

Nelson Montana for EliteFitness.com

Think you know about bodybuilding? Think again.

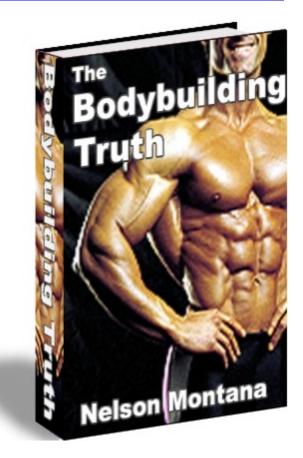
It's a fact: You're being fed a pack of lies by the supplement industry Fu*kers.

And you're making them rich!

If you want to gain the maximum muscle in the shortest time possible, you must learn to avoid their lies.

Read on to find out how you've been screwed (without even knowing it) and how to stop it once and for all.

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THE BOTTOM LINE... What It All Comes Down To

As the title suggests, THE BOTTOM LINE is a "get down to it, no fluff, no hype, non-apologetic" journal that is designed for one thing and one thing only -- to show you, the bodybuilder, the most direct and uncomplicated methods toward building more muscle and shredding off fat...fast! That is, as much as your body is capable.

This book is designed as both a companion and a continuation of "THE BODYBUILDING TRUTH -- Secrets You're Not Supposed To Know." If you haven't read that original work, some of the information herein may seem confusing or incomplete. For that reason, I'd strongly urge you to read both books in an effort to be fully versed.

Since the time of its release, <u>The Bodybuilding Truth</u> has changed the way thousands of bodybuilders train, eat, supplement, and view the industry of bodybuilding itself. The concept behind "The Bottom Line" is to update information and address some strategies that either weren't included or have yet to be discovered. If you thought <u>The Bodybuilding Truth</u> was scathingly honest in regard to misinformation about training, the fallacies concerning nutrition and the slimy side of the supplement industry, then hold on! If you're looking for more, no nonsense methods of training, you've come to the right place. And if you want more honest information about bodybuilding, nutrition, supplementation, and the most effective use of anabolics, get ready for a jolt.

I should make you aware right from the start that this is not a reference filled journal that reads like a text book, so if that's what you want, stop reading now. You won't find it here. My intention was to write an entertaining book that that is conversational in style and informative in content. Whereas some bodybuilding journalists seem to go out of their way to sound overly technical, I've avoided it whenever possible. I've even avoided citing references, and here's why:

References are subjective.

Whenever a study is conducted, such as to prove or disprove the effects of one thing or another, there's almost always a commercial interest involved and whenever that's the case, test results can be manipulated. Using such references to validate a point is meaningless, so instead, I'd prefer to use logic as my reference. I'll also try and present that logic in the most direct manner possible without confusion or subterfuge. I promise to get to that often evasive bottom line.

References are conflicting.

For every study that proves one thing, there's a study to prove the exact opposite. Instead of wasting everyone's time listing those that agree with my line of thinking, I'll just present the information which I believe to be valid through my observations and experience.

References are skewed.

Besides the fact that there are many variables in any test and results vary, many studies aren't conducted under the proper conditions. Double blind studies among genetically similar subjects with comparable athletic training diets and sleep patterns are almost non-existent. Add in other factors such as stress and biorhythms, and the conclusions drawn are often of the "your guess is as good as mine" variety. Also, as any rational person will attest, everything can be proved scientifically, but that doesn't mean the methods are available to do so. Science is always working within the limitations of what is known. Therefore, if science can't prove something, that doesn't mean it can't be proven scientifically, it just means that we don't yet know how to prove it scientifically. Remember, scientists once thought that breaking the sound barrier was impossible. It was proved conclusively -- scientifically. Research also determined that steroids don't work. We've certainly come a long way since then, but there's still so much that has yet to be discovered.

References are false or forgotten.

Over the course of over 30 years involvement in bodybuilding, I've read hundreds, maybe thousands of books, journals and reports on the subject and all the aspects surrounding it. I've talked to countless professional bodybuilders, scientists, doctors, researchers, historians and aficionados and I've worked with hundreds of bodybuilding clients. I've learned a lot. But if I were to attempt to document every bit of data, every conversation and every moment of revelation, this book would never get written. Of course I could do what a lot of people do -- just cite references that have nothing to do with what I'm talking about. But my intention is to inform, not impress.

References are boring.

One of the most rewarding aspect of my work is the response from readers who enjoy what I have to say. I like getting to the point and most people appreciate my getting to it. Now I know that isn't for everyone. Some people want to read studies and sources and debate and dissect every bit of minutia in every manner imaginable. Then there are those who will take the ball and run with it -- right to the gym. (My kind of people) If you enjoy reading technical information and want to research the information I've presented --

be my guest. For the rest of you, we're going to cut through the confusion and the contentions and get going toward that elusive goal of gaining more muscle.

Some references don't exist.

Much of what I propose is conjecture -- as is so much of bodybuilding theory. We absorb the concepts that we find helpful and discard those that aren't. The theories presented here are meant to encourage open-mindedness and a broader scope and not just blind acceptance of the words promulgated by the bodybuilding community. I'm a writer and I don't have my own private lab and research team. I can only offer an opinion -- one which will be as forthright as possible, and as you'll discover for yourself, one that will get you on the fast track toward a better body.

I trust that the information between the covers of this book will be understood, enjoyed and applied. Yet there are people who can't stand it when you force them to rethink their comfortable beliefs. Some might get defensive-- even antagonistic. I should know. I've had my share of hate mail. I've even had some threats of bodily harm. And what I find so disturbing about that isn't so much the threats themselves but the fact that there are people who can actually get so belligerent over an opinion about bodybuilding. It's just lifting weights folks. We ain't curing cancer here. A difference of opinion one way or the other will not alter the world peace process one bit. Let's keep things in prospective. Most of us are out to have some fun on the way toward bettering ourselves and building our bodies and we're looking to find the most effective way of doing it. This book will help to do that.

I suppose I should also warn you about my approach. I've been accused of coming on strong, being overly direct and lacking tact. Guilty as charged. In my personal life, I like to think of myself as an amiable, personable fellow. One might say "charming", thank you very much. But I'm not here to make friends. This information is geared for people who want the straight, gritty truth. Sure, I can buffer it with comments such as "on the other hand" or "everybody is entitled to their opinion" or "some people say...." But I won't. If I don't believe an opinion has merit, I'm not going to validate it and I won't insult you, the reader, by attempting to play every angle. I want to share over 30 years of unbiased experience with you. I will not patronize or condescend. I may not be subtle, polite or politically correct. I may even be a little gruff at times. But the way I see it, if you want to clean out a sewer you have to expect to get down into it and get dirty. That's why I'll continue to dispel the myths, dispute the misconceptions and discredit the false icons that permeate the bodybuilding community. In doing so, I don't expect accolades. But my job isn't to shmooze the fat cats and gain acceptance. I'm looking to show them for who they really are and if that means making a few enemies, so be it. What I might lose in hollow alliances is your gain in the battle against the ignorance and the arrogance perpetuated by a disingenuous and deceitful industry.

If you want pomp and pretense, there are plenty of other books you can read.

These are my views. Unsoftened and unabashed. Right between the eyes.

This is The Bottom Line.

Let's get to it.

SETTING THE RECORD STRAIGHT

This is the part where I'm supposed to have a disclaimer of some sort. It should be written in the third person and have some legalese type wording and basically state that all the information herein is for entertainment purposes only and isn't meant as medical advice and all that. In other words, if you misinterpret the information and mess yourself up, DON'T BLAME ME. I assume no responsibility. As a matter of fact, consider everything from here on in as fiction.

Now for all you fiction fans, here goes...

In <u>The Bodybuilding Truth</u>, I spoke sparsely on the topic of drugs, for several reasons. Although I feel they can be a viable tool for those who choose to use them wisely (i.e. judiciously), I don't really see drug use as the main focus of bodybuilding. I've always thought that they should be a "last resort" to be considered only after many years of training when appreciable gains can no longer be achieved through natural methods. I also believe that anyone who considers using them should first become educated in the application and precautions.

But I can't instill my opinions on everyone. Mandating when the right time to use drugs might be is like mandating good judgment or good taste. It must be left to the individual. And a lot of individuals will make poor decisions, regardless of what I have to say. More disturbing, they will make erroneous decisions based on a misunderstanding of what I have to say. That upsets me greatly. But I realize there's little I can do about it.

Oddly enough, I have more respect for someone who chooses not to use steroids, mostly for the fact that those who do use them tend to overuse them. The natural athlete has to fight and struggle for every ounce of muscle earned, and in doing so, he learns how to be a better bodybuilder. Any fool can take a gram of juice and grow. Unfortunately, he'll usually look like a formless blob. That's a personal observation. The amount some guys are taking today are ten times greater than what guys like Arnold and Sergio ever took, and they look like crap. But again, I can't make other people's decisions for them.

As much as I admire someone who takes the drug free route, if their reasoning is because they believe drug usage is "cheating," I must respectfully question their philosophy. Who are they cheating against? Is it cheating to take an antibiotic if you have a serious infection? Is it cheating to have your Polio vaccine? Or even a flu shot? How about supplements? Cheating? Unless you're Amish, you've probably taken aspirin at some point in your life. You may use caffeine if you're tired or a glass of wine if you want to get a buzz. None of these things are inherently evil. It's their misuse which presents a host of potential catastrophes.

Steroids are fascinating -- to me at least. They unquestionably can enhance what we work so hard to achieve. Maybe the most equitable comparison would be to ask; if a drug enhanced intelligence or talent, would you take it? I admit, I would.

The psychological aspects of steroid use are also complex. Dan Duchaine put it perfectly when he made this statement:

"Once you use steroids, your whole outlook on your sport changes, usually irrevocably. You will find a pessimism, a cynicism about the sport and its athletes that you probably didn't have before. This negativism has a way of sometimes creeping into your view of other things in your day to day life. Granted, this changed outlook is probably closer to actual reality than your previous mental state but I've not seen athletes happier because of it."

Allow that to sink in. Knowing Dan as well as I did, this statement is truly profound and more than a little morose. Knowledge, leads not only to a better understanding but often to a loss of innocence. Once you know how the magic trick is done, much of the magic is gone.

I've decided to begin this book with a challenge to many of the current opinions on the use of anabolics. Since the advent of the internet, there is an abundance of accessible information and the neophyte can learn more in a matter of hours than what took many of us who've written about it in the past years to compile from text books, personal experience, observation, and underground information. But along with this wealth of information comes an abundance of misinformation. It's to the point where there is an epidemic of rumors, myths, half truths and untruths about steroid use, and it isn't coming from uninformed zealots, it's coming from the so called "experts." Many of these neogurus are far more knowledgeable of anabolic pharmacology than me or Dan Duchaine or anyone who wrote about them just a short time ago. But just because they have the technical knowledge doesn't mean they offer the best advice in their application. In fact, their advice, more often than not, is ill conceived and irresponsible. They're also, in my opinion, way off base on a lot of issues.

Time will bear out who is right and who is wrong and who promoted caution and who encouraged recklessness. Until then, I offer this bit of advice; The preachings of most of today's steroid gurus should be viewed with suspicion, not adulation.

I should preface my remarks by reiterating that I am not a scientist. My viewpoints come not so much from the textbooks but from the "trenches." And those trenches aren't just at my local gym. As an industry insider, I have access to information that would be impossible for the average bodybuilder to acquire. I want to share that information and challenge it when necessary.

The following comments are an often contrarian viewpoint on the topic of performance enhancement drugs. They are designed and presented to evoke an alternative outlook on what has been accepted as truth by too many for too long. Prepare to look at things a little differently from here on in.

Note: If you have no interest whatsoever in anabolics you can jump forward to the next section. There's plenty of information that applies to you.

CLOMID - THE BIG LIE

Like everyone else who has ever read a single book (or every book for that matter) on the proper use of anabolics, I usually included a course of Clomid after each cycle. It was the responsible thing to do. So they say. There was just one little problem with this procedure. It seemed to make the recovery and the return of libido, testicular size, sperm count, seminal volume and normal testosterone levels worse. How can this be? Maybe I was just a weird exception to the rule. One doctor suggested I might have some bizarre feedback loop that gave the drug its negative effects. Maybe I was crazy. Maybe not.

The simple truth of the matter is this: the thinking on Clomid is based on some very sketchy evidence which has been parroted endlessly among the bodybuilding community. In a way, I'm at fault myself. Allow me to explain.

A few years back, I co-wrote an article with Brock Strasser called "The Steroid Summit." In that piece, I mentioned Clomid and ejaculate volume. Where I was going with this was the fact that I noticed a definite decrease in ejaculate volume and this would indicate that Clomid wasn't doing what it was supposed to do. Brock replied "Oh yeah, Clomid will definitely increase ejaculate" and he went on to say how male porn stars are using it to enhance their "bursts of drama" so to speak. We were tackling a lot of topics and I didn't want to dispute his contention so I let it go. At any rate, wouldn't you know... the rumor about porn stars and Clomid ran rampant. I started hearing it everywhere, even in places unassociated with bodybuilding.

I knew I couldn't be the only person experiencing negative effects from Clomid so I did a little personal survey. It turns out I wasn't as weird as I thought. Out of over 100 bodybuilders I questioned, about 1 in 4 experienced in the use of steroids and aromatase blockers admitted that Clomid didn't have the effects they were hoping for. Many also claimed that Nolvadex, which has a very similar structure to Clomid, caused a loss in libido and a weak ejaculation. Even among those who felt it helped them, there were complaints about "emotional distress" and "weepiness", both of which suggest an increase in estrogen. So how can anyone be sure Clomid is actually beneficial?

Still, the rumors persist.

I was on a popular internet message board recently and someone was claiming that they weren't getting back their atrophied testicles even after using 50mgs of Clomid for two weeks. The resident "guru" suggested taking 100mgs for another two weeks. This line of thinking is straight from the middle ages when doctors prescribed leeches to cure a disease -- if the patient got sicker from the treatment the solution was; more leeches! Ridiculous? Of course. Some things never change.

There are several major problems associated with Clomid, as well as Arimidex, Nolvadex, Teslac or any other estrogen blocker. For one thing, all these compounds are indiscriminate in how much estrogen they block. So what's bad about that? Well, the whole point of using an anti-estrogen is to protect against the spillover of estrogen that comes with the excessive use of androgens. If the body can't metabolize all that testosterone, it aromatizes into estrogens. What the experts fail to address is the fact that the amount of aromatization varies greatly from individual to individual. If the steroid dosages are moderate, there might not be any aromatization of any consequence, and the anti-estrogens may lower levels below what they were normally! And keep one very important fact in mind. A little estrogen in men is necessary for a healthy libido. (It's also necessary for other things such as bone density, skin tone, etc., but I can't think of anything more important to most men than their dicks.)

More recently, it's even been suggested that estrogen may play a role in the proliferation of androgen receptors. This may explain why some experienced steroid users claim that they get decreased results when adding an anti-estrogen to their stack. It was once thought that anti-estrogens such as Nolvadex decreased IGF-1, but this has not been validated with any concrete evidence. Nevertheless, studies done on rats found that androgen receptor binding was dramatically increased after the administration of estradiol, increasing the anabolic potency of the androgenic steroid. If nothing else, this shows that estrogen is, on some level, directly or indirectly involved in the process of promoting muscle growth. There's also the added element of strength and size gains due to the water retention that estrogen inflicts. And just as a kicker, anti- estrogens may also increase sex hormone binding globulin which is the last thing you want when coming off a cycle.

In the case of Clomid, the effects may be even worse than other anti-estrogens since Clomid is a mild estrogen itself. The basic theory behind its use (which is sounding more and more stupid every day) is essentially that the Clomid will occupy the estrogen receptor sites thus disallowing the formation of more estrogen. Maybe. What's more likely in cases where estrogen levels are normal, the Clomid will simply add more estrogen. This may the reason for some people's apparent aversion to Clomid and its estrogen-like side effects.

Even if Clomid did lower estrogen, there's no evidence that lower estrogen will necessarily lead to increased testosterone, yet this is the premise which everyone follows.

Clomid has also been known to produce a decrease in the LH response to LH releasing hormone. This is something that has been known for a while, (findings on this date as far back as 1978) yet curiously ignored. Naturally, studies aren't conducted to benefit the bodybuilder on steroids, so we must learn to read between the line sometimes. In doing so, conclusions can be drawn. All too often steroid gurus draw them incorrectly.

The notion of increased sperm count is also one of contention. Allow me to get technical for a moment and break my own rule about references for a second while I cite this quote from a study done on Clomid.

"Treatments with idiopathic oligospermia for six to nine months resulted in a significant increase in gonadotropin testosterone and estradiol levels. A significant increase in sperm density was observed only in subjects with low sperm count below normal basal FSH levels. In cases where sperm density increased, FSH levels decreased, suggesting an inhibitory effect."

What this suggests in plain English is that not everyone reacts to Clomid treatment in the same way and sperm levels must be abnormally suppressed for the drug to be of any benefit. And even in situations where that is the case, the side effect was lowered Follicle Stimulating Hormone, which as you may know, controls the amount of Leutinizing Hormone we release which in turn regulates how much testosterone we have. This is why so many bodybuilders claim to crash after coming off of the Clomid.

Judging from this information it's clear that Clomid, at best, is a crap shoot and its benefits, if any, are temporary. So why is everyone still taking it?

Of course, this is hypothesis on my part and a lot of the pedants and pundits will refuse to acknowledge it. After all, all the pros use Clomid. Why should anyone listen to me? They don't have to, but they should.

I was speaking with Jerry Brainum on this very subject. I should mention, Jerry, unlike some of the self-appointed experts that abound on the internet and the world of underground newsletters, is one of the most knowledgeable people in the business on the subject of nutrition and pharmacology. He's been writing on the subject before most of these pseudo whiz kids were born. He knows everybody who is anybody in the world of bodybuilding. When I mentioned my theories about Clomid he said to me;

"You're not alone. I don't know a single pro who still uses Clomid."

This in itself speaks volumes. Of course, it may not be the best validation for my argument since there are plenty of pro bodybuilders who are complete jackasses when it comes to knowledge and application of anabolics. He or she usually hires someone who knows something, or more likely, can get something. The protocol is then to load the syringe to the top and keep shooting until the stash is gone. Nevertheless, the fact that Clomid has lost its allure among the higher echelon on the bodybuilding ranks is a sure sign it isn't working well. If it did, they'd all use it, even if they stayed on 365 days a year. Who wouldn't want to maintain testicular size and increase natural production while keeping estrogen low? If Clomid was effective in doing so, there'd be no reason to stop. They know what works and what doesn't. And they know that Clomid sucks. (Of course, there's always some lunkhead who doesn't catch on right away.)

One last thing to keep in mind: Back in the 60's and early 70's no one used antiestrogens. Look at the pictures of the stars of that time and you'd be hard pressed to find a case of gyno anywhere. Food for thought.

The bottom line: If dosages are kept sane, Clomid wouldn't be needed -- even if it worked well, which it doesn't.

Forget Clomid. For more effective methods of keeping excess estrogen in check, read on.

IF YOU MUST...

When it comes to anti-estrogens, the best bet may be not in occupying the receptor sites, as does Clomid, but to compete with the testosterone/estrogen balance. At one time, Proviron was deemed a valid choice as an anti-estrogen agent until some of the sophomoric steroid students argued that it didn't have any direct anti-estrogenic properties. True, but it still looks as if it's the best choice if you feel the need to guard against estrogen build up. It does so because DHT acts as a gyno antagonist. (Yet another thing that has been oddly overlooked.) Even when DHT is applied topically it's been shown to reduce gyno in cases where the gyno hadn't been a chronic condition.

Beyond the direct effect of DHT, Proviron has distinct benefits, the first being that as a derivative of DHT it isn't capable of forming estrogen, yet it has a much higher affinity for the aromatase enzyme (which converts testosterone to estrogen) than does testosterone. That means administering it with another aromatizable compound will prevent estrogen build up due to the fact that DHT binds to the aromatase enzyme so strongly. There's also been some suggestion that Proviron may downgrade the actual estrogen receptor, thereby making it twice as effective at reducing circulating estrogen levels. And because DHT has such a high affinity for SHBG it leaves more free testosterone to impart its anabolic effects.

It makes sense that the use of Proviron is a more practical and rational method of dealing with the possibility of excess estrogen than the aforementioned method of attempting to add a weaker estrogen in the hopes that it will prevent aromatization.

William Llewellyn touches upon this in Anabolics 2000. He says...

"(Proviron) is in contrast to Nolvadex which only blocks estrogen's ability to bind and activate receptors in certain tissues." (such as breast tissue)

In other words, the World Anabolic Reference was right when it stated;

"Proviron cures the problem of aromatization at the root while Nolvadex simply cures the symptoms."

Proviron in moderate doses has been shown to be remarkably safe and free of side effects in most men. If you must use an anti-estrogen, Proviron is the way go.

(Note: For more information on reducing estrogen, refer to the upcoming chapter "Lower Estrogen -- Naturally").

WAR! (On Drugs) WHAT IS IT GOOD FOR?

To this day, I don't feel completely comfortable talking about drugs. It's kind of like talking about sex, or religion, or politics. Opinions are varied and very personal and if one's perspective is in contradiction to anothers, it's a fair bet that it isn't going to be readily embraced.

Be that as it may, this is The Bottom Line. And there are some indisputable facts about steroids, irrespective of anyone's personal opinions about their use.

They work.

They will be used.

They aren't as dangerous as some people claim.

They aren't as benign as some people claim.

I've been attacked on both sides of the fence on this issue. I've been accused of encouraging the use of steroids (which is absolutely not true). I've been accused of using steroids extensively (which is absolutely not true) and I've also been accused of being a total weenie and recommending pussy dosages and playing it way too safe. (Which may or may not be true.) I will say, my conservative use has given me a more accurate perspective than that of someone who uses high dosages and combinations of whatever he can get his hands on and then starts evaluating the effects of one or the other.

Another reason, maybe the main reason, I don't like talking about drugs is the fact that so many people don't really listen to what's being said. They hear what they want to hear. I had one 18 year old guy write to me asking my advice on what was a better stack; Deca and D-bol or Sustanon and Winstrol. I felt this guy needed a reality check so I let him have it. I said; "Here's some advice. Quit bodybuilding! If you can't make gains now, you never will. Real bodybuilding takes guts and hard work and you sound like you don't have it in you, so save yourself the time and trouble of injecting a substance of dubious origin into your bloodstream and take up an easier hobby."

His response?

" I do work hard, I just maxxed out my gains. So should I go with the Deca and D-Bol?"

Ugh.

As awkward as the drug topic may be, I have no problem giving my opinion on the laws surrounding steroids. Make no mistake about it; the so called "war on drugs" is a farce. It cost the taxpayers billions. It doesn't work. It never has. It never will. Don't believe it? All one has to do is take a look at the countries that have adopted a policy of less oppression toward drug users. Drug use is down! Violence and theft stemming from the need for drugs is non-existent. The money once used to incarcerate is now used for rehabilitation. Compare that to the condition as it now exists in the United States.

And just as an aside, there is horrific destruction of property in foreign lands (burning crops, bombing poppy fields) by the U.S. government which may be more responsible for the dissent and disdain against our country than anything else. In those cases, the destruction is designed to stop the import of narcotics which possess a threat to society, although I don't know of anyone who would take a narcotic unless they wanted to. These lip service laws are just a convenient way of grouping everything into one melting pot of government issued morality.

The laws against steroids do not protect anyone. Not you, or me, or our children, or Mom or apple pie or democracy or the republic for which we stand is at risk if someone decides to increase his or her musculature. If someone is caught using steroids, it does not help them or anyone else if they are imprisoned along with murderers and rapists. It's a disgrace that it can happen in this country. But it does.

The anti-drug herd is as clueless as it gets. Their best mode of operation is to try and frighten people but anyone over the age of eleven knows that scare tactics never work. And the more they're used, the more people become anesthetized to them. I all too often hear parents lamenting on how they can keep their kids off of drugs. I think it's pretty simple. A kid will listen to a friend he admires and trusts. Be that friend. But guidance and education aren't enough, apparently. People want the government to raise their kids for them.

Here's the bottom line: In the case of drug laws, for the most part they're designed to insure that no one receives revenue without paying taxes. That's the crime. But it's shrouded by this smokescreen of arrogant indignity and bogus piety. Isn't the government protecting our health, you say? Get real.

And another thing...

If I want to go down into my basement, drink a quart of Vodka, and then juggle a couple of flaming chainsaws...that's my right. As long as nobody else gets hurt, who cares? It's my choice and I'll suffer the consequences.

The health issue regarding steroid use is one that is brought up the most often. A lot of people don't realize this, but the AMA was AGAINST the criminalization of steroids!

But the politicians needed a whipping boy and choosing one that wasn't popular with the general public was the perfect choice. (Only crazy people who want muscles would ever use steroids, right?) This is why I believe it'll be a long, long time before the prohibition against anabolics is revoked. There simply aren't enough people who want it repealed, as was the case with the prohibition of alcohol. Then candidate for President Franklin Delanor Roosevelt knew it was unpopular and by revoking it, he would improve his standing among the populace. Roosevelt went on the win the election. But don't wait for the same thing to happen with steroids. Meanwhile alcoholism is rampant, even among teenagers.

There's also a lot of media generated propaganda surrounding anabolics. Let's face it, it's hard to defend something that has the potential for disaster. Still, I get infuriated when I see ads that say; "Buying drugs supports terrorists." Hell, buying gasoline supports terrorists. It's the illegality of drugs which makes them a viable black market for anyone, maybe even terrorists. So, if anything, it's the inane laws that are put into place that support terrorism. But the honchos in Washington D.C. love to place the blame elsewhere -- and you're as good a place as any.

At the core of all this idiocy is the fact that steroids aren't understood very well by the public. One of the negative stigmas concerning steroid use is the myth of "roid rage." I say myth because I don't believe anyone has ever exhibited violent behavior because they were on steroids. Being a malcontent, mentally unstable asshole on steroids -- that's a different story. But the way I see it, it's like alcohol. You know how some people are "nasty drunks?" Well, it isn't the alcohol that makes them nasty. The alcohol just lowers inhibition. They were nasty all along. The booze just gave them an excuse to be more at ease with being their assholy-selves. It's the same thing with anabolics. If you're an overly aggressive person with all sorts of issues which I really don't care about, the increased strength and heightened sense of well being from additional androgen might turn you into a raging, hostile prick. Don't blame the drugs -- but they do make a handy excuse for coping a plea in court.

It's only natural to side with a conviction based on one's personal preferences, and the issue of steroid use is no different. If you decide not to use steroids...great. But that doesn't mean it's wrong or immoral and those who choose to partake are evil. Yet many people equate morality with legality (which I find more than a little disturbing). And for all of the people who are outraged by unfair laws, there are just as many people who are just fine with them. The truth is, many people want laws. They provide a clear cut guideline. They're safe. Follow them and everything will be alright. (And may you sleep soundly in your beds tonight dear citizens.)

It works the other way too. Those who enforce the laws are by nature bureaucratic thinkers -- in other words, they don't think at all. Their job is to act in a regulated manner and a law is permission to do so, even for atrocities such as slavery or the holocaust. If

those references are too abstruse for you, let's bring it a little closer to home. If someone makes a right turn after stopping at a red light in a deserted part of town at 3:00 in the morning, according to the law set forth by the Department of Motor Vehicles, it's no different than someone who runs right through a red light at 3:00 in the afternoon across the street from a schoolyard. Now anyone with an ounce of sense knows that the first person shouldn't be bothered and the second person should have his testicles chopped off with a rusty hatchet. But on the books, it's the same crime. So don't expect to talk any sense into those who enforce it.

Humans are by nature a flocking species and some people aren't much more analytical than sheep. Tell them what to do, or what not to do, and they're just fine with it. Thinking is hard.

There's also the reactionary aspect to drug use. The media loves to sensationalize because that's what gets ratings. Here's an example: What if you saw the words "Child Molested!" as a headline in a newspaper or an opener of a news show? Chances are you'd think of a heinous and vicious crime. But what if the charge was against an 18 year old girl who had sex with an 17 year old boy? Technically, the charge is the same, but suddenly the dynamic is different. It isn't really a "crime" at all. Come to think of it, it's kinda nice. Yet it can be presented as the most vile and egregious act imaginable. Distortions such as this happen all the time. One would think that our founding fathers allowed for freedom of the press in order to insure that the public would get all the facts straight. But news is now entertainment, which means it's a business, which means it's governed by money, which means that any possible twisting of the facts that may lead to a more sensational story is fair game. And drug use makes good copy.

Let's not discount the feminists role in all of this. This nation has been pussified within an inch of its life. Turn on any news show, talk show or TV show in general and anytime you hear the word "testosterone", it's in a negative context. It symbolizes all that is evil about men -- aggression, belligerence, misogyny. Men are vilified if they so much as openly exhibit any masculine traits. Movies that are considered "cute" have women who are thieves, embezzlers or prostitutes and as long as she's presented as the heroine, she'll be so. Women love it. Yet men are depicted as incompetent boobs incapable of cooking, cleaning, child rearing or rational thinking. Women love that too. And men sit back and take it, as if they should somehow be apologetic for having balls. The irony of all of this is that women loathe these wimps whom they've psychologically castrated. Then they wonder; "where are all the real men?"

Think this isn't a feminist driven society? Then tell me this: Why is it that a man can take female hormones to become a woman and it's considered acceptable yet if he takes hormones to become more manly he's a criminal?

Enough politics, philosophy, psychology and sociology.

My original intention for a chapter on drugs was to compose an update of the "Steroids For Health" report which was written in 1997 (published in 1998). Instead, I thought it might be a good idea to look back at it and interject comments along the way. In this way, I could provide updates, insights and retrospection to the basic principles.

Keep in mind, this was six years ago. There wasn't much available information and we were all shooting from the hip back then. Dan Duchaine's original Underground Steroid Handbook is loaded with inaccuracies but that doesn't diminish its significance, nor does it detract from the fact that Dan's insights were nothing short of brilliant. Bill Phillip's Anabolic Reference Guide was a combination of medical text and empirical evidence -- often erroneous and less germane today, nevertheless, it helped people learn more about anabolics -- for better or worse. The Steroid Bible was read by thousands of people and it was little more than generic referencing of the various drugs. The World Anabolic Reference made a giant leap in detailed scientific information along with firsthand application recommendations for bodybuilding and athletic enhancement. Still, it was often guessing and guessing wrong.

According to a lot of folks in the industry, Steroids For Health is a part of that early catalog of steroid information, albeit a less technical one but one which offered another perspective. And for all its foibles and antiquated references, I have to say, it still holds up as pretty good advice.

So here, presented in its original text, as written on an old word processor (hence, no italics -- but hey, I thought I was so high tech that I wasn't using a typewriter!) is the original Steroids For Health article with interspersed epilogue. I trust that it may help you make intelligent decisions regarding the use of steroids.

Note: Learn to use the law to your advantage. If you run into any trouble regarding possession of anabolics, call someone who knows your rights. I'd recommend reading LEGAL MUSCLE by Rick Collins. Never, NEVER, NEVER say anything without representation! Check out www.steroidlaw.com and let them do the talking for you. You won't regret it.

Oh yeah!

I will not be discussing every drug used for bodybuilding purposes for two reasons.

One: I don't use them and any advice would not come from firsthand experience, therefore it would just be a rewording of other material, so you might as well find that material in the first place if that's what you're looking for. (Whew, that has to be the longest sentence in the book.)

And Two: I believe substances such as Clenbuterol, Insulin, DNP, Cytomel, Nubain, Synthol, RU486, Dopamine and Diuretics are dangerous and unhealthy and have no place in bodybuilding.

If you disagree, write your own damn book.

STEROIDS FOR HEALTH 2002

With all the pontifical warblings that emanate from a misinformed and sensational seeking media, it seems almost inconceivable that steroid use can be considered something that is actually GOOD for you!

Right off the bat I'd like to say that I hate that first sentence. What, did I swallow a thesaurus for breakfast that day? Oh well, I guess I was caught up in my excitement and indignance and wanted to come on strong.

Sure, anyone familiar with "real" bodybuilding (not the fantasies extolled by supplement manufacturers disguised as athletes) should know by now that the dangers of chemical enhancement are outrageously exaggerated. The general public, however, has been bombarded with a reefer madness like hysteria for so long that they can hardly be blamed for thinking that anabolic steroids are on par with heroin (both schedule II drugs) as a life threatening substance.

Technically Schedule III, but laws vary from state to state.

What I find unforgivably ignorant is people's inability and adamant reluctance to evaluate the severity of a substances usage. There is a difference between drinking a quart of scotch a day and having a beer on Saturday night. There is a difference between use and abuse.

Let's presume you're with me so far. You agree that popping a couple of D-bol is not going to make your liver explode and give you an instant brain tumor, but claiming that anabolic steroids are actually health enhancing seems incredulous. Well, let's take a moment to evaluate the elements of a healthy body. Doesn't being stronger provide a certain protection from the ravages of daily stress? (both physical and mental) If one's mental state has a direct correlation on the overall physical state then it would seem apparent that looking good and feeling good about one's self can elevate the entire spectrum of the mind, body, and spirit connection. If this is a bit too metaphysical for you, how about the ability to recover more quickly from illness, higher growth hormone levels, improved T3 count, (note: I was referring to the "killer T cells", not the thyroid hormone) increased blood volume and lower cortisol levels? They all contribute significantly to your overall health.

Of course, if your approach to steroid use is to gain 30 pounds every time you do a cycle and get as big as possible at any cost, then this information is probably not for you. However, if you are not a professional bodybuilder looking for some secret cycle that this year's "Mr. Endorsement for Hire" uses to grow his 24 inch arms but

rather someone looking to take advantage of the benefits that steroids provide without the negative side effects, then there is a way. Naturally, everyone is different. Some people may have a medical condition that would make even the most modest steroid cycle unwise. For most healthy adults, however, this is a safe and practical approach to using anabolic steroids for increased health and long term gains.

It is important to first realize that a lot of this information will be in direct conflict with much of what you have heard, even if you are knowledgeable on the topic of steroid use. In order to keep an open mind, it is imperative to realize that very often the "experts" in any given field may have the technical data correct but the assumptions derived from said data are erroneous. What works in theory and what works in the real world are often very different (ex. HMB works in "theory").

Would you believe at this time, the topic of HMB was still very controversial? I was going out on a limb with this one. As we all know, it's worthless for growing muscle, as is 7-Methoxy and Myostatin -- and every other supposed muscle building supplement for that matter.

There is a certain security in the belief that some pedagogue has the answer. People want to be led. Socrates realized this aspect of human nature over 2000 years ago. Incidentally, the heads of state in ancient Greece didn't care much for Socrate's opinions so they had him executed! In my time, I have had authorities tell me that marijuana causes insanity, masturbation will make me go blind, and I can protect myself by ducking under my school desk when they finally drop the A-Bomb. So much for the advice of experts.

I confess, I've used that analogy before. I like it. And it's something of which I must keep reminding myself. I also remember, when I was a kid in grade school, insisting that it felt colder when it was windy (this was before the "wind chill" factor was used in gauging temperature) and was told it was my imagination because wind won't affect a thermometer. Lots of childhood issues here. Let's move on.

When it comes to the implementation of steroid use without the loss of gains obtained, hair loss (bummer), loss of libido (major bummer) or post cycle depression, these simple steps are of paramount importance.

(I'd include blood lipids, blood pressure, and PSA along with that list.)

The first step is one that may evoke considerable suspicion.

ALL CYCLES SHOULD BE NO LONGER THAN THREE WEEKS IN LENGTH.

This 3 week cycle premise was met with some skepticism until Bill Roberts, who had a reputation as a pharmaceutical mastermind adopted it -- except that he made it a TWO

week cycle. That reminds me of the joke about the guy who heard that the 10 Minute Abs video was selling so well he decided to put out a 9 Minute Abs video.

That's three weeks, at most, at full dosage with one added week to taper down. I know, you're probably thinking, "What kind of puny gains will I get from just a three week cycle?" I'll tell you what kind. Gains that you KEEP! Have you ever wondered why so much muscle is lost soon after the cessation of a cycle? It's mostly because the body is an adaptive mechanism and it will not nor cannot maintain a weight gain of enormous magnitude, especially one that is made in such a short time. But a gain of 4 or 5 pounds? THAT it can handle. It's funny,

everybody speaks about Primobolan having this mysterious ability to grow muscle that isn't lost after the cycle is over. That's because Primobolan is so very weak. It doesn't cause massive weight gains. The growth is slow enough for the body to "adapt" to it and the total growth is slight enough to maintain. It isn't magic. It's basic physiology.

One internet nit-wit who writes a regular column for one of the drug sites went as far as saying this thinking is outdated because it's based on the theories of adaptation which were first documented back in the late 1800's. So I suppose the theory of gravity is also outdated since it's so old? Stupid, I know. But this is a stupid business. What makes it worse, is that it's stupidity under the pretense of intellect.

I also find it incomprehensible how people scoff at 5 pound gains. Ever see a 16 ounce steak? Imagine five of those attached to your body. That's quite a bit of meat!

There are other advantages to the 3 week cycle concept. For one thing, the cycle is simply too short to cause any side effects. Take a look at The Physicians Desk Reference or The Complete Guide To Prescription or Non-Prescription Drugs and look for the contraindications of an overdose of steroids. None. That's right, all complications resulting from the use of steroids are due to prolonged use. As in all types of warfare, hit 'em hard, then get out! Keeping cycles this abbreviated also negates the need for Clomid or Nolvadex.

When keeping duration short, dosages should be at their highest right out of the gate when your receptors are fresh and the best gains are made. An additional benefit is the fact that the next cycle can be started sooner. A four to six week drying out period is not unreasonable. Keep in mind that an injectable steroid is active for two to three weeks after injection so it is at the end of that time that you can begin to consider yourself "clean." Now instead of huge weight gains followed by a severe "crash," you can make steady gains that are not unlike training "naturally." Only faster. I could never understand why someone would want to "blow up" just to wind up losing what they gained. Why bother?

Going with the more natural gains premise is what makes this work so well. I'm just sorry I went so "quote" crazy in the paragraph!

Besides, receptor sites get saturated rather quickly. After a few weeks it takes higher and higher dosages to get any additional gains. This is neither a healthy nor efficacious endeavor. Realize also that the longer the cycle the greater the backlash of cortisol after cessation. This is what leads to the depression that often follows a cycle. It leaves the athlete not with a sense of accomplishment but with anxiety and impatience to get back on the juice. Although steroids are not physically addicting like a narcotic drug, they certainly have the potential to be psychologically addictive. When used in the manner described, no such crash occurs.

Another misconception that never seems to be addressed is the importance of milligram strength in determining the efficacy of a particular product. Pop Quiz. What steroid is stronger, Winstrol or Anadrol? Well, everyone knows that. Anadrol, of course. bzzzzz WRONG! The mistake most people make is that they are comparing TABLETS not MILLIGRAMS. With apologies to Dan Duchaine who says that Winstrol is worthless, Winstrol is a very powerful drug. So powerful, in fact, that it is made in only a 2 mg tablet (unfortunately). Anadrol, on the other hand, has a terrible affinity for receptor sites so it's made into a 50 mg tablet (which also inflicts considerable stress to your liver). Obviously, two Winnies won't do a thing whereas two Anadrol will make just about anyone grow, but the comparison isn't fair due to the difference in milligram strength. Since both pills are approximately the same price, they are judged on the same terms (per pill). Yet, I can say unequivocally that an EQUAL amount of Winstrol is far more effective than Anadrol, it's just that it would take fifty pills to match it milligram for milligram. In other words, 100 mgs of Winstrol will produce more solid, longer lasting increases in muscle tissue hypertrophy than 100 mgs of Anadrol. I believe that anyone who is at all interested in their health should never touch Anadrol. I don't care how much of a bargain people think it is, it's NO bargain. It is the epitome of a fools paradise. Those explosive gains in weight and strength are due mostly to the excessive water retention. Force feed yourself and drink a gallon of water every half hour and you'll experience similar gains. As one colleague of mine puts it, "After you finish a course of Anadrol, you piss twice and lose 15 pounds!"

It's amazing how many people didn't GET this. More bewildering was the fact that many of the experts didn't see the simple logic to it. Then again, they weren't looking for it. Of course, as it turned out, the assertion was correct. Even Dan himself was gracious enough to say it was a good point.

So many facets of steroid administration are mired in ambiguity. For instance, if 200mgs a week are recommended, what happens after three weeks when you have the first dose still in your body? Do you now have 200 a week or is it 600? If 100mgs a week of one substance is recommended and 20mgs a day of another is the preferable dose, what is the recommended dosage when stacking the two of them? These questions have never been answered to my satisfaction (still haven't) but it's a moot

point with the short cycle approach. A consequent topic of confusion for many people is; how much of a difference is the effect of one steroid compared to another? The simple truth of the matter is, not much. You see, the body doesn't have receptors specifically for "deca" and others designed only for "anavar." They all work very similarly. The exotic stacks that people come up with are often a convoluted attempt to seem "scientific." Stacking two or more steroids is usually more effective due to a higher dosage than if one were to take a single steroid.

A very simple observation with absolutely no scientific evidence to support it. It's also correct. In fact, the assumption may be more relevant than I realized. There is still some debate and certain drugs will produce slightly different reactions, but as many far more knowledgeable people than I on this subject will attest, a testosterone molecule is a testosterone molecule is a testosterone molecule. And ALL steroids are based upon the formula for testosterone.

The only advantage to stacking is to combine an oral with an injectable in order to provide both an "immediate hit" (provided by the oral) and a gradual taper.

Another point of contention, but follow me for a minute. Mg for mg, orals tend to be stronger and faster than injectables. In other words, if one were to take 50 mgs of an oral a day, the total weekly intake would be 350mgs. I believe most experienced juicers would agree that the 50mgs per day of an oral will wield greater gains, especially in strength, than 350 mgs a week of most injectables. Nonetheless, orals are not very practical when health is a priority.

The more important factor is the anabolic/androgenic ratio. Here is where the health concern plays a large role. It is the androgenic component of a steroid that is so harsh to the endocrine system. For this reason, it makes sense to keep the androgenic levels as low as possible and maintain the more benign anabolic properties as high as possible. The only problem with that is, without some elevation in androgenic activity, gains are almost non-existent. You have to take some of the bad with the good. The key is to take in just enough androgen to allow for the desired growth. This is where so many bodybuilders go awry. High androgen steroids like the various testosterones provide huge gains but they are also the type that look "puffy" and diminish quickly. Once again, it is the more subtle, highly anabolic steroids that will produce the safer and more "quality" muscle gains.

My concern over water retention was a bit overemphasized. True, many people equate bloat with growth and that's inaccurate, but if dosages are kept reasonable, bloat from testosterone isn't as big of an issue as I , and many others at the time, thought.

With all the literature around concerning the wide array of anabolic substances, it may seem a little overwhelming trying to decide what is the quintessential combination for that "perfect" stack. For most intents and purposes, it is a lot

simpler than you may think. When using steroids for health purposes, it is mandatory to consider only those substances that provide an advantageous risk to benefit ratio. This will exclude all veterinary products.

Read this next sentence carefully.

VETERINARIAN MEDICATIONS ARE NOT INTENDED FOR HUMAN CONSUMPTION! The purity guidelines are not as stringent for a cow as they are for a human. They are designed for animal receptor sites which will also work in humans, but much of it is wasted due to the fact that the molecule is floating around looking to attach itself to something that isn't there.

Okay, here we go. This is the statement that evoked the most derision I've ever received as a journalist. What's so ironic is that I had this data verified by a doctor. (Technically, a veterinarian)

Of course, androgen receptors are the same in humans and animals but what a lot of people don't realize is that many medications are species specific. For example, aspirin has a similar effect in dogs as it does in humans, yet it's poisonous to cats. When approaching the vet in question I asked him about this and in all fairness he may have been referring to the fact that medications often contain other substances that are designed specifically for the animal in question.

Another concern is the side effects some people experience on vet roids. Finaplex has been known to produce fever in some users. Trenbolone induces allergic reactions such as hives and night sweats. Equipoise promotes anxiety. This tells you something is not right! I find it astounding that people refuse to confront this evidence and are willing to gamble with their health in order to defend the benefits of ingesting animal medicine.

To be honest, there aren't a whole lot of studies on veterinarian drug use in humans (none, that I know of) so it's difficult to draw an accurate conclusion one way or the other as to its effects. For me, that's enough to stay clear of them. For others, as long as they don't know for sure that something is wrong, they conclude that everything must be fine and dandy. They view their decisions as bold and enlightened, but I see it as just another way of sticking your head in the ground and refusing to see the harsh reality.

The bottom line on vet steroids is that I still wouldn't use them and I still, in good conscience, wouldn't recommend them. Some people argue that it's better to use vet products than it is to use counterfeits. But black marketers know this and counterfeit the vet stuff as well. Not to mention, the purity issue is still a valid one. If a cow gets an infection from a dirty drug, what's he going to say? Moo?

I may never hear the end of this infamous faux pas but at least it was done with safety in mind. No one got hurt by taking this advice. I'll accept a lifetime of ridicule for playing it "too safe" over advising someone to do something that may cause them harm -- which is rampant among many of today's foolishly heralded gurus.

Probably the least egregious of the vet products are Equipoise and Winstrol V, neither of which I would recommend. Many people develop flu like symptoms on Equipoise. Winstrol V is most similar to the "human" winny but it stays active in the bloodstream only for about 24 hours which requires daily injections and a high cost. As mentioned earlier, all of the testosterones (with the possible exception of Sustanon) can cause problems, especially in the older athlete. Parabolin is very anabolic and not very androgenic yet it has other toxic qualities. The only rational choice among the injectables is

Primobolan and Deca Durabolin.

This was a misconception based on the erroneous information at the time. It stems from the fact that competitive bodybuilders used buckets of testosterone (which produced the most dramatic gains) and along with the excessive quantity came excessive negative side effects. But it's the dosages that inflicted many of the contraindications, not so much the testosterone itself.

Primobolan is still a good choice for beginners and women. It really is an excellent and underrated anabolic. (Lots of fakes though) I could never understand why Deca was considered stronger. Could be the bloat. Guys love to see the numbers on the scale go up. I've always gotten more solid gains with Primo. As a matter of fact, I believe the ideal testosterone replacement therapy protocol would be a shot of Sustanon a week alternating with Primobolan on the following week. Unfortunately, neither are available in the U.S.

In regards to Sustanon, I thought of it as a more cautious choice due to its time-released properties and that thinking wasn't far off. Mg per mg, Sustanon is known to cause less water retention and to be less likely to induce gynecomastia than other testosterones. Although the standard dose per vial is a walloping 250 mgs, Sustanon indeed, appears to be more "mellow" than an equal amount of other testosterones. As many experienced steroid users know, Sustanon is made up of a blend of four esters:

30 mgs Testosterone Propionate 60 mgs Testosterone Phenylpropionate 60 mgs Testosterone Isocaproate 100 mgs Testosterone Decanoate.

The proprionate and phenylpropionate are very fast acting -- presumably released into the circulation within a couple of days.

I don't believe this to be entirely accurate.

Besides the fact that many people will swear that they can feel the effects of these testosterones almost immediately, all one would need to do is take a blood test as evidence to its release. I've seen, firsthand, blood test results that were taken shortly after the administration of a single dose of Sustanon (no other steroids were in the body prior to this). The blood test of the subject showed a testosterone level of 4,987 ngs! Naturally, this level will decrease dramatically after a few passes through the liver, as well as excretion of urine and feces. (Over the course of a few weeks, one shot of Sustanon is likely to elevate testosterone levels around 500 ngs -- which should certainly be enough to put on some muscle.) In any event, this proves the point that Sustanon hits hard and it hits quick.

The remaining two esters are extremely long acting making Sustanon a far more "elegant" (Dan Duchaine's term) drug than either cypionate or enanthate, in that it provides a more even distribution. With cyp or enanthate, you get a big peak which diminishes over the course of 10 days or so. With Sustanon, the levels are more stable, which may also be one of the reasons it's less apt to cause gyno since gyno results from a radical and abrupt increase in estrogen.

Most of the literature on Sustanon's duration also states that it's active for up to four weeks. This may be so, but personal experience suggests that its effects drop significantly after about 16 days. Interestingly enough, Sus seems to impart the majority of its effect between 6-10 days after administration when, as many users will attest, there is a considerable boost in libido. (Once again, this is something that is impossible to gauge objectively if one is taking several doses and/or several other drugs at the same time.) It should also be noted that a blood test taken just 6 weeks after the last injection of Sustanon will reveal a depleted testosterone level in the subject, proving that any extended half life is of little impact. (And ease the mind of anyone taking a drug test).

In William Llewellyn's book "Anabolics 2000," he states that Sustanon 250 is the most sought after injectable testosterone "not due its unusual potency or combination of esters, but simply because a stack of 4 different esters is a very good selling point." Although Anabolics 2000 is one of the better books available on the topic of steroids I must respectfully disagree with Mister Llewellyn on this point. I believe that 250 mgs of Sustanon is far superior to 250 mgs of cypionate or enanthate and will yield better results, perhaps for no other reason other than the aforementioned "release time." It's also more cost effective.

Orals are generally more toxic due to their being 17 alpha alkylated. Primobolan tablets are one exception but I can not recommend them due to their ineffectiveness in most everyone other than the first time user. They are, however, excellent for women. Anavar is another oral steroid that is considered very safe but would fail the risk to benefit ratio because they, like Primobolan tablets, will not provide satisfactory results in most people, including women.

This is even more so today. Primo tabs used to come in 50mgs, and you still needed about eight a day, at a buck a pop no less. Today, they're made in 25 mgs tabs and go for about 2 bucks a pop.

I've seen conflicting information on the toxicity of Anavar. (Oxandrolone) Is this another case of the dosage being so low that therapeutic dosing hasn't shown many side effects? Some studies conclude that milligram for milligram Anavar is just as liver toxic and nefarious for raising cholesterol as any other 17 alpha alkylated steroid, while other studies suggest it may actually lower cholesterol (although I can't see how). It should be mentioned that even when a total serum cholesterol lowering effect was witnessed, the LDL and HDL were put in a disfavorable ratio, which negated any positive effects from the overall lower level.

There have been tests that suggest that Anavar lowers bodyfat but I must dispute the reliability of such tests. All steroids will increase the muscle to fat ratio to some degree. Anavar is just one of the few that have undergone extensive testing since it's prescribed in the treatment of HIV. I believe that Anavar produces a "hard" look because it's very good not only at building muscle but it also does a very nice job at forcing glucose into the muscles. And it does all this without water retention, thus producing the "illusion" of fat loss.

The brand name "Anavar" is no longer produced, even though some counterfeit companies still use the name. These counterfeits aren't necessarily fakes, they're merely generic versions produced under conditions of dubious conditions by companies of suspect integrity. The "legal" brand name for Oxandrolone is Oxandrin and its price for ergogenic enhancement is in the outrageous range of \$75 a day. There is a generic version as well as a "paper" version (drops of the drug in a liquid form on a sheet of paper) which are reportedly quite good, depending on the source. There was also a powered version available which I felt was an excellent concept. Make your own pills! The anthrax scare put an end to the mailing of powdered substances, however. At any rate, a counterfeit version from a reliable source may be the only "cost conscious" use of Anavar that I can see. It's a disgrace that the real pharmaceutical companies are such greedy bloodsuckers -- some might say worse than the counterfeiters. (The insurance companies are partly to blame as well.) This stuff cost pennies to make.

Andriol (not Anadrol) doesn't work much better than the various "andro" supplements now on the market. It, too, isn't 17 alpha alkylated. Like the prohormone supplements, several administrations a day are necessary to maintain a suitable level in the bloodstream. I would say that two milligrams of Androdiol is comparable to one milligram of the steroid Andriol.

Not a bad speculation. In regard to Andriol, it never panned out as well as everyone had hoped. Today, it isn't a serious consideration for anabolic purposes.

This and the whole prohormone issue were very hot at the time. As I professed in <u>The Bodybuilding Truth</u>, prohormones are a total dud in regards to being an anabolic agent.

Proviron is best used, arguably, as an anti-estrogen. That pretty much leaves only Winstrol and good ol' Dianabol.

Some people may argue Dianabol as a viable choice because it has the potential for being liver toxic as well as its propensity towards inhibiting the release of gonadotropin from the hypothalmus. The reason it makes my favorable risk/benefit list is because it's just so damn effective! If dosages are kept to 20 mgs a day, the benefits not only outweigh the risks but it becomes an ideal choice for the "short cycle" endeavor. D-bol works great with Primo as a "kicker" since Primo is almost all anabolic with almost no androgenic qualities.

Dianabol has certainly proved itself. Isn't it funny how the first oral (Dianabol) and the first injectable (testosterone) have been shown superior to all the subsequent "improved" drugs. Dianabol has even become popular among non-bodybuilders due to the" endorphin rush" it provides.

Winstrol on the other hand isn't quite as benign as once believed. Mg per mg, it's as hard on the liver as Dianabol and is notorious for elevating LDL levels. As a matter of fact, it's a fair conclusion to say a 17 alpha alkylated mg of one drug is as toxic as a 17 alpha alkylated mg of another.

The best way to implement each cycle would be to choose a dosage as low as possible that will still allow for muscle growth. 800 mgs of Deca will not produce twice the gains of 400 mgs of Deca so be prudent in your choices. At the same time, doing too little will be a waste of time, money, and receptor site acceptance.

They now say that receptor site down regulation is a myth and that the lesser gains are a result of reduced binding proteins. Six of one/half dozen of the other, in terms of the end result.

Let's say you decide on 400 mgs of Deca a week and 20 mgs of Winstrol a day.

This stack turns out to be even better than I realized. Since Deca will increase progesterone and Winstrol acts as a progesterone antagonist, they're a perfect combination.

(The other alternative would be 400mgs of Primobolan a week and 20mgs of D-bol a day which is the exact same overall dosage).

An excellent stack, and supposedly a favorite of Arnolds. Primobolan, however, is still the best drug, in my opinion, for the "health conscious" athlete looking to dabble.

But we can't discount the bottom line, and that is; testosterone provides the best bang for the buck -- and in all likelihood, a more "safe bang" than most anything else. (besides Primobolan) It's all dosage dependent. 300 mgs of test is arguably milder than 400 mgs of Deca yet it will yield very similar, if not better, results.

Yeah, I know to some of you that sounds like a girlie girl cycle but we're being health conscious now, aren't we? Do the full 10 tabs of winny (20mgs) for three weeks. At the beginning of the fourth week, take 8 tabs for 2 days, then 6 tabs for 2 days, 4 tabs for one day, 2 tabs for one day and only one tablet on the last day.

The concept of reducing dosages is still controversial. Since the injectables have a long half life, they are, in a way, self tapering. You may be better off just coming off and allow the testicular pituitary axis to normalize as quickly as possible. Since the dosages suggested are so small, I don't think it would matter one way or the other.

Another idea is to just take a small amount of an oral in the morning. The theory here is that it will prevent catabolism but since the half life is just 4-6 hours you'll be "clean" by the time you go to sleep (when most LH is released) and the body can regenerate overnight. This is certainly worth a try but I wouldn't recommend extending the cycle in order to do it.

By the way, you may want to take them sublingually to allow for more of the drug to be absorbed directly into the bloodstream and less through the liver. (The validity of this practice, however, is questionable.)

I spoke with Dan Duchaine about this and his viewpoint made sense. By bypassing the liver you also bypass the time in which the drug remains in your bloodstream. In any event, I don't think taking something sublingually is much different from just swallowing it.

Take your first 200 mg shot of Deca on day one. Wait three days and do another 200 mgs. Wait four days and do another 200 mgs. Five days later do 100 mgs of Deca. After a week, do your last shot of 100 mgs of Deca. In this way, there will be an abundance of the drugs in the bloodstream when the growth stage is at its peak and it provides enough of a gradual decrease to allow for the body to begin readjusting and "cleansing itself."

A crude non-technical term -- but you get the idea.

This may be of little consequence since the testicular axis has not been inhibited for very long. For this reason, there should be no decrease in libido whatsoever. Some men claim to have an increase in their sex drive after a short cycle! I'm only speculating here but perhaps since the body is used to a higher level of testosterone it attempts to "regulate" itself by producing more as you're coming off. Sort of a homeopathic process.

I don't know if homeopathic is the best choice of words here. Maybe adaptation or vaccination? Compensation? No better, is it? Never mind.

Still, at the end of a cycle, it is recommended that a course of Tribulus Terrestris be administered. This may aid in the normalization of luteinizing hormone. It is also a good idea to take Silymarin, NAC, Fenugreek and Primrose Oil during the administration of the drugs. Silymarin and NAC work as liver protectants while Fenugreek and Primrose Oil help balance HDL and LDL levels which tend to get disrupted with the use of Winstrol.

Fenugreek will lower LDL but may increase estrogen as well as block absorption of zinc. Skip on it. And to those who used it, sorry. No one knew. I'm sure it didn't make that much of difference anyway.

Men over 35 may choose to include Saw Palmetto and Pygeum to the herbal array to guard against prostate enlargement due to a spillover of DHT.

Pygeum good. Saw Palmetto bad.

Although I'm not a big fan of Phosphatidylserine as a muscle building supplement, it wouldn't hurt to take some at the end of a cycle to help protect against a backlash of cortisol. Procaine, a life extension drug that is reported to have anti-catabolic and cortisol suppressing properties may also be helpful at this stage. It goes under the brand name of KH3 and is distributed by the International AntiAging Systems. Fax (011) 44 541 514145.

By the end of the cycle, you can expect to be at least 6 to 8 pounds heavier. If your diet was on target, 4 or 5 of those pounds will be muscle. If you get enough sleep and train correctly, you will keep it. Most advanced lifters couldn't gain five solid pounds of muscle in a year if they trained naturally. This method will give you that almost every time out. A year's worth of muscle in a month ain't bad.

And that point is what it's all about in a nutshell. Unfortunately, too many guys want to be big yesterday so they use way too much and stay on for way too long and then they go from HCG to Clomid to Bromocriptine to Nolvadex to drug to drug to drug hoping to salvage their gains. Sooner or later, you have to pay the piper. The bottom line is; it's all about how much free testosterone is available. If you have a lot of SHBG, you can take a

gram a week and still not have the available T of someone who takes much less but has a lower SHBG. And the more test you take, the more it will bind, which is why high dosages are mostly waste. You can get bigger with more gear, but it won't be quality muscle.

I should mention at this point that if it is your first or second experience with steroid use, take all the recommended dosages and cut them in half. I would also recommend holding off on steroid use altogether until all "natural" pathways have been exhausted. Anyone under the age of 24 should avoid using steroids since their natural testosterone and growth hormone levels are still so high it seems pointless not to take full advantage of them.

I feel more strongly than ever about this. Now that I have a son this age I have to admit, I would hate to see him using steroids. What's really disturbing is when teenagers ask advice on how to use them. I always tell them not to, but that isn't what they want to hear. Along with aging comes some cautious behavior. It reminds me of the quote by Winston Churchill: "Anyone who is young and not rebellious, has no heart. And anyone who is old and not conservative, has no brain."

As the baby boomer generation becomes more aware of youth extending procedures, hopefully there will be an increased demand for the end of prohibition of steroids. Much like plastic surgery, drug therapy can have an incredible life enhancing and confidence bolstering effect, IF, it is done correctly. Mess up and you may be far worse off than when you started. We can all take a tip from the old timers who kept steroid use to a minimum. Not only did they not experience any ill effects, (most of them still look pretty good!) but they didn't draw attention to themselves by exhibiting indiscreet and often hostile drug induced behavior. Maybe if everyone had treated these remarkable compounds with the respect they deserve, they might still be legal.

I freely admit that I have achieved a level of physical status unobtainable without steroids. Through the judicious use of steroids I am now, at the age of 44, twenty five pounds heavier than my maxed out natural weight and my fat percentage is still under 9% even though I haven't had any "assistance" in over a year. To a lot of muscleheads, my 190 pound body is hardly an opposing sight but in my mind, I take up enough space. For someone with a "skinny kid" mind set, 190 muscular pounds is a dream come true.

This paragraph was deleted by the editors who first published it. I guess they felt that 190 pounds wasn't BIG enough. For me, 190 feels just right. I don't need to get overstuffed just so some lunkhead won't think I'm too small. Personally, I could never comprehend why anyone under 6 feet tall would want to weigh more than 250 pounds. Even if your bodyfat is low (which it usually isn't) carrying that much weight is unhealthy, doesn't feel

good, and doesn't look good. Even while on steroids I never went much over 200 pounds at a height of 5' 11"-- dispelling the notion that I either took a lot of steroids or that steroids turn everyone and anyone into a mass monster. At age 49, I'm still 190 pounds with about 9% bodyfat, and I eat whatever the hell I want.

Since I look the best I ever have, I feel as if I've been given a "second youth!"

This in no way is meant to be an encouragement to engage in illegal activity. All information is for educational an entertainment purposes only, kind of. This article is also in no way a disparagement to those who wish to train naturally. Steroids are a tool. If you decide to use that tool, know what you are doing.

On that note, allow me to wish you the very best of health and the best of luck on your genetic altering journey. Remember always, to use your new found super powers only for GOOD and not for EVIL. Grow in peace.

Amen.

IS DECA DEAD?

This may come as a surprise, but I can say with all certainty, after all these years of being involved with bodybuilding and the anabolic applications therein, Deca Durabolin is an overrated and ultimately, outdated drug. I say outdated, not because there have been newer and better drugs invented, but based on what we now know, it just doesn't hold up as a wise choice.

At one time, Deca was considered a safe drug due to its low androgenic properties. But such assertions were presumptuous and off base. The fact that Deca is anabolic without being highly androgenic holds no benefit whatsoever since it will still suppress endogenous testosterone as much as equal amounts of straight testosterone. It'll also cause as much water retention. And it will do more to damage sperm count than any other steroid. If you want to have children, stay away from Deca!

As anyone knows, testosterone will increase libido while you're on it. Deca, on the other hand, will decrease it. (The dastardly deca-dick) Deca will also aromatize and inflict gyno, yet anti-estrogens are useless in its prevention since the infliction isn't estrogenic in nature. The gyno caused by Deca is due to progesterone.

Deca is often used by men concerned with accelerated hair loss from androgens but if you're using DHT inhibitors such as Proscar along with Deca it can make the condition worse!

Not only is Deca also expensive, it's often faked. Add on the fact that it is detectable on a drug test for up a year after the last injection and I see no reason why anyone would still want to use DecaDurabolin.

HCG -- Without The Gyno

If steroids are used in the manner which I suggest, the use of HCG is unnecessary. However, for anyone who chooses to use higher dosages and/or stay on for longer periods, HCG can be an invaluable aid in "easing the crash."

When it comes to long term steroid use, there are no free rides. Sooner or later you have to come off and when you do, there's a good chance you'll be hating life. Going from Superman to David Spade is no fun.

What goes up must come down, but one way to cushion the blow is with the use of HCG.

HCG (Human Chorionic Gonadotropin) will help jump start the production of luteinizing hormone and get your natural testosterone flowing again. In this way, the body's own testosterone will help support the muscle gains obtained while on a cycle. Of course, it too will inhibit the production of gonadotropins, so in some ways it just postpones the inevitable. I feel HCG's biggest appeal is in its cosmetic capability. It will force the testicles to produce semen and bring them back to normal size. Once they're back, they're back -- in appearance anyway.

Read the existing literature on HCG and the one consistent caveat is its propensity to inflict gynecomastia. The reason for this is the abrupt elevation in testosterone causes an abrupt elevation in estrogen. This problem is easily alleviated, however.

The standard method of using HCG (for fertility stimulation) is to take 1000 I.U.'s once a week for 5 weeks. Bodybuilders expounded on this and use 2000 I.U's every 4 days.

It stands to reason if this drug causes a rise in testosterone that is so fast the body can't adapt, doesn't it make sense to use lower dosages spread out over the course of daily doses? That's a hypothetical question. Of course it is. As a matter of fact, Dan Duchaine suggested taking 25 I.U's every few hours but for some reason this advice is still ignored.

I've found that 200-500 I.U's of HCG (spread out over four equally dosed individual shots) every day for one week is more than plenty for producing the effects most men are looking for. Prolonging the treatment not only delays the recuperation process but will make the body less receptive to future applications. Get the gonads going and get out!

For an extra precaution, a concurrent course of Proviron may be added (a single 25mg tab should suffice) as well as 1000mgs of Calcium D- Glucarate twice a day. DO NOT TAKE CLOMID. It will only prolong the rehabilitation process.

Note: Never "bridge" steroids, i.e., use a low dose in-between cycles. The act of bridging is nothing but denial. People bridge because they can't deal with going off completely. But using small dosages in-between cycles will not impart any anabolic effect and just keeps the HPTA suppressed.

MAIL ORDER MUSCLE

The practice of ordering steroids through the mail is a precarious endeavor. It can be a book in itself. Instead of elaborating on a host of ancillary issues on the topic, I'll try and get to the bottom line by addressing some common questions regarding this issue.

Q: With all the scrutiny concerning overseas mail these days, is it better to order from a domestic source?

A: Opinions differ as to whether using a domestic source is superior to a foreign source with the consensus going with the domestic. Mail from overseas is more suspect to inspection and more likely to be opened. On the other hand, a domestic source carries its own set of problems which are rarely addressed. If a company is working within the borders, they are far more likely to be shut down. It's a fair bet U.S. officials aren't going to go to Thailand and stop a Ma and Pa steroid dealership. All they can do is keep an eye out on what comes into the country and as we all know, this process isn't very efficient. Another drawback to the domestic source is, if it gets busted, the Feds are likely to keep a sting operation going. They continue to advertise and take orders. They collect a nice list of customers this way. All it takes is a phone call to the local division of the FBI in your area and before you know it, you're getting a bang on the door at 4:00 in the morning. Anyway you look at it, it's a risk.

Q: I see websites all over the internet selling steroids. How can I tell if they're legit.

A: Chances are that any site that advertises openly is a scam. And if they aren't, they probably won't be in business for very long. Don't be a sucker.

Q: I received a notice from the DEA that a package I ordered was confiscated. What should I do.

A: Ignore it! You know nothing, you hear me!!? It's junk mail as far you're concerned. A small order of steroids for personal use usually won't warrant an investigation and a notice is sent instead claiming that a package was intercepted and you need evidence that it belongs to you. Don't be an idiot and go down there asking for your drugs!!! These packages are usually discarded (right into someone's pocket) and you shouldn't have any problems.

Q: Should I use a P.O. box when ordering gear?

A: No! The last thing you want is to have an illegal substance in a government building. P.O. boxes must be registered with ID that will lead a trail straight to your door. Unless you can get one under an alias, don't do it.

Also, whenever ordering by mail use a fake name, or one similar to your own. (i.e., if your name is "Bill Johnson" use something like B. Jackston")

Even if the package arrives, the first thing you should do is write WRONG ADDRESS RETURN TO SENDER in magic marker on the envelope. The reasoning here is, in a worst case scenario where the Feds were waiting to bust you, their evidence will be tainted. As a defense, you can always say that the package wasn't yours, which is why you wrote upon it. But don't explain this to ANYONE -- especially that nice cop who has a son about your age and he wants to "help" you. He's the most dangerous guy in the room.

Q: What if I'm asked to sign for package?

A: Don't do it. Signing something is ten times more incriminating.

Q: I got a package I didn't order. Can I keep it?

A: Receiving "gifts" of contraband is an old law enforcement sting. Sometimes it'll be something like an innocent old lady claiming to be your neighbor or a hot young babe who just moved in and got your mail by mistake. You'll be more likely to accept it from these people than from a guy who has "COP" written all over his face. But if you do, expect a knock (or a crash) on the door ten minutes later after you've opened up the package of goodies. Entrapment? You betcha. But it happens all the time.

Q: What if I don't get my order?

A: You've been screwed. Treat it as an inexpensive lesson.

For more detailed information on this topic I'd recommend the book "Legal Muscle" by Rick Collins (www.legalmusclebooks.com)

THE NEW PROHORMONES Same Shit Different Day

Allow me to say something right off the bat. Pat Arnold isn't my favorite person. And I won't be expecting any love letters from him anytime soon either. Actually, I have nothing against the guy, it's his products I don't like. But some people take it as a personal attack if you don't care for their work. Nevertheless, I still maintain that prohormones are a worthless product. I call it like I see it and that's the way I see it. And I've seen plenty.

Pat, as you may know, is the inventor of prohormones starting back with the first ones that don't work right through to the latest ones that don't work. I guess you can't blame him for trying, though. Actually, I can. And I will.

For one thing, Pat admits the old prohormones were flawed, but for some reason we're all supposed to forget about that and go right out and buy the new improved version.

The official stance of the Journal of the American Medical Association on prohormones is that they do little except raise estrogen levels. Now, you may not agree with everything I say but nothing I said ever raised anybody's estrogen levels.

One of the selling points of these substances is that they're "just one molecule away from real testosterone." Well, a monkey's DNA is just one step away from a human's DNA. But that's a BIG STEP! It's similar to testosterone but that's like saying that a Honda is similar to a Lamborgini. They're both made of similar materials put together in a similar manner. Rosanne Barr is biologically similar to Pamela Anderson. Similar is not the same.

Pat is akin to somebody who can almost build an airplane. You'd certainly have to be very knowledgeable in aeronautic engineering to construct a blueprint for a plane. But if the plane doesn't fly, what good is it? It's the same with prohormones. You must have an outstanding conception of molecular science to conceive them, but if they don't work, what good are they? Worse yet, if they do harm...?

This is what angers me the most. The damage that's been done to thousands of people because of this guys little science experiments is beyond reprehensible. He sees his work as an ongoing creative endeavor, which may very well be the case. But YOU are the guinea pig. I've asked Pat outright; "What do you say to all the people who've had their hormone balance disrupted because they had used your products?" No answer on that one so far.

The latest (at the time of this writing, I'm sure they'll be more) in the parade of prohormones is 1-AD. I must admit, this one has gotten some good reports. Maybe Pat

finally hit upon something. Then again, if it was so good, he'd use it, wouldn't he? Hmmm.

I can't say that studies have proven 1-AD to be bogus. That's because there haven't been any -- which should make you think twice before putting it in your body. But part of my job is checking this stuff out, so I gave it go. All it did for me was bloat me (even though he says it can't) and killed my libido (even though he says it can't).

I'm especially fond of the ads that claim all of these compounds are a thousand times more anabolic than testosterone? Where do they get these preposterous statistics? By the way, nothing is more anabolic than testosterone so if you're going to exaggerate, at least make it a credible exaggeration.

Still, there are those who swear it worked for them. One guy told me that he used 1-AD while increasing his caloric intake an additional 1000 calories a day and he put on 6 pounds in two weeks! Gee, I guess it had to be the 1-AD. What else could have caused such a dramatic weight gain? Well, I'm convinced.

DOES IT MAKE SENSE TO CENSOR?

I honestly believe that prohormones should be banned. This may sound odd coming from someone who is so big on civil liberties but I feel one thing has nothing to do with the other. One argument I get on this is; "How can I be against the criminalization of steroids yet want prohormones to be illegal?" Illegality and criminalization are different issues. Unavailablity protects the public, but if some guy were to get a hold of some prohormones and took so much of them that he grew breasts, I don't believe he should be punished for it. It's the persecution of people for making personal choices that I find so repellent. Maybe one day, those in charge will understand the difference.

In the very least, products such as this should come with a warning label, not unlike alcohol, cigarettes or OTC drugs. This is something else that will be met with grave resistance, much like the rally against labeling music. The recording industry sends out cries of "censorship!" which is absolutely not the case. It's a warning -- something to alert the consumer of the consequences of the product they're purchasing. Use at your own risk. I know that I'd like to know what they are. I wish I knew beforehand the consequences of all the "andro" products I used. Instead, I put my faith in the "gurus" who spoke my language. But that's where the term "con artist" comes from. "Con" as in instilling "confidence." It's what they do so well -- sometimes so well, you don't even know you've been conned.

Bottom Line on 1AD: I think the stuff blows, but if you've used it and it worked for you, or think it did...Mazeltov.

Maybe one day Pat and I will be able to mend our differences and sit down and have a drink and a laugh about it all. They say that human life span may someday be capable of reaching 200 years so I guess anything is possible.

IDOL GOSSIP The Lost Interview

The following is an interview I did for a bodybuilding website. It was never printed. I'm not exactly sure why, but I'm presuming the site feared some sort of retribution.

The interview in part concerns my association and the "about face" of the Testosterone website. At first, I regretted the fact it was never printed, but before long it was ancient history to me -- something that's better off left in the past and there's no sense bringing up bad blood.

But, what the hell.

Testosterone.net has become extremely popular and the Biotest line of supplements are doing very well, yet, they evidently still have a need to badmouth people and to spread lies. Now I get to set the things straight, or at least, tell my side of the story. This may not be of interest to everyone, and if you never read the Testosterone site, it might be pretty meaningless to you. Nevertheless, I know a lot of people are curious as to what went down there and what goes on behind closed doors of some of these supplement companies. So here's my frank and uncandid views as they were presented to the interviewer whose name I shall keep anonymous but I'll call him "Jim."

Jim: Hi Nelson, and thanks for taking the time to talk with (.....).

NM: My pleasure Jim. Glad to do it.

Jim: I wanted to get right into your affiliation with Testosterone but tell us what you've been up to since you left.

NM: I've been very busy. I still write for MuscleMag and American Health and Fitness as well as a few non-bodybuilding mags. I'm working on a new book which should be ready by the summer. I also stay busy performing and teaching, and living in New York is a non-stop kick.

Jim: By teaching, you mean personal training?

NM: Nah, I have some private music students. I used to do the personal training thing, but no more. I have a few clients who refuse to leave though. (Laughs) At this point they don't need me but now I'm more of a therapist than a trainer to them. We've developed a friendship and I'll keep it going as long they want me for as long as I can.

Jim: I understand you're an actor.

NM: Not really. I've done some stuff -- bit parts in movies and television, but it's just a sideline. I don't take it seriously. I also don't think acting is a high art. A lot of people can act without any training whatsoever. Music is much deeper. It requires a lifetime of devotion. When people ask me what I do, the first thing I say is "I'm a musician."

Jim: You sound like you take it very seriously. What do you say to people who think that makes bodybuilding a lesser priority to you?

NM: I'd say they're right! But I don't see why one thing must be in competition with the other. If bodybuilding was all I did, that would make me pretty one dimensional, not to mention boring as hell. I love bodybuilding but it isn't quantum physics you know. I believe I have a unique perspective on it in part that I'm one of the youngest guys who has a firsthand experience in the sport as far back as the 60's. That's because I was into bodybuilding from when I was 12 years old.

Jim: Wow, were you like the most muscular kid in the seventh grade? (Laughs)

NM: Just the opposite. I was always a weenie little kid. Bodybuilding was a way to look less weenie. I realized right from the start that I would never be a pro or an exceptional athlete. When I was 15, I started helping a couple of friends learn the ropes of weightlifting. They knew absolutely nothing while I knew quite a bit for my age. One kid had the ideal mesomorphic physique and the other kid was kind of big boned and barrelchested. Within 6 weeks, both of these guys could outlift me in every move even though I started out stronger than them. The big kid blew up -- put on like 30 pounds in no time. The mesomorphic kid had a classic bodybuilders build. I swear, at 15 he could have been in the magazines -- full dense muscles and a square Steve Reeves chest. I thought; 'How can that be? I'm so much more knowledgeable in the Weider Principles!' (Laughs) And bodybuilding is scientific, so those who know more should look better, right?! That was a bitter pill to swallow.

Jim: As you say, "genetics my friends."

NM: Yeah, I learned that lesson fast.

Jim: Did you continue bodybuilding throughout the years?

NM: On and off. Nothing serious. I never got to look too impressive but those early days of training gave me a nice frame. I don't have any bodypart that's especially outstanding but I have good lines and good symmetry. In my 20's, I didn't need to do much to stay in shape and I wasn't interested in being real big. I had more of that "Michelangelo's David" type of body...skinny by today's standards but this was the 70's -- thin was in, and the dames didn't mind one bit. (Laughs)

Jim: So when did you get back into bodybuilding?

NM: Not until years later. I was already in my 30's and my son was entering that awkward early teen stage and wanted to fill out a little. I bought him a barbell set and showed him some stuff, and began working out with him. That's when the bug bit me again. I was never badly out of shape but when I started making some decent progress, I loved what I saw and I began training with a new focus and intensity -- much harder than when I was a kid. There's been no turning back since.

Jim: Is this when you started developing your controversial principles?

NM: Not right away. I had a lot of catching up to do. I was out of touch with the bodybuilding scene and all the new supplements. I realized a lot of the old techniques were no longer used. I was intrigued by all the new information out there. This was the late 80's. I started using the latest methods but the results were very limited. I kept hitting a wall. Being an artist, I took a more abstract and analytical approach to training. I kept asking myself 'what if this...what if that?'That's when I began formulating some ideas that went against the grain but nonetheless proving themselves correct. I slowly began to realize that there was a much better way to do things. I stopped using the traditional methods with the personal training clients I had at the time and had them do things that were working for me and they all started making progress again... much faster too. After a while I went back to some of the old journals and realized that many of my brilliant observations were exactly what Vince Gironda was teaching 30 years ago! (Laughs)

Jim: Do you follow all of the Gironda teachings?

NM: I've studied them all but I've made a lot of adaptations. He was off on a few things, even contradictory, but he was still so ahead of his time. A genius really. Maybe the only genius the bodybuilding world has ever had with the possible exception of Rheo Blair and maybe Dan Duchaine. But even geniuses can be wrong sometimes.

Jim: I found some of your writings to be hard to accept at first but I have to admit, once I stopped doing cardio my gains shot up and I didn't put on any fat.

NM: Of course. That's always the case. The only people who disagree with that advice are the ones who don't take it. Sometimes the antagonists will scream; "References! References!" My answer is: Common sense! Common sense! Try it and see. But some people would rather argue than take action.

Jim: Do you do clinics and seminars?

NM: I spoke at a few but I'm not a very popular speaker! (Laughs) You have to realize, when a gym puts on a clinic and pays someone to come in and talk about glycemic

indexes and food timing and food combining and supplement timing and doing your cardio and taking prohormones and then I come along and say it's all a bunch of horseshit, well...it kind of defeats the purpose.

Jim: Ha! That's true! Do you go to any of the big shows and symposiums?

NM: God no. I have little interest in bodybuilding shows. Maybe I'm jaded.... I remember the day -- man, I sound old -- when bodybuilding shows were something special. Today, everyone looks the same. The presentation is bad. They're essentially poorly run beauty contests. It's so dumb. Symposiums are more for people to rub elbows, but the few I've attended, I've kept a low profile. There aren't too many people in this industry I care to mingle with. I choose my friends with a lot of discretion, not to mention some of the people at those things want to see me dead! (Laughs)

Jim: This topic can be an interview in itself but I wanted to talk about your tenure with Testosterone. I want you to feel free to be as honest as possible, so don't hold back.

NM: You got it.

Jim: First off, why did you leave?

NM: Well, technically I was let go. Both Charles (Poliquin) and I were fired at the same time. But had that not happened I know we would have left not long afterward. They were going in a direction that neither I and Charles felt comfortable with. And we let it be known.

Jim: What was the problem with Charles?

NM: Well, I shouldn't speak for Charles. I can only say what happened to me.

Jim: In what way did (Testosterone) change as far as you could tell?

NM: When Testosterone started out I thought it had a great concept. The idea was to take the void left by Muscle Media 2000 and do it better. I was a fan of Muscle Media so this was a dream come true in a lot of ways.

Jim: Did the excessive plugging of the Biotest products bother you?

NM: Believe it or not, no. What bothered me was that they were doing exactly what Bill Phillips did, except that TC and Tim either didn't want to admit that was the plan all along or they didn't want to admit that they changed along the way. I'm still not sure which way it was.

Jim: Both Muscle Media and Testosterone were successful when they were geared to a hardcore audience. If that approach worked, why would they change?

NM: Because every bodybuilding business is reliant on the sale of supplements and the biggest market for supplements is beginners. They're the most likely to buy because they haven't gotten wise to the con. But getting that mainstream market is hard. Hundreds of companies start up and fold within a year. Testosterone did what Phillips did by appealing to the more advanced hardcore audience, which is much smaller but more devoted and willing to give allegiance to those who speak the same language. It worked very well.

Jim: So why did they change?

NM: For the same reason Phillips changed. You can only go so far with an educated audience. Once you lay out the stuff that works and expose the rubbish, there isn't much left to talk about. It's time to sell supplements. At first, they only sold creatine, protein and tribulus -- all proven products. And they weren't pushed hard. But if you want to make millions you have to sell lots of stuff and advanced trainers know better. That means appealing to the kids and the newbies.

Jim: I guess that's true. I never thought of it that way. You were their main writer in the beginning weren't you? You had a lot of articles the first couple of years.

NM: I wrote most of them, yes. In fact, both TC and I had to use alternate names to make it look like there were more people on the staff! Except that I felt he hid behind an alias byline to attack people, but that's another story. Things were moving very fast and changing all the time and readers were responding to it. I thought we were really on to something. In the early days, TC spoke about Testosterone being more than just a bodybuilder magazine. It was intended to have more of a "being a man in the 21st Century" theme, which I thought was very hip -- a sort of combination of Muscle Media 2000 with a little Esquire and a little Maxim. It would talk about men's issues and a man's place in the politically correct world. I wrote about everything from parenting to a piece called "Sex Cells" which took the opposite attitude toward strip clubs than expected. This concept of writing beyond bodybuilding topics was open to everyone but not too many of the guys could be articulate on any topic beyond bodybuilding. That left me and TC. One of my favorite articles was called, "Where Have All The Heroes Gone?" It was a tribute to "ballsy" men throughout history. TC wasn't crazy about my choices, though.

Jim: Really? I remember that piece. I liked it. Who did TC have a problem with?

NM: For one, he hated my choice of Rudy Giuliani. Remember this was before September 11. I guess my choice wasn't that bad after all.

Jim: Well TC has praised Clinton so that tells you something.

NM: Oh, he LOVES the Clintons! I guess that's where he learned that being coy and evasive was so admirable.

Jim: (Laughs) Okay, getting back to the website, Testosterone did have those elements you spoke about -- men's issues along with no nonsense bodybuilding info.

NM: Right, but things started getting weird. TC and I started out friendly enough even though a lot of people had a problem with him, mostly for mouthing off about some steroid sources that sold legit stuff...this was back when he was with Muscle Media. They got busted and... anyway...I tried to see past that stuff and give him the benefit of the doubt. But we never seemed to be on the same page. He changed his mind so many times I didn't know what he wanted half the time. He was very vague and evasive. Very unconfrontational. I wanted direction and specific answers so I could get to work on things and he'd sort of waffle back and forth. At first I thought it was the fact that TC had that "laid back California vibe" and I had this "in your face, let's put all the cards on the table" New York thing happening. I was maybe too eager to get things going. I think he saw it as too aggressive.

Jim: Too aggressive for a guy who is editor of a magazine with the subtitles Dangerously Hardcore and Muscle with Attitude?

NM: I'm glad the irony of the situation isn't lost on you! (Laughs) TC didn't want to come off like Bill Phillips so he pretended to care about everyone's opinions. One problem; you ask me my opinion and I'm going to give it to you! He didn't like that. But everything I said was meant to better the mag and was open to debate as far as I was concerned. It's funny. TC told me a story once where he made a suggestion to Bill Phillips to which Phillips responded, "No. We're doing it my way." TC then said; "Do you just want a bunch of yes men?" And Phillips shot back. "YES!" I thought that was very funny -- and prophetic. At least Phillips admitted it. TC wanted yes men too. When Chris Shugart came aboard he got what he wanted.

Jim: So is Chris TC's lap dog?

NM: (Laughs) Well, let's say he's a "company man!" I don't like to talk bad about people, but you know, Chris has said some petty bullshit...how I was consumed by my ego and shit -- he doesn't even know me. So, the way I figure it, the gloves are off. He won't discuss it man to man and they monitor their message board so...

Jim: Let's have it. Give me the dirt!

NM: You know...nothing against the guy. He's not a bad writer. But...I felt...a lot of people felt...his early articles were just watered down versions of older T-mag articles. He wasn't bringing anything unique to the table. The whole concept of the site at first was

that everyone was a personality. I was the "plain talk" guy. That lasted two issues. Bruce was the consumer watchdog. We were supposed to get Dan (Duchaine) but he wasn't interested. Anyway, Chris was a surprise to everyone. It was like, who's this? But whatever TC said, Chris loved, ya know? So anyway, he became the golden boy and I was viewed as the problem child.

Jim: That's not surprising. Sticking your nose up the bosses butt works. I see it all the time.

NM: Yep.

Jim: Personally, I can't read the site anymore. Every other article is an ad for Biotest. The writing is lame. Now they're doing things like interviews with male porn stars!

NM: Yeah, they put down the newsstand mags for having girlie pics but do interviews with guys whose job is to ejaculate in front of a camera. I don't get it... but what do I know?

Jim: Occasionally there's a good article but there isn't too much that's interesting.

NM: I know some good people who will contribute to the site now and then and I don't blame them for making a buck. My problem was that I was told I would be more than a contributor -- more of a partner, not financially, but in terms of a contributor -- so my reference is different. I will say this...they have one of the best looking sites on the net. The graphics department and the artists did a great job. That takes money of course, and Tim has money. Truth be told, I thought TC wrote some good stuff when he was under the tutelage of Bill Phillips. He just started to lose it after a while. Bruce had some good stuff even though we disagreed on some topics. I thought Ian King, who knows his stuff, was a nice guy but you know, no one knew who he was until I did an interview with him to get him some recognition. We were so much in agreement on training that I didn't know what angle to give the article so I used something cheesy like "The Thunder From Down Under" because he was Australian. I was ready to scrap it until my wife said, Go on... it's gimmicky but it's fine." As it turns out, that was the only time Tim wrote to me to say "good job." I thought Ron did a good job taking over the magazine reviews but they had such a short leash on him he couldn't do much with it. TC hated when I wrote funny pieces. He actually said to me; "There's only room for one funny guy here and that's me!"

Jim: Wow, that's incredible. I liked those mag reviews you used to do. I even liked the few that Rob Schuh did. The new ones aren't at all like that.

NM: I figured Tim Patterson wanted to advertise in the Weider mags, which they eventually did, but my scathing reviews, which were encouraged at first, put them in the

doghouse with the Weiders. By letting me go it was an opportunity to go back to Weider and say; "Hey, it wasn't us! It was that Montana guy and we fired him!"

Jim: Wow, that's pretty sleazy. Now I have to ask you something. TC wrote that you kept reminding him of your high IQ.

NM: You know...I said that ONCE to TC. He was putting together a bio of the staff and wanted interesting information so I mentioned that I never finished high school -- but my I.Q score was 170. Now I've taken IQ tests since then and the results have varied wildly. Some are a lot of algebra, so if you know algebra, which I don't, you'll score much higher. I'm good at logic so the ones that emphasize those questions, I do well on. But even that stuff is arguable. For example, out of the letters A, E, T, and O, which doesn't belong?

Jim: I'd say the T because the others are vowels.

NM: Right! But it could just as well be the O, because the others are all made up of straight lines. See what I mean? On some I.Q tests 140 is average and on others it's the upper register. So what does it mean, really? I'd say a more accurate number of my IQ is around 150... which isn't bad but...IQ tests can't tell how insightful or creative a person is. It can't tell how skilled a person is. Even wit is a form of intelligence. It's really an elitist bullshit thing. Hey, I know very educated people who are nitwits. Personally, I think a really good mechanic can be as smart and skilled as a doctor, but one has a fancy degree and another has a blue collar skill. Some comic book art is better than some of the stuff hanging in the Museum of Modern Art...I'm not sure what I'm trying to say here. Is this making any sense?

Jim: Perfectly.

NM: Okay, where were we?

Jim: Testosterone. So when did the bottom drop out of everything?

NM: Yeah, right. One day TC wrote an e-mail -- we did most of our conversing by e-mail -- and he said "I heard that you had bad things to say about me." I was flabbergasted. I was like...'what's this? Fourth grade?' I said; "What are you talking about? Tell me who said what and I'll respond to it." He refused and just started playing games with me...not printing articles... when he did, he'd mess with the prose...late checks, printing letters criticizing my work -- a few of those I'd swear were written by him. This may seem slight, but he printed the title of one of my articles all in lower case. Any first year journalism student knows you don't do that.

Jim: Was that meant to be a passive aggressive way to belittle you?

NM: So I'm not being paranoid? (Laughs)

Jim: I was a psychology major so I studied stuff like this.

NM: Maybe it was a Freudian slip. Who knows? At any rate, it was clear the time had come to move on.

Jim: Well the fact that he fired Charles puts you in good company, that's for sure. I always liked his stuff. It's strange that TC had a problem with you and Charles being strong personalities. In his editorials he often talks about being an individual and not succumbing to authority. I guess it's okay when he does it, but if someone else does it he cries "foul!"

NM: Yeah, well...it's easy to dish it out but tough to take.

Jim: He also made claims that you and Charles had ego problems.

NM: Isn't it interesting that everybody who no longer work for TC has an ego problem? Phillips, Schuh, (Will) Brink, (Jerry) Brainum, me, Charles...he's put down Dr. Eric Serrano who is one of the most genuine people in the business, and also one of the smartest. But he won't cower to Tim or TC, so they take shots at him. That's wrong.

Jim: I read one weird editorial where he's talking about getting into fights or some such baloney. For some reason, I don't see him as a tough guy.

NM: He tries to come off like a bad ass and a rebel. Meanwhile, this is a guy who lives in La Jolla, California. To TC, being a rebel means wearing sneakers to the country club.

Jim: That's funny! A lot of our readers have torn into him because he isn't that big.

NM: You know, that doesn't even matter. Dan Duchaine wasn't that big. A lot of guys who are really knowledgeable aren't that big. Bodybuilding shouldn't be just about who's bigger than who. That's genetics. But ... if you aren't that big or even that well built, don't go around calling yourself a T-MAN. God, that is so embarrassing.

Jim: Tell me about it. It's so dorky.

NM: Well, it's geared to kids. Grown ups don't call themselves T-Men for gods sake. Whatever.

Jim: I understand you've had some confrontations with Bill Roberts.

NM: Oh boy, hmmm...The last time I spoke with Bill Roberts I e-mailed him concerning a statement he attributed to me that wasn't accurate. I just wanted to edify the situation.

He wrote back "Fuck You!" and had me killfiled from e-mailing him. I thought it was funny! It's like a kid who slaps you and then runs into his house and locks the door! Bill is one of those people who I believe was overpraised as a child. He can't accept anyone not thinking the world revolves around him. He really has illusions of grandeur -- smart about chemistry and clueless about most everything else. There seems to be a trend toward that lately in this industry.

Jim: A couple of issues back some of the Testosterone staff ran pictures of themselves as proof of their expertise and supplement line and to quell the criticism they've been getting. Did you see that? What did you think?

NM: Yeah, someone told me about that. Well... TC had a shirt on. Tim is a skinny vascular guy. Veins are great. I'm jealous! I'm not at all vascular and there isn't much you can do about that. A guy with veins and a tan and some oil and the right lighting can actually look muscular without much muscle. Who else...? Ron Harris is a freelance writer who does his best work for Muscular Development and MuscleMag. He always had an excellent build. It wasn't the result of any of any Biotest supplements, that's for sure. The picture of Bruce Kneller (Brock Strasser) was taken long before Testosterone existed and he's freely admitted to using serious doses of steroids. So where's the proof of anything?

Jim: What do you think of the Biotest line?

NM: The Tribex and PowerDrive are good products but you can get the same ingredients elsewhere for half the price. I know taste is subjective but GROW made me gag. Great name though, I gotta admit. Everything else is pretty much snake oil. Another irony of sorts is that Bruce started out as the consumer watchdog who dismissed most supplements and he turned into a supplement huckster. At least he denounced ZMA as garbage but then I saw something where he contritely offered this public apology to Victor Conte and said he thought ZMA was great...man, that was so degrading. It was sad really. I guess they got to him. Hey, money talks. People will eat shit for money. The old line about selling your soul is true.

Jim: But you won't sell your soul?

NM: You know.... it's not that I'm so upright or magnanimous. I just hate phonies. I hate hypocrisy and I hate it when people aren't straight up. I can't play that game. Maybe if I did I'd be a lot more successful, but I can't. We all compromise and I'm not above it. But there is such a thing as going too far. The saddest part of the Testosterone gang is, they refuse to see themselves for what they are. I think they believe they really are T-MEN!

Jim: (Laughs) I don't think anyone who uses the term T-MAN can be taken seriously. Nelson, I think we got some great stuff and there are so many more things we can get into, I feel as if we barely scratched the surface. Do you think that maybe we can do this again next week and pick up where we left off? You've been a great guest and I appreciate your honesty.

NM: Thanks Jim. Sure, any time. It'll be a pleasure.

Jim: Great. I'll call you next week.

That call never came.

THE BOTTOM LINE ON NUTRITION

"A Bulldog Doesn't Get To Look Like a Greyhound By Eating Like One."

- The Bodybuilding Truth

I said it before, and I'll say it again:

What you eat has almost nothing to do with the way you look.

Given a reasonable ration of protein, fat, and carbs, diet will not alter one's appearance beyond a weight gain or weight loss. It cannot change your genetic disposition. Only exercise can change body shape and increase muscle growth.

Every diet ever conceived is either an intentional attempt to hoodwink the reader into buying something he or she doesn't need, or it's based on ignorance derived from misinformed sources. In most cases, it's meaningless prattle designed to fill pages of fitness magazines. You can argue all you want to the contrary, but you'd be wrong.

When it comes to gaining weight or losing fat, the equations are clear. I must say, I do get a kick out of hearing people discuss diets, as if certain combinations and equations make a damn bit of difference. But hey, people like to think they're privy to special information. It's an ego thing. Nevertheless, you can't dispute the laws of nature and nature doesn't care how many diet books you've read. It will respond in the only way it knows how, and that is one of adaptation. You won't change the laws of physiology.

You must realize, this opinion isn't coming from some flippant "off the top of my head" guesswork. It stems from decades of study and experimentation and finally, realization. It ain't fancy. But it's the truth.

One associate of mine played devil's advocate with my beliefs concerning total caloric intake and offered this scenario.

"What if one person ate 3000 calories from Fruit Loops every day and another ate 3000 calories from steak. Who would make better progress?"

Fair enough. Protein stimulates the metabolism and sugar releases insulin and fat storage, so naturally the person who ate 3000 calories from Fruit Loops would not do well. But nobody eats 3000 calories from Fruit Loops. If you do, why the hell are you reading this book? And just as an aside, I knew a girl in high school who went on the

most inane diet ever conceived -- the M&M's diet! Except for a small dinner, she ate nothing but M&M's candy. Guess what? She lost weight. Calories. Calories. Calories.

So what's with all this protein we're supposed to eat? Is it really necessary? Yes. But understand why.

It actually takes very little protein to build the amount of muscle that can grow in a day's time -- only a few grams, really. And that leads some misguided authorities to claim that high protein diets aren't needed for bodybuilders and supplemental protein is a waste. There are a couple of problems with that line of thinking. For one thing, when anabolism occurs, the available aminos must be present. That means you need protein available at all times. Also, if a meal is too low in protein or has an incomplete amino acid ratio, the "building blocks" may not be "ready to go" in order for muscle growth to take place. This is why the bloodstream must be saturated with protein -- within reason. Think of protein saturation like this; once a glass is full, pouring more into it is useless, but you need enough to keep it full!

Keeping protein high is based on common sense. (Which is where I try to base all my tenets.) There are only three macronutrients -- protein, fat and carbs. We also need fiber and water. We all need a certain amount of calories a day and if protein is too low, that means fats and carbs will be higher because the bottom line here is plain and simple -- ya gotta eat.

Now I have nothing against fats and carbs. Some of my best friends are fats and carbs. But a bodybuilder must emphasize protein. The reason you have to remain careful about overdoing carbohydrate intake is because they're so damn easy to eat! And they're digested quickly, leaving you hungry for more. This was one aspect that some people took issue with in The Bodybuilding Truth. It seems I was simultaneously suggesting to keep carbs low while saying that diet didn't matter all that much. Allow me to further edify those remarks. Diet doesn't matter beyond calorie consumption -- as long as protein is the main calorie source! That doesn't mean you have to restrict fats and carbs to ridiculous levels nor does it mean that you have to use complex manipulation of their ingestion. The best bet in getting adaquate protein is to make sure that you make it a priority at every meal so that at the end of the day your carb to protein ratio isn't too far in favor of the fats or starches. If you want a ratio, I'd say shoot for 40% protein, 30% carbs, 30% fats. It comes with a caveat

though; it isn't easy getting this ratio every day. But you have some leeway. You don't have to count every macronutrient calorie. Just think of protein by its Latin definition, "first choice" and you'll be on track. As a matter of fact, it looks as if the old "one gram per pound of bodyweight" still holds up as pretty good measuring stick.

I also believe that all macronutrient sources should come from as great a variety as possible. Mix things up! Eat Italian one day, Chinese the next, Barbecue the day after.

Forget all these convoluted manipulations where one meal you eat just protein and carbs and the next you just eat X amount of protein and fat then you make sure you have a protein drink with 12.7 grams of high glycemic carbs immediately after the last rep of your workout and then eat no carbs for the next 63 and a half hours until 3:30 on Sunday afternoon when you can have a banana. Life is too short for this nonsense! And in the long run, it won't make a bit of difference. In the end, it will still come down to calories.

I also take issue with this trendy new age, pseudo-organic macrobiotic bullshit where the body must eat only foods from a certain region or foods which our ancestors ate. Reality check: Two hundred years ago our ancestors average life span was 50 years. Not to mention, if macrobiotic diets were so great, they all would have looked like gods and in truth, folks from the turn of the century were kind of spindly by today's standards. (Fat too.) Incidentally, this less than impressive stature of our ancestors is what leads today's bodybuilders to wondering why everyone was so impressed with Charles Atlas. Besides having a nice shape, his physique is pretty ordinary. But in 1930, NOBODY looked that good! Not even close! No, it isn't food that made a difference in the subsequent improvement of physical status. It's training that made the difference. And in all fairness, the sudden leap in the quality of superior physiques after the middle of the century was due to the introduction of drugs, not superior diet plans. That's not an endorsement of drug use. That's just the way it is.

Every bodybuilder should make sure to get his or her protein also from a variety of sources -- meat, eggs, fish, turkey and chicken prepared in every conceivable manner. You may still need to boost the daily ratio with some supplemental sources. Get both simple and complex carbs of all kinds, be it grains or fruit or potatoes. And both saturated and non-saturated fat have their benefits. I also recommend supplemental Omega 3's since it's difficult to obtain them solely from food sources.

Don't expect a pristine diet to alter your musculature. Food is fuel. Use it as such. Food is also one of life's great pleasures. Eat what you like.

Here's the Bottom Line:

Eat sensibly, emphasizing protein. After that...

To gain size: Eat more. To lose fat: Eat less.

In "The Bodybuilding Truth," I explained how genetics and metabolism will have the last word when it comes to how well the body will process nitrogen in order to build muscle and how well it will burn fat. What wasn't addressed in depth is that when it comes to metabolism, the dictating factor comes down to one thing....the thyroid. The more efficiently that baby works, the more fat your body will be able to burn.

Instead of trying to starve off weight or using drugs (even legal ones) to instigate the nervous system, let your thyroid do the work.

Here's how.

FIRE UP THE FURNACE! How To Get Your Thyroid To Burn Fat For You

Want to lose fat? Who doesn't? Regardless of how much or how little size one may possess, everybody looks better with low bodyfat. You can be huge and muscular but if you're carrying a layer of blubber over your muscles, you won't look like much. At the same time, a tight and sinewy build with just minimal muscle will look impressive. (Quick, how many women do you think have a problem with Brad Pitt's body?)

YOU ARE YOUR FATHER'S SON

Okay, everyone wants a lean, svelte physique, but getting it...that's another story altogether. Beyond the hard work, the limited food choices, the nutrient timing, and the outright hunger, there is one inevitable factor that will govern how much fat you can take off and keep off. It's your metabolism. And that's mostly a matter of genetics. You see it all the time; one guy eats a perfect diet and can't seem to lose that roll around his belly, meanwhile the homeless guy who sleeps in the park and eats out of garbage cans is vascular and has a ripped six pack. Genetics.

FAT ATTACK

So is there nothing we can do to alter this hereditary horror? Actually there is. The key is to center in on the facet of your metabolism which dictates how efficiently you burn fat. If it's slow, you can diet until you're anorexic and you'll still carry fat. If it's fast, you can eat pretty much whatever you want and still be lean. How's that sound?

STRIKE UP THE GLAND!

The answer to burning calories lies not so much in the food you eat but in how the body processes it. And the one thing that determines how well the entire metabolism operates isn't in your stomach, or the intestines, or even in your muscles. Oddly enough, it's located in your throat, of all places. It's that tiny butterfly shaped gland called the thyroid.

In case you're wondering, you don't need to be suffering from thyroid disease or dysfunction to experience some of the negative effects of a sluggish thyroid. Even a healthy thyroid can afford to be coaxed to work at an optimum level in order keep the metabolism running as efficiently as possible and there are several ways of accomplishing this.

Without getting into a lengthy scientific description of the thyroid, for now, think of it as the body's "thermostat." Through the release of the hormones T4 and the more potent T3, it will constantly attempt to keep the body at a comfortable 98.6 degrees. And as you may know, elevating body temperature is the key to the burning of more fat. Once again, this is accomplished quite well through resistance exercise, but it also can be achieved with certain drugs. However, this dangerous practice can cause irreparable harm to the thyroid.

The popular choice among bodybuilders is Cytomel which is synthetic T3 reserved for people with thyroid cancer or complete shutdown of thyroid function, not to mention Cytomel is catabolic and decreases bone mass. Smart, eh? Not to mention, that Cytomel will pretty much make you feel as if your head is on fire. Stay away from it. Period.

"Triacana" was once a very popular drug (technically a thyroid pro-hormone) among competition bodybuilders since it was regarded as effective and much safer than Cytomel. The problem with Triacana is that it required multiple dosages throughout the day. Once effective dosages are reached, the same side effects being to occur. (Much like testosterone based prohormones and pro-steroids). Also like prohomones, Triacana works on a different principle than exogenous hormone. Triacana will increase TSH (Thyroid Stimulating Hormone) which sounds logical, but it isn't the most effective way of getting the thyroid revved up. People who are hypothyroid (excessively slow thyroid to the point of needing medication) tend to have high TSH levels. That's because the thyroid is struggling to keep the body temperature elevated. But if T4 doesn't get converted into T3, it can struggle all it wants, you'll still be hypothyroid.

Today Triacana is manufactured in very limited quantities and only in France making it almost a "non-option" for competitive bodybuilders since the more powerful thyroid hormones are readily accessible. For long term natural elevation of the thyroid, however, Triacana serves no purpose.

Doctors are fond of prescribing Synthroid (synthetic T4) to patients with low thyroid output even though this practice is often unhelpful for hypothyroidism if the problem is in the conversion of T4 to T3. You'll just get more T4 that can't be converted to T3. So what do most doctors do if the patient doesn't respond to the synthroid treatment? They prescribe a higher dosage of course! The thinking of the medical establishment scares the hell out me sometimes.

By the way, Dan Duchaine recommended Synthroid at the end of a cycle for its anticatabolic effects, but I believe Dan was off on this. Thyroid medication is actually slightly catabolic in nature and also has a degenerative effect on bone density.

Unless you have a serious medical condition, the only rational way to get the thyroid to operate at full-blast capacity is through natural means, yet what's most surprising is that many popular diet strategies may actually be counterproductive in this regard.

The thyroid is, in a way, the body's furnace, in that it "burns" food for fuel in order to provide energy. The more it burns, the more effectively it will use fat (both ingested and stored) to continue operating. If it's a little sluggish, its fat burning ability will be hampered and excess calories become stored, as fat. Although hypothyroidism is usually reserved for the elderly, a sub-par thyroid is very common. And almost everyone, except

the extreme ectomorph, can benefit from hyping thyroid output to optimum levels. The way that's done, however, is often in contradiction to the standard diet practices.

YOU'RE DOING IT ALL WRONG!

If you've ever read Superman comic books as a kid, you may be familiar with the strange tales of "Bizzaro World." That was a planet where everything was the opposite of Earth. Beauty was repulsive. Stupidity was admirable. Its inhabitants all dressed like Superman and disturbed the real Superman's life in order to "help" him. No laws of logic applied. (I wouldn't be surprised if the people writing those stories were smoking more than Marlboros.) Well, when it comes to fat loss, it may sound like the laws of Bizzaro land are in effect in that most of the tactics you've been using may actually be making you fatter! (Now you know why all the traditional advice hasn't been working.)

THE BIG "FAT" LIE

Diet will only do so much. Lowering carbs is a common approach to fat loss but if carbs are too low it can affect thyroid output. The low fat craze is finally being recognized as the "bad idea of the last half century" and fitness authorities are finally getting wise to what many bodybuilders have known for years: in order to burn fat, the body needs to ingest essential fatty acids. But one area where even bodybuilders go wrong is in attempting to eliminate the "bad" fat -- that of the saturated kind.

But get this...

Saturated fat has been shown to stimulate thyroid function! So by eating a little non-hydrogenated saturated fat (such as coconut oil) you may be enhancing the fat burning process.

FORBIDDEN FRUIT

Fruit is healthy, right? Not so fast cantaloupe boy. Fruit contains fructose which will raise triglyceride levels. Fruit juice is pure sugar and can easily add hundreds of empty calories to your daily consumption. What's worse, is that fruits such as peaches and pears have been shown to impair thyroid function. Don't get too nervous. An occasional piece of fruit is fine, (bananas are good for the thyroid) just don't go overboard thinking lots of fruit is the answer to fat loss. I could never understand the 4-6 servings of fruit a day recommendation. What's a serving? A piece of fruit? Hell, if I ate 6 pieces of fruit every day I'd never leave the bathroom. But I digress.

BE SURE NOT TO EAT YOUR VEGETABLES

With all the health benefits of cruciferous vegetables such as broccoli, cabbage and cauliflower, there is a downside. They contain a chemical called thiourea which is a goitergen. What that means is, they retard the process of the thyroid from turning iodine into the essential fat burning hormone T3. With enough T3, you can eat lard sandwiches and get ripped. Without enough T3, you can do sit-ups from morning till night and you'll

still carry fat. No doubt about it, T3 is the master fat burning hormone and insuring its output is the only way to get fat levels down low enough to insure clear cut definition.

ALL SWEETENERS ARE NOT EQUAL

Using aspartame in order to cut down on calories? It may not be such a good idea. Although studies on animals don't always apply to humans, it's been discovered that excessive dosages of aspartame can shut off the thyroid of mice permanently.

You may also want to consider avoiding products that contain Green Tea or soy. Green Tea contains flouride, a known T3 suppressant. And raw soy products such as Tofu contain phyto-estrogens that can hinder T3 production.

Melatonin, which is regarded as one of the best supplements by the Life Extension gang, will also lower body temperature, thus slowing down thyroid function and the ability to burn fat. That sucks.

IS THE MAGIC BULLET SHOOTING BLANKS?

Guggulsterones have gained a lot of popularity as a thyroid supplement and a lot of bodybuilders are using it in the hope that it'll help them lose fat. Are they on the right track?

Here's the promo on Guggulsterones as presented by the supplement companies:

Guggulsterones are the active extract of guggulipids which is an Ayurvedic herb that not only stimulates the thyroid but helps to lower cholesterol. (A slow thyroid can increase LDL.) This has been one substance that has undergone extensive research. One of the studies concluded that guggulsterones are a viable option for the treatment of hypothyroidal conditions through a direct stimulating action on the thyroid gland. Subjects with low body temperature reach the optimum 98.6 degree mark after a month of guggulsterone therapy. The effects seem to come directly from the production of more thyroxin. Guggulsterones may be especially effective for bodybuilders on a diet. When 4000 mg of guggulipids extract (standardized to 2.5% guggulsterones) were taken daily for three months, the conversion from T4 to the more potent T3 remain in the normal/optimal range. And as one more added benefit, guggulsterones improve skin conditions and help eliminate acne.

Sounds good, huh? I thought so too until I learned a nasty little secret about guggulsterones. They're an anti-androgen! (This may be why they help clear acne). Guggulsterones have indeed been shown to increase thyroid output but only temporarily. After a while, there's a build up of estrogen and thyroid function slows down more than before. Pass on it.

And to top this it all off, let's not forget that stress has a direct adverse effect on thyroid function.

A HINT, A CLUE, A TIP, GIVE ME SOME GOOD NEWS ALREADY!!!

By now it probably sounds as if fat loss is more hopeless than ever. Take heart. There's plenty you can do to get your thyroid up and running faster than a Mexican migrant worker making a dash for the border. The following is a list of supplements that can make all the difference in how well your thyroid functions. And the best part of it is, you won't suffer the jitters that usually accompany most fat loss products.

The most important nutrient to a healthy thyroid is iodine, which led many of the old time bodybuilders to use kelp tablets. (Kelp is rich in iodine) This old time tactic is still very effective for keeping the thyroid running at full speed. There can be too much of a good thing, however. Doses over 2000 mgs can have a detrimental effect on thyroid function so be cautious in how much iodine you take in.

Selenium appears to be vital in that hypothyroid people tend to be deficient in it. Once again, since this a trace mineral, too high a level can be toxic. Get at least 200mcgs but no more than 900 mcgs a day. Selenium is essential to convert T4 into T3. Since the soil in which crops are grown today is practically baron of selenium, you must supplement.

The amino acid L-Tyrosine is very important due to the fact that it most directly dictates T3 production. Tyrosine also has a noticeable side effect -- it increases alertness making it an excellent pre-workout supplement. The acetyl form (N-acetyl-Tyrosine) should be taken in between meals for better absorption. Tyrosine can be too stimulating for some people so start with 500 mgs four times a day in-between meals and work the dosage up to 3000mgs a day.

Maca has been gaining a reputation as a legitimate sexual stimulant since it increases frequency and rigidity of erections. If that isn't enough to sell you, it also looks as if it may improve thyroid function! It's uncertain exactly how and why Maca works but studies have shown it to have a direct influence on the hypothalamus/pituitary axis. The pituitary gland directly affects the thyroid and therefore may be at the cause of many thyroid deficiencies. Anecdotal evidence is strong in support of the use of Maca, but it doesn't come from the bodybuilding community or a supplement company. It comes mostly from post menopausal women, who are most a risk for hypothyroidism. T4 levels have increased up to 2 points in one month in most patients. (Comparable to a pre-contest cycle of Triacana.) I've personally tested the effects of Maca with a blood test. Blood tests don't lie. T4 was indeed higher with it than without it.

Coleus Forskohlii is also known as "Forskolin" and it aids in the regulation of hormone production including thyroid and testosterone.

(Note: There's been some evidence that Forskolin may exasperate prostate cancer, as will too much testosterone, so these studies are suspect. Just to play it safe, mega dosages beyond 250 mgs a day are not recommended.)

Olive Leaf Extract is a powerful immune system enhancer which seems to have a direct effect on the thyroid. Testing in this area is still new and inconclusive but since olive leaf is also an antioxidant with no adverse side effects, even in high dosages, it can definitely be regarded as a "why not" addition to your "thyroid support system" program.

Ashwagandha is another little known Indian herb used as a tonic for the nervous system which in turn lowers stress, thereby improving thyroid capacity.

Colostrum is high in lactoferrin, which is a potent immunity booster. Low immunity will lead to a slow thyroid.

Glandulars have become a joke among the bodybuilding community in that they were touted as an alternative to steroids back in the 1970's. (What were they thinking?) For the most part, glandulars such as desiccated liver are an economical source of supplemental protein, but in the case of thyroid extract, the benefits extend far beyond the mere nutritional content.

Before the use of synthetic thyroid drugs, patients with low thyroid output were given a substance called "Armour Thyroid." (Yes, that's the same "Armour" company who make meat products.) It turns out that the thyroid concentrate contains minute amounts of T2, T3 and T4, which in turn provided support to the thyroid and increased thyroxin and consequently, body temperature and metabolic function. Although the synthetic versions of T4 (Synthroid) and in cases of severe thyroid shutdown, T3 (Cytomel) are preferred by most conventional doctors, some still prescribe the Armour Thyroid. Many patients who didn't respond well to the synthetic versions did much better on the natural glandular extract. There have been rumors that Frank Zane (affectionately known as "The Chemist") was enthusiastic in using Armour Thyroid to achieve his ultra-cut pre-contest condition.

Armour Thyroid is available only with a prescription and many of the thyroid glandulars once available in many health food stores no longer contain any active thyroxin, but it is still available. Just make sure you get the "concentrate," not the extract.

Research has shown that 7-Keto DHEA increases thermogenic enzyme activity and supports proper thyroid function. Test subjects have shown to lose up to 10 pounds in three weeks from daily doses of 200 mgs a day. 7-Keto DHEA (which will not convert to testosterone or estrogen) has been proven so effective at raising thyroid function that

doctors who prescribe thyroid hormone replacement often warn their patients NOT to use 7-Keto DHEA because it will increase the effectiveness of the thyroid drugs! Well, why not try the 7-Keto DHEA first and see if that helps! Or use it in conjunction with a lower dose of drug? Doctors. Eeeerg. Don't get me started.

7-Keto DHEA has been shown to be free of side effects in therapeutic dosages. Most reassuring is the fact that body temperature will not exceed 98.6 when using 7-Keto DHEA, even in high dosages.

UPSIDE DOWN, DOWNSIDE UP

A great exercise which enhances thyroid function is the good old fashioned handstand. If a free handstand is too difficult for you, you can do it up against a wall. While you're at it, try to throw in a few reps of lowering and raising yourself with your arms -- an exercise upper body builder!

KEEP IT COOL

One more tip: If your environment is too hot, the body will react by trying to remain cool. You want to condition the body to work at maintaining heat. One excellent method of achieving this is the practice of taking cold showers, or at least, finishing off cold. Sure, it takes some getting used to, but the rewards may be well worth it. Also, be sure to avoid electric blankets, saunas and steam rooms which disrupt the natural body warming process.

A muscular, fat free body takes serious training, a sensible diet and a fast metabolism. If any of these elements are missing, you'll always be out of reach of your goal. Put them all together and you're on your way to a razor sharp, muscular body in no time. Your thyroid is the body's furnace, so turn up the heat! And watch that fat melt away.

GAIN TEN POUNDS IN TWO WEEKS -- DRUG FREE (This Is Not An Ad)

Whenever someone contacts me either by e-mail, for a phone consultation, or for personal training instruction and they say to me; "I can't gain weight no matter what I do", I patiently try to explain to them the basics of proper macronutrient balance along with a detailed plan for several meals throughout the day with the emphasis on adding more quality calories. But in my mind, I fantasize about smacking them repeatedly over the head with a 45 pound plate while screaming;

"EAT! EAT! JUST EAT MORE YOU MORON!!!"

Are you starting to detect a theme here?

Going with this basic understanding along with the premise that no diet is magical or mystical, there are those who would like a detailed plan on gaining mass. If that describes you, then the following information should be right up your alley. It offers some of the best advice I know to pack on pounds, fast!

Time for another reality check:

No matter what, you can not increase size without increasing weight and you can't increase weight without increasing calories and you can not increase calories without putting on some fat.

That said, if you follow the methods I've outlined here, fat gain should be kept to a minimum. And you will grow -- guaranteed.

I'm not going to lie to you. What I'm about to propose isn't easy. Nor is it convenient. So unless you're committed to doing what it takes, stop reading now. Also, if you have a foolproof connection to all the gear you would ever care to take, move on. I can't top that. But if you're interested in making some serious gains, drug free, without spending a fortune on supplements, it can be done. Of course, if you want to add some additional supps into this program, it can tilt the odds in your favor. As a matter of fact, you can employ these methods while on a cycle and make even better gains than you thought possible. Some of the suggestions may seem simplistic, others a bit odd. Nevertheless, they must be followed implicitly. Attempting to tweak a little here and there will only produce inferior results.

The reason these tactics work so well is because they simulate the effects of steroids. Stick with me and you'll see what I mean.

Before embarking on this program, it's imperative that you have the time to see it through. If you're going to be on an erratic schedule, or out of town, or putting in extra hours at work or school, don't bother getting started. Wait until you know you have two weeks to devote to getting BIG.

For the sake of simplicity, I'm going to lay out the guidelines in ten easy to understand segments.

Before you do anything else, you must take a few days off from training. This will assure that no bodypart is still recuperating. I also want you to be eager to hit your upcoming workouts with a vengeance! Try to eat as cleanly as possible with a slight calorie deficit. (I'll explain the reason for this in a moment. Nothing drastic. Don't go hungry. Just eat less (especially carbs) and avoid empty calories. Try to eat red meat at least once a day in order to maintain strength.

After three days, you're ready to begin the program.

Step 1: If You Aren't Full -- Eat!

This may seem obvious, but you'd be surprised how often this simple procedure is overlooked. Overeating is extremely anabolic. What I'm implying isn't the standard, "eat every three hours" concept. I'm suggesting eating all day long! And that means everything, including carbs. The fact that you were in a minor calorie deficit caused a loss of glycogen from the muscles which will now be refilled. Because the muscles can store more sugar, there's less chance of the carbs being converted to fat. This will allow this extra food to more readily be used for energy and muscle growth. If you're afraid of what equates to force-feeding, you'll never know the thrill of the potential growth spurt it can provide.

Step 2: Retain Water

Fill up a gallon jug of water at the beginning of the day and make sure you finish it before the end of the day. I don't care what it takes. Sip it all day long if you have to. The body must get used to carrying more weight in order for it to hold on to increases in size. Constant hydration is the best way to do that. Don't wait until you're thirsty! Once you're thirsty, you're already dehydrated and in a catabolic state. By the way, don't be shy with the sodium intake. It will make you hold more water. Sure, you'll be bloated and look smooth, but any mass drug will do the same thing to you. Now isn't the time to be concerned with definition. Just get big.

Step 3: Have a Blast From The Past

One of the overlooked aspects of steroids is the fact that they increase appetite. When the first Mr. Olympia, Larry Scott, was first introduced to Dianabol, (Aah, my beloved Dianabol -- how I miss you so. They're magically delicious!), he made tremendous gains. The photos from his first Olympia win compared to his second win will bear me out. He always looked good. But in 1967, he looked, well, like he used steroids. Larry has since revealed his cycle stack in preparation for the contest. It consisted of 2 Dianabol tablets for 8 weeks prior to the show. You read that right. Two! Tablets! That's a whopping 10 mgs of Dianabol which lead to tremendous gains in his physique. Does this mean low dosages are far more effective than we're led to believe? Perhaps. But it's more likely something else. Larry said the drug made him ravenously hungry. "I ate constantly!" he remarked. It may very well have been that the increased caloric intake is what made the difference.

One of the best methods of increasing appetite is with a substance that has become the poster boy for outdated supplements: Desiccated Liver tablets. Liver contains high doses of vitamin B12 which has a substantial influence on appetite. Liver also contains hemme iron, which is the natural state of iron found in animal tissue (unlike ferrous sulfate, which is the synthetic form found in most mineral supplements and can be toxic in high dosages). Hemme iron will increase red blood cells. As you may already know, steroids also increase red blood cell count.

Take 100 Grains of Desiccated Liver 6 times a day in-between meals.

Step 4: Sit Down Instead of Sit Up

Do no ab work during this time. Abdominal training stresses the nervous system more so than other types of training because of the pressure put on the solar plexus. The solar plexus is considered the center of the nervous system. You won't have abs at this time anyway so don't think about them.

Step 5: Just Say No To Aerobics

That means none! No sports, no bicycle, not on "off days", not "just a little"...nothing! You need all your energy for your workouts. Don't waste it on non-muscle building exertion. Don't worry about your heart getting enough exercise. You'll live.

Step 6: Cream Of The Crop

Mix all your MRP's with whole milk. Half and Half would be even better. I don't want to get into a discussion as to whether milk has growth factors or if the lactoferrin increases immunity. Whole milk has fat! And that's what you need right now, both for its calories

and for the anabolic effect. Many readers already know of the need for fat already, but I had someone write to me recently arguing this point. He told me he was a "certified personal trainer!" (Whoa! Was I ever impressed once I heard that!) He went on about how he read that muscle growth was obtained through the intake of complex carbs -- not fat or excessive protein. I'm sorry pal, I must have missed that issue of Prevention Magazine.

Drink at least one MRP between breakfast and lunch and another after dinner every day without fail. During this time, food isn't just sustenance. It's a mandatory tool.

Step 7: Egg-cellence

Organic whole eggs are the most anabolic food on the planet. Think about it. An egg has all the components of life itself. Egg protein is still regarded by many as the very best protein source. The reason for organic eggs is that caged hens are forced to lay more eggs. (They do this by simulating "shorter days" with artificial light.) This means their eggs are less potent. I must admit, I know of no data that proves this other than the fact organic eggs are bigger, have plumper yokes and taste better. Free range chickens also eat insects which increases the protein quality within the embryo. (Caged hens are fed only grain.)

Boil up a half dozen eggs and put them in the refrigerator. Eat them at various intervals along the day. What about all that cholesterol? Glad you asked. The cholesterol in an egg isn't like other cholesterols. They contain the proper amount of fat emulsifiers to counteract the LDL. You see, the body will make as much cholesterol as it needs even on a low cholesterol diet. If cholesterol intake far exceeds what the body will manufacture, then you've got problems. The key is to restrict the "bad" and elevate the "good" cholesterol (HDL) which is the basis of all cell growth and that's what eggs do. This is another example of how Mother Nature knows best.

Step 8: ZZZZZZZZZ

Sleep nine hours each night. Ten is even better. Taking an afternoon nap is better still.

Step 9: Graze and Gorge

Buy cans of olives and nuts and nibble on them all day long. They're loaded with monounsaturated fat yet aren't very filling so you can really pack in the calories. This is important! Don't neglect it.

Step 10: Mass Fast

This will be the most simple workout schedule you'll ever have to keep. Remember: NO SUBSTITUTIONS! This routine will work all the major muscles as well as the stabilizers. They're compound movements designed for mass.

It's time to shock the body into an anabolic state.

Day One: Dips. After warming up, dip till failure. Once failure in the full range is reached, continue with partial reps until total failure is achieved. If you can do more than 15 full dips, add weight. Do four sets. That's it!

Day Two: Off

Day Three: Squats. Using a weight which you would normally use for 10-12 reps and do 20 reps. Rest as long as you need to do another set of 20. Repeat for four sets. You're done.

This is a short but oh so painful workout. But as they say; "Pain is just weakness leaving the body." See it through. Don't skimp.

Day Four: Off

Day Five:

Without a warm up, do a set of slow, deliberate, underhand chins to failure. Rest completely before embarking on a set of heavy deadlifts. Do 3 more sets of deadlifts with maximum weight in the 3-4 rep range. Leave the gym.

Day Six: Off

Day Seven: Off

If you follow these guidelines to the letter, I guarantee you'll experience growth like you're on the sauce. (Well, pretty close, at least.) After about two weeks, the results will slow down and the excess calories will more likely be converted to fat. That's when it's time for an alternate approach, such as switching to a higher volume routine. For now... get ready to grow. It's a good feeling.

LOWER ESTROGEN - NATURALLY! Get Hard and Stay Hard

Striated bodyparts. Sinewy muscle fibers. Sharply etched definition. Are these attributes the result of superior training? A pristine diet? Drugs? Yes, no, and maybe. In all likelihood, they're the result of a favorable hormonal output. That means high testosterone, and even more importantly, low estrogen.

Some people are just lucky in that they have naturally low estrogen levels. They're the fortunate few who are always lean, always cut. Estrogen makes you puffy, mushy and virtually impervious to growing muscle. That's why women are usually softer than men, (and that's just fine with me). Estrogen is vital to both sexes but more so for women because it's what allows for fat storage and milk production. That's great if you're planning on having a baby, but it's a real obstacle if you're looking to get a hard body. If a man's estrogen is too high, it can be disastrous.

In the past, estrogen in men has been luck of the draw. Of course, steroids can tip the scales in the favor of more androgens but the body in its ever resilient effort to maintain homeostasis will often counteract the excessive intake of androgens by producing more estrogen. If the problem gets too severe, not only do you have a bloated physique, but the potential for gynecomastia (bitch tits) is increased as well. Although the propensity for gyno is genetically determined (some people never get it, even when taking buckets of roids), it can begin to show up even in natural athletes if their estrogen gets too high. This prompts many competitive bodybuilders to use anti-estrogen drugs along with their steroid stacks such as Nolvadex, Teslac and Arimidex, all of which have a host of negative side effects of their own.

The problem is nothing new. Historical writings and artifacts exist which show that elevated estrogen and gynecomastia have been a problem since the time of ancient Greek civilization. The term "gyne" comes from the Greek word meaning "woman" and "mastos" meaning "breast." Statues of the Pharaoh Seti depict a man with enlarged breasts. Aristotle, too, had reported encountering the problem and there's even a documentation in the writings of Paulus of Aegineta (635-690 A.D.) which describes a primitive surgical procedure for the removal of gynecomastia. That must've hurt.

Not surprisingly, lowered testosterone and elevated estrogen is common among older men. Once testosterone levels begin to drop, the testosterone/estradiol ratio can cause increased fatty tissue to develop under the breast. Combine that with looser skin, increased weight, and lessened muscle tone, and the results aren't pretty. Those of you familiar with "Seinfeld" may remember the episode when George was horrified to see that his father had grown breasts! (Which prompted Kramer to invent the "Mansiere.")

George was convinced he had witnessed his own future. He was right, since to a great degree, the inclination toward enlarged breast tissue as we age is hereditary.

An unfavorable estrogen to testosterone ratio is also prevalent among adolescents. Once a teenage boy begins secreting copious amounts of hormones, he still may not have developed the necessary enzymes to convert all the testosterone into its free state. The result is an increase in aromatase which may lead to gyno or at the least, retain water (referred to as "baby fat"). This isn't unlike what happens when steroids are introduced to the system. The body reacts similarly to someone going through puberty. Spurts of growth, increased sex drive, acne and water retention are all common place. What is also common is the inability of the liver to handle the increased surge of testosterone. In an effort to maintain balance, some of the androgen spills over and is converted into estrogen. The higher the level, as well as the more rapid the rise of exogenous testosterone, the greater the chances of aromatization.

Although it appears to be the scourge of youths, seniors and steroid users, anyone can have elevated estrogen levels. And your chances are better than ever. Environmental toxins, pollution, heavy metals, radiation and even ions from computers have shown to decrease testosterone and increase estrogen levels, as will a lack of natural sunlight. Alcohol consumption and marijuana use have been linked to decreased testosterone as well. Even chemicals released from plastics used in microwave ovens have estrogenic properties. We're being bombarded from every angle. Is it any wonder the average testosterone level of a 30 year old man in the year 2000 is 20% lower than it was in the year 1950?

Diet is also a factor. Excess weight can cause "droopy pecs." A diet low in fat (as in the case of many vegetarians) will cause a drop in natural occurring testosterone. Certain foods, like raw tofu, contain estrogen-like compounds that can knock hormonal levels into a disfavorable ratio. Soy isolate, which is the type used in protein products, doesn't present as much of a problem.

A partial instigator of increased estrogen levels and consequential symptoms of gyno in the last few years may be due to the use of prohormones. In the case of androstenedione, it converts not only to testosterone, but more so into estrone, which is a mild estrogen. Prohormones produce a sharp "spike" in testosterone levels which in turn causes some aromatization since the elevation is too fast for the liver to handle. The drop is also very sudden, leaving the user with a suppressed HPTA which may result in a rise in estrogen. Using transdermal prohormones may be worse since they maintain a longer lasting suppression resulting in potential long term libido loss.

Okay, so there are lots of nasty possibilities which come from excessive estrogen. But what about the bodybuilder who's just looking to knock it down a few notches and harden up his physique? Well, when it comes to keeping estrogen at bay, there are ways of

fighting back without resorting to drugs. Strangely enough, one of the most potent antiestrogens is in the form of...

Cruciferous Vegetables

Now if you've been paying attention you know I already mentioned that cruciferous veggies may impair the thyroid. But stay with me for a moment.

Your mom always told you to eat your vegetables but she probably had no idea how much they can help build muscle. Foods such as cabbage, broccoli and radishes contain phytonutrients and an interesting chemical known as Indole-3-Carbinol which binds to estrogen and expels it from the body through urination. If that isn't reason enough to eat them, it's been recently discovered that cruciferous veggies also contain an amazing substance called Calcium D-Glucarate.

What calcium D-glucarate does is inhibit an enzyme called beta-glucuronidase. One of the ways in which the body eliminates excess estrogen, as well as many toxic chemicals, is by attaching glucoronic acid to them in the liver. It is then eliminated through the feces. Beta-glucoronidase breaks the bond between the excreted estrogen and glucoronic acid. When this happens, the estrogen and/or toxins are re-absorbed into the body instead of being excreted -- not good if you're trying to get as hard and muscular as possible! But get this: By taking calcium d-glucarate, beta-glucoronidase can be significantly reduced. This allows the liver to do a better job of maintaining proper hormone balance. Calcium D-Glucarate may be the very best anti-estrogen (even better than drugs) in that it doesn't block estrogen in the way that something like Nolvadex does, nor does it have any estrogenic properties of its own, which is the case with Clomid. Until recently, isoflavonoids were touted as an anti-estrogen since it's a natural substance which acts similarly to the drug Clomid. It, too, is a weak estrogen which helps occupy estrogen sites theoretically preventing endogenous estrogen from forming. It's abundant in soy isolate and can be ingested in a much more concentrated form through supplements. Isoflavones have become popular with the Life Extension crowd because its effects are very "provable." Unfortunately, in some people, the same negative effects they experience with Clomid are prevalent with isoflavonoids. Calcium D-Glucarate, on the other hand, actually binds to excess estrogen and removes it before it can impart its effects.

Since Calcium D-Glucarate is not an essential nutrient, no deficiency state exists but it looks as though 500-1000 mgs per day can provide considerable protection against elevated estrogen levels. That can add up to a lot of vegetables, so in order to make sure you're getting enough, you might consider supplementing -- not to mention, too many cruciferous vegetables may hinder your fat burning goals, as stated in the "Fire Up The Furnace" chapter. The best bet is to supplement Calcium D-Glucarate for a week at a time when needed with a few weeks off in-between. Do not use it on a full time basis since estrogen levels might get too low.

Also valuable in lowering estrogen and raising testosterone are these foods and nutrients.

Zinc...Zinc is vital for proper hormonal function. Although zinc deficiency, to the point where disease may occur is very rare, zinc levels in men are far lower than they were just 20 years ago. Today, people are exposed to greater stress levels. The soil in which much of our food is grown is depleted of naturally occurring nutrients. Supplemental zinc acts as an easy, economical safeguard for optimum testosterone levels. Just do yourself a favor and don't buy ZMA. It's an overpriced, overhyped scam.

Flax Seed Oil...Besides the increased essential fatty acids, notably Omega 3's, flax seeds contain lignans, which have been shown to have anti-tumor properties. What does this have to do with lowered estrogen or gyno? Gyno is, in essence, a benign tumor. Flax seed oil should be a part of every bodybuilder's supplement regime for health, strength and prevention of excessive estrogen. Flax seeds in their original state are also a great choice. (Great on cereal!) As mentioned previously, Flax Seed Oil has also come under scrutiny as of late but those studies were conducted using the oil, not the whole seeds. If you're prone to gyno, a little Flax Seed may work in your favor.

Whole Eggs...Since cholesterol is the building block for all hormone development, including our favorite, testosterone, eggs should be a staple of any serious bodybuilder's diet in order to keep a favorable hormonal balance.

Fiber...It's been known for some time that fiber binds to fat and helps remove it from the digestive system, but fiber provides another function. Along with removing fat, it helps to remove excess estrogen. This makes adequate fiber (and water) intake invaluable to bodybuilders.

SAM-e: This methyl donor has a host of benefits from mood elevation to liver protection, but what may be of more interest to the bodybuilder is the fact that it also lowers prolactin -- a hormone that increases as we age and imparts anti-androgenic effects. SAM-e suppresses prolactin without altering other hormones. (Unlike Vitex, which lowers prolactin but raises progesterone.) Often what is thought to be excessive estrogen is really an abundance of prolactin.

Herbology is far from an exact science but the use of herbs in raising testosterone and lowering estrogen shouldn't be discounted. These are a few substances which have shown promise in the fight against definition destroying estrogen.

Muira Puama...This exotic herb is arguably effective in freeing "bound" testosterone. When testosterone is inactive, it can't impart its anabolic properties. As we age, SHBG

(sex hormone binding globulin) increases, preventing whatever testosterone is available to be activated. This may be the main cause for waning libido in older men, more so than total testosterone level.

Tribulus Terrestris...This herb works by allegedly stimulating Luteinizing Hormone which in turn activates Follicle Stimulating Hormone which in turn increases testosterone and possibly lowers estrogen.

Silymarin...Also known as Milk Thistle, this substance works as a liver cleanser. Silymarin promotes healthy liver function which aids in conversion of balanced hormone activity. (Alpha Lipoic Acid and Inositol are also excellent for "cleaning" the liver.)

Avena Sativa...Shown to increase libido and erectile function, Avena Sativa may also increase free testosterone, perhaps better than any other herb, and can be useful in helping to stabilize HPTA output after a steroid cycle.

(Note* Update: Diindole Methane (DIM)... I mentioned this along with Chrysin in The Bodybuilding Truth as not especially effective but new evidence warrants further exam. DIM is not an inert substance and does have some estrogen lowering capabilities. It may also boost 2-hydroxy estrone which is a "good" estrogen, but an estrogen nonetheless. This may be why so many people felt it was a "wash" in its effectiveness. It removed some estrogens while added others. Since reaction to this compound varies I felt it only fair to mention it. My personal experience was not positive but it may be worth a try. Just keep in mind, if you try any anti-estrogen, use only one. In that way you'll have a better feel for the effects, plus too much estrogen suppression will have a deleterious effect, as mentioned.)

Lowering estrogen naturally makes the most sense for several reasons. For nothing else, it's good to know you don't have to worry about the side effects of drugs.

Not everyone can be blessed with enough testosterone to make them an elite athlete. Nor can everyone have low enough estrogen levels to insure single digit percentage bodyfat. Be that as it may, by following the suggestions that have been laid out here, you'll be tipping the odds in your favor, and you'll be doing it in a natural and healthy manner. From now on, make sure you keep estrogen in its place! Once you do, you'll realize that getting "harder" has never been easier.

WELCOME TO THE LATE SHOW

There's an old saying:

"Age 40 is the old age of youth. Age 50 is the youth of old age."

As you get close to age 40, you suddenly start contemplating your own mortality. After all, you're halfway through life -- if you're lucky. Worry breeds stress and anxiety. When you're 30 and you have a pain in your chest, you just have a pain in your chest. When you're 40 and you have a pain in your chest, you're convinced you're having a heart attack!

At times we make the aging process out to be worse than it really is. Can we maintain youth? Do we have to degrade into weak and frail shells of our former selves?

Time takes its toll in many ways but what dictates an old man from a young man isn't the wear and tear of life. What really separates the young from the old is the level of vital hormones. Once you're past 40, they ain't what they used to be... and either are you. Along with the accumulation of years comes the inevitable decline of our most precious hormone -- testosterone. And when it comes to feeling good and looking good, testosterone is what it's all about.

In "The Bodybuilding Truth," I spoke about resisting the need for testosterone replacement and how I didn't want to be dependent on any exogenous source. I still don't. But there are certain undeniable facts to the aging process and they can either be addressed or ignored. There can also be an active approach or a passive approach, or what is probably best, a balance of the two. To me, aging gracefully is a combination of accepting the inevitable and fighting it tooth and nail.

The results so far aren't bad. I do some occasional work as an actor and my age range is 30 to 40 even though my chronological age is 49. It isn't meant to be duplicitous, nor is it vanity. The simple fact is, I can't play 49. I don't look it -- at least not the normal conception of what a 49 year old man looks like. Part of it is genetics. My parents both looked youthful well into their 50's. Part of it is grooming. So often when people say "You look good for your age" they're really saying; "you don't look like an old fart", as if to suggest that anyone over 40 is pretty putrid. (Regrettably, many are.) Part of it is also attitude. Maintaining a sense of wonder and curiosity and willingness to learn can't be over emphasized when it comes to staving off deterioration from time. But for the most part, I truly believe it's been weight training and supplementation that play the biggest role in maintaining my "youth."

Still, we all age.

At age 40, because of my newfound techniques in training, I looked and felt better than any other time in my life. At 49, I have to admit I've lost a step. Father Time has caught up to me. But I'm doing my damnedest to kick his ass.

I don't want to pretend I'm 20. I simply want to look and feel the best that I can at my age. Along with the "natural" arsenal against aging, there's hormone therapy -- something I've always thought might be an option when I'm really old. But I came to realization that I had two choices. Either continue to deteriorate, or take the initiative and do what it takes to keep myself young -- and by young, that means having the hormone levels of a younger man.

Bottom Line: Testosterone makes the man and there's no way you're going to have the level you had when you were 30 when you're 50.

There are risks, sure. But there are risks of having low levels as well. The therapy is new, and this generation are the pioneers, or perhaps more aptly, the guinea pigs for these new procedures.

After considerable deliberation, I jumped on board. And I'm glad I did. I get my testosterone from a pharmacy and I know it's real and I know it's legal. I feel better and I reap all the benefits. I still hate the fact that I'm dependent on it, but now that I've been reminded of how good it feels to have testosterone in the upper range, I'd never want to do without it. I've made my decision, and I'll live with it.

The process of getting testosterone replacement wasn't easy, however. Some doctors will make you jump through hoops for testosterone mostly due to the fact that it's a controlled substance requiring a triple script and it's a major pain in the ass for them to fill out. A lot of the old timers are also in the dark ages as to the dangers. I had one doctor who made me go to an endocrinologist who had me go through a bevy of tests in order to find the reason for my low testosterone. (Actually, it wasn't that low -- around 400 which is normal for my age.) He also couldn't understand why I would want more! (Really!) After weeks of tests and over a thousand dollars in bills, the results were in, and the treatment was exactly the same as from the start -- testosterone replacement therapy. One problem. He wouldn't prescribe it. "You have to respect the normal range," he insisted. Meanwhile, he was willing to write a prescription for a daily antidepressant so that I may "get over my listlessness." Aah yes, the old "cover up the problem instead of fixing it" approach. No thanks. With physicians like this, who needs morons?

There aren't too many things that are good about being older but one advantage is that if you've been around for a while, you get to learn a few tricks. And one thing I've learned in life, is that if you don't get the answer you want, keep going until you do. So I checked

into a clinic, had full blood work done and spoke to a physician -- all for at a total cost of under a hundred dollars. I got the script, no problem.

If you want to circumvent the rigmarole required for getting testosterone, some retired doctors who aren't that well off will write prescriptions for just about anything, for a fee. The ethics involved are dubious, but it's legal. Just don't be an idiot and come right out and ask for a script for steroids. Learn to use a little tact and feel people out.

The following chapter is on the benefits of testosterone replacement and was originally constructed to be published in a monthly periodical. I wrote it in a way that I hoped wouldn't come off as too radical for a mainstream magazine (even though it was intended for a bodybuilding mag). It's also a retrospection on the history of testosterone throughout the years.

Ask not for whom the senior citizen discount tolls! Time catches up to all of us. But I, for one, am staying one step ahead of the rat bastard.

THE TEST OF TIME The Effects of Testosterone Over The Years

The potential for muscle growth is determined by many things, but none more important than testosterone. It's a fact: the more you have, the bigger you'll get, and when it begins to decline in the advanced years of life, the results are a loss of strength and vigor. It's also why so many bodybuilders engage in the use of anabolic steroids since all anabolics are in one way or another derived from the molecular structure of testosterone. But as we all know, the exogenous use of steroids, including testosterone, has its consequences, most notably, the shutdown of the testicular axis. In other words, as soon as an "outside source" is administered, the body, in its attempt to maintain homeostasis, will reduce the amount it produces on its own -- which is what makes excessive anabolic drug use a precarious procedure to be sure.

WHAT TO DO WHEN THE WELL IS TAPPED

Of course, there comes a time when the body will no longer produce enough testosterone on its own -- at least not enough for sufficient muscle growth. After age 40, levels will steadily decline and by age 50 testosterone is usually about half of what it was in your 20's. This depressing inevitability is something that's been accepted throughout time. Everyone slows up as they age. Muscle mass dwindles. Recuperation takes longer. Fat begins to build up no matter how much you work out or how strictly you diet. Sexual desire is less frequent and less intense. Even your erections are weaker. It all sucks.

But don't get bummed out so fast! Today, testosterone replacement is quickly becoming a veritable fountain of youth for the aging bodybuilder and its practice and application which once was deemed controversial, is proving itself to be a tremendous boon to the life and well-being of thousands of men over 40. Besides increased muscle and reduced fat levels, testosterone also heightens libido, improves mood, enhances recuperation, lowers cholesterol, and aids in the prevention of heart attacks. Not a bad deal.

TO T OR NOT TO T

Still there are those who remain suspect, and they should. Testosterone therapy isn't something to be taken lightly. Once you commit to it, you're on it for life. It also isn't exactly natural. But you know what is? Growing old. Let's face it, life's plan is to replace you with someone younger. According to the dictum of evolution, you've outlived your usefulness by age 40. Move out of the way. Make way for the new. To many of today's baby boomers, that option is simply unacceptable. And testosterone replacement may be the solution. Is it time to start?

A RETROSPECTION OF THE "HIM" HORMONE

The desire for more of this "life juice" known as testosterone isn't new. As far back as the nineteenth century, there's evidence that doctors tried feeding patients with everything from horse semen to ground bull's testicles in an effort to increase their "manliness."

(Hey, wasn't that tactic used by some supplement companies a few years back?) Even bizarre experiments implementing the removal of the testicles of one species and transplanting them on another were conducted. As misguided as many of these studies may have been, it was well understood that testosterone was the substance that, literally, separated the men from the boys.

Throughout the early twentieth century, the quest to find the formula for the hormone that makes life worth living made slow and steady strides, but it wasn't until 1935 when testosterone was first synthesized by Dr. Charles Kochakian. He also believed strongly in the therapeutic benefits of testosterone but his theories were shunned by the medical community of the time. (Incidentally, Kochakian lived to be 90 years old.)

Eventually, world events radically altered the interest in these studies and they were to take on a bigger impact than could ever have been realized.

The year was 1940. The place, Nazi Germany.

As Adolf Hitler set about molding the tiny bankrupt nation of Germany into the fiercest fighting machine the world had ever seen, German scientists were given a choice between contributing to the cause of the Third Reich or paying the consequences of not cooperating. Besides incredible advancements in weaponry and aerotechnology, Hitler wanted to perpetuate the notion of Aryan supremacy. His perverse dream was to create, at any cost, an infantry that could withstand a workload so far beyond that of mortal men, that no opposing army could stand a chance against them. The Nazi medical establishment set out to create a drug that would allow a man to withstand torturous physical demands, as well as tolerate a lack of food -- something that would also accelerate healing in the case that he was wounded. Every soldier would be bigger, stronger, faster -- physically superior in every way. It didn't matter if the soldiers developed side effects years down the road. Lives were expendable. Victory at all cost was the objective. Fortunately, many of the doctors involved in this project were, for the most part, a bunch of quacks consequently making little headway in the area of genetic engineering. One can only imagine if the outcome would have been different if they had been first to discover the recipe for anabolic steroids.

What was unknown at the time was that Russia had similar ideas and by the war's end, Russian scientists had successfully developed synthetic androgens in an injectable form. Ironically, they were first administered to victims of Nazi concentration camps in an effort to quickly increase their weight and red blood cell count.

Although peace had been declared, throughout the 1950's, a cold war still existed. The superiority of one nation or another would no longer be settled on a battlefield but on a playing field. The Olympic games were a "friendly" international competition with the underlying suggestion of national supremacy. Through the 50's and 60's, it was obvious that Russia was dominating any event that employed strength as the main criteria. U.S.

hopefuls were getting their heads handed to them by a new crop of Russian supermen. With all the McCarthy conspiracy paranoia surrounding the nation at the time, the government stepped in and contacted the United States weightlifting team physicians to research the inexplicable advantage of the Russian athletes so that the United States may be better equipped to level the playing field somehow and possibly, gain an advantage over their political enemy. After all, the pride of the nation was at stake. One of the doctors working for the team at the time was a young man by the name of John Ziegler.

Ziegler and a small group of fellow scientists did some studies on Russian athletes who had defected to the United States. They noticed that the young men had extraordinarily enlarged prostates, apparently through the exogenous administration of synthetic testosterone. The Russian coaches knew that this primitive form of testosterone therapy might be damaging to the athletes' health but the objective, one more time, was victory at any cost.

The American scientists went about using these initial findings to attempt an alternative. The key was to first realize why testosterone did what it did. As unfathomable to others as it may have been, Ziegler realized that the testosterone was latching on to a "receptor site" which increased protein synthesis and creatine phosphate absorption. Going with this understanding, he experimented with the distribution of testosterone's molecular structure and came up with a formula that eliminated some of the androgenic properties and increased the nitrogen retaining properties. The technical term was 17-alpha-methyl-17beta-hyroxil-androsta-1.4dien-3-on, better known as Dianabol. He submitted his discovery to the Ciba Pharmaceutical company and they agreed to purchase the formula. He was paid \$100.

As amazing as it was, Ziegler's attempt at a "kinder and gentler" testosterone finally proved ill fated. Oral anabolics are too harsh on the liver to be considered a viable option for any long term therapy.

THE WINNER AND STILL CHAMP

Over the years, there have been dozens of anabolic steroid analogues but through it all, basic testosterone has reigned supreme. There's no getting around the fact that testosterone is the king of anabolics and it's the reason why there isn't a major competitive bodybuilder who doesn't use it as the base of his (or her) steroid cycles. Its use, and overuse is also rampant in professional sports of all kinds.

WHERE IT STANDS TODAY

Despite the public hysteria surrounding anabolic/androgenic steroids and the potential for their abuse, they do have a medical purpose. To thousands of men over 40, the use of testosterone to restore what time has taken away is nothing short of a miracle. Unfortunately, the sensational media loves to report on the myths and misconceptions. It makes good copy. Thankfully, a new generation of open minded physicians are rediscovering the benefits of this remarkable drug and maybe, just maybe, the

mainstream public will soon begin to see testosterone replacement as a viable tool against the ravages of aging.

LIFT AFTER 40

The only way of knowing if your testosterone levels are sub-par is by taking a blood test, but here's a tip off; if you haven't been waking up with erections on a consistent basis, your testosterone is probably sub par.

The "acceptable" level range is 200-900 ngs. Testosterone levels over 1000 (common among steroid users) can cause a multitude of health problems but optimum levels (between 500 and 800 ngs) have been proven to be remarkably safe.

The next step is finding a doctor who accepts that a higher T level is preferable. Some MD's are still reluctant to prescribe testosterone since it's a controlled substance requiring a triplicate prescription -- meanwhile tranquilizers are freely dispensed without question. (Go figure.) It should also be mentioned that if you are under 30, it's unlikely you'll be eligible unless you have an underlying medical malady -- unless you want to get crafty. Here's what I mean...

If one were to do a cycle of prohormones, which is perfectly legal, it's a good chance that their blood level of free testosterone will be severely depressed. (Nor-androsteine is especially notorious for this.) Taking a blood test at this time may show depressed levels and make you eligible for a script of testosterone. Of course, this will be a lengthy and costly procedure for getting a low dose of testosterone, but it's an option that's legal and safe.

For now though, let's get back to those who really need it.

A BETTER IDEA WAS SURE TO COME

Testosterone application and administration has improved tremendously over the past few years. The early versions of patches applied to the scrotum are mercifully gone.

AndroGel is a potent rub-on application which dries invisibly in minutes. Its only drawback is the hefty price. (About \$200 a month and it often isn't covered by insurance.) To the cost conscious, the injectable form is a much more economical choice but the level in the bloodstream is highest 24 hours after application, slowly dwindling in potency over the course of several days. The advantage of AndroGel is that the daily dosage provides a peak and decline throughout the day more similar to natural testosterone secretion. Due to the more natural "rhythm" of testosterone release there's also less testicular shrinkage.

In the case of testicular atrophy, a course of HCG (Human Chrorionic Gonadatropin) is recommended every 6 months to restore the normal ability of the testes.

Prolonged use of HCG will suppress the body's own ability to produce gonadotropins. But by using more frequent lower dosages for a shorter duration, the Leydig cells do not become desensitized to the drug, making future applications more effective.

The elevation in the body's natural testosterone from the HCG should last from a month to 10 weeks which allows for some time off from the exogenous therapy. Once testosterone levels begin to drop below base line, the standard replacement therapy can be reinstated.

ENOUGH IS ENOUGH

Opinions on the optimum dosages vary from one authority to the next. Some people believe that the androgen should be just high enough to impart its effects and relieve the symptoms of lethargy and libido loss, while others feel that since you'll be shutting down your natural output anyway, you might as well replace it to the level it was during youth. It's still uncertain which is best but a dosage of 200 mgs a week of injectable testosterone cypionate or 5 grams of 1% AndroGel daily works extremely well for most men.

THE FINAL TEST?

Many questions still remain. Will testosterone become as commonplace as Viagra? Will the medical establishment continue to resist its distribution? Will future generations view this era of testosterone treatment as crude and off-base as the early predecessors of hormonal research? Or are we on the dawn of a new world where health, vitality and unlimited muscle growth is possible into our 60's, 70's and beyond? Only time will tell.

POST SCRIPT

It may be a while before testosterone replacement is a mainstream topic, which is why I was so surprised when I saw the issue addressed, in all places, on a re-run of the old TV show "Coach." Now for those of you who aren't familiar with the premise of this show (and god, I hope for your sake you aren't), it's one of those typically stupid sitcoms where every male is a jock-doofus who is incapable of expressing any depth of emotion and the only sensible character is the "Coach's" wife.

In this one particular episode, "Coach" is feeling listless and has no desire to audition the new line of cheerleaders. After pining over his lack of verve, his doctor puts him on the testosterone patch. (Patches are much funnier than injections). Naturally, the ensuing reaction leads to the supposed humorous consequences. Coach begins acting like a rambunctious teenager and he can't leave his wife alone -- banging her every which way, six ways to Sunday. So what happens in the end? You guessed it. The wife decides she likes the "old" coach and convinces him to stop the treatment. He reluctantly agrees but then realizes it's for the best and everyone lives happily ever after.

I don't get it. This is like when characters on sitcoms find lots of money and then lose it and realize it's for the best. NO IT ISN'T!!!

This is another example of how the media attempts to strip men of their birthrights to be men. Having a sexual appetite is something that's viewed as obnoxious, aggressive and antagonistic toward women -- or at least by a handful of male hating dykes who obstensibly control the entertainment world.

In the real world, our leading man "Coach" would have stayed on the T replacement, felt like a million bucks, gained some muscle, went to the cheerleader audition, and then gone home and given his wife the ramming of a lifetime. She'd take it, and she'd like it.

And everyone would live happily ever after.

THE BOTTOM LINE ON TRAINING

When it comes to constructing a workout routine for a muscle magazine, you may be surprised what goes into the thinking process. This was best summed up in a conversation I had with Bob Kennedy. Now for those of you who don't know Bob, he's the publisher of MuscleMag International. Bob may not be the most massive guy you'll ever seen, but he knows bodybuilding. He's also genuinely interested in finding new ways for his readership to obtain their goals. And although there have been some criticisms of MuscleMag, some deserved, some not, it continues to flourish and appeal to tens of thousands of readers around the world.

We were discussing different routines and ideas for future articles when he said something I found to be very poignant. I'll have to paraphrase to some degree but to the best of my recollection his remarks were as follows;

"I always get guys who want to write for MuscleMag. They think because they lift weights and they have muscles they know what to do and how to tell others to do it. Sometimes I tell them to put something together and send it to me and what I wind up with is nothing more than a list of dozens of exercises. These guys don't realize that a bodybuilding article takes writing skills, not just knowing about weightlifting. You have to inspire the readers and get them encouraged. You have to offer them something different and something interesting. That's more important than any combination of exercises. It reminds me of what Serge Nubret used to do. He'd take a single 25 pound dumbell and do a concentration curl for 10 reps. Then without rest in-between alternating hands he'd do 12 reps the next set -- all the way up to 25 reps, then back down again. Silly, right? But it worked. And do you know why it works? Because everything works."

And there you have it folks. That's the honest truth, and as "bottom line" as it gets. There are no magical workouts. But there are good ideas. And if you can present those ideas in an entertaining format that's all that counts when it comes to training information.

That's what I've attempted to do here. I've presented a compilation of some unique training programs that I hope will throw a new twist into your training. Although "everything" might work, nothing works better than a routine that your body has yet to experience.

Besides training regiments, there are also concepts and philosophies concerning all aspects of the muscle building process -- some of which are a culmination of over 30 years of experience. I hope they may be of benefit to you. As a matter of fact, I know they will. Give them a try and see for yourself.

TRAINING: The Nuts And Bolts

The first rule that must be established when it comes to proper training is, there are no steadfast rules. The following is the schedule I use because it's easy to follow. It alternates days of pushing movements and pulling movements. In this way, the muscles that were worked previously won't come into play during the following workout, allowing for more recuperation time.

Each workout also incorporates a major muscle group and an assisting muscle group. For example: on Monday, it's Chest and Triceps. When you work your chest, you're also using your triceps so there's no need to warm them up before working them. The same goes for Back and Biceps. Train legs by themselves because "leg day" is the most exhausting of all workout sessions. The abs and calves are the "left over" group which don't require as much work so they're all done on the remaining day of the schedule. (Note: You may on occasion want to do some specialization on either the abs or calves.)

This plan hits the entire body in one week. For example:

Monday: Chest and Triceps

Tuesday: Thighs (Quadriceps and Hamstrings)

Wednesday: Off

Thursday: Back and Biceps

Friday: Abs, Calves, Traps and Shoulders (Shoulders are also worked when training

chest and back so a lesser workload is required.)

Saturday: Off Sunday: Off

Keep in mind, you'll need to pick a day or two where you devote some time to stretching. Since stretching isn't taxing to the adrenal system it can be done either in conjunction with your training or on an "off" day.

You can take additional days off if you feel you need them but this program works well on a consistent basis. I also feel it's better to go into the gym and do a light workout just to maintain the habitual aspect. It's harder to come back from a long layoff than to just keep the momentum going. Nevertheless, after several months of constant training, it's a good idea to take a full week off from training. If you have a vacation planned, it would be the perfect time to relax and enjoy it.

WHAT TO WEAR

What am I, your mother? Wear whatever the hell you want! Just please avoid those clown pants that were popular in the early 90's or you're going to embarrass yourself. You can keep the weightlifting belt at home as well because it does nothing.

THE FOUR VERY BEST EXERCISES

You'll notice a similarity between each of these movements. They all require moving the body through space. That's what makes them so effective. Whenever the entire body is in motion, there is a greater anabolic stimulus. The stabilizing muscles are also working. The greater stress secretes more growth hormone. And what may be most significant, any exercise that requires balance activates neural activity which in turn demands more concentration. More concentration equals more intensity.

Since every major muscle is stressed, it's feasible that anyone can make marked improvements in their physique implementing nothing other than these four movements. They work great as a "quickie" workout or when circuit training. (Working the entire body in an "aerobic" fashion).

I'm not advocating that these be the only ones you ever use. As mentioned, anything and everything works. And variety is essential to stave off boredom. It's just been my experience that these four movements are far superior to all others and should be the mainstay of any successful program. The first is...

Squats:

Squats are often referred to as the "king of exercises." They're also considered the most "anabolic" of all exercises because their execution releases more growth hormone than any other movement. A lot of people hate squatting, with good reason. They're tough. They separate the men from the boys and the women from the girls, yet without them, no exercise program is complete. It's their difficulty that makes them so effective. Squats will also raise your basal metabolic rate making them the greatest diet aid imaginable!

Excuses for not doing squats are just that -- excuses. Got bad knees? Do partial squats. Can't go heavy? Go light and do more reps. If you have no one to spot you, the Smith Machine squat is a viable alternative. Working out at home? Squat with no weight for one minute sets. There's always something you can do to generate intensity.

The proper form for the squat is like so...

Lift the bar off the rack, placing the bar solidly across your shoulders and step away. Adjust your feet to shoulder width and point the toes slightly outward. Keeping your head up and back straight, bend your knees and lower yourself until your thighs are just below parallel. Come back up stopping before locking the knees and without pausing, descend again. Repeat the movement until the desired rep range is achieved.

The Hack Squat is a suitable alternative but no less displeasurable. The Hack places less emphasis on the glutes but adds a little more onto the quadriceps. (Though some people find them to be harder on the knees.)

Whichever form you choose, squatting is a must. Unless squats are an integral part of your program, you're just going through the motions and you'll never achieve optimum results.

There's an old bodybuilding poem of unknown origin that says it all.

Down the road in a gym far away
A young man was heard to say,
"No matter what I do, my legs won't grow!"
He tried leg extensions, leg curls, leg presses too.
Trying to cheat, these sissy workouts he'd do!
From the corner of the gym where the big guys train,
Through a cloud of chalk and the midst of pain,
Where the big iron rides high, and threaten lives,
Where the noise is made with big forty-fives,
A deep voice bellowed as he wrapped his knees,
A very big man with legs like trees,
Laughing as he snatched another plate from the stack,
Chalked his hands and monstrous back,
Said, "Boy, stop lying and don't say you've forgotten!
Trouble with you is... you ain't been SQUATTIN'!

'Nuff said.

Another "best" exercise is...

The Clean and Press:

More than any other movement, the clean and press works virtually every muscle of the body -- top to bottom. It may be the optimum exercise for developing functional strength due to the fact it utilizes an explosive movement (the lift) as well as concentric control (pushing the weight overhead) and static holding (holding it above your head). It's also the only movement which incorporates both pushing and pulling. In other words, it's every muscle building principle wrapped into a single exercise. Yet, if you were to take a look around the gym, it's a safe bet that within an hour's time, you won't see a single person doing the clean and press.

Beyond its strength enhancing capabilities, the clean and press is an outstanding muscle builder and overall body shaper. Not only is it terrific when on a muscle building

program, it'll also enhance definition. It is most definitely a body sculpting exercise, and a great one.

Now that we've established the merit of the clean and press, let's outline its proper technique.

If you've never before attempted the clean and press start with a weight light enough to handle easily in order to get a "feel" for the movement.

- * Start by grasping a loaded barbell with an overhand grip and the hands slightly wider than shoulder width. Keep your heels down, your butt low, and your back as upright as possible.
- * In one swift motion, straighten the legs and jack the bar upward to your shoulders until the palms are facing forward. This portion of the lift works the legs (mainly the hamstrings and glutes), the lower lumbar regions, the rhomboids, the anterior delts, the traps, the biceps and the forearms. It even brings the calves into play since they become the "anchor." Not bad for a single move, eh?
- * Once the bar is positioned at the shoulders, press it overhead. It's okay to cheat a little by hoisting with your legs but be sure not to bend too far backward in order to gain leverage. This portion of the lift hits the anterior and medial delts, the upper pectoral and most specifically, the triceps.
- * Lower the weight back to the shoulders and return the barbell to the starting position, again keeping the back straight while bending the legs.

If you're coming off a layoff, the clean and press is an ideal choice for "waking up" the entire system. It's also perfect when time is of the essence. A few sets of cleans and presses along with some specified isolation moves can provide a total body workout in under 20 minutes. Naturally, this isn't recommended on a long-term basis but it's certainly preferable to missing a workout.

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Chins:

Notice I didn't call them "chin-ups" because the technique of jutting the chin over the bar is incorrect. The proper way to do a chin is to lift the body, keeping an arched back, your legs bent, and your elbows out to the sides, and raise your chest to the bar. Keep the head back, away from the bar as you ascend and descend.

I'm not going to recommend reps because that's up to you. If you can easily do more than 15 reps, you'll need to add weight for greater resistance.

If you're a woman, this can be a tough movement at first. But even if you can do only one -- do it. Then do it again. You'll get stronger. A viable option is the "Gravitron" machine which allows you to offset some of your bodyweight with a counter weight. If your gym has one, use it and try to lessen the counter weight each workout. One might make a good argument that barbell rows and dead lifts are comparable in effectiveness as chins and I'm not sure I'd disagree with that. But chins are a must.

And lastly there's...

Parallel Bar Dips:

Dips, like the other movements, are very difficult and very effective. Keep your chin on your chest, round the back, and hold feet forward under your face. Dip downwards and raise upwards into a straight-arm position. Make a point of stretching as low as you can at the dip part of the exercise. Don't bounce up and down, but perform the exercise under strict control.

This is another movement where the Gravitron can be an assist to women. If no Gravitron is available, pushups are an excellent substitute. In fact, I believe good old fashioned pushups may be the very best exercise for the chest. If pushups are too hard, (I'm presuming you're a women if that's so, otherwise I might have to bitch slap you) do them with your knees on the floor until you start building up strength.

OVERRATED EXERCISES

Preacher Bench Curls: Once the arms are vertical, there's no longer any resistance to this movement. People think it works the "lower" bicep. What it does is induce stress only in the first half of the movement. Larry Scott had great success with them but I think Larry would have killer guns if all he did was jumping jacks.

Concentration Curls. This movement allows for too much torque and deltoid involvement. The opposite of this position would be steep incline curls which removes the deltoid assistance and places the stress more deeply into the bicep.

Leg Extensions: Nowhere in life do your legs move against resistance in this manner. This exercise is commonly used by physical therapists as a rehabilitation device for patients with bad knees, yet, it is the most knee shearing, unnatural stress you can ever put on them! A squat is the natural direction the knees were designed to move. It's the basis of all leg movement from picking something off the floor to getting out of a chair, yet some trainers are still regurgitating the old wives tale that "squats are bad for your

knees." Partial squats with a light weight are the best knee rehabilitation exercise around. Leg extensions are best used as a warm up or a "finisher" (a final light set) or as part of a superset or tri-set routine.

Overhead Presses While Sitting: You would think a seated position would eliminate cheating because you can't hoist the weight up. Be that as it may, lifting while seated puts pressure on the spine. You're better off standing.

*Incidentally, all shoulder exercises will cause some erosion to the scapula and rotator cuff. There's always somebody who will tell you not to do "this or that" shoulder exercise. The best rule of thumb to follow is, if it hurts--don't do it. If it doesn't hurt, don't worry about it.

Leg Presses: This is more of a glute exercise. It also puts stress on your spine. It isn't terrible, it just shouldn't constitute the bulk of your leg training. Has that been the case with you? Come on...has it? Bet your legs haven't been growing either. Give the leg press a break and start squatting again.

Wrist Curls: The wrists tend to get plenty of work from any movement that requires gripping a bar.

Hammer Strength Machines: These machines attempt to simulate free weights because each handle requires separate balance. The problem is, you have to adjust to the machine's balance. For some people, it works out nicely. For others, (like me) it feels unnatural.

Rope Pulldowns: Not bad. Not great. They're the most popular triceps exercise because they're comfortable. Skull crushers and rope pull "forwards" where you're kneeling away from the cable station and the rope starts from behind your head are much better exercises.

Bench Presses: Bench presses are simultaneously the most popular and most useless of all exercises. They're hard on the shoulders because that's where the majority of the stress is and there's a tendency to overdo the poundage when bench pressing because the support of the bench allows for it. Bench presses can also build a "bunchy chest." Dips and/or push-ups are far superior. Many of the pros have abandoned benching. (See, Vince Gironda was right again.) Keep bench pressing to a minimum.

Any Circular Movement: Rolling the shoulders or spinning the arms in circles can be abrasive to the joints and rotator cuff. Use such movements sparingly.

Dumbbell Flyes: These provide more of a stretch than anything else. Cable crossovers are a similar movement with more continual tension throughout the movement. Incline flyes

are even worse. The direction of the movement isn't in a direct line against gravity in that your arms are moving "sideways" against gravity, making it a contraindicated movement. All you wind up working are a few of the tiny muscle fibers in the deltoid.

Front Squats: I don't see how placing the bar across your clavicle works the thighs any more effectively than having it across your back. The legs are still moving in the same direction. I think some people believe front squats must be good because they're so unbelievably uncomfortable. But the discomfort has nothing to do with what the exercise is supposed to work!

Side Bends With Weights: I HAD to mention this one because, as everyone knows, the obliques build up quickly and the last thing you want is a bigger waist. Having said that, I'd still suggest not ignoring oblique work. A little muscle on the obliques can provide a nice curve, as well as aid in strength moves involving the hips such as squats and deadlifts.

The Pec Deck: Once again, you're stuck with the range dictated by the machine. The one's where the arms are bent are better than those where the arms are outstretched because it's less stressing to the anterior deltoid.

The Swiss Ball: The most idiotic invention of the century. These oversized beach balls are okay for stretching but using them to lift weights is nothing short of ludicrous. The theory is, more balance is required, therefore more stabilizer muscles and neuron activity is incorporated into each movement. There may some truth to that, but the risk of slipping and having a dumbell landing on your teeth far outweighs the minute advantage in muscle stimulation. A fad that hopefully will soon die.

Okay, this is the nuts and bolts of effective training. But what about some stuff that's a bit off the beaten path? Thought you'd never ask. The following chapters are a culmination of unusual training routines for every muscle group. Check 'em out.

OUTLANDISH LEGS! An All Out Assault For a Wicked Set of Wheels

Read it and weep. This program is brutal! It's beyond painful. In fact, it's so tough, it's almost obscene! If the notion of overtraining is an issue for you -- turn the page. This routine is for the guy who isn't afraid to inflict some serious stress on his thighs and force them into growth! And that, it will definitely do. But it's gonna hurt ya.

ARE YOU TOUGH ENOUGH?

Under normal circumstances, legs are the toughest bodypart to train, which is why they're so often neglected. They're also easy to ignore. (Hey, just don't look down). Now, I know what you may be thinking, "I never skip a leg day!" But the fact that you train legs as often and as long as every other bodypart isn't enough. Legs require considerably more effort because they're so much stronger than any other bodypart. Yet, just because you can push more weight with your legs than you can with your arms doesn't make it any easier. That increased workload makes it more strenuous to the endocrine system in general. That's why you can actually get nauseous after an intense leg session and the routine being proposed here is most definitely intense. But it works. Do you have the stomach for it?

PREPARING FOR BATTLE

If you're still up for the challenge, this is what you'll need to do. First off, it's necessary that you not train the day before working legs. You want maximum energy for the task at hand. It would also be a good idea to take the following day off. You should be so depleted from this workout that you're going to need it!

BRING ON THE PAIN!

The workout will consist of 4 tri-sets executed in a back to back fashion. That's 8 tri-sets, or a total of 24 individual sets. What's that you say? Sounds like a lot? Tell me something I don't know. Anyway you slice it, when you want to blast a muscle group into new growth, it will require a more voluminous workload. The "heavy weight/low rep" method, in which you bring each set to total failure, thereby negating the need for multiple sets, just doesn't apply to legs. You can only go so heavy before you risk a rupture, annihilate your knees, or blow out your back. The only answer is sets and reps -- and lots of 'em. Don't think this means using little pussy weight. You need to go heavy AND do high reps. (Sound's like fun, doesn't it?) Even many advocates of HIT (high intensity training) agree that legs respond better to higher reps. And that's what you're going to do.

Each tri-set will consist of the three movements. The first will be a set of 20 rep squats. The second will be a heavier lower rep movement. The third will be a repeat of the first -- 20 full rep squats. This tri-set is performed with no rest in-between sets! Getting scared yet?

GENTLEMEN, START YOUR LIMPING

Naturally, high rep squats must be performed with a much lighter weight than you would normally use. The intention of the first set is to flush the legs with blood and get a pump. The second set will be the "main stress" set -- a heavy compound move that will engage all the major muscles. The final squat set will bring blood flow back into the legs, removing lactic acid saturating them with nutrients. Due to the excessive stress on the entire body, this procedure is extremely anabolic. And oh yeah, it hurts like hell.

Here's the run down of the entire workout:

*Tri-Set One:

Start with twenty reps of full range squats. Follow immediately with a set of slow, deliberate Leg Extensions. Obviously, you won't be able to handle very much weight after the squats but go with as heavy a weight as possible while avoiding all momentum. Slow and steady is the key. Shoot for 4-6 smooth reps or just short of failure, which will come pretty quickly.

Once completed, do another 20 reps of squats. Even if you can only use the weight of the bar, even if you can't use any weight and all and you're just doing deep knee bends -- do it! Don't stop until you complete the set.

That's one.

Rest for 4 minutes and continue on.

*Tri-Set Two:

This time you'll do twenty reps of full squats followed immediately by heavy slow Hamstring Curls in the 4-6 rep range, followed immediately by another 20 reps of squats.

Rest for only 2 minutes. Keep the intensity!

*Tri-Set Three:

Another twenty reps of full squats followed immediately by slow Leg Presses in the 6-10 rep range followed by another 20 reps of squats.

Now you can rest for up to 5 minutes. It's time for the last mile, so go all out!

*Tri-Set Four:

Twenty reps of full squats followed immediately by steady Hack Squats. Accentuate the slowness of the pace in both the concentric and eccentric motion. They should each be at 4 seconds up and 4 seconds down. Work in the 6-10 rep range and finish up with another 20 reps of squats. If you can do more than 20, go for it!

Normally this would be enough for most mortals but if you want the deluxe "he-man" version, rest for 10 minutes and repeat the entire sequence.

As you can see, this routine is relentless. Due to its punishing properties, it's meant to be conducted for a total of no more than one session a week for six weeks. After that, train legs as you would normally. After this torture session your old leg workouts should seem like a day at the beach!

NO CRYING ALLOWED

Don't say you weren't warned. This program isn't for everyone. It's strictly for the fiercest of warriors who will stop at nothing to possess thick, powerful "tree trunk" legs with cuts and folds like layered cables running throughout. Don't be surprised to find an inch or two more on the tape measure as well. As an additional benefit, you'll develop extraordinary stamina and glutes as tight as steel. And if anyone says you need to still do cardio to increase your heart rate, you have my permission to smack them in the head! This routine will test your lung power far beyond anything you've ever imagined!

Have you got what it takes? There's only one way to find out. The next time you're up for a challenge try this vicious tri-set routine and bomb your legs to oblivion!

To those who are about to fry their thighs, we salute you.

BETTER BICEPS A Quick and Effective Method

When someone asks you to "make a muscle," do you unhesitatingly roll up your trousers and flex your calve? No way. It's the biceps that everyone wants to get a look at. Biceps, for some inexplicable reason, are the gauge by which one's overall muscularity is judged. If your biceps look good, most people will presume the rest of you does as well. That's why we want them. You have to admit--the biceps have little to do with overall strength or health. (But damn, they sure look cool.) Okay, they're mostly for "show", yet when they're big and defined and vascular, they're an awesome sight which suggest strength, power and sensuality. Is it any wonder guys want bigger bi's?

Impressive arms are so revered that novice gym-goers will spend more time working biceps than all their other bodyparts combined. Of course, all that will do is lead to overtraining. Instead of working harder, it's time to start working smarter.

A NEW OUTLOOK

When it comes to becoming "well armed", the barbell curl is the most popular weapon of choice. It's probably the simplest of all exercises. Yet, because of its apparent simplicity, the curl is all too often executed incorrectly, not only by beginners but experienced lifters as well.

It isn't easy to accept the fact that something so basic can be misunderstood. There's hardly a bodybuilder worth his protein powder who would admit that he didn't know how to curl correctly. But every now and then it's necessary to examine the mechanics of an exercise and when studying the barbell curl, you can begin to see it flaws.

There are some unforgivable abominations of technique when it comes to curls. Leaning back, swinging the weight, bending the knees and hunching the shoulders are all commonly employed tactics which reduce the stress on the biceps. This is another case of sacrificing form for the sake of lifting more weight. In order to optimally stimulate growth, it's necessary to focus the entire motion of the curl onto the biceps. The first step is to eliminate all assisting muscles and isolate the function of the bicep. When performing curls, try leaning back against a wall. This simple adjustment eliminates momentum and prevents cheating. Face a mirror to keep an eye on your shoulders. They must stay relaxed so that they're removed from the execution. Also, when lowering the bar, do not allow the arms to straighten completely. By maintaining contraction, more emphasis is placed on the targeted muscle.

IT ISN'T REALLY A CURL AT ALL -- Or Shouldn't Be.

A major misconception when it comes to curling a weight is the notion that the weight should "arc." If you were to view a standard barbell curl from the side, the motion of the

bar moves along the line of a semi-circle. Yet, this motion is not the optimum curve if the objective is to work the biceps as effectively as possible. Once the bar reaches a 45 degree angle, the movement is no longer working against gravity. This excludes the crucial "peak contraction" at the top of movement. In order to get the most out of your curling movement, stay aware of keeping the elbows back. As you lift the weight, the bar should then follow an almost straight line close to the body, as opposed to the circular movement which comes from jutting the elbows forward when lifting the weight. Think of it as "dragging" the barbell up instead of "curling" it. When performing a curl with the back against the wall, your triceps should stay in contact with the wall throughout the up and down movement.

SURE, IT FEELS GOOD--BUT IS IT DOING ANYTHING?

Another common mistake is falling in love with the preacher bench. I know, it's a "comfortable" movement. But it's more of a brachialis exercise than a bicep movement. Have you ever done a workout consisting of nothing but preacher bench curls? You'll feel it mostly in the joint between your forearm and bicep. That gives the illusion that it's working the "lower biceps" but there isn't any "lower" biceps. What you're feeling is mostly residual soreness from the forearm and brachialis which emanates into the upper arm. The truth is, the bicep received very little stimulation. Don't get me wrong. Preacher bench curls will work. But if your bi's are a stubborn bodypart, they're not the best choice. It's better to exert your energy on more effective movements.

A LITTLE OF THIS -- A LITTLE OF THAT

Instead of laying out a detailed biceps routine, work on the above techniques with a set and rep scheme in which you're already employing. The main thing to stay conscious of when working the bi's is keeping your elbows back, and the "arc" of the curl more vertical. You can do this with dumbbells, incline curls, even pulley curls.

These slight alterations in technique can make all the difference between a productive workout and a waste of time. They may seem basic, but the results will be bigger biceps. And that's what you want isn't it?

IMPROVE YOUR LAT-TITUDE Setting Your Mind Up For a Broader Back

In nature, there's a basic law: The big fish eats the little fish, and the big fish gets eaten by the bigger fish. This tenet holds true throughout the animal kingdom and every beast instinctively is aware of it. The size of a creature will dictate its dominance, often without retaliation. Don't mess with the big boys. Even among the same species, it's the largest and strongest of the herd who invariably winds up as the leader (at least until a bigger one comes along). These leaders get to feed first after the kill and they even have their choice of any female in the flock. No doubt about it -- being big has its perks.

As savage as the aristocracy of the wild may be, in some ways, it isn't that different among humans. Naturally, factors such as education, career, and wealth are a more significant criteria toward one's status in society, yet there remains that primal hierarchy; those who are bigger command the most immediate attention. Females are instinctively attracted to the man who looks as if he can protect her and provide for her offspring. Of course, without intelligence, wit, creativity, compassion, and all the other attributes that separate us from lower life forms, all the size in the world won't mean a thing. Big and dumb doesn't cut it. Be that as it may, nobody wants to be small.

When "sizing up" another individual, it's the first impression that counts and nothing connotes sheer size more than a broad back. A man's back is a statement of sorts. If it's narrow, it suggests frailty. If it's wide, it exudes power. Even the term "a strong backbone" stems from the fact that the back is the source of all upper body power. Bulging biceps and a big chest are meaningless without it.

Bodybuilders are well aware of the back's importance in the overall development of the optimum physique. Yet, the rear lats are a sticking point for a lot of guys and with good reason -- it's the one area that requires complete focus and concentration when training. This is due to the fact that the back cannot be seen in a mirror when working out. You have to think about it. There's no ogling of the back as it goes through its motions. This is work

This attention to detail or lack thereof, is what makes the difference between a "so-so" back and one that stands out in all its audacity. If your lat work hasn't been giving you the results you desire, don't throw in the towel just yet. There is a solution, but it must be prefaced with the understanding that you need to follow the instructions carefully!

These exercises offer a unique variation on the basic back movements that'll force you to concentrate on the execution. In order to get the most out of each exercise, the one constant throughout every movement is to pause for 6 seconds when the muscles are completely contracted. During this time, think about the muscles of the back. Feel them

tensing and bulging! After this hold, slowly return the weight, staying conscious of how the lats are stretching and widening.

The first exercise is a little unusual but it's terrific for building the teres major and adding width to the upper lats. It's called...

The Overhead Leaning Pulldown

Lean back from the lat machine so that the pulley is at a 60-degree angle. Pull rearwards, keeping elbows high and wide. As you bring the pulley bar downwards, lay back and drop chin to chest. Keep chest concave (hump back). Touch bar to the lower pec line -- hold for a count of 6 -- and repeat for 2 sets of 10-12 reps. Since the back is usually arched during back movements (to prevent injury) this is a movement that shouldn't be too heavy. Concentrate on form and feel throughout the full range of motion.

The next movement is a variation of the low row. Instead of sitting, though, you'll stand over the bench and hunch forward, emphasizing the belly of the lats and thickening them. This exercise is known as...

The Racing-Dive Lat Pull

Stand in the bent-over racing-dive position, as if you're about to dive into a pool. Your abdomen should be touching the thighs. The floor pulley should be approximately 16 inches off the floor. Extend arms and grasp the pulley, keeping head down. Pull inward with the elbows wide. Pull head rearwards and arch back while pulling the bar to the lower pec line. Remember that 6 second contraction! Release and repeat for 10 -12 reps. Do 3 sets.

The next move is an old stand-by with a twist. It's the...

Underhand Close Grip Barbell Row

The most common version the barbell row involves using a wide overhand grip but in this case, the grip will be underhand and closer, hands about 6 inches apart.

With back arched and knees bent slightly, pull the bar to the waist, lowering it slowly and allowing for a complete stretch. The motion of pulling to the waist (rather than the chest) should be slow and deliberate. Pulling to the waist allows the arms to come down toward the line of the torso, greatly increasing the stress on the lower lats. The underhand (supinated) grip rather than the more common overhand grip also increases the involvement of the lower lats while the narrow grip increases the range of motion.

The key to this exercise is to concentrate on using the back muscles in a totally controlled movement, at a medium speed, while getting a full stretch and that 6 second contraction at the top of each rep. Perform 4 sets of 8-10 reps with good form. This movement will amaze you with its mass and strength building potential.

Next up is one you don't see too often. It's known as...

The High Bench Dumbell Row

Lie face down on an exercise bench at least 30 inches high. Hold a dumbbell in each hand at arm's length. Pull both weights upwards simultaneously while lifting legs and head. Think of this as a sort "combination rear lateral raise/lower back hyper-extension." Keep elbows wide (at right angles to the body) and hold at the contracted position. The trick here is to relax the hands in the low position, as if each rep is a "single." Expect some serious soreness in your upper back the day after you do these. Shoot for 3 sets of 10 reps.

And finally, we saved the toughest for last. This is a fantastic exercise for lengthening the lats and building a solid "V" from the traps down to the obliques. They're called...

End Bar Chins

Grasp the end of a chinning bar with one hand hooked over the other. You'll be "sideways" parallel to the bar. (You can wrap a towel around the end of the bar to make it more comfortable). Pull upwards keeping elbows wide, back arched, and head back. Touch pec line to end of bar and hold that 6 second contraction! Lower and repeat until failure. (Which shouldn't take too long). Do 3 sets.

Another sure-fire way to develop some serious thickness throughout the entire back region is THE STATIC HOLD DEADLIFT. If you want to crank the intensity up a notch, you may add them onto the previous routine.

Use a weight that is heavier than you would use for a barbell row but not as heavy as you would use for deadlifting. Take an underhand grip and "row" the bar up to the upper abs (taking extra precaution in keeping the back arched tightly). Now hold it. Maintain that contracted position for 10 seconds. The tendency will be to try and hold the bar in position with your arms but CONCENTRATE on your back. There may also find yourself holding your breath at this point in order to generate increased tension. Breathing is mandatory! More than any other exercise, this movement puts a sobering stress on the erector spinae, but with a little perseverance, that elusive "Christmas Tree" may be arriving a little early this year!

For more advanced bodybuilders the SUMO LIFT OFF A RACK is a great variation of the more generic dead lift. Place an adequately loaded barbell on the notch below the knee high prongs of a squat rack. Take a stance that's wider than shoulders width. Grab the bar with a close grip (about 6" apart). "Deadlift" the weight off the rack. You'll notice the movement is much shorter than a traditional deadlift but the open "sumo" stance disengages the legs thus allowing more of the muscle fibers of the rhomboid region to come into play. Go for higher reps with this one. Four or five sets of ten to fifteen reps of these "little" lifts and your back will be begging for mercy.

NO BRAIN - NO GAIN

The biggest challenge towards making these methods work is the consistent thought process that goes along with it. By "thinking" about your back while going through the exercise, it will automatically involve itself to a greater degree. Successful back training is the mark of a truly proficient bodybuilder. A wide and powerful back is its reward. Tenacity is the key to achieving it.

TIME TO STOCK UP ON XXX SHIRTS!

Stick with this routine once a week for 6 weeks. You should start to notice some improvement after the second workout. After a few weeks, you'll begin to see that flaring, majestic sweep to the torso. After 6 weeks time, you'll know what it's like to feel your back while training it. These exercises will force your body and your mind to work in ways they've never known. That's the key to growth -- both physically and mentally.

If you want to be big, you need a big back. And if you want a big back, you have to think about what you're doing. After that, it's just a matter of applying the right exercises -- and some sweat. But more often than not, toughness comes more from the mind than from the muscles. Unlike the aforementioned beasts of the wild, our superior intellect gives us control over our bodies. What we can conceive, we can achieve. So set your mind up and get to work on those lats! You'll still have to prove yourself in the various walks of life, but with a little more size, you just may be the first to get noticed. And with the powerful presence that comes from a broader back, people are going to see you coming from a long way off.

TRIED AND TRUE Triceps: A Unique Triceps Movement That Guarantees Great Guns!

Everybody has their favorite exercises. There's always that one movement for each bodypart that seems to produce the best results, or in some cases, it can simply be that a particular exercise just FEELS better than the others. In either situation, the assumption can be misleading. So is the case with tricep training.

MORE WEIGHT =3D MORE MASS The consensus on tricep training is that it's the heavier, and often, the more uncomfortable movements, that produce the most mass. Lying barbell extensions (skull crushers) head the list in that they're a heavy movement that place a distinct and direct stress onto the three heads of the triceps.

On the other end of the spectrum, you have tricep kickbacks. They're thought to be more of a sculpting movement but they've all but fallen out of favor due to the fact that the weight necessary to perform kickbacks correctly is too light to adequately stress the muscles, at least enough to stimulate growth. The leverage factor, considering the angle of the body, doesn't allow for a great deal of exertion. In that regard, kickbacks isolate the triceps almost TOO well. Some bodybuilders may throw in a set or two at the end of their regular tricep routine (when no one is looking) just as a finisher -- something to contract the tri's and get a little extra pump. But almost no serious lifter would make them the crux of their tricep training.

A MUSCLE ONLY KNOWS GRAVITY This preference over heavy movements versus isolation movements brings up an interesting point. Is it the EXERCISE that is superior or inferior or is it a matter of the POUNDAGE that is being lifted? With skull crushers, you may be able to handle 100 pounds but with kickbacks, a pair of 30s would be a challenge. But what if there was a way of duplicating the intense contraction of a tricep kickback with the heavy poundage of a mass building movement like the lying tricep press? There is. And when you hear how simple it is, you'll wonder why you've never done it before. As a matter of fact, you may wonder why you've probably never seen ANYONE doing it! And once you try it, you'll realize it's a tremendously effective exercise which not only packs on mass but brings out knife-sharp detail throughout the three heads of the triceps. It does so by combining the heavy weight of a barbell exercise with the isolation of the tricep kickback. The exercise is the BARBELL KICKBACK! LOOKS WEIRD. WORKS GREAT! At first glance, this move may appear awkward but it's actually quite comfortable. The usage of a barbell not only allows for more weight, it also prevents cheating so prevalent with the triceps kickbacks. Even when using two dumbells at a time, the arms can swing the bells back, yet this isn't the case with a barbell. Grab a hold of one and you'll see what I mean.

How It's Done - The barbell will be held behind your back with your arms down at the sides, palms facing backward. (If possible, it's easiest to back up to a barbell rack or have

someone hand you the bar.) Use a "false" grip (thumbs the same side as the other fingers) to prevent overuse of the wrists and to keep the stress on the back of the arms.

- Take a shoulder width grip. (Note: You may also want to experiment with some slight variations in width.)
- Bend forward until your torso is parallel to the ground. Bend the knees slightly.
- Place the barbell so it falls into the mediolateral axis (the crook of the back of your knee where your leg bends).
- Now, bend the arms and raise the bar up as high and as far back as you can. You can even heave a little if you have to. After a few reps, you'll start to get the feel for it.
- Hold the bar in the contracted position for a count of two. Slowly lower back to the original position. Use a weight that will allow for no more than 12 reps.

"TRI-ING" FOR MORE MUSCLE If you execute this correctly, you'll feel a major flushing in all three heads of the triceps. They'll swell and get pumped up quickly. It should also produce a deep down ache that you normally don't get with isolation movements.

Tricep training isn't unlike working any other bodypart in that it requires new stimulus to instigate growth. This can come from a variety of techniques but nothing shocks those dormant muscle fibers more than an exercise it's never experienced, and the barbell kickback should fill the bill perfectly.

Once your tri's get used to the barbell kickback, you may want to take a break from it for a while, then spring it on your unsuspecting tri's a few weeks later. Then again, you may like it so well you just might wind up with a new favorite for working triceps! And why not? The barbell kickback gives you the best of both worlds. It's both a mass movement and an isolation movement -- a single exercise for both size and shape. What's not to like? Give them a go, and watch those triceps start to grow!

SERRATUS MAGNUS - The Forgotten Muscles

Taking a glimpse at the title of this page may evoke the reaction; "The serra-what?" It's understandable. There aren't too many articles written on the development of this tiny muscle group. Then again, there also aren't too many people with impressive looking serratus magnus. Coincidence? Unlikely.

It's a shame. The serratus magnus are among the most beautiful muscles of the torso and their development can make a tremendous difference in the overall look of your physique. When fully developed, they stand out like rows of symmetrical cables, fanning from the frontal lats, under the armpits, over the intercostals, and into the rectus abdominals. They add lines to the upper body and create a more muscular appearance. Not surprisingly, they can be easily covered by thick fat laden skin, but when in full bloom, they're as sensual and spectacular as a shredded six pack. They're also paramount in the performance of most upper body movements, both pushing and pulling, which is why so many bodybuilders ignore them since they get plenty of work from presses, crushing exercises, even sit-ups. But all of these movements work the serratus indirectly. In order to achieve truly impressive serratus magnus muscles, they must be targeted directly.

Although their development is essential for a high placement in bodybuilding competitions, many top bodybuilders when not in contest shape, have pretty poor serratus. A few rare examples of men with outstanding serratus development are Flex Wheeler, Dexter Jackson, Mike Matarazzo, Chris Cormier and Kevin Levrone (when he isn't too "bulked up"). Dorian knew that the serratus were important and worked them hard, as did Robbie Robinson, whose trademark side-pose shows off his serratus in all their intimidating glory. Come to think of it, Robbie still has them --at age 60. What's your excuse?

The best approach toward developing any small muscle is to isolate it and that principle holds true for the serratus. Some bodybuilders have an excellent comprehension of how the various muscles move and work whereas others couldn't care less about such anatomical academia. Since the serratus are so rarely trained directly, their function may be less understood.

Without getting too technical yet providing adequate information, here's a brief low-down on the mysterious serratus.

ORIGIN

The serratus, like every skeletal muscle has two main attachments. The more solid one is called the "origin", since this is where your muscle starts. Your serratus magnus is interesting in that it has a multiple origin, divided into three groups of finger-like

sections. These are as follows: (1) The upper part which has attachments on the first and second ribs, several inches from their costal cartilages; (2) the middle part, which is attached to the second and third ribs; and (3) the lower part, which is attached to the fourth, fifth, sixth, seventh and eighth ribs. In other words, your serratus magnus has its origin on the first eight ribs counting from the top down. This is why someone who is extremely skinny appears to have his "ribs sticking out." What's more accurate is that the serratus, which resemble ribs, become very visible when bodyfat levels are low. On a muscular torso, well developed serratus gives the illusion of the torso being more defined.

INSERTION

This is simple enough. The other end of your serratus magnus, which is attached to the lesser part, or the more movable part, is called the "insertion." As with all muscles, when your serratus magnus contracts, it pulls the insertion toward the origin.

ACTION

The upper and middle parts of your serratus magnus pull your shoulder forward, assisting in movements such as the push-up or bench press. They also help in raising the upper body, as is the case with a "sideways" sit-up. Oddly enough, the lower row helps to rotate the shoulder blade, and turns the glenoid fossa upward. (The glenoid fossa is the cup-like socket into which your upper armbone fits). So in part, the lower part of your serratus magnus is responsible in assisting your deltoid muscles and are a significant factor in the strength of any overhead pushing movement while the upper and middle serratus assist in twisting, turning and stabilizing the torso. This proves that although they're small, they are vital to overall power.

Okay, now that the anatomy of the serratus has been explained, how do we go about building the little buggers? The first step is to stay conscious of their movement, as slight as it may be. You may be so used to them "going along for the ride" in most exercises that concentrating on their movement might take a little practice.

The following movements all emphasize the serratus magnus and will help build them to their utmost.

One Arm Side Press

While holding a single dumbell, tilt the torso to the side opposite of the hand holding the bell. Press the dumbell directly overhead. Allow the weight to come all the way down the serratus area before resuming the concentric portion of the lift. Make sure to lift in a straight vertical line while concentrating on the serratus. This will involuntarily involve them to a greater degree.

One Arm Cable Pull Down

Face a pulley set at the highest rung. Use a single grip handle. Standing about 3 feet away from the pulley and keeping the arm straight, pull the handle down directly to the top of your knee. Squeeze and contract the serratus at the completion of the move. With the opposite hand you can place your finger on the serratus to make sure they're contracting to their fullest. Return slowly and repeat. Do at least 3 sets of 12 reps and you'll start to feel an unfamiliar pump in the area.

Serratus Twist

Hold a light dumbell or plate in front of you with extended hands. keeping the arms straight, twist the torso from side to side going for a much extension as possible to each side. Keep the movement brisk! Do 50 reps on each side.

Pulley Crunch To The Side

This is similar to a kneeling rope crunch to work the abs except that you twist your torso at the bottom of the movement, contracting the serratus and obliques. Bring your elbow to the opposite knee at the bottom of the contraction. Try for 25 reps to one side then 25 reps to the other immediately followed by 50 reps alternating from side to side.

Twisting Leg Lifts

This can be done hanging from a bar or any other method in which you'd perform leg raises. The difference is the body is leaning to one side, the legs are bent and the knees are drawn across the body, emphasizing the transverse abdominals and the serratus magnus. Repeat on the other side.

One Sided Bends With Arm Overhead

Stand with your right hand on your hip and your left hand outstretched above. Bend to the right and extend the outstretched hand over your head and as far to the right side as possible. Keep this position and "pulse" tiny bends. Stay on this side for one minute. Return to an upright position--switch arm positions--repeat on the opposite side. These little movements keep the serratus and obliques under constant tension. It's tougher than it sounds, but if you want to make it a bit more manly, try holding a 10 pound dumbell in your overhead hand. As a matter of fact, you can hold a dumbell in each hand and make this move a total midsection molder -- not only the serratus and obliques, but the transverse abdominals and erector spinae come into play. Keep in mind, these tiny muscles are paramount in the stabilization on the torso during most powerlifts, especially squats. Do 10 one minute "sets" on each side, alternating sides.

Barbell Pullovers

Lying on a bench, hold a light barbell overhead. Bring it back as far as possible with only a slight bend in the elbows. Go for a full stretch. Breathe deeply and return the bar up to the overhead position.

Dips With a Twist

Using standard parallel dipping bars, begin the descent like a typical dip, but as you come up, turn the body to one side. This displaces the stress heavily onto the serratus. You can try this move in the opposite manner in that you twist on the way down, and straighten on the way up.

Lying Leg Twists

While lying on your back, arms at your side, palms down, raise the legs straight up. Now keeping the feet together, lower both legs slowly to the left until they touch the floor. Bring the legs back up and repeat on the other side. Do 15 reps on each side for 3 sets and tomorrow your waist will feel tighter than ever.

Include these movements in with either your chest training or ab workout. Or put aside a part of your program strictly for serratus. They deserve the attention. It's also a good idea to try and pose the serratus, which will help you gain control over the muscle group as well as bring out the detail. Keeping the calories in check will insure that they can be clearly seen.

The Serratus Magnus may be a forgotten group of muscles but those tiny striations will bring out the detail of your chest, outline your abs, and make your lats look broader. Once you develop them to their fullest, the improvement in your muscularity will command attention and make you stand out from the crowd -- on the beach, on the competitive stage, or any time a good looking woman may see you with your shirt off. So don't forget to train them!

NO CALVES? NO PROBLEM!

You've been hitting the gym for a while now. You're looking good. What was once a mediocre physique has been transformed into one which demands attention. It didn't take too long, either. It's amazing how setting your mind to working out can change your life. You feel better and you look better and each enhances the other. Even in clothes, you radiate a presence -- tall, strong, confident. Everything is working in your favor. There's just one little problem. Make that two little problems. Those scrawny calves.

Hey Fella, Ya Got Twigs In Your Sneakers!

You're not alone. More than any other bodypart, the calves are the toughest bodypart for most people to improve. They're also the least fun to train mostly because the movements are so limited. You have seated toe raises, standing toe raises, donkey toe raises... and that's about it. To top it all off, those little buggers burn when you work them! Hardly seems worth the effort which is why so many guys neglect to work their calves, leaving them with stick legs from the knees down. You may look killin' in a tank top, but when you're wearing shorts, all eyes are on those lower legs. Damn!

A Fowl Comparison

The reason calves are so resistant to exercise is due to the nature of the muscle fibers that make up the calve. They're mostly thin stringy muscles (referred to as "slow twitch") unlike the muscles of the thigh or the chest. To get an idea what this is like, imagine the meat on a turkey neck. For one thing it's red, as are all slow twitch fibers, and it's obvious there's little potential for growth within the strands of muscle. Even if the turkey is overfed, the neck won't change very much. Now look at the meat of the breast which is made up of white "fast twitch" muscles. (Also referred to as "Type II" muscle fiber.) It's big and plump and it'll continue to grow as long as the bird grows. Think of your calves like the turkey neck. Come to think of it, they may even resemble a turkey's neck.

Something Else You Can Blame On Your Parents

Some people are lucky. They're blessed with more Type II fast twitch fibers in their calves. They're the fortunate few who don't even have to train them. As long as they continue to walk, their calves look good. If you've read this far, you're not among them. Welcome to the club. It's enough to make you wear long pants year round.

Even with the limitations that nature places on those of us who are "soleus challenged," there are a few tricks which can make the most out the genetic hand you've been dealt.

Build It And They Will Come

Since the calves are subjected to thousands of reps each day through walking and running, it stands to reason that they're designed for endurance. Attempting to build the calves using heavy weight is futile because the muscles aren't equipped to handle too

much weight. For example, when you're lifting a lot of weight while on the calve raise machine, a good portion of the stress is absorbed by the Achilles tendon. Tendons can get stronger but won't increase in size. In order to add any meat to the calve muscle, you'll need to pump them full of blood. Only through high reps, emphasizing the eccentric movement, will you see any improvement in your calves. And by keeping the reps in as condensed a time span as possible, the better the chance you'll have of getting the best pump.

Pyramid Power

One such principle of condensing reps within a short duration is to use a technique known as "pyramiding." Usually, this involves moving up in weight within a particular exercise with each successive set until you reach your maximum weight, after which you continue performing sets with gradually decreasing poundage. For calve training, there's a slight change. The weight remains the same. It's the reps you'll be increasing.

Here's an example using the Standing Calve Raise. Perform each set using a smooth, full range of motion.

- 10 reps
- 5 second rest
- 15 reps
- 10 second rest
- 25 reps
- 10 second rest
- 15 reps
- 5 second rest
- 10 reps

As you can see, this is a total of 75 reps, all completed in about 2 minutes. Naturally, you'll need to adjust the weight in order to make such an assault on your lower legs possible. Complete another two sets as described in a similar manner and your calves will be gorged!

Calves may be tough and they may not be the most fun to train, but that's no reason to let them ruin an otherwise excellent physique. Stick with this pyramiding program for training calves and in no time they'll begin to take on new shape and size. As a matter of fact, they may start to get so impressive you'll actually look forward to wearing that new pair of shorts. Walk proudly.

DARING MOVES FOR DYNAMIC DELTS 7 Shoulder Exercises You've Never Tried -- And Should!

You know how it is. You go into the gym on a regular basis and you give it all you've got. Whatever it takes to get the job done, you do. Most of the time it's just the meat and potatoes exercises -- Squats, Bench Presses, Curls -- the old tried and true. They work. No need to bother with a foolproof formula. Or is there?

There's no denying that basic compound exercises are all you need to build a solid foundation of muscle, but as any advanced trainee knows, any exercise, regardless of how well it has worked in the past, will start to grow stale and less effective. There comes a time when you need to mix things up. The only problem is, so many bodybuilders have a limited array of effective exercises to draw upon. And in the case of delt training, the limitations seem even more pronounced. Substituting seated presses for standing presses and lateral extensions with a machine in lieu of dumbells seems hardly like a change at all. Still, a little variety can be a nice alternative and stave off boredom. But what if it were possible to do something completely different -- something so radical it not only adds inspiration to your workouts but provides an entirely new stimulus to your muscles. Well, now there is.

The following is a compilation of seven deltoid exercises which you've probably never seen. They may seem a little odd at first but after a set or two you'll start to feel muscle fibers coming alive that you never knew you had! Get ready to shock your shoulders and see them swell up to melon-sized proportions.

Exercise #1: The Prone Reverse Raise:

The object of this exercise is to work the posterior deltoid/outer trapezius in a way that no other movement can.

*Lie face down on a bench high enough so that your arms can extend down to the sides without touching the floor. If no bench is available, you can do this exercise while standing and bent over, torso parallel to the floor.

*Holding a dumbell in each hand, palms facing forward, slowly and deliberately bring the arms up and back (not out to the side), alongside your body. Keep the arms straight throughout.

*Return the weight to the original position and repeat.

If you think about it, the direction of this movement isn't executed by any other exercise. Expect to see detailed definition in the rear delts in no time!

Exercise # 2: Supine Cable Arcs:

- * In this exercise you'll be lying down on a bench at a cable station, facing the pulley.
- *Using the connection at the bottom rung, take hold of a straight bar with both hands in an overhand grip while seated on the bench.
- *Now lay back keeping the cable down by your hips.
- *Using an upward, arc-like movement, raise the handle overhead and upwards until your arms are outstretched as far back as they'll go.

Shoot for 12-15 reps with good form and expect a full blown pump in the anterior delts and traps.

Exercise # 3: The Lifting Press:

This one was a favorite of the old "York" gang, the original weightlifting champions from Pennsylvania. It seems lifting humongous weights wasn't enough for these guys. They had to make life difficult for themselves now and then -- just for fun. As you'll see, this is a tough move requiring balance, coordination and a heap of functional strength.

- *Lie on your back and in one hand, hold a dumbell overhead.
- *Keeping the elbow locked, begin to stand up. (You read that right.)
- *Attempt to keep the bell directly overhead at all times.

There aren't any rules as to how this is done. Some guys sit up and then stand up while others prefer to go on their knees first. Any which way will stress the shoulders a'plenty.

Exercise #4: "W" Presses:

Careful with this one -- it's tougher than it sounds. Start with a moderate weight and build up the poundage slowly.

- *Hold a pair of dumbells in the standard fashion as if you were going to do presses.
- *Now as you raise the bells above your head, w-i-d-e-n your arms so that your hands are further out to the sides at the top of the movement, simulating the look of a "W".
- *Lower the weights down until your elbows are as low and close to the torso as possible.
- *Repeat for at least 10 reps.

Exercise #5: Alternating Raise Swings:

*Hold a dumbell in each hand.

*With your left hand, raise the bell out to the side like a standard lateral raise, while simultaneously, raising your right arm up with the elbow bent at a 45 degree angle, twisting the arm so that the elbow is forward at the end of the movement and the dumbell is in front of your face.

*Return to the original position in a smooth rhythmic motion and repeat by switching the positions onto the opposing arm.

This movement can be done with a heavy weight for 6-8 reps or with a lighter weight for higher reps.

Exercise #6: The Swingbell Raise:

*Grab a heavy dumbell while it's on the floor with both hands.

*Keeping the legs apart and slightly bent, raise the weight from the floor to above your head in one sweeping motion.

This exercise works great as a warm up, an aerobic activity, a strength lift, and a terrific front deltoid builder.

Exercise # 7: Lying Bent Arm Quarter Laterals:

*Lie down, sideways on a bench with a slight incline.

*Holding a heavy dumbell in your free hand, bend at the elbow.

*Now using just the shoulder muscles, raise the weight just a couple of inches so that your elbow and bell remain at the same height.

*Slowly and rhythmically lower it, but don't let it come to a total rest.

*Keep the weight moving within this range of motion for as long as possible. Repeat with the other arm.

*If you can continue this exercise for more than 30 seconds, you may need to slap on more iron. If you can do it for less than 5 seconds, back off on the weight a bit.

There you have it. Seven sensational exercises that are guaranteed to mold mighty delts. They may be different, but they're bound to work as well, if not better, than what you're doing now.

Drastic changes require drastic measures and these movements are sure to fit the bill. So dare to be different! Say goodbye to stalled shoulder growth. And send your delt training into overdrive!

NO BARS HELD Build an Armor Plated Chest--Without Barbells or Dumbells!

Wait a minute. You must be asking yourself, 'Is the title of this chapter suggesting that great pecs can be built without bench pressing or other similar movements?' The answer is a resounding yes. And not only that, but the development you'll obtain from training in this manner will be preferable to the methods that you may now be employing. Hard to believe? You'll see.

I'm going to go out on a limb and presume that the main exercise in your chest training is the bench press, right? It's understandable. The bench press is not only effective, it's very satisfying to perform. (It may very well the most "comfortable" of all exercises.) It's also a movement understood by everyone. Tell someone that you're a bodybuilder and the ensuing question is invariably; "Whaddaya bench?" Take a look at novice trainers and chances are the bench press is taking up a good portion of their workout. That's because its effects are so immediate. Since the chest is a responsive bodypart for most people, a set or two of bench presses will quickly pump up the pecs. You feel fuller. You stand taller. This proof of its efficacy, however, is also its drawback.

It's easy to fall in love with the bench press. The problem is, the bench press is not the best exercise for the chest, but it may the best exercise for blowing out your shoulders! (as many an experience trainer will attest)

Excessive benching may also result in pecs which are bunchy and hang low. (Not the most aesthetic of sights.) Training guru Vince Gironda was so adamant about the negative effects of the bench press that he forbid his students from doing any benching at all! His belief was that the chest should sweep across the top of the rib cage like a gladiator's suit of armor. It should be high and tight. Masculine. Although most bodybuilders would agree with that assessment, they're hard pressed to give up their beloved bench press routines.

If your pecs are getting bigger but aren't looking any better, it's time to take a new look at chest training.

The following is a unique approach towards working the pectorals. A few of the movements may appear odd at first. To the hardcore lifter, the idea of doing a workout with barbells and dumbells may seem downright sacrilegious! But don't take this workout for granted. It's tough. And it concentrates on exactly what makes a good looking chest: width, height and tightness.

Begin the routine with...

BENT OVER CABLE IRON CROSS

Grasp the handles at the cable station as you would for a standard crossover exercise. Step forward just enough to cause a little stretch of the arms. Now bend at the waist so that the torso is parallel to the floor. Keep a slight bend in the elbows but maintain rigidity as you bring the cables down toward the floor until your hands meet. If the arms aren't stable throughout this movement, the triceps and front deltoids wind up doing most of the work, thus defeating the purpose of the exercise. Concentrate on making your pecs do the work!

Lean forward to the point where you're almost balancing yourself at the midpoint between falling forward. Allow your outstretched arms to "hold you up." (Almost like a gymnast's "Iron Cross" hold.) While in this bent over position, more emphasis is placed on the outer pecs which will help create a majestic pec-delt tie in. Hold this position for a moment, them slowly squeeze your arms together lifting the torso back up. Make sure your arms remain rigid and extended all the way until the hands touch at the top. Do 5 sets of 10-12 reps with less than one minute rest between sets.

PEC DECK HOLDS

Load the pec deck with a weight heavier than you can rep comfortably. Bring the handles together one at a time to avoid potential injury. Have a training partner help you if necessary. Now hold the handles together. Allow them to widen just a few inches and bring them together again. This will be a shock to the inner pecs unlike anything you may have previously experienced. Continue for one minute. Take care in returning the handles to their original position. Do 3 sets.

POWER DIPS

This is the money exercise! It can very well be the ultimate pectoral builder. It's definitely the most underrated. Dips work the entire chest region. Eschewed in favor of the bench press but superior in efficacy, dip work performed properly, will develop a "slablike" appearance to the chest muscles. Maybe the perennial bodybuilder's question should be; "How many dips can you do?!"

In order to get the most out of the power dip, it must be differentiated from the standard parallel bar dip. First, the body needs to be hunched forward, placing more strain on the pecs. Tuck your chin into your chest. Don't make the mistake of bending the legs! That will force your body to remain upright and then the triceps will take on the crux of the work load. Dipping "upright" also puts a tremendous strain on the shoulders. Instead, keep the feet in front of your upper body. This not only insures proper technique, it also prevent cheating since momentum is eliminated. Use the widest portion of the dipping

bars. Keep the elbows outward. This, too, emphasizes more pecs and less triceps. Dip down as low as you can. Keep strict control going down and coming up.

If you can do more than 15 reps easily, add weight if a weight supporting strap is accessible. If not, dip until failure and keep the rest between sets short. Do 6 sets of as many reps as possible.

INCLINE BENCH CABLE FLYES

Unlike Incline Dumbell Flyes, this movement is a more even and direct stimulation of the upper pecs. Place an incline bench in the center of the cable station and set the seat at 35 degrees. While seated, keeping the legs together, hold the cables attached to the bottom base, palms faced upward. Pull steadily forward to the position where your hands meet. They should be about the height of the face. It's important to use a smooth action with this exercise. A yanked or jerky movement can cause damage to the rotator cuff. Again, let the pecs do the work. Focus on form. It shouldn't take a lot of weight to feel this hitting the upper pecs. Do 3 sets of 12 reps.

BOX PUSHUPS WITH FEET ELEVATED

If you examine the movement of a pushup, you'll notice it can be perceived as an "upside down" bench pressing movement. Although the pushing against resistance is the same, the standard pushup hits more of the pectoralis minor. Perhaps it's because the body is moving through space which in turn requires more of the stabilizing muscles to come into play. Whatever the reason, it's a great exercise that has become all but extinct.

The idea behind box pushups is to place each of your hands on a stable box, or similar piece of apparatus, which will allow the body to dip beyond parallel. By elevating the feet, more stress is placed on the upper pecs. Continue this movement to failure, whatever that may be. At the end of the set, rest just long enough to perform a few more reps and go to failure again. At this point, your chest should be fried.

A well developed chest is a magnificent sight. It also tends to be a favorite bodypart to work. But don't get carried away with excessive poundages if a balanced symmetrical chest is your goal. Heavy bench pressing can be a great strength builder but a bad choice as the mainstay of your chest training.

Try this alternative to barbell work for one month every time you work your pecs. If a hard sweeping chest is your ideal of perfect pecs, you're going to be very pleased with the results.

YOU CAN SPOT-REDUCE! (Sort of) With These Secret Methods

A short time back, an insignificant heavyweight bout was staged between the champion Lennox Lewis and an unknown journeyman by the name of Hasim Rahman. Considering the fact that the 6'5", 250 pound Lewis was about a 90 -1 favorite, it was a fair assumption that it wasn't an event to be taken seriously. It was supposed to be nothing more than a formality to fill some TV time and sell some ad space. For Lewis and his entourage, it was just a quick pay day. Nothing but a show. A farce. A joke. There was no way Rahman was going to win. There was just one glitch. Rahman had other plans.

On a related note, there's sound scientific evidence stating that according to the aerodynamic nature of a bumble bee, it shouldn't be able to fly. Apparently bubble bees are unaware of these studies.

What's the correlation between these analogies? It's just that there's a lesson to be learned here. Far too often in sport, in bodybuilding, and in many aspects of life itself, we accept defeat before the battle is even fought. There can also be cold hard data which suggests that something is scientifically impossible, so it would be foolhardy to refute it. But maybe we shouldn't be so accepting of beliefs which, despite apparent specious evidence, may not be entirely accurate. One such belief is the theory known as "spot reduction."

For the last several years, the idea that fat deposits can be lowered at targeted points in the body has been proven to be a myth. Presumably, bodyfat is lowered proportionately throughout the body, therefore, attempting to lose excess fat on the waist, which is where it's most likely to be stored, is a waste of time. There have been tests and research studies -- irrefutable scientific proof. As with Hasim Rahmad and the irrepressible bubble bee, some of the bodybuilders from 30 years ago weren't aware of these facts. They believed it could be done. Pretty dumb, eh? Of course, they didn't have the advantage of all the scientific analysis we now possess. If they had, they could have saved themselves a lot of time. Instead, they went about building amazing midsections, many of which rival and surpass today's champions! No clenbuterol. No diuretics. No thyroid stimulants. No Growth Hormone. No liposuction. Just razor sharp abs and tiny 30 inch waists on a 220 pound frame. The dopes.

There were some techniques that these men from yesteryear employed that produced undeniable positive results. One was to simply train the waist in a rapid high-rep method, all the time visualizing that the fat was melting off. They were convinced that energy used to employ a specific muscle or muscle group would draw energy from that very muscle or muscles. They would alternate sit-ups with leg raises, allowing the upper and lower abs to take turns absorbing the stress in an effort to maintain the fat burning properties. The use of sweat belts aided in both the profusion of perspiration and the removal of fluid in the immediate area. The generated "heat" would in turn "burn" fat.

Sure, these techniques aren't supposed to work. But one thing is certain -- they can't hurt! Building the muscles of the abdominal wall while removing subcutaneous water, all the time burning a whole lot of calories can only improve the look and clarity of your abs.

There are a few other "spot reduction" tricks as well. Actually, calling them tricks is an undervalue of their power. They're treasured tactics which come from the ancient yogis who thought of the stomach and the residing organs as the vitality center of the body. It's a method of mentally cranking up the voltage in your nervous system so it arcs from axon to axon into every muscle fiber of the abdomen. To those who have implemented these once clandestine practices, there is a consensus that they indeed work. The Tai Chi masters who have long known the phenomenon of stimulating the vital organs through massage and exercise, believed that once you remove toxins, the internal muscles will dispel fat and work more efficiently.

The following exercises are a combination of esoteric Far Eastern techniques, golden age bodybuilding secrets and a few novel twists, all of which are believed to tighten the skin, eliminate adipose tissue, and tone the internal organs. The synergy of these powerful techniques are invaluable for building a mighty midsection and a wasp-like waist.

THE VACUUM

This movement has its roots in ancient Oriental medicine but it's something that old time bodybuilders would practice religiously throughout the day. The technique is simple -- it's merely a matter of staying conscious of sucking in the stomach. The traditional yoga technique would include deep inhalation as the stomach distends outward and a total exhalation when the stomach goes in. Early physical culturists would take this one step further by attempting the technique with the hands behind the head and the lats stretched outward. The classic example of this pose was used often by Frank Zane, who when in this position, looked as if his navel was pressed up to his spine! How do you get the stomach to retract so far? Practice. Judging by the bloated bellies of many of today's bodybuilders, it looks as if they could use a little more practice when it comes to holding in their stomachs.

THE RING OF FIRE

Stand up leaning against a wall. Place your weight on your left leg and attempt to raise your right hip without lifting your right leg too high. (Your right foot shouldn't be more than a few inches off the ground). Contract the entire region of the transverse abdominals including the external oblique muscles and the serratus magnus. Think of the muscles hardening! Maintain that position while breathing deeply. Lower the right leg and repeat on the opposite side.

THE PELVIC PIVOT

Lie on your back with your hands down on the floor by your side. Lift the legs straight up with the toes pointed toward the ceiling. Now raise your hips so that your buttocks come off the floor and try to hold that position. You'll feel tension through the entire abdominal region. Maintain this position for as long as possible. Repeat.

THE CIRCLE RUB

This one may seem strange but it works remarkably well, although how it works is uncertain. It may have to do with increasing heat, and therefore fat utilization just below the epidermis covering the abs. This is what you do: With the palm of your hand, rub your stomach briskly in clockwise circles for one minute or until you feel heat being generated on the skin. Stop just long enough so that you don't irritate the skin. Recommence the rubbing in counter clockwise circles. Throughout the day, repeat the process, alternating hands.

THE SQUAT CRUNCH

Squat down as low as you can with your knees spread wide apart. Your hands will be down between your legs and close to your body. At this point, thrust the pelvis forward. You should feel a strong contraction in the abs. Hold for a count of 10. Relax and repeat.

THE FROG

Okay, this one is kind of a sit-up, but not really. Lie on your back with your hands behind your head. Make sure your elbows are out to the side, not forward. Spread your knees out to the side and have the bottoms of our feet tough each other. This removes the psoas from the upper movement. Now slowly rise up, but don't use momentum to try and sit all the way up. Just go as high as you can, until your abs are fully contracted. Keep distance between your chin and your chest. Don't push your head forward! Hold this position for a count of 6 and slowly lower back to the ground, one vertebrae at a time.

THE AB PULSE

Your head will be facing forward, chin down. Place your feet about one foot apart, equally balanced on the floor. Without bending forward, crunch down slightly over your abdominals, looking at them. Try to flex them so they show the most clarity. Now take little, short breaths. (Be careful not to hyperventilate.) On the exhalation, you should see the muscles begin to separate. Continue doing this until they start to cramp. Stand up straight and backward stretching out the abs. Breathe deeply and repeat.

It should be mentioned, if your bodyfat percentage is too much over 10%, the results won't be as dramatic. But if you're one of those people who always seemed to lack abs, even at a low bodyfat level, this program just may be a dream come true. By incorporating these lost secrets into your traditional ab routine, you'll begin to see abdominal definition you never knew you had! You will burn fat where it's needed

most. You can spot reduce -- or at least it'll look like it. And if anyone tells you it's impossible, don't bother to argue. Just show 'em your abs.

PERPETUAL PROGRESS Radical Techniques for Avoiding Plateaus

The body is an amazing mechanism. Its ability to adapt to stressful situations is almost limitless. Paradoxically, it is stress that simultaneously wears us down and builds us up. Stress must be administered in order to develop a tolerance to it. In turn, we become stronger. Excessive stress, over time, is also what causes the inevitable wearing down of joints and cartilage. 'Not me', you say. 'I'm an amazing specimen of a human being!' Yes, if you are a bodybuilder, then you are quite likely among the most physically superior of the species, not unlike how a Rolls Royce is considered the zenith of automotive technology. But even a Rolls can pop a fan belt or run out of gas. Yet the vehicle that is our body, much like its mechanized counterpart, must be used or it will rust and deteriorate.

It would then seem logical to approach training with the intent of using the body enough to maintain proper function yet not so much as to cause excessive or accelerated deterioration. But wait. We're bodybuilders. It's necessary to push our bodies beyond mere "function." In order to become increasingly more muscular, it is obligatory that we stress our muscles just short of actual injury. A precarious position to say the least.

If proper precautions are administered, the threat of injury or overtraining can be avoided. Proper warm ups, sufficient rest and avoidance of potentially harmful endeavors such as maximum one rep lifts, can go a long way in assuring against a debilitating set back. "Nutritional saturation," as I like to call it, is equally paramount. The demands of high intensity training take a toll on the entire endocrine system and it's necessary to flood the body with nutrients as an insurance of optimum function and recuperation.

Okay, so now let's presume you're doing everything right. Your training is going well. You're eating a high protein diet with lots of water. You're supplementing with so many micro-nutrients that you have the most expensive urine in town. There's only one problem. It's been months since you've noticed any change. You've stopped growing!

Don't panic. Muscle growth is not a linear process. X amount of muscle doesn't necessarily grow in X amount of time. Muscle growth is intermittent. You may have noticed periods where the improvements were obvious. You know, the times when everyone's telling you, "Hey man, looking good!" or "WOW! You're gettin BIG!" Don't ya love it? But of course, growth cannot be continual, at least not at a steady rate. Periodic plateaus are the way our bodies utilize that incredible ability to adapt. This is actually a good thing if you think about it. It is our body saying "Go ahead! Try and beat me up! I can take it! Sick? I can't get sick. I've got weights to lift!" Weight training is not only the best method for altering the shape of your body but it

conditions the body (and mind) to withstand a multitude of adversity. It is for this very reason that plateaus occur. When you are in peak physical condition, you are able to adapt to greater and more demanding workloads. The muscles can now successfully do what you are asking them to do. In short, there is no need for additional muscle hypertrophy. You've trained yourself right into a state of stagnation.

You may be saying to yourself at this point, "I look good...I'm stronger than ever...It is now easy to maintain a fit and healthy body... but DAMN IT!.... I WANT MORE MUSCLE!!!"

The two most often executed options for breaking through plateaus is to either train harder or to take time off. Both are valid but neither is particularly productive (unless, of course, you are actually ill. Keep this simple rule in mind. If you are sick, DON'T TRAIN.) Coming back from a brief layoff can be refreshing and I do recommend an occasional break from hard training, but in general, I don't think taking more than a one week layoff 2 or 3 times a year is such a great idea. For the same reason, I'm not a fan of training only 2 days a week, no matter how intense it is. Humans (like all animals) are creatures of habit. It is imperative to become habitual about something in order to be consistent. If you plan to work out only twice a week something may come up that forces you to miss one of those days. Training only once a week will not yield satisfactory results -- no matter what anyone says. It also becomes too easy to develop an apathetic attitude towards something that is not practiced on a regular basis. It is by far better to work out for half an hour, five times a week than to work out for 2 hours, twice a week. Sometimes it's better to go to the gym and have a mediocre workout just to maintain the continuum. If you train 5 days a week and have to miss a day, no big deal. You most probably will be anxious to get back to the gym to make up for that lost day.

There is an alternative to the more training or the less training tenets; different training. That's right, being in a rut is the perfect time to start breaking some of your own rules. Here are a few suggestions for shaking up those non-productive sticking points:

IF IT AIN'T BROKE, BREAK IT!.....Time to change a few things around. If you're a heavy weight, low rep kind of guy, why not kick back on the poundages for a while. Intensity can be maintained by utilizing rep ranges you rarely approach. Cut the weight by 15% and add an additional 5-10 reps per set. Since your muscles aren't used to this form of stress, it may very well encourage new growth. This will provide a break from your regular routine without the fear of any muscle loss. In fact, high reps are thought to increase mitochondria production which in turn allows for more muscle fiber, so at the very least, you can look at it as an investment in future muscle growth. Consequently, if you are more of a "pumper," try some powerlifting. A workout consisting of just a couple of sets of some basic moves like cleans and presses can be refreshing as well as challenging.

CHANGE PARTNERS.....If you work with someone on a consistent basis, it's almost impossible not to fall into a rut. (Besides, "familiarity breeds contempt" as they say.) Give yourselves a break from each other -- no hard feelings of course. If you choose to either work with someone else or to work alone, don't do your regular workout. Let someone new dictate the pace or try that routine that you read about but your old partner wasn't interested in.

HAND OFFS.....Decide on only one bodypart to work, then choose one exercise. Let's use the example of barbell curls again. After performing a warmup set, load up a barbell with a weight in which you and your partner will be able to perform about ten reps. After one person completes his set, it is handed to the other person without it ever touching the ground. Keep going back and forth among yourselves all the while attempting to complete 10 reps a set. Once ten reps cannot be completed, simply do as many as possible before handing the bar back to your partner. When neither one of you can no longer complete another rep...the workouts over! Short and sweet (well, short anyway).

WEIGHTLESS WORKOUTS..... All exercise has its benefits even though weight training is by far the most superior. Nevertheless, it wouldn't hurt if on occasion you gave yourself a break from the weights. Try stretching for an hour. It's harder than you think and helps keep muscles sinewy. Take a class in self defense. Juxtapose that with a yoga class. Remember, this is not meant to be a substitute, just a variation. When was the last time you posed for 20 minutes? How about an all ab workout? A few sessions like these will keep you in the proper frame of mind for training yet allow you to recoup from the usual grind.

PUNISH A NON-COOPERATIVE BODYPART.....Are your calves refusing to budge? Try this. Make every workout you do this week into a CALVE workout! Nothin' but calves! You may very well shock those puppies into new growth. Fun for the whole family! Don't worry about overtraining. The rest of your body will be getting plenty of rest (you may be walking a little funny for a while, though.) Take a complete week off before working calves again so they have time to respond to the inflicted torture.

CHANGE YOUR ENVIRONMENT.....This can be as simple as going to the gym at a different time. Not only will your body have to adjust to being taxed at a different part of the day, but chances are you'll see a different group of people who have yet to see you. This can be just the stimulus for a quality workout. If you train at home, it's still a good idea to occasionally splurge for a one day visit at a local gym. Seeing other people train provides inspiration as well as a perspective of your own progress. You may also pick up a few pointers along the way.

Plateauing may be inevitable but it doesn't have to be a negative experience. "Necessity is the mother of invention," so in an effort to overcome a sticking point you may very

well come up with a more productive angle to your regular training ritual. They aren't meant as a substitute for a more efficacious way of training, just an occasional alteration. Try some of these suggestions and see for yourself. That plateau you thought you were on may just be the first step towards a whole new level of growth.

ULTIMATE INTENSITY - Is It Necessary For Muscle Growth?

No one ever built an impressive physique without hard work. Persistence towards handling progressively heavier weights is the only way to grow. You know it, I know it, everyone who has or wishes he had a hard muscular body knows it. The question I'll attempt to address in this chapter is just how much intensity is really needed for maximum muscle?

This is such a hard one to call. Unlike the "one size fits all" precept that some well meaning marketers wish to promote, the benefits of "all out" training intensity is determined by many factors, not excluding the training experience of the individual. The very term "maximum intensity" is impossible to determine as well. How many times have you seen a novice struggle with a given weight for 8 to 10 reps and then while providing an encouraging spot you find they were able to complete 15 reps? This is an example of someone not approaching the muscle promoting stress in which they are capable. Although it has become unfashionable lately, the expression "NO PAINNO GAIN" still rings true. As in all things in life, be it developing a business, learning to play an instrument, excelling in a sport or building a better body, it is imperative to go through a stage where you are absolutely, passionately obsessed with improvement if you want to be great.

But where does it stop, and when does the point of diminishing returns begin? Again, this is exclusive to the individual. As an example to illustrate the intensity factor, let's examine someone with a proclivity towards wickedly fierce workout sessions, the inimitable Tom Platz. No one can ever accuse Tom of "doggin it" in the gym. The man was a veritable symbol of near maniacal, gut-bursting training intensity! A few years back Tom was featured in a training video proclaiming a high intensity training system which received a lot of attention. Tom looked every bit as good at age 40 than he did at age 30. But therein lies the dilemma. After thousands of hours of inflicting insanely torturous punishment upon his body, he looked....the same. All that talk about "doing whatever it takes to GROW", or "shocking the body into GROWTH" is a moot point. How much more size has Tom really accumulated using these methods? Rounding the bend at 50 it's doubtful he's put on more muscle. This is not meant to disparage his attempt. I find it noble. But the truth is the truth. The same level of conditioning could most probably have been achieved without a near psychotic fervor towards reaching ultimate intensity.

The lesson here may be that once one's maximum potential has been reached, it is no longer lucrative to persist in a training protocol that provided the accomplishment. But what if your genetic potential has yet to be realized? Is maximum intensity the most efficacious approach? Proponents of the HEAVY DUTY style of training insist that it is. Mike Mentzer professed that the intensity reached in a single set is what

causes muscle hypertrophy and was fond of using the "hitting the hammer on the head" analogy. So let's go with that one.

If you were to tap on a nail with your fingertip repeatedly, it wouldn't matter how many times you did it, it will never be driven into a plank of wood. The force is not intense enough. But if you were to strike the nail with a hammer as hard as possible, it would penetrate the plank of wood. Therefore, it is not duration that accomplishes the goal but intensity. Great analogy, huh? There's just one little flaw. It's wrong.

Muscle growth is an adaptive process. It happens in increments. The nail analogy, if you think about it, is actually pretty stupid. A more accurate analogy would be to compare developing more muscle to developing a suntan (stick with me on this if you happen to be black, it still applies). The tanning of skin is a gradual process. If someone were to expose their skin to more sunlight than it could tolerate at a given time, the skin would become damaged (burned). This can be compared to someone who hasn't stepped into a gym in a while and then proceeds to try every machine in sight. Chances are they'll be racked with pain the next day from overtraining far beyond what they are yet capable of recovering from. Using the suntan analogy, if exposure to sunlight is gradual, with intermittent intervals between exposure and time to heal, then the skin becomes slowly darker thus allowing it to get more and more dark. Such is the case with training. The muscle gets a little bigger and a little stronger in an adaptive process. Stress, then rest, more stress, rest again, and so on until the muscles get as big as possible.

There are many ways of obtaining sufficient intensity. The main thing is to force the muscle beyond what it's expected to do or what it is easily capable of doing. Not only is it not necessary to achieve this in a single set but attempting to accomplish it in a single set is unrealistic and risky. The amount of stress needed to sufficiently work the muscle would put undue strain on the joints and ligaments as well as tax the adrenal system. This can lead to increased cortisol production and you know how that can bring progress to a grinding halt. Why not just do more sets? Bodybuilding is not a race. No extra points are awarded for finishing sooner.

It's really quite simple. Three sets at 90% intensity are more intense than one set at 100% intensity. The bottom line? Attempting ALL OUT effort ALL the time can only result in injury or at the very least, a state of overtraining and fatigue.

I've voiced my opinion with H.I.T. and Mike Mentzer in " The Bodybuilding Truth" so I won't belabor the issue. I would like to address the myopia surrounding one of Mike's thought processes, though. Mike was fond of attacking bodybuilders who didn't follow his methods and accused them of being obsessive and irrational. But obsessive and irrational behavior comes in many forms including the obsessive belief in one's own rationality. To put it in a less grandiloquent way; the proof is in the pudding. And if

Mike believed what he said, he would have been in good shape in his later years. He sure had amazing genetics. Yet he turned into a broken down old man at the age of 48. Some people think that trumpeting his rantings is an homage to his greatness. Perhaps. Or perhaps it's just fighting windmills.

The bottom line...

The best way of knowing how much is "enough" for any particular individual is through examination and experimentation. Enjoy the ride. You'll make progress as long as you work hard. Some days it may be too much, other days too little. Don't worry. Bodybuilding is not an exact science. Do you actually think that someone out there has the secret? The perfect amount of sets and reps that will make all the difference in the world? ("I used to do 10 or 12 reps but now that I do 11 reps, my gains are through the roof!") Come on, you know better.

The best advice I can give for obtaining optimum intensity is the old stand-by of judging by the soreness obtained the day after your workout. (Even though soreness isn't directly linked to muscle growth). I'm not talking about sharp pain or a feeling of being injured or overly stretched. Simply shoot for a good tight feeling that tells you you've worked the muscle. Do that enough, and you will grow.

INSTINCTIVE TRAINING Can You Trust It?

The sport of bodybuilding has gone through a lot of changes. It seems that every day there's a new gadget or a new supplement which promises much but delivers little. The problem may lie in the fact that although technology can change, the human body is a result of millions of years of evolution. It's designed to respond to what its genetic coding allows. A tool or a technique may be "state of the art" but that doesn't mean much to an organism which is basically pretty primitive.

From prehistoric times to the present, the body has developed through a series of severe adaptations. Although it thrives on being put to work -- it would rather not. This is the very reason good old fashioned weight training is so effective. The body recognizes the strain of lifting heavy weights, therefore, it'll adjust in an effort to make that task as easy as possible and the way it does this is by becoming bigger and stronger. Nice, eh?

The process occurs in all species. It's a matter of survival. What differentiates man from beast is that man can make a conscious decision. He doesn't have to wait until it's necessary to use his body, he can use it more and in a calculated manner. By doing so, he'll reap greater benefits. And that is the very basis of bodybuilding.

Along with the plethora of bodybuilding merchandise, there's been a renaissance of well thought out ideologies designed to improve the way in which we build muscle tissue. With all the bodybuilding knowledge we've accrued over the years, there is less of a "hit or miss" approach toward training. Today's bodybuilder can save years of misguided effort thanks to the level of accessible expertise, as long as he or she also learns to avoid the deluge of disinformation. This is the thinking which has actually led many bodybuilders away from a once popular, but somewhat intangible training principle; Instinctive Training.

Instinctive training was a style of working out which became very popular from the 60's through the 80's. The basic principle was an individual interpretation of the benefits of a particular exercise or training routine based on "feel." The theory was that an advanced athlete could tell what was working, or what wasn't, solely on empirical evidence. It was also a way of determining which bodyparts needed more work. It also could work as a "warning system" when the threat of overtraining set in. With enough practice, bodybuilders were able to rely heavily on their instincts to keep them on track with their goals.

Once bodybuilding became more refined and entered the computer age, instinctive training was dismissed as crude, outdated and unreliable. Today, the practice is all but forgotten. In lieu of following what happens to "feel right," the current modus operandi toward developing muscle is to have a detailed plan -- a scientific calculated program

which charts every move and assesses every improvement. In this way, one's progress is documented. The results are substantiated. Nothing is left to chance and less time is wasted floundering to find what works. The question is, should procedure always supersede instinct? It would make sense in most cases. Instinct is primal and based on reaction. It can cloud our perception. It can't be trusted. The standard argument is; "If you follow your instincts -- they'll tell you not to lift heavy objects!" Perhaps. Or perhaps the concept is deeper than we realize. By excluding the instinctual component from your training, you may be inhibiting your progress. If you blindly follow a set program, you not only lose out on potential growth inducing ideas, you also lose out on the joy of the discovery, which is all a part of the sport of bodybuilding. Instead of ignoring our instincts, maybe we should be concentrating on developing them.

Some advocates of Instinctive Training say it isn't so much instinctive as it is intuitive. Once again, we're dealing with something which sounds more cosmic than concrete. The Hindus called it "spiritual awareness." Freud called it the "Id." The common man calls it "a gut feeling." Irrespective of its title, it does exist. Not unlike class, taste, or love, we may not be able to touch it or chart its effect or even put it into words, but it's as real and as vital as the air we breathe. It's also very often the most accurate gauge we possess for determining what's best.

One of the problems with the "training log" approach to working out is that too many variables come into play. The supposition that if you did 6 reps last week and that means you should do 7 reps this week, is terribly flawed. Sleep, stress, diet and even biorhythms will affect performance. There are other factors which can influence each and every working set. There's training speed, rest in-between sets, partials, forced reps, descending sets...countless ways to force the muscles into growing. Monitoring poundages may be good for someone whose sole purpose is to lift more weight, but it will do little in terms of building muscle. What's equally interesting is that adhering to a strict program may be holding you back. If you feel like doing more reps or more weight, you should go for it! Damn what the journal says!

Regardless of all the instruction and advice a bodybuilder receives, there comes a time when he must learn to think for himself. He must examine and analyze through sheer trial and error, what training procedures, exercises, and even dietary habits work better than others for him. It's the most logical way of finding the most result producing procedures and the unproductive ones, if he ever wants to achieve success.

There will always be authorities who espouse one method over the next. Very often they have a herd of followers who blindly adhere to said methods. If they make progress, they deem it proof that the methods work. But any exercise program will work -- to a degree. So why limit your options? Keep experimenting and continue finding new ways to

challenge yourself and keep those muscles from doing what they do all too well -- adapting.

I should convey that set programs can be an excellent method of making gains and charting progress. Some people also like the order of having a detailed game plan. That's fine, but allow yourself to get creative now and then. You may find a new angle or an interesting rep pattern that really works well for you. Remember, most of the world's greatest discoveries were born out of not going by the book. Mix it up. Follow a pattern -- then break it. Try something new. Take a chance. But most of all, listen to that inner voice. It knows more than you may realize.

REBOUND TRAINING How Re-Training Your Muscles Can Re-Generate Growth

Building a muscular body isn't that different from going to school. When we start out in grade school, the lessons are simple. The fundamentals of learning are taught in an easy to understand manner so that we may avoid confusion as the lessons progress. In high school, we're able to comprehend more, consequently the teachings become more specialized and in-depth. In college, complex and abstract methodologies are presented in an effort to challenge our thinking and encourage new thought patterns. Point A leads to Point B which leads to Point C and so on. In order to hone one's knowledge and skill, the pattern must be followed through. Move too quickly, and the information won't be properly assimilated. Move too slowly, and development will be stunted and sub-par.

The same principles apply to bodybuilding. In the formative stages, the instructions on executing proper form are introduced in an uncomplicated manner. Basic compound movements are employed. Three sets. Ten reps. One or two exercise for each bodypart. Nothing fancy. Just the "meat and potatoes" please.

In keeping with the basic tenet of early training, the concept of working the entire body in a single workout every other day is often recommended. It's been the standard plan of action since bodybuilding began over 100 years ago, and for a very good reason. It works.

As most people know and have experienced, an untrained body will respond well to basic resistance exercise and almost any style of training will encourage growth when the stimulus is new. Almost everyone benefits at the early stage of a weightlifting regime. Once, and only once, the bodybuilder develops a tolerance to this "bare bones" method of training can he or she then begin to specialize -- making specific goals a priority as well as incorporating more complex programs. Supersetting, pyramid training, emphasizing concentrics, isolation work, one bodypart a day workouts, mass building, cutting cycles, as well as countless other tactics and techniques designed are engaged to stave off homeostasis and spur hypertrophy. High school is over. It's time to get serious.

What's most interesting about the never-ending process of manipulating muscle, is the fact that dozens of training techniques are mixed and matched in an infinite variety, yet the one method that proved most successful from the start is hardly ever considered -- full body training.

Although full body training may be akin to going back to school after you've graduated, the comparison isn't entirely analogous. For one thing, an advanced bodybuilder trains too hard to work every bodypart in a single workout -- or so it's been said. The consensus is, working the entire body several times a weak will result in burn out. On the other

hand, as a bodybuilder improves, he gets stronger and his ability to recuperate increases. If anything, an advanced trainer should be able to tolerate a more frequent workload.

In an effort to shock their muscles into growth, bodybuilders will often increase poundages along with the volume of work enforced onto a particular muscle group. The problem with this approach is the muscle will then need many more hours to recoup. The muscle cannot be worked until it has fully repaired, which leaves you back to square one. The muscle is broken down, adapts, and the process begins again when you train it again next week. This is the reason so many people plateau. No matter how hard they train, the body has found a way to adapt to the stress. The end result: no growth.

There's a solution to this dilemma and it's called "Rebound Training." Although it may sound esoteric, it's based on the very basic and proven principle of working the entire body every time you work out.

Now stop for a moment and reconsider full body training -- exactly the way you trained when you first started. (But with much heavier weights, naturally). In this manner, you'll be hitting each bodypart with more frequency, which in turn adds up to more stimuli. The fact that the muscles don't have time to completely recuperate is the very impetus that forces them to adapt to the increased workload by growing bigger and stronger.

In case you're concerned about overtraining -- don't be. Athletes prove this all the time. Sprinters usually have tremendous thigh development, yet they don't train legs just once a week. They do dozens of sprints every day. Powerlifters practice their specific lifts each session. Olympic gymnasts are known for their arm development and they train the same arm muscles for hours every day. If we believed what so many bodybuilding authorities espouse, this behavior should lead to overtraining and limited growth. As it stands, many gymnasts have musculature comparable to top level bodybuilders. The reason for this phenomenon is the "rebound" effect. By stressing the muscle prior to full recovery, it begins to compensate, not by recovering, but by growing. The body being the adaptive mechanism that it is, prepares for the "aftershock" by increasing mitochondria, the cells within the muscle fibers which effect contraction, and growth. Suddenly, training more often makes sense, doesn't it?

Rebound Training has become especially popular among more experienced bodybuilders. Since they tend to have well established muscle memory, all that's needed is an intermittent wake up call to keep them full and strong. Full body training three times a week fits the bill perfectly.

Of course, overtraining is still a possibility, therefore the premise behind "Rebound Training" is to take advantage of the anabolic effects of exercise while eliminating the draining effects of too much work. Not only do you need to work each muscle before it has a chance to "rebound" from the previous workout, you also need to allow the body to "rebound" from the strain of increased muscle exertion. This may seem like a paradox.

How can you work more while simultaneously lowering overall stress to the nervous system? The key is to work more often, yet with less volume each outing.

Here's how it's done.

Begin Rebound Training when you're fresh and are free from any muscle soreness. Think of it as a new beginning -- not unlike what it was like when you first started training. That may require some humility on your part but just think about how quickly gains came when you first started lifting weights. That ought to be plenty of incentive. Even though the entire body is being worked, the routine shouldn't exceed one hour. If it takes longer than that, you're taking too much time in-between sets. Due to the increased overall stress, you may need to adjust the weights accordingly.

For simplicity's sake, let's say you'll begin the first workout of the week on a Monday. After a brief warm up, choose one exercise per bodypart. (This is a good excuse to use only your favorite movements!)

*Begin each set for each bodypart with a weight that will allow for at least 10 reps but no more than 15.

*On the second set, use a weight which allow for no more than 10 reps.

*Go directly to the original weight and rep until failure.

*After catching your breath, go on to the next bodypart.

*Continue until each muscle group is worked.

*Avoid the tendency to add sets or additional exercises.

After a days rest, return for the second workout of the week.

On Wednesday, repeat the previous steps but instead of doing the same exercise for three sets, use a different exercise for the second set. (The heaviest set). On this day, you might want to use an isolation movement for the first and last set (i.e., flyes for chest, concentration curls for bi's, leg extensions for legs, etc.) and a compound movement for the middle heavy set. (i.e., bench presses for chest, barbell curls for bi's, squats for legs, etc.) Work every bodypart in this manner. Once again, get in and out of the gym in less than an hour.

Thursday: Off.

On Friday, train in the same manner but this time out, add an additional "heavy" set for each bodypart. In other words, follow the process previously laid out except now instead

of returning to the original weight after the second set, you'll repeat the heavy set twice and then go directly to the lighter finishing movement. Once this workout is over, don't train again until next Monday. Enjoy the weekend.

The following week, return to the "Day One" formula except this time, try to add more weight on to all the movements. The reasoning here is, the muscles must get the signal that the workload isn't tapering off. In this way, they'll be forced to respond to the increased demand being placed on them.

Repeat workouts two and three, always striving to lift heavier weights. Don't make dramatic jumps in poundage, just enough so that you're doing a little more each time out. Continue with this program of Rebound Training for one month for best results, always striving to up more weight.

As with any course of education, there comes a time when you need to re-evaluate the rudiments -- go back to your roots and understand what got you to where you are. It's also a continual journey of discovery. The learning process is never over.

Full body workouts with overlapping work may be simple but its rewards can be great. By training in this manner just three times a week, you just may start to see growth spurts similar to those you experienced when you first started training. And why not? You'll be training in the same way as when you first started! And that just may be one of the best ways after all.

YOU CAN'T GROW WITHOUT IT

More than training, more than diet, more than supplementation, even more than anabolic steroids -- the most important ingredient in how much muscle you can grow has to do with recuperation.

Tissue repair takes place only when the body is at complete rest. And if you think just "taking it easy" is enough, you're wrong. As long as you're the slightest bit active, full recuperation can't occur. The only time your muscles will grow to their fullest is during sleep.

In today's frantic, "got to have it all, got to get it done, give it to me yesterday" pace, sleep has come to be looked upon almost as an inconvenience -- something that detains accomplishment. In our society, the notion of taking a nap is considered a little lazy. And the prospect of oversleeping, the ultimate act of irresponsibility and unprofessionalism. Sleep?! How dare you.

The truth is, sleep is the most significant component to strength, health and muscular development. You may be able to bench press 400 pounds but without sleep, you're going to feel and look lousy. On the other end of the spectrum, no problem seems quite as grave after a good nights sleep. It's a virtual cure all.

To the bodybuilder, sufficient sleep is essential in that, loss of sleep is extremely catabolic. Endurance athletes prove this in an interesting and convincing manner. Those engaged in six-day bicycle races eat four or five times as much food as they would normally, yet, at the end of the contest, these world class athletes wind up looking like cadavers. They're incoherent, hollow-eyed and weak. It's the loss of sleep, more than the physical exertion, that prevents them from transforming food into tissue.

It is this positive reconstructive quality in sleep that explains why babies, whose chief business in life is to grow, spend up to fourteen hours a day sleeping, a capacity which gradually diminishes as maturity is approached, until it finally settles down around the average of eight hours. It's also the loss of this "reconstruction period" that accounts for the short hours of sleep and the light character of the sleep of the aged. Old people don't sleep lightly and get up early because they don't need sleep, but because they can't get it! Their bodies no longer function at peak efficiency and total body conditioning has a lot to do with the quality of sleep. That's why you can be having a conversation with your grandfather and the next minute he's dozing off in the easy chair.

As most bodybuilders already know, it's during sleep that growth hormone is secreted and it's growth hormone that keeps fat in check as well as maintains firm muscles and tight skin. Although the use of exogenous GH has become more popular and more frequent, it hasn't quite lived up to expectations. I believe this is due to the fact that it isn't

so much the actual growth hormone that provides the youth enhancing qualities, but the fact that the growth hormone is being released that induces the majority of the benefits. That's why deep sleep is imperative to the bodybuilder looking for maximum growth. The deeper the sleep, the quicker the recuperation and the more effectively all the processes of repair are carried out. The lighter and more disturbed the sleep, the slower the recuperation, and the quicker fatigue will set in. So in effect, if you sleep lightly and keep waking up throughout the night, you may still get 8 total hours, but the release of growth hormone never occurs, which is why you're still dragging your ass the following day. Sometimes sleep of an hour or two under conditions of complete relaxation will accomplish more actual reconstruction than a whole night's restless, dream-racked sleep. I say dream-racked because vivid dreaming is not a result of deep sleep, even though it's mistaken as such. The majority of dreams take place soon after falling asleep and just before awakening. In other words, dreams occur when the body isn't fully at rest. The best quality sleep is that deep, "dead-like" slumber where you're unconscious from beginning to end which is known as non-REM (Rapid Eye Movement) sleep.

This explains why people who sleep deeply are able to recuperate fully and be fresh and thoroughly rested after four of five hours sleep. While others who are light sleepers require nine or ten hours, to accomplish even less. Interestingly, people with active imaginations -- creative types and those with ambitious personalities seem to be most prone to insomnia and disturbed sleep. Does that describe you?

If you do have disturbed sleep or your overbooked lifestyle forces you to cut sleep short, there are things you can do to about it. For one thing, don't believe the myth that sleep "can't be made up." If you needed a few more hours of sleep, that deprivation can carry over for days, however, if you add a few extra hours the following night, it can make up for the loss of recuperation time. Naps may not provide the much needed release of growth hormone since that usually doesn't occur until 20 minutes after a deep sleep is obtained. Nevertheless, naps offer additional recuperation time. They can also "clear your head" due to the fact that the brain enters the "alpha stage," even if it's for a short while.

Realize also, that if you sleep just one hour less than you need each night, that equals a loss of one night's sleep (7 hours) after just one week. At the end of the month, you've lost 4 full nights of potential muscle growth!

As much as possible, try to establish a steady sleep schedule. Erratic patterns will disrupt deep sleep and thereby impede recovery. The body operates best when it becomes conditioned to regularity in sleep time.

Activity is crucial for a good nights sleep but overtraining will also cause restlessness. Keep your training in check. You can't go "all out" 52 weeks a year.

If you find you're unable to sleep because your mind is wandering, make an affirmation that it's time to shut down the system. The day is done and there's nothing else that can be accomplished. Empty the mind and allow the body to recover and recharge.

Especially important is to always sleep in a well ventilated area. Sleep is when the body uses oxygen to repair and rebuild. Stuffy, dust filled rooms hinder the recuperation process. If possible, keep a window slightly open overnight. Don't deny your muscles the fullest amount of fresh air.

Sleep may not be a topic that gets people enthused but it can make or break your muscle building progress. If you've been stalled for a while, it can simply be a matter of insufficient recuperation. Everyone's needs are different and requiring more sleep or more "time off" shouldn't be viewed as a fault. Listen to your body. By adding an extra hour or two of sleep each night you just may add inches of muscle to a lagging bodypart. The extra rest may also bring back some long lost intensity to your training. So if it's more SIZE you crave...make sure to get your ZZZZZZZ's.

Sleep well, and grow.

TIME UNDER TENSION It May Be More Important Than Sets And Reps

The process of muscle building is fascinating. It's both extremely simple, yet infinitely complex. And it's no surprise to say, it takes a hell of a lot of work! But what is it that actually allows for the adaptation of stress to result in bigger muscles? The standard answer is; the muscles adjust to heavy weights thus enlarging and increasing in strength. You may think the scientific explanation of the muscle building process is more elaborate and complex, but in actuality it's even simpler: No one knows for sure.

It's this ambiguity regarding muscle hypertrophy which leads to the dozens of training programs, all promising the "best" results. The irony here is that no particular exercise routine can possibly be "best" due to the undeniable constant that the body will adapt to any form of stimuli. Mother Nature is a lot smarter than any scientist or exercise guru. She's always one step ahead.

Whenever you hear someone praise a new technique or tell you that they found a personal trainer who jump-started their gains, all that really happened was that they did something different. It was the newness of the stimulus that produced results. Eventually, the body will adapt to the new method of working out and progress will stall...again.

In order to constitute change, most bodybuilders use what is known as "periodization," which is basically the concept of alternating between periods of heavy, low rep training and lighter weight, higher rep training. Exercises are also changed in an effort to keep things fresh. Regardless of how many changes are made, what may very well be the biggest factor in the process of muscle growth is often ignored. It's the amount of time in which the muscles are placed under tension. Some experts believe that's the only thing that matters. And they could very well be right.

Follow along for a moment. When lifting a weight, the muscle goes through a range of motion. Within each nano-inch of movement, hundreds of fibers come into play. After completing a set of, let's say, 10 reps -- each of those fibers have been stressed for a specific amount of time.

Now, let's suppose that set took 30 seconds to complete. What difference would it make if only five reps were completed yet, the total time was still 30 seconds? Wouldn't all the muscle fibers have received the same amount of stress? Even though the muscle contracted half as many times, the period where the fibers were stressed was twice as long. Will this produce as much muscle growth? Less? More? Is 3 sets of 10 repetitions that much different than 6 sets of 5 repetitions? It's hard to say with any certainty. There are too many variables to accurately gauge motor recruitment, but it does pose some intriguing speculations.

One argument against the "time under tension" theory is the fact that isometric exercise places strain on a muscle for a designated amount of time yet, the results gained from isometric exercise have been proven to be sub-par to that of weight training. The comparison, however, is unfair. Isometrics work a muscle in a static position, therefore, all the muscle fibers don't come into play. You would need to perform an isometric exercise in every range of a muscle's movement and to my knowledge, not too many people have attempted such a program. (Although it would be interesting to hear of the results).

Another angle to the time under tension principle has to do with powerlifting. If a powerlifter executes only 2 or 3 reps, the length of the set is just a couple of seconds. How can that lead to any strength and muscle gains? The answer is due to the fact that the lift is performed many times throughout the workout. If he does 20 sets of 5 second lifts, that's 100 seconds that the muscles have been under tension. (approximately three "normal" sets) That's still a bit on the low volume side, but as you know, powerlifting is designed to develop strength, not muscularity. Realize also, those 100 seconds are at ultimate intensity.

Going with the theory that it's the duration in which a muscle is under stress which results in its growth, why not incorporate this facet of training into both your heavy and light training periods?

Here's an example:

- *Choose a single exercise for a specific bodypart such as a barbell curl.
- *Take a weight in which you would normally use for 8 reps.
- *Time how long it takes to complete the set.
- *Now, using a clock with a second hand, perform a single rep slow enough so that it takes as long to complete as it did to do 8 reps.

Try a few sets in this manner and you may be surprised how deeply it hits the muscle.

You can use the same technique with a lighter weight:

- *Grab a weight that is conducive to getting a pump. (10-12 reps)
- *Complete the set and time it.
- *Instead of doing 10-12 reps, try to stretch only 5 reps into the same period of time.
- *Shoot for the full amount of sets but make each rep super-slow.

Other examples of utilizing the time under tension principle are as follows:

*Execute as many reps as possible (in a controlled fashion) in an allotted amount of time.

*Perform a set of any particular exercise for a bodypart once every half-hour throughout the day. Although the effort will seem minimal, at the end of the day you'll total over 20 sets -- and you'll feel it the next day!

*Use a metronome. (They can be purchased in any music store. You don't need anything elaborate, just something that will "click" in time.) Count the amount of clicks it takes to complete each phase of a rep and try to match it every time. You'll be surprised how much it makes you concentrate on your technique!

Here's another somewhat radical experiment. Instead of working a specific bodypart for 10 sets, try working it for 2 sets -- five days in a row! It's still the total time of work, isn't it? I'm not suggesting this method is optimal, but it might be fun to see how you react to it.

Here's one that requires a lot of free time, but if you're stuck in the house on a rainy day, you may want to give it a go. Pick any exercise, such as a barbell curl, and do one set every half hour, each half hour, for a total of 20 sets. Obviously, you won't get much of a pump going, but it's a sure bet your arms will be sore the next day!

The very opposite technique works well too. Try completing 10 sets in as short a time period as possible. You'll save a hell of a lot of time, and once again, you'll know you worked out when you feel the soreness the next day.

It may be impossible to accurately determine if training at various speeds is preferable to performing sets at a consistent cadence yet one thing is certain -- changing tempo and time between sets is another variable in the training process and it's variety that keeps the gains coming.

The next time you work out, experiment with time under tension. Keep a log of the length of each set so that you'll know exactly how long you actually exercised. In this way, whenever you try a new routine or use different poundages, you'll have a better understanding of just how hard you're really working! You'll also add another dimension to your training program. And while you're at it, there's a good chance you'll wind up with more muscle. Perfecting the Time Under Tension method may take a little more work...but it's time well spent.

HOW DO YOU RATE? Are Your Muscles as Strong as They Should Be?

Yeah, I know. You're a bodybuilder, and that has little to do with how much weight you can lift. Increased strength is a pleasant side effect to bodybuilding but increases in muscle mass and lifting ability aren't necessarily synonymous. We see examples of it all the time. Every gym has that guy who doesn't look at all impressive who can outlift the guys with the competition level physique. Humbling, isn't it?

It's important to train in one manner or another in order to achieve your objective. If large shapely muscles are the goal, you'll need to pump the various muscle groups with blood using strict form, moderate weight and tempo, an 8-12 rep range, a variety of movements, and short rest periods between sets. If getting better at a particular lift is your goal, practice that lift -- as heavy as possible.

Muscle growth may be your main objective but increasing strength has its advantages. It's the most tangible gauge of progress. It allows for more stress and ultimately, more growth. And besides, bodybuilders are expected to be strong! Even if you won't be entering any powerlifting contests in the near future, there's no reason you have to use pitiful poundage in the major lifts. Sometimes you have to show that all that muscle is useful for more than just looking good!

This line of thinking is what leads most bodybuilders to test themselves every now and then to see just how strong they really are. The problem with such a practice is that they attempt a one rep maximum lift.

Maximum lifts are not the best test of strength! Maximum lifts are the best way to injure yourself!

Single rep maxes are a catastrophe waiting to happen. And the last thing a bodybuilder needs is an injury that will put his training on hold and sabotage progress -- not to mention the pain that persists long after the injury occurs. Don't be a fool.

What's also ironic is that a one rep max isn't even a very good indicator of muscular strength. When forced to lift a maximum load, it's the bones and tendons that take on the majority of stress. That's why so many Olympic and Powerlifting champions aren't exactly sculpted specimens of muscularity. They're more big, blocky, thick-boned powerhouses. In the case of squatters, overall height is a tremendous factor. Shorter men have a distinct advantage over taller men since not only is their center of gravity better positioned, they also have to move the weight less distance to achieve lockout.

A truer test of muscular strength would be to lift in the higher rep range. Some people erroneously believe that higher reps are more a matter of endurance and aerobic ability, but that's a misnomer. The completion of 20 repetitions can take under a minute - hardly a barometer of long distance stamina.

Many methods devised to test strength require complex calculations. You know the type. Take three-quarters of your one rep max (which is impossible to determine without potential harm) and divide it by 4, then add 15 pounds and yada, yada, yada. What I propose here is much simpler. It takes into consideration the individual's bodyweight and adjusts the testing accordingly. The entire experiment takes just a few minutes. It's also fun! Are you up for the challenge? If so, take this test now and find out how strong you really are!

Pushups:

It doesn't get any simpler than this. The old pushup is an all but forgotten exercise that is excellent for building definition throughout the pectorals and anterior deltoids. It's also an outstanding indicator of upper body strength. (Which is why it's still used by firefighters as a yardstick of their ability to perform strength related tasks.)

It's irrelevant how much you weigh in order to test yourself. Give yourself as much time as you need (as long as you don't take the weight off of your arms at any point or stop for more than 10 seconds). If you're capable of completing over 100 push-ups, you are indeed a man's-man! Even 50 is still excellent. 30-40 is okay, but if you can't eke out at least 25, it's time to start specializing on your functional strength. Incidentally, although the two moves are similar, a good bench presser isn't always good at pushups. The reason being; pushups require more work from the stabilizer muscles, whereas bench pressing is more of a leverage lift.

Curls Against a Wall:

While holding a barbell, stand with your shoulders, back, butt and rear of your upper arms against a wall, feet shoulder length apart, approximately 14" forward.

Without any alteration of this position, or bending at the knees, curl the barbell to your shoulders maintaining a strict form throughout. If you weigh under 160 pounds, then a curl of 100 pounds for 4 reps is superior to most bodybuilders your weight. 80 is good. 60 is fair. If you weigh between 170 and 190, 4 reps with a 120 pound bar is superior, 100 is good and 80 is fair. If you're 200 pounds or more, you'll need to curl 140 pounds for 4 reps to be considered superior. 130 is good and a fair weight would be 110 pounds.

Chin-ups to Failure:

Once again, here we have a basic and brutal test of strength. Chin-ups are different from the chins you might do to develop your back. When working lats, the movement must be controlled and deliberate. The grip is overhand and the head moves back from the bar as you raise yourself in order to stress the latissimus. When performing chin-ups, the grip is

underhand and you can use some "swing" in order to get your chin above the bar. If you can do 20, you're in good shape. More than 30 shows tremendous upper body strength. 15 is acceptable. Less than 10 is pretty bad. If that's the case, it's time to lay off that comfortable lat pulldown (with the light weight) and start chinning!

Body Weight Benching:

In order to keep it safe and keep it simple, try this. Warm up to make sure the muscles aren't cold. Then take a barbell that matches your total bodyweight. If you feel this is too much to complete at least 4 reps, abort the test! Don't feel bad. It's better to be safe than sorry. If you can knock out 5-8 reps, you're doing all right. If you can complete more than 10 reps, you're a damn strong dude. If you can do more than 25 reps, people better not tick you off because you're one intimidating son of a bitch.

Seated Holdout To Front:

This is probably the most exacting test of shoulder strength you'll ever find. Sit on a flat bench with a back rest. Lift a barbell and press it overhead. Then slowly lower it forward, keeping the arms straight until it's positioned at eye level and arm's length. Hold the bar in this static position for a count of five. If you're under 200 pounds and you can hold 75 pounds for 5 seconds, you can rate yourself as possessing superior shoulder strength. 65 pounds is good. 50 is fair. Less than 45 pounds is weak. If you weigh over 200 pounds, you'll need to hold a 90 pound bar to rate superior. 75 is good. 65 is fair. If you can't hold at least 50 pounds, you either need more deltoid work or you're carrying far too much fat and not enough muscle. Work on it.

Rep Squatting:

As mentioned, one's anatomy has as much to do with their squatting ability as does their muscular strength. Yet, if you want a reliable test of your leg and lung power, give this assessment a go.

Take a barbell that weighs half of your bodyweight. Now, perform as many deep squats as possible in a time span of one minute. Many non or beginning trainers wouldn't reach double digits on this one, but 25 reps is about average for an experienced bodybuilder. 30-40 is extraordinary. And if you can bang out more than 50 of those suckers...DAMN!

You may have noticed, no point system was used. That's because this test isn't meant to be a competition. Instead, it's a way of each individual judging his own capabilities. If you decide to test yourself on an ongoing basis, you may want to do it on an off-day when you're fresh. The test alone will be quite a workout! As a matter of fact, this type of training makes for a nice change of pace to your regular routine or as an addition to it when you want to step up your training volume.

So how strong are you? It doesn't matter if you don't excel at every movement, for most people have their weaknesses in one lift or another. But even if strength isn't your main

priority, it's always good to know where you stand. It's also a good idea to check how far along you've come. See for yourself.

JUST ANOTHER DAY

That last cycle made you pretty strong. All the major lifts are up. Gains are up too. You put on a solid eight pounds this time out and the dosages were modest. It was great having that barbell loaded with a weight that has eluded you for so long finally being pushed to full extension. As much as measurements have never been a major concern, they are the most tangible of barometers when it comes to progress. That extra half inch of growth on the upper arm was a nice surprise. Looks good. Now for the moment of truth.

The cycle's been over for weeks now. Any remainder or "half life" residue is long gone. It's leg day and it's time to see just how much of that chemically assisted strength you've retained. Most people will tell you that it can't be done. They say that any strength gains obtained through performance enhancers are the result of having the drug in your body. Once they're gone, so go the gains. But you refuse to accept that. Your mind set is different. The way you see it is; I lifted it then, I can lift it now. That cycle was not a free ride. It was meant to take you to the next step. That step is here.

It would be so easy to rationalize. You may think; 'Now that I've acquired some size, I should cut up -- maybe do some high rep leg extensions.' After all, the last thing you want to do is overtrain at this point. Everyone knows that one cannot be expected to train naturally with the fervor that is possible while using steroids. But any accomplishment is considered impossible until proven otherwise. There comes a time where it's necessary to err on the side of overkill.

It's moments like this that exemplify the training experience. What you put into your training is what you get out of it. Not only is it something that can't be taken away from you but it may very well be the one thing in life that you are completely and exclusively responsible. Results are twofold. You look better because of the effort, and you feel better for having exerted the effort. The progress isn't always linear but that makes the effort that much more noble. If you have the self discipline to alter your physical structure, you can do anything.

It wasn't easy getting into the gym today. Things have been getting hectic and you have a lot on your mind. There couldn't be a worse time to be working legs. You decide to do squats.

After a couple of warm up sets you start to question your motives. The weight feels heavy. By the time you get into the "power" set, you're wondering if this just ain't your day. It isn't the heaviest weight you've ever lifted, but close. The brain is relaying a signal to the body. 'It's too much. Six reps are enough. Rack it!' Then you remember an expression not heard of late. Something that you recall from the past. Who said it? Was it from an old movie or maybe a passing remark from one of the older gym members?

Maybe it was something your Dad or even your Grandfather brought up. A quaint and old fashioned term -- something so corny you don't dare say it out loud. But now is the time you need it. WILLPOWER. Is it a cerebral or a visceral virtue? When a barbell is across your shoulders with a weight so crushingly heavy it makes your legs shake, it doesn't really matter. Any problems that were on your mind when you entered the gym are far away at this point. Only one thing is evident. Give in, or keep going. All it takes is that willpower to tell yourself, 'Don't stop!' You're going to make it to ten reps. It's only pain, but pain is temporary. The reward is far longer lasting.

You complete the eighth and then the ninth rep. Just one more. When it's finally over, you think again. 'Was that really everything I've got?' You don't want to risk a full rep because there's no one around to spot you. You're on your own. You decide to do "partials." Your quads feel as if they're going to explode! The pain is becoming unbearable! Scream if you have to! What kind of fanatically deranged person does this to himself? Don't ask, Just GO!

When the bar slams into the rack, your knees buckle for a moment. You feel a little nauseous but it will pass. As you struggle to catch your breath, you notice out of the corner of your eye, a fellow riding the stationary bike. There is a covetous look of cower in his eyes. He knows. You know it too. You did it. You've gone to that place that takes a special kind of fortitude, and you feel a sense of pride. But you're not out of the woods yet. Four more sets to go.

After the workout, it's time to head back to the grind. The wobbly walk becomes a badge of courage. Those legs are going to hurt tomorrow. Of course, pain is just another word for weakness leaving the body. A true affirmation of a job well done. As you walk the streets, a calm comes over you. All sorts of people pass by. The most amusing is the guy in the Armani suit with a belly hanging over his belt. He may have the money to buy fancy duds but a great body must be earned through sheer physical effort. It's not for everyone. A woman passes you. You pretend not to notice but you can tell she likes what she sees. Some people snicker, assuming that anyone who spends so much time on their body must be intellectually vacuous. If they were as smart as they thought they were they would realize that some of the greatest minds in history, including Socrates and Aristotle advocated the pursuit of the individual's ultimate physical perfection. There's no need to state your point of view. Disparaging comments of that sort are only symptoms of jealousy.

You're on the bus now and it begins to get crowded. Across the way, your eye catches a bare forearm hanging on the overhead metal strap. It is large and vascular. A further glance reveals a muscular body. It seems incongruous to its surroundings, very much how you may look to the other passengers. At first, there is an inclination to say something. It wouldn't be unlike someone who recognized a member of a similar fraternity -- two strangers in similar uniforms would have no problem striking up a conversation with each other but for some reason, it doesn't seem appropriate in this case. Even though there is a

shared kinship, it's private. Remarking on the physical attributes of another can be mistakenly considered sexual in nature. Definitely don't want that! Just keep it cool. The bus comes to a stop and the bodybuilder starts working his way past the maze of commuters and passes you as he exits. He, too, realizes that he is in the company of one of his iron brothers. He knows where you've been because he's been there as well -- facing the squat rack -- under that loaded barbell, in the frame of mind that you just experienced.

As he walks through the door he throws a casual "Take it easy" your way. You give an acknowledging nod and think; 'Yeah, that'll be the day.'

GOLD IN A GARBAGE BIN

Everyone has their favorite movies. Some of mine are Plan 9 from Outer Space, They Saved Hitler's Brain and Teenage Cavemen. Anyone familiar with these cinematic gems knows what I mean -- they are three of the worst movies ever made. Yet, they have a certain charm to them. They aren't multi-million dollar projects gone bad. They're just awful, but honest. You get the feeling that the directors and everyone else involved were trying their utmost to make the best possible picture. The fact that the results are laughable makes them that much more endearing.

Another such mal-masterpiece is the 1985 clinker, Rocky IV. It may not be fair to include it among the others mentioned because it, like all of the inferior sequels subsequent to the original Rocky, had a big budget and were never meant to be anything other than a "cash in" on the trend's popularity. Nevertheless, this excrement set to celluloid ranks (and the word is apropos) among the most poorly written abominations of thespianism the world has ever known--except for five minutes of it.

There is one scene that really gets to me. It's the part where Rocky and the evil Russian superman, Drago Something-or-other-Slovotskivetch, are preparing for their upcoming bout.

Drago is shown training at an ultra modern facility in the city of Moscow while Rocky chooses to work out of an old cabin somewhere in the Russian tundra. Drago has doctors, trainers, and technicians monitoring his every move. Rocky has his friends and family shouting words of encouragement. Drago works out on high tech equipment with digital readouts. Rocky chops down trees and lifts boulders. Drago runs on a state of the art indoor track. Rocky runs through the snow with a log across his back.

To the average moviegoer, the metaphor is apparent, if not obvious. It's the brute against the genetic marvel. Drago represents scientific calculating. Privilege. The future. Rocky represents primal tenacity. Heart in the face of adversity. Guts.

As a bodybuilder, I appreciated the connotation, yet saw that scene a little differently. To me, it implied the basic impetus behind building your body. It doesn't matter what you do or how you do it, just as long as you do something. If you work hard, you'll get better. And the harder you work, the better you'll get. That may sound clich, and cornball, but it's true. And as stock and manipulative as that scene may have been, it works for me every time I see it -- which just goes to show you, you never can find something of value even in the least likely of places. A lesson in itself.

For the most part, Rocky IV is just jingoistic hogwash. It catered to people's fears of the unknown such as the Soviet threat and modern technology. It mollified the audience with

confirmations of Western superiority by having the winner be a symbol of the American work ethic.

Still, if you can get past the pandering and the propaganda, you may want to check it out. If nothing else, Sylvester Stallone and Dolph Lundgren deserve kudos for whipping themselves into phenomenal shape. I can't remember seeing movie characters in better condition who weren't competitive bodybuilders. It's downright inspiring.

As far as the rest of the movie...well, it's good for a laugh.

OVERLOOKING THE UNOBVIOUS

Back in the dark ages when I was in junior high school, (what is now referred to as "middle school"), my classroom had an interesting and somewhat degrading method of seating the students. We were placed according to our academic record. In other words, the student with the highest grade would be in the first row, first seat. The next "smartest" student was in the first row second seat and so on down the line. All the subsequent seatings were arranged in a steady decline of praiseworthy placement all the way down the line to the lowliness of the last row, last seat. That's where I sat.

Yes, I had the lowest grade in the class -- barely passing in fact. One more demerit and it was off to the class for the learning handicapped, or as they so sensitively put it back then, the "retard class."

One day, the English teacher, Mr. Westerly, came in with a surprise test, much to the chagrin of everyone present, myself included. But this wasn't something that would go on our final grade. It was meant more of an evaluation of the student's capabilities.

"Mr. Westerly! Mr. Westerly!" shouted one obsequious student in the front row.

"Will it hurt our average if we don't do well?"

"There's no passing or failing on this one," the teacher assured.

This concept, as common as it may be now, was lost on this clan of adolescent baby boomers. The teacher went on to say; "I don't expect anyone to do that well on it, but do your best. If you answer half of them right I'll be very impressed."

"What if we get a 100?" another kid exclaimed.

Mr. Westerly smirked and said, "No one will get them all right. College students at major universities who finish in the top of their class don't get them all right."

"But what if we do?!"

In an effort to appease what was obviously a moot point the teacher said; "If anyone gets all of these questions correct, I'll buy them dinner, alright?"

As the papers were handed out, I had a slightly more enthusiastic approach to it than the standard tests which I had so miserably failed to comprehend. This wasn't a test of what we were taught, but of what we could figure out on our own. I liked that. And besides, it didn't count.

We were given a time limit and soon after we begun, I could see the look of confusion on everyone's face. This test wasn't about dates or facts or anything we learned in last week's lesson plan. It was all about logic and deduction. The collective sweat on the brows of my collegiate cohorts could have filled a reservoir. They scribbled furiously to get the answers in. I stared at the page for about a minute without answering a single question.

"Mister Montanino," (my birth name, which I changed because evidently no one can pronounce it correctly) erupted the voice from the head of the room, "You better get going."

I ignored the intrusion and continued to look at the page. Suddenly it hit me. I picked up my pen, wrote down my answers top to bottom and held my hand up to announce I was finished. The teacher gave me a disgusted look and said; "Just guessing defeats the purpose, but I wouldn't expect much more from you." The class snickered and went back to racking their brains in an attempt to grasp the concepts set forth on the page before them. I drew some pictures while I waited for everyone to finish.

When the allotted time limit was up, everyone was to submit their answers. The top student at the head of the class got an impressive 14 out of 50 answers correct. The second kid got 9 and the average among the remaining class was about 5 correct answers. And if you have any deductive capabilities yourself you already know where this story is going.

I ordered the steak.

So how did a misfit hippie reject with a D average manage to get every answer right when so many others far more advanced couldn't figure out half of it? The reason I did well was the nature of the test. It was pure logic, and in order to arrive at the right answers it was necessary to overlook the "sandtraps" of confusion purposely interjected into the text. Once that was accomplished, it was merely a matter of connecting the dots. In a way, it was my dismissal of going through the proposed calculations and taking the shortest possible route. Maybe it's because I didn't know any other way. At any rate, I did what I do best. I found the simplest solution to the problem.

As we travel through life, we all rely on our learned and innate skills to get by. One might say a good presentation is a matter of presenting our strengths and hiding our weaknesses. When it comes to assessing bodybuilding information, be it training or nutrition or supplementation or anabolic enhancement, all I can do is offer my expertise, which isn't in the area of chemistry or kinesiology or pharmacology. But I'm real good at seeing that bottom line.

Case in point.

Not long ago I ran across a very prominent authority in the field of training and anabolic assistance. It had been years since we last spoke and he mentioned that he was using GH. He went on to say; "Maybe you have an answer to something that's been bugging me. I've talked to some of the top guys and no one seems to know. Whenever I use Growth Hormone, I get dog tired! I thought this stuff is supposed to give you energy! I've had (noting scientist) do a lab test and he can't find anything. I've also spoken to (steroid guru) and he's stumped. Have you ever heard of anything like this?"

The first question out of my mouth was; "Have you been cutting carbs."

"Yes!" he said. "I want to get ripped and this is the way you're supposed to do it." I then reminded him why GH can work as a cutting agent. GH will utilize carbs at an alarming rate, much like when you're a kid. This is one of the reasons some people lose fat on GH as well as have more energy. But in the case with children, not only are they running around in a 90 pound body, they tend to eat tons of sugar. By using GH while in an already carb depleted state, this bodybuilder, however advanced, simply didn't have the energy capable of supporting a 240 pound body. Hence, he was constantly exhausted. I suggested he up the carbs a bit, which he did. He got back to me a week later and said he felt a thousand percent better -- even though the extra carbs negated the carb burning effects of the GH.

That was easy.

Another example of elusive logic involved a competitive bodybuilder who was using Cytomel T3 thyroid hormone. He found that by taking less T3 he had more energy than when he took more! That seemed to make about as much sense as taking five hundred mgs of testosterone causing bigger gains than using five thousand mgs. Was it something in the drug or did he have a strange allergic reaction which occurred after a specific dosage? One expert after the next offered hypothesis after hypothesis but no one could figure it out. But again, they were all looking at it the wrong way.

Body temperature fluctuates throughout the day. It isn't uncommon for temperature to shift a degree or two. If your temperature is 97 you wouldn't even notice a difference. If it got to 96.5 you may feel cold hands but still nothing alarming. However, if your temperature goes just one notch over 98.6 which is very likely with high dosages of T3, you're going to feel pretty crappy -- much like having a flu. I had him take his temperature and it was just over 99. No wonder he was dragging his ass.

Simple, eh? So why did the experts miss it? Because they were looking for the complicated answer -- the one in which they could use their skills. In doing so, they overlooked the obvious.

Getting to the bottom line should always be the first step. More often than not, it's the only step you need. It doesn't take a brilliant mind or a high IQ or a PHD. It just takes common sense, and a little practice. And the first step at developing it, is recognizing it.

I haven't thought much about that incident from my schooldays but thinking back, I remembered ungraciously gloating over my victory dinner, compliments of Mister Westerly. We made small talk and at one point the conversation turned more serious when he said to me; "I may have underestimated you Nelson. Maybe you underestimate yourself." As a confused kid with little direction and even less confidence, I didn't reply. He then asked me point blank; "What do you want out of life?" I thought for a second, them innocently and immodestly replied; "I want to be known as someone who was great at something." He politely contained his amusement and just smiled and said; "Believe in your dream. You just might achieve that greatness."

With apologies to Mr. Westerly, I never quite brought to fruition the grandeur I had hoped for. But maybe because of that one simple incident which confirmed I had more on the ball than I, or anyone else thought, I lived more of my life as if I could be great -- at everything and anything I attempted. And through that effort, I know I got closer to my goals, however humble, than had I not believed that greatness was possible.

There's a saying: "The way you do one thing is the way you do everything." In other words, one's approach will carry over to all aspects of his or her life. It has with mine. And in regard to bodybuilding, I may never have achieved the physique of a professional bodybuilder, but I've made tremendous progress. I've walked the walk, which entitles me to talk the talk. After all, if you want advice on how to get rich, don't ask the guy who inherited a million dollars -- ask the guy who started with nothing and figured out how to make a fortune.

Although being "number one" in any particular field may not have been my destiny, I've accomplished far more in my life than my wildest teenage imagination had ever conceived. Living and learning has been quite a trip so far. And what makes the journey most rewarding is the fact that I get to experience it with the broadest of perspectives. You see, it's a long, long way from the last seat in the last row.

CURTAIN CALLS AND CLOSINGS

The year was 1969. The location was the Brooklyn Academy of Music. The event: The Mr. Olympia contest.

I was only 15 years old and in order to make it to the show, I had to convince my father to take me. How awkward. I think he was already less than thrilled that I poured endlessly over the pages of pictures of oily men flexing in an odd assortment of peculiar poses. I can understand why. At one time my Dad was a professional boxer (ranked fourth in the world) until a hammer fisted Cuban by the name of Kid Gavilan ended his hopes of being champ. When my father trained, it wasn't just for improved physical conditioning. It was literally a matter of survival. Now here he was, having to sit through a cavalcade of oddballs strutting their stuff among a group of fans who were closer to a cult than a typical sports audience. But he knew that for some strange reason, it had been a dream of mine to see a bodybuilding show in person, and this was the biggest of them all.

As I meandered through the lobby of what was once an opera house, it was apparent I was the youngest person there. Definitely the smallest. Needless to say, I was a little intimidated mingling among the sea of inordinately large men. I remember thinking; 'Wow, they exist. There really are men who have worked out for years in order to look different than ordinary people.' My father's opinion, on the other hand, was probably closer to the mindset of most people at the time, being that anyone who spent so much time on something so self effecting must be narcissistic or demented in some way. He begrudgingly bit his lip and humored me. (Thanks dad.)

This was a special night. In retrospect, more special than I could possibly have realized at the time. Everyone was there for the same reason. We had all come to see the debut of a man they called Schwarzenegger. Was he really the giant that the magazines had been claiming? Six foot three, two hundred and thirty pounds with 20 inch arms? Impossible!

The atmosphere on that chilly September night was almost surreal. Only a select few understood the impetus behind this quirky subculture sport called bodybuilding and most of them were there. I didn't really fit in. But somehow, I felt as if I belonged.

As I stepped into the theater, I noticed a blackened stage except for a single stark spotlight beaming down onto a platform. The letters IFBB were pasted on the front in what looked like duct tape. The Mr. Universe contest was also to be held that night since there were only a few contestants who would challenge the reigning Mr. Olympia, Sergio Oliva. Schwarzenegger would be one of them -- if he won the Universe.

When the first competitor walked out on stage, I was in awe. Only in comic books had I seen such muscularity. Out of shyness, I contained my excitement but I wanted to cheer at the top of my lungs! The next competitor was equally as impressive as were most of those who followed. They were all heroes to me.

Then came the moment everyone was waiting for. The MC made an announcement. "Ladies and Gentlemen...Arnold Schwarzenegger!" Never before, or since, have I heard an ovation comparable to the one that then erupted. We were a community of outsiders embracing our superstar. When Arnold stepped onto the platform, the crowd gasped! Even my aloof father showed a stunned expression of disbelief. I'd seen Johnny Unitas throw a touchdown and I'd seen Mickey Mantle hit one out of Yankee Stadium. I'd even seen the great Muhammed Ali in his prime, but none of these events captivated me as much as seeing Arnold going through his posing routine. Even though he wasn't even tanned or oiled, it was obvious this event was no contest. Bring on the Olympia.

During the intermission, the lobby was buzzing with excitement. This was the dawning of a new era. The bar had been raised to a seemingly insurmountable height. There was a prophetic consensus that the game would never be the same again.

Suddenly, the lights began blinking -- a cue that the audience was invited back into the theater for the second show. The Olympia was about to begin. As it turned out, no one besides Arnold would compete against Oliva. Arnold, now oiled, went first. Again, the applause was deafening. Every pose was more dramatic than the last and although we'd all seen him just moments ago, it was as if he was pulling out all the stops this time around. Screams and whistles emanated from every corner of the auditorium. People started standing on their seats! The fervor was climaxing to the point where I honestly thought a riot might break out. It was pure pandemonium! We all knew that history was in the making. We just didn't know how much. The day would come when everyone would know the name of Arnold Schwarzenegger, but on that night, he was ours.

Arnold completed his routine and began walking off but the audience refused to let him go. He obliged with a few more poses to the wild approval of the crowd before finally exiting. The mob began to chant. Ar-nold! Ar-nold! But there was another man left to be seen. Sergio Oliva walked out onto the stage.

As impossible as it may seem, it was immediately apparent that Oliva had eclipsed the pinnacle of ultimate muscularity. It was almost frightening. He didn't look human. His arms actually appeared bigger than his waist! His lat spread, even in a relaxed state, made Arnold look narrow. The audience's reaction was a collective stun. Sergio giggled a bit, looked back into the wings, and waved to the crowd. He didn't even pose. Instead, he walked across to the MC and took the Sandow. No one argued. He was that awesome.

1969 was a lifetime ago. A lot has happened and a lot has changed. And although my involvement in bodybuilding occasionally got sidetracked, ever since that eventful

evening, I'd often fantasize about emulating my childhood heroes. It took me over twenty years, but in 1997, I finally did it. I spent over four months getting in the best possible shape of my life and stepped onto the stage at the NPC Nationals in what would be my first and last bodybuilding contest. I got my ass kicked.

But I did it.

I don't mind admitting, it's scary as hell to walk out in front of hundreds of people in your underwear and make the statement; "This is my best." I did it to test myself and I did it to fulfill a childhood dream. Most of all, I did it for the experience. And what is life itself if not an opportunity for experiences?

Today, bodybuilding shows are different from when I was a kid. For one thing, many of today's audience members are bigger than most of the contestants in 1969. At the show in which I was a competitor, the contestants didn't step onto a podium (which eliminated some of the majesty) and the stage was brightly lighted, making it less flattering and less atmospheric -- this being necessary in order to illuminate the banners of the various sponsors. Most of the contestants routines weren't choreographed and consisted of hitting mandatory poses. Many of the competitors would gesture to the crowd to make more noise, placing their hand to their ear, as if to say; "I can't hear you!" "Get excited!" As with all shows, merchandisers littered the lobby where pro muscle celebrities sold autographs. Camaraderie and enthusiasm among the fans have been replaced with blase' posturing and cocky bravado. Yet in spite of it all, my competing in a bodybuilding contest was a symbolic validation that this once skinny kid can finally fit in. As far as further competing, however, I'm not sure I want to.

Today, bodybuilding for me isn't about winning trophies and beating others. My only competition is myself. I train because I must -- because I love it. After all these years, I can say with certainty and pride, I belong. I guess it's something I've always known. And much like that September night so many years ago, it's something I'll never forget.

SECOND CHANCES

Like most men, I sometimes doubt myself. Am I changing? Losing a step? It's tough to tell. At times, I'm convinced I'm better than ever. I'm pretty sure I'm smarter than ever. But I wonder -- maybe my acquired knowledge has led to playing it too safe. When we're young, we're reckless. When you have all the time in world and nothing to lose, you're willing to take chances. You're immortal. Then you get a little older -- a little wiser -- and you realize the folly of your ways. Unfortunately, along with taking lesser risks, comes lesser payoffs.

At age 22, I traveled around the country with my band. I drove from town to town in a 1971 Pontiac GTO with a broken muffler. And in case you're unaware of it, there is nothing on earth louder than a 1971 Pontiac GTO with a broken muffler. You could hear us coming from a mile away in that beaten up old wreck with bald tires and no rearview mirror. I loved it. And when I played in clubs, I played the way I wanted. No compromises. I was out to show what I could do. I was on fire.

Fast forward a decade or so. Add a wife, a kid, and a mortgage. And while you're at it, include a liberal dose of compromise, disillusionment and jadedness. We all get there eventually. The more we have to lose, the less we're willing to risk. Although I continued to live what is considered a bohemian lifestyle by working as a writer, musician and actor, once I was thirty something, I tended to play my cards a little closer to my chest. I became more willing to please -- making people happy by telling them what they wanted to hear. I learned how to "get over." Even as a musician, I was ever conscious of curbing my aggression and consequently, my enthusiasm. I learned all the correct parts and executed them flawlessly. Instead of standing out, I blended in. I was the consummate pro. I was bored.

Then a change occurred when I turned 40. Some people might call it a midlife crisis. I like to think of it more as midlife liberation. A "rebirth," if you will. I began reverting back to my old ways. The time was right.

Today, I no longer worry about being accepted. I feel that at this point, I have something to offer and I'm going to bring that something to the table. Yep, there's always a chance someone won't like it, or my unabashed style will be deemed offensive, or excessive. But some people will like it and that's what makes the effort so much more rewarding. One thing I've learned throughout the years is that it's better to fail on your own terms than to fail trying to be something you're not. There's a 50/50 chance either way, so why not pull out all the stops? Do what you do, and make it big. Anything else is second best. I try to apply this philosophy wherever and whenever I can. My only regret is that it took so long.

There's an old gambler's motto: "You can't win if you play not to lose." It isn't a bad idea to apply that thinking to everything.

An incident occurs to me now and then that can be considered a microcosm of the first few stages of life. When I cart my music equipment into a room, be it a bar or a five star hotel, there invariably seems to be some member of the staff telling me; "Take that stuff around the back through the kitchen!" -- even if the stage is located right by the front door. It's not like I'm carting garbage through the place, so what's the problem? Should I be ashamed that I'm a musician or am I just a servant in their eyes, unworthy of being seen by the patrons? As a young man, I might've responded by saying;

"Don't tell me what to do fuckhead! You can shove this gig up your sister's ass for all I care."

Once I matured, I realized the better answer was;

"No problem. Where's the back entrance?"

Now, I look the guy square in the eye and say politely;

"I'm going in this way."

I still have my days of doubt and insecurity and regret. Given enough time, anyone can find a multitude of reasons why their life hasn't turned out the way they had hoped. But the way I see it, traveling through life isn't that different from traveling in my old GTO. Sometimes it's better without a rear view mirror. In that way, there's no reason to look back.

Straight ahead. It's the only way to go.

FINDING HARDCORE BODYBUILDING A Gym Story

It was still bitterly cold when the snow had finally stopped falling. As I peered outside my bedroom window, I could see that the roads were as good as closed. Nothing short of a heavy duty SUV could work its way through what looked like two or three feet of thickly packed powder. It was worse than yesterday, which was worse than the day before. Nevertheless, I wasn't going to let it stop me. Today, I had to get to the gym --anyway I could.

Just to make sure they were open for business, I gave a call. One ring. Two rings. Then a voice:

"Hello, Bellrose Gym. Joe speaking. Can I help you?"

"Yes, are you open today?" I asked.

The somewhat agitated voice at the other end answered, "Unfortunately, we are. Can you believe it? I mean, who's going to come out on a day like this? If I didn't live next door to this place, there's no way I'd be here. The joint's deserted."

"But you are open?" I reiterated.

"Yeah, yeah. Regular hours today. Don't ask me why."

"Thanks. See ya." I hung up the phone and picked up my gym bag. I was on my way.

I set my mind to the fact that walking through the snow drifts would make a nice warm up, as if the expression can be applied to such a situation. On any other day, the three quarter of a mile distance to the gym was a piece of cake. Today, it was going to be rough. But I wanted to go. My body craved activity. I needed to lift iron and no excuse was going to stop me.

The Bellrose Gym isn't what one would call a "hardcore" club. It's of the commercial variety designed for casual fitness seekers and overweight housewives. The layout is made up of mostly stationary bikes, treadmills and a smattering of exercise machines. Half of the floor space is reserved for various types of aerobics classes. But it was downstairs, in the basement, where I was headed -- dark, dank and reserved for anybody who really wanted to train. It had weights, benches and more weights. Nothing fancy. Yet, it did have a power cage and dumbells that went up to 100 pounds and it welcomed anyone who chose to forgo the niceties of the main floor and enter into the "pain zone." As grungy as it was, the basement wasn't a bodybuilders' hang out in the traditional sense. There was never any talk of competing, nor did anyone of any prominence train there. I

doubt if any of the members were juicing or had ever so much as seen the stuff. Still, I've never known a group of guys that worked harder and more seriously. Some of the patrons had amazing physiques -- thick, vascular and defined. But even those who weren't genetically blessed, still attacked the iron with ferocity.

When I finally finished my trek though the suburban tundra, I stomped as much of the icy sleet off my boots as I could and walked though the doors of the club. As far as I could see, there wasn't a single person in the place. A lone figure, who I assumed was "Joe" was sitting at the front desk reading a newspaper, arms folded, hunched forward. As I approached him, he maintained his relaxed posture except that his eyes glanced sideways in my direction.

"You're the one who called?" he asked without much enthusiasm.

"Who else?"

Joe was indifferent to my attempt at humor through the usage of stating the obvious. As I went to take my membership card from my spongy soaked wallet, he looked back down at the paper and grumbled, "Go on in."

It was eerie perusing the gym floor. The usually boisterous aerobics room was closed. A notice on the wall stated; "No classes today due to the inclement weather." Where there was typically several people waiting for a bike, a custodian was getting in some clean-up time. The treadmills were vacant. I had free reign to any machine I wanted. I walked downstairs.

I anticipated the stark absence of clanging plates and the mournful groans that were ever present in the basement whenever someone attempted to hoist a poundage that refused to budge. Instead, I noticed something surprising. There were about eight or nine people who also made it out into the gym and down to the dungeon. Maybe it wasn't so surprising after all.

I wasn't especially close with anyone there but I'd seen them all before. They were the regulars -- the guys who you noticed but didn't necessarily associate with. One thing was certain though. They were serious lifters.

Anyone who couldn't hang would be upstairs, not here.

As I got into my routine, it was hard not to acknowledge the others who were also training. It wasn't as if we could maintain anonymity through the din and congestion of a "normal" training day. We were it. I gave a knowing nod to one of the guys passing me as he grabbed a set of heavy dumbells from the rack. As I started my next set, a peculiar sensation came over me. I felt as if I was suddenly being judged by my peers. Under

everyday circumstances, I'm oblivious to what anyone thinks about my training or the poundage that I use. Bodybuilding, for me, is a solitary activity. It's my therapy. My meditation. But today, I truly felt as if I was among a brethren. These men were here for the same reason I was. We were all, at least in one way, the same.

I racked the 45 pound dumbells and picked up the 60s. The next set, I went even heavier. I wanted to make this workout count. Halfway into the session, there was an undeniable electricity in the air. Everyone was pushing harder than normal. It was as if this select group had become one mind. Bars bent under the pressure of accumulating plates. Masses of metal defied gravity through the sheer force of human sinew. At one point, I noticed a trainee staring at a dauntingly heavy barbell. It was almost like he was communicating with it -- daring it to beat him as it had done so many times before. Suddenly, he lunged down, grasped the bar, and cleaned it to his shoulders. Just then, he let out a bellow of agony. No one flinched. He's got it. We all knew it. He then pushed the weight overhead, shaking under the pressure. 'Nice lift,' I thought to myself. When he returned the bar to his shoulders, he took a deep breath and shouted out loud, "That's ONE." I was amused and impressed. He knocked out three more reps. That's the way you do it

The energy in the room was building and I had ceaseless enthusiasm for the rest of the workout, lifting more weight than ever before. My usual rep range of 8 to 10 was no longer the desired number. In fact, I stopped counting. I just kept going. At the end of a grueling set of seated presses, one of the members stood behind me as I was reaching failure. He shouted; "Come on! You got four more!" For some inexplicable reason, I believed him. At least, I wanted to. So I strained and stressed and with every ounce of strength I could muster, and with just the slightest bit of help from my comrade, I made that fourth rep. And then a fifth -- followed by partial reps at the top of the movement until it felt as if my entire torso was on fire! When every last bit of energy left my body, I slammed the bells down to the floor and gasped for air. It felt good.

It was then when my acquaintance made what I'm sure was meant to be nothing more than a passing remark, but it had as much poignancy as anything I've ever heard. He said;

"Only the warriors are out today."

I was too fatigued to respond, but I concurred. I also took it as the highest compliment a bodybuilder could receive.

That workout took place back in the winter of 1996 and it was, in many ways, the benchmark from which I've judged all my workouts since. I don't always succeed, but if I had never pushed as hard as I did that day, I would never know what I was capable of. It's amazing how inspiration can come from the most unlikely of scenarios.

I've since moved from the neighborhood where the Bellrose Gym resides. I now live in New York City and have access to some of the best facilities in the world, short of Venice Beach. It isn't unusual to see a top pro training right beside you on any given day. The bodies that frequent these high tech establishments are a blatant disclosure to the availability of anabolics. It's all around. Freaky musculature is almost commonplace.

Some newcomers know of my writings in the muscle magazines and it's for that reason that I'm often asked; "Where's the best, most serious gym in the city?" Neophytes want to know where the big boys congregate and where they can score some steroids. Aspiring competitors hope that I can hook them up in a place where they can learn a few secrets --something that will give them that extra edge.

By far, the most asked question is; "Where can I go where it's really hardcore?"

And whenever I receive that ubiquitous query, all I can think of is a cold snowy day some time ago, back in the basement of an obscure gym filled with unknown bodybuilders sweating and straining to get just one more rep for no reason, other than to do it.

Where is it hardcore? Hardcore is indeed a place, but don't try looking for it. It doesn't have a name and it doesn't have an address. You won't find it in the phone book, on the Internet, through a personal recommendation or with the right connections. Hardcore is in the heart. And as long as you have an intense desire to train harder and heavier than you did the last time out, everytime out...you're in the right place.

YOU KNEW IT ALL ALONG

In the beginning of the book, I made the analogy of anabolic enhancement to a magic trick. I'd take that comparison one step further and say that in a lot of ways, all of bodybuilding, be it enhanced or natural, is a little like "slight of hand." You know what it's like when you first see an amazing card trick? It's so impressive, you're intrigued, even envious. You may even see the magician as someone with incomprehensible talent. You become curious as to how the seemingly impossible was accomplished. You can think about it and analyze it forever and still never figure it out. Then, once it's explained to you, you smack yourself on the forehead and say; "Of course! It's so simple."

It's the same thing with developing your body. When you're new at the game and you first gaze upon the extraordinary physiques in the magazines, they seem unworldly. You wonder how such musculature is possible. You want to know how you, too, can obtain it and you're eager to do what it takes to do so. The marketers of bodybuilding products realize this, which is why they have an endless array of products you can buy in order to get that elusive "magic." But more often than not, the information they provide is just some chicanery of its own -- something to keep you entertained, impressed and ultimately, deceived.

This is where I trust the information in this book was different. Instead of more tricks, I've tried to show you how the tricks are done. Once you know that, it's a lot easier accomplishing your goals.

Now, instead of the spectator, you are the magician. But even the magician must practice his skills. It takes a while before that slight of hand is executed in a manner where it really does seem like magic. And as a builder of your body, you must work hard at developing your skills. The only difference is, you need to put in more than time -- more than devotion. You need to put in intense physical effort. You have to reach deep down and want it. And when you're in that gym, under that bar, sweating and straining, you have to want it more than anything else. If you can do that, and you follow the advice laid out in this book, you're on your way. The Ace is already up your sleeve. Pull it out.

You have the knowledge. Now you need to get to work. One without the other won't get you far. Put the two together there's no telling how much you can accomplish.

From here on in, it's all up to you.

And that, my friend...is the bottom line.

Free Bonus One: THE UGLY WORKOUT Look Bad -- Get Big

Are you walking the walk, or just talking tough? You might be able to impress your buddies at the gym with huge poundages, but to master the weight room you're gonna have to get nasty. Maybe it's time to stop looking pretty and start bustin' your ass!

To many bodybuilders, the time spent training is the highlight of the day. More than a workout, the trip to the gym is also a chance to get away from the grind and escape into your own world. It can also be the only chance to meet up with the "crew" -- that bunch of rambunctious buddies who have the same burning desire that you have; getting bigger! And let's not forget the biggest perk of all. The gym is one of the few places where it's totally appropriate behavior to walk around with as much flesh showing as possible! The fact that the girls on the stairmaster feel the same way is a tasty treat as well. Yep, the gym is a place to see and be seen. Sure you're there to work, but there's no reason why you can't have some fun along the way. But watch out. Things are about to get ugly.

If your training hasn't been as productive as you'd like, you need to change a few things. The biggest change may be the approach toward your workouts. Although the social club atmosphere which prevails in most gyms adds an enthusiasm and sense of camaraderie to the experience, it can sometimes be a hindrance. In an effort to make training more pleasurable, it's easy to lose sight of the main objective -- getting the most muscle out of your time in the gym. This is when it's time to check your ego at the door and train in a manner which goes against your grain.

WHO'S KIDDING WHO? I can hear you now. "I work damn hard! I'm a maniac! I lift heavy! Ask anyone in the gym and they'll tall you, I'm all business." No argument there. But that may be the problem. All too often, it's easy to get caught up in doing what you do well. Week after week you APPEAR impressive -- showing off that big bench -swinging those heavy barbell curls -- slapping another 45 on the Smith Machine. Then one day you realize you've been sticking with movements where you can handle the most visually eye catching poundages. You may also be ignoring techniques which you fear will make you look like a weenie. Be honest. When was the last time you did an exercise you really hated? Haven't you on occasion opted for the leg press because you can load it with ten plates? (I have to say, that IS pretty cool.) C'mon. You know you're sure to attract an audience when a bar is stacked to the max. Meanwhile, performing lunges while holding a couple of 20 pound dumbells isn't quite as spectacular. Besides, you have to admit, you never were very good at doing lunges. That's why they may be exactly what you need. IT'S A DIRTY JOB -- BUT SOMEBODY'S GOT TO DO IT If you're willing to fess up to the fact that you've been shunning potentially effective techniques for those which are more eye appealing, it's time to take a step back. That's when it's time for an "ugly workout."

One way to do an "ugly" workout is to think in terms of NOT what you do well. That's right -- all those movements which you've been avoiding because they're either too uncomfortable or they don't allow for the handling of heavy poundages are now on the agenda. Can't stand hack squats? Make your next leg workout nothing but hacks! Despise dips? Dip till you drop! Think that the abductor machine is only for girls? Load that baby up and start breaking a sweat. No only will the alteration stimulate dormant muscle fibers, it's also a terrific mental exercise facing the challenge of doing what you don't want to do and getting it done. Knowing that you've tackled a task which is all too easy to avoid is very empowering. It takes fierce determination. But you're a bodybuilder. You're used to that.

WHY DO YOU HAVE TO DO THINGS THE HARD WAY? Try this little experiment. From a standing position, jump as high as you can. Chances are you bent your knees quickly and "sprang" up. This is your body's method of making use of momentum -- getting the most result with as little effort. Now try this. Bend the knees and stop at the bottom. Hold that position for a few seconds. Now without any downward motion, jump up. Pretty pathetic, isn't it? The height obtained is nowhere near what it was when you "bounced". This is the difference between developing functional strength and developing muscle. When jumping in the natural manner, the body is doing what is most efficient. The muscles have little reason to change because they can already complete the task. When employing the second method, the legs are getting a signal that they're not working optimally. If one were to continue attempting to jump higher and higher using this hindrance, how do you think the muscles would respond? You got it; they'll get BIGGER and STRONGER in an effort to execute the more difficult movement! This is another example of how looking bad will make you look good in the long run.

LESS IS MORE -- MORE OR LESS Some of the most stressful movements require no weight at all and anything which employs the body moving through space is a good example. That's why chin-ups are more difficult than pulldowns. Whenever possible, perform exercises that don't restrict you to a set position. Instead of finishing a leg workout with leg extensions, do deep knee bends till failure immediately after your last squat set. Oh man! There's no way you'll look cool doing THAT. But your legs will pump up like crazy! Substitute good mornings for hyperextensions. Pushups instead of bench presses. Think you're pretty strong because you can bench 300 lbs? Try doing 100 pushups in one minute and see how strong you really are.

DONCHA HATE THAT? By far, the UGLIEST workout of all not only consists of executing those dreaded movements but utilizing techniques which will make your gym mates laugh out loud at how stupid you look! The reasoning here is that the key to muscle growth isn't necessarily lifting lots of weight. It's making an exercise as DIFFICULT as possible. It takes humility to use a light weight and make it "feel" heavy. It's also very smart.

ACCENTUATE THE NEGATIVE In case you are unaware, it is the belief of many exercise scientists, kinesiologists, and experts in biomechanics that the negative, or eccentric portion of an exercise is what causes the most trauma to a muscle. For this reason, some people feel that excessive emphasis on the the lowering of the weight is far too stressful to be employed on a continual basis. Well, allow me to fill you in on a little secret. Muscle trauma is what induces growth! That's the reason it's possible to be strong without possessing outstanding musculature. Most powerlifters couldn't care less about added muscle. They want to improve their maximum lifts. That's why they train exclusively using explosive movements. It's also the reason they can be strong without shapely muscles.

SIX SECONDS TO A BETTER WORKOUT Beside poundage and repetitions, there is another factor toward increasing intensity during a set -- applying the Time under Tension principle. Once again, it won't be flattering, but it's effective. The best way to take advantage of this concept is with the 3-1-6-1 technique: Take THREE seconds to raise the weight just short of lockout. Pause for ONE second. When lowering the weight, count to SIX. (Just to make sure you don't rush it say; one-one thousand and so forth.) Pause for ONE second at the bottom of the movement. Repeat. Prepare to reach failure much sooner than when training normally. It's going to look like you're doing less, but you, and your muscles, will know better.

SOMETIMES YOU JUST HAVE TO STOP AND FEEL THE DISCOMFORT Another tip toward greater growth is the use of staggered eccentrics. Using a barbell curl as an example; when lowering the bar, pause every few inches and hold the weight for a three second count. =A0 Concentrate on every portion of the movement. At the top of the movement, squeeze and contract the muscle as hard as possible! This is extremely intense! Of course, when someone sees you wincing in agony with a 40 pound bar, they may snicker at how "weak" you are. That's alright. If they only knew! Had enough humiliation? Here's one more. Just for the hell of it, every now and then make a workout day an "everything you hate" day -- a session of nothing but exercises which you haven't done in over six months. That's the worst!

It takes a very secure person to put up with the derision which will no doubt be inflicted while attempting these exercises. Some people may think you don't know what you're doing. Others will assume you're lifting pansy poundages. Don't expect them to understand. Don't explain. There will be a payoff. The shock and confusion your body will receive will send it into anabolic overdrive! You'll blast out of that rut you've been in and start growing again. Cuts, separation and defined detail will come out like never before! Is it worth being seen when you're not at your best? How badly do you want to grow?

Performing awkward exercises and utilizing methods that intentionally make you look lousy isn't for everyone. Training in this manner takes thought, concentration, and a whopping dose of humble pie. It may not look like you're doing much. But you're going

to look a whole lot better when it's over. Now get to work and try some of these suggestions. But don't say I didn't warn you. It ain't gonna be pretty.

Free Bonus Two: THE PERFECT CYCLE

Is it possible? Can the perfect cycle be constructed? There are lots of people who think so. Unfortunately, what they consider perfect may not concur with your definition. To some, a successful cycle is one which produces the most noticeable immediate gains. They'll swear up and down how great it works, regardless of the side effects, health risks or inability to maintain the gains. But instant gratification is not the name of the game here. To me, a "perfect" cycle (or one as close to perfect as possible) is one that will contain 3 specifications.

One: It will produce the most gains with the least amount of suppression.

Two: It will be virtually impossible to cause gyno.

Three: The gains will be as permanent as possible.

If that's your idea of a good cycle, this is for you.

(Note: I must preface this report by saying that this cycle is not designed to be cost effective. If you want the best, be prepared to pay for it. Then again, I could never understand why someone would want to cut corners when it comes to something as serious as this. Also, there's a reason for these choices, especially the use of Primobolan. Yes, I know it's hard to get and it's expensive and it's often counterfeited, but that is irrelevant to the matter at hand. Primobolan is the safest, most risk-free steroid and it produces very solid gains. Please don't e-mail and ask if you can substitute Fina or Deca or Cypionate for the Primo. It's there for a reason.)

Week One:

25 mgs of D-bol every day. Spread out to 4 daily doses. (Note: If you are extremely sensitive to gyno, use 30mgs of Oxandrolone instead of D-bol).

Day 1: Sustanon 250.

Day 2: 100mgs Primo

Day 3: 100 mgs Primo.

Day 5: 100 mgs Primo.

Day 7: 100 mgs Primo.

Week Two:

30 mgs of Oxandrolone every day. Same administration as above.

Day 8: 200 mgs Testosterone cypionate or enanthate

Day 10: 100 mgs Primo

Day 12: 100 mgs Primo

Day 14: 100 mgs Primo

Week Three:

20 mgs of oral Winstrol every day. Take last dose of Winstrol no later than 6.00 P.M. (Note: Ox may be substituted for Winstrol if LDL is a problem.)

Day15: 100 mgs Primo

Day 16: 100 mgs Primo

Day 18: 100 mgs Primo

Day 21: 100 mgs of Primo

For the following week, take one 25 mg Proviron tablet each morning along with 1000 mgs of Avena Sativa 3 times a day.

There it is. Any more will cause too much suppression and you will not have enough endogenous testosterone to maintain the gains.

Solid muscle. No crash. No gyno. No anti-e's. It's perfect.

Following this cycle, work the entire body just 3 times a week for no more than 45 minutes a session, the next 3 weeks. Sleep at least 8 hours a night. And of course, NO AEROBICS!!!

Although dosages can be manipulated to a degree, chances are you won't do much better than following this plan exactly. (I strongly urge beginners to use half the recommended dosages.) You can only hold on to so much muscle at a time and gaining too much more is a waste of time as well as presenting needless risks.

Some final thoughts: Keep in mind, steroids are growth drugs. They are designed to repair and build muscle tissue. THERE IS NO SUCH THING AS A "CUTTING" CYCLE. People like to use gear while dieting because they just like to have more muscle while dieting. It's as simple as that. The idea that drugs are used for fat loss stems form the need of competive bodybuilders to continue using non bloating drugs up until contest time. That has nothing to do with using steroids in the "real world." The anti-catabolic effects of steroids are minimal unless you're in a starvation state -- which for competitors trying to achieve 4% body fat, it is. A cut in calories and calorie expenditure sufficient for normal, sustainable fat loss is not going to cause major catabolism. Studies that show steroids lower fat levels aren't entirely accurate. There is a GAIN of lean muscle mass, but that isn't a LOSS of fat. The percentage has just been shifted. (Another example of how studies are misinterpreted.)

In order to make the most of this cycle you must eat, eat, and eat some more -- as much protein as possible. The drugs allow for the increased nitrogen which otherwise would be excreted from your system.

You must also train like an animal! Don't cruise through your workouts thinking that the drugs will do all the work. They only work if you break down the muscle. Train hard!

Use the aforementioned herbs to restore libido post cycle, especially Maca, Epimedium, and Avena Sativa. The South American extract Carao also seems to be beneficial in this area.

The herb Xanthoparmilia (100mgs) mixed with 2000 mgs of Arginine will produce "Viagra-like" results.

And remember; the longer you stay off, the more solidified the gains become.

Stay strong. And be careful.

Free Bonus Three: A GUIDE TO PAINLESS INJECTIONS

A Guest Editorial From "Anna The Anabolic Babe" by Anna Varr

I remember my first time. No, not that. I'm talking about my first time trying to inject myself. It was equally as scary as the "other" first time but not nearly as pleasurable. At any rate, both experiences were over in a couple of seconds.

To many bodybuilders experienced in steroid use, shooting up is a walk in the park. But if you've never taken the plunge, so to speak, the idea of stabbing yourself and flooding your bloodstream with a substance you bought from some guy who you know only as "Big Lou", can be a little frightening to say the least.

Whether you're a newbie, a novice, a girlie-girl like me, or a veritable veteran at the fine art of what amounts to anabolic hari-kari, there are a few tricks which can make the experience a lot less painful. In fact, self injection should be pain-less.

I know, you're a big tough guy, and a little pain and maybe even a little blood, doesn't bother you. Some people go out of their way to play down the dangers. I knew one guy who used to do his injecting in the men's room of the gym and while prepping himself, he'd place the hypodermic on the toilet tank. (At least he wiped it first.) Another braintrust at the same gym was showing a newbie what kind of needles to use and he removed the cap and stroked the pin with his filthy fingertips! "See," he said. "It's not too bad." Yet another Neanderthal used to jab himself right through his sweatpants and shoot the entire contents into his leg as fast as he could. He'd get bruises and abscesses and shrug it all off. "Dat's what ya gotta do ta get big," he was fond of saying while smiling through the three or four teeth he still had in his mouth. (And they say there aren't any good men around worth dating.)

While the dangers and the pain associated with self injecting may be exaggerated, there's no need to make it worse than it has to be. There are enough risks involved without adding to them. So even if you're an old pro at this, what you're about to read may make life a little easier. If you're a virgin and haven't yet mustered up the courage (don't worry, I won't tell) then read this information very carefully.

Time for a disclaimer! The information about to be presented is purely hypothetical. I am not encouraging anyone to engage in any activity that is either illegal or potentially dangerous. This is for entertainment and informational purposes only so put away that number for the law firm of Sheister, Stikum and Sckrew and listen up. As a matter of fact, ignore it altogether.

Now, IF...I somehow were bitten by a poisonous snake and there were no qualified medical practitioners around and my life depended on injecting myself with the antidote, this is how I'd do it.

Here's the How, What, Where, Why and When of painless injecting.

WHERE

The injection site I'd pick would be the glutes. It's the fleshiest area with the least nerve endings. I never understood why someone would shoot themselves in a more sensitive area like the leg or shoulder.

The temptation for someone who may not know better, is to place the needle in the lower part of the butt cheek. It's the softest and presumably the easiest to penetrate. The problem with this location is the sciatic nerve runs through the middle and lower area of the buttock and if you hit it while injecting, they'll have to scrape you off the ceiling.

The area where you'd inject is the upper outer quadrant of the cheek but not so high where you'll hit your pelvis bone. Feel around for the muscle. That's where it needs to go.

WHAT

The standard size needle is 22 or 23 gauge and 1 1/2 inches in length. I'm not sure why this has become the standard but I believe it's longer and thicker than necessary. A one inch, 25 gauge needle works fine for anyone under 250 pounds or so. They can be purchased through any veterinarian supply house. 25 gauge is the standard for dogs. While you're at it, order some thicker 18 gauge pins. I'll explain why in a minute.

Using a 25 gauge for injecting does require a little more pressure to get the oil through the needle but you're pretty strong, aren't you big boy? Actually, it's better that the oil comes out a little slower. It allows the oil to be dispersed evenly instead of congesting near the skin surface. It should be mentioned, this procedure concerns only oil based injections. Winstrol Depot, which contains tiny granules in a water base, may not penetrate a 25 gauge needle.

WHEN

Don't even attempt to inject something that isn't in a sterile environment. Needles that have been exposed are garbage. Throw them away! NEVER re-use a needle. Wash your hands and lay out a clean towel where you can place everything you need. If you're using a vial that needs to be filed, use the serrated end of a clean knife. If you're using a plungetop vial, (the kind that you turn upside down), wipe the top with a swab of alcohol before

drawing the fluid into the syringe. Make sure not to extend the needle above the fluid in the vial or you'll get unwanted air into the syringe.

Regarding drawing out the oil, a thicker gauge needle will be necessary. You'll never be able to draw with a 25 gauge. Besides, if you're drawing the solution from a vial with a rubber stopper, it will dull the needle. (Dull needles hurt more.) That's where the 18 gauge comes in. Unscrew the needle on the hypo and screw on the 18 to draw out the required dosage. It'll take just a few seconds. Unscrew the 18 and replace the 25. You can save the 18 gauge for future use if it's kept clean but pins are so cheap you might as well splurge for a new one each time and keep things perfectly sanitary.

Never pull on the plunger before filling it because it will reduce the suction, making it harder to draw.

Once filled to the proper dosage, tap the syringe by flicking it with the back of the nail of your middle finger (just like they do in the movies) to make sure any air bubbles rise to the top. Squirt a drop out of the tip of the needle to make sure there's no trapped air and to lubricate the pin with some oil. I love when they do that in the movies as they're about to kill someone with a lethal injection. Let's not take any unnecessary risks now!

HOW

There are a few tricks that can make this procedure virtually pain free. One is to run the filled syringe under hot water for a minute. This increases the viscosity of the oil allowing for a smooth transition. If you're really afraid of a little pinch (which is really all it amounts to with a 25 gauge) you can hold an ice cube on the intended injection site for about a minute. That'll numb it. (Make sure you wet the cube first or it may stick to your skin). Slapping the area will also numb it and loosen the muscle.

Look in a mirror and view the area where you want the needle to go in. If you have a birthmark nearby, use that as a target.

If you're right-handed, while holding the syringe in your right hand, reach across your body and pull the skin near the intended entrance site (right cheek) taunt with your left hand.

Put your weight on your left leg. Stay relaxed. If you tense up it will hurt more.

Push the needle in firmly. Don't stab! But don't go too easy or it won't penetrate properly. If you try and cheat by just having a portion of the needle in, the steroid will get trapped in the fat and won't circulate properly. It may also cause swelling at the injection site. Think as if you want to pop a balloon with a dart. That should be just about right.

This may sound stupid, but don't think about the needle. Think about your belly button. (This works -- really!) Once the needle is in, it's recommended that you draw the plunger back to check for blood. Honestly, I find this practice very impractical. It's so difficult to see, considering the positioning. Besides, that area of the glutes doesn't have any major arteries running through it. At the very worst, you'll break a capillary or run through a small vein. Have an alcohol swab ready if you bleed after you pull the needle out. At any rate, it shouldn't be more than a drop or two. The butt checks are fat and fleshy (at least mine are) and don't have many blood vessels near the epidermis.

Push down the plunger steadily and firmly until it's empty. Keep it straight. Don't twist or bend bend the syringe.

After completing the injection, quickly pull the needle out quickly and massage the area to help disperse the oil. You may feel the oil running down the inside of your leg which might freak some people out. Don't worry, it's normal and it actually can be prevented by lying down and elevating the legs. If possible, alternate the left and right cheek if you're planning more than 2 injections a week.

WHY

Well, we all know why we do this. Bigger muscles! It does a body good.

There are always unforeseen risks. One never knows if they may have an allergy to something. The worst case scenario is when someone has such an adverse reaction they go into anaphylactic shock which can result in paralysis or heart attack. Granted, it's a one in a million chance, but it exists. That's why doctors have a vial of adrenaline prepared in case they need to immediately revive a patient. I would imagine if you asked a doctor how many times he needed to use it, the chances are he'll say; "never." If you're thinking about having a vial of adrenaline handy...stop thinking. You won't be able to use it even if you knew how because if you actually went into anaphylactic shock, you'd be unconscious in a matter of seconds. So if you're still standing 30 seconds after injecting, you'll probably live.

Sticking yourself may be harrowing but it doesn't have to be painful. Everybody starts out as a wuss when it comes to needles. I sure was. But before long, I became a full fledged juice shooting slut. Still, there's no reason not to do things the easy way.

Hopefully these tips will make your venture a little less nerve wracking.

Bon Voyage'.

Anna

Free Bonus Four: THE "NO BULL" UPDATED SUPPLEMENT REVIEW

To anyone familiar with my work, it isn't any surprise to hear that my stance on muscle building supplements is not one of glowing praise. But to those who are reading about it for the first time, I'll get right to the bottom line.

Some supplements can be a tremendous advantage in the quest for better health and vitality, yet there is not, was not, and probably never will be a supplement that is anabolic in nature -- at least to any degree of any efficacy. (That's for all of you pro-hormone, pro-steroid, zealots. On paper, these compounds show anabolic/androgenic activity, it's just not high enough to be of much consequence in terms of putting on muscle. Sorry.)

The latest overhyped product as of 2002 are these new "night time anti-catabolic formulas." First of all, ANY food source can be considered anti-catabolic. It's one of the most overused and misunderstood terms in bodybuilding. One of these "grow muscle while you sleep" products contains milk protein, kava kava, and some vitamins and minerals. Ninety bucks.

The dogma on night time eating is to ingest protein to induce muscle growth and to limit carbs which hinder GH release and may get stored as fat. But the entire concept of avoiding carbs at night may not even be such a great idea. Protein, unless it's a high tryptophan food like turkey or milk, tends to increase alertness. Carbs release sonotropins -- one of the reasons they're known to make you groggy, making them a better choice for a night time snack.

Still, the scams go on. And as anyone who's been burned more than once will attest, the ethics of a shark are admirable compared to some of these supplement companies. Methoxy-7? Pul-eeze! Myostat? Even the researchers at John Hopkins University admit that REAL myostatin has no effects on adult tissue yet the seaweed or some such crap that's used in these Myostat supplements is touted as an anabolic agent simply because it has some similarity to authentic myostatin in structure. This is fraud, plain and simple. But that's the supplement business. It's scum.

There's a little twist of irony in the evolution of supplements. Those of you who have been around for a while remember the Hot Stuff craze of the late 80's/early 90's. Hot Stuff was the first supplement purported to actually "do something". Once Bill Phillips dismissed it as "voodoo", sales of Hot Stuff began to plummet. The makers of Hot Stuff back peddled, changed the formula and even apologized for some misleading statements. In retrospect, Hot Stuff should have stuck to their guns. Many of the original ingredients have experienced a resurgence in popularity.

Urtica Dioica and Muira Puama have been shown to reduce SHBG (sex Hormone Biding Globulin).

Arginine is high in nitric oxide which is fundamental for muscle contraction, oxygen uptake and sexual energy .

Yohimbe can also be considered a legitimate sexual enhancer since it's a vasodilator and will increase blood flow to the extremities, including the penis. (No wonder people thought this stuff was an aphrodisiac.)

Colostrum has been proven as an immunity enhancer.

Beta Sitosterol has been shown to improve conditions of benign prostate hypertrophy and to lower cholesterol.

Glandulars aren't as inert as once thought and even Boron has been shown to improve the strength of teeth! This just goes to show you, sometimes a "good idea" is better than all the convoluted scientific clap trap they can throw at you.

Instead of reiterating what's good and what sucks in the world of supplements, I wanted to present some updated information on what wasn't quite as good as we had thought, and what was overlooked yet had considerable merit.

I'll start right off with the one supplement that has a direct effect on bodybuilding goals. No, it isn't any mysterious anabolic compound. It's...

Saw Palmetto:

This substance may be one of the most highly supplemented herbs, and with good reason -- it does what it's supposed to do in that it reduces the symptoms of benign prostate hypertrophy. Saw Palmetto works and I've used it and recommended it. The way in which it works, however, may be deleterious to those who need it the most. Confused? Stick with me a moment.

Saw Palmetto works by blocking the enzyme 5-alpha reductase, which is what allows for the production of DHT (Dyhydrotestosterone). That's good, right? We've been hearing for years how DHT is the bad testosterone and the culprit for everything from prostate enlargement to baldness. Well, not only may that not be the case, but it looks like everyone has been barking up the wrong tree. It's true, that reducing DHT will also reduce inflammation of the prostate, not caused by an infection (prostatitis). But in doing so there are far worse repercussions. DHT is more anabolic in nature than once believed, but maybe more importantly is the fact that DHT is essential to achieving an erection!

The majority of consumers of Saw Palmetto have been older men -- those who are most prone to prostate problems. But it's that very demographic who need what Saw Palmetto takes away -- DHT - since erectile dysfunction is more prevalent among older men. So in other words, using Saw Palmetto to cure prostate enlargement is like using decapitation to cure a headache. It helps one problem but causes a bigger one.

There's something that has never been answered to my satisfaction: If testosterone and DHT are the cause of all that's bad about being male, i.e., hair loss and prostate enlargement, it would then be the bane of young men, since that's when levels are at their highest. So why do older men with lowered testosterone and DHT develop baldness and prostate hypertrophy? I've discussed this with several authorities in the field and the usually reply is; "Good question."

I don't claim to have all the answers, but it shows that there's alot about this subject even the medical world doesn't yet understand. In the meantime, I'd recommend staying away from Saw Palmetto unless you experience acute symptoms of prostatitis or BPH. (Pain, swolleness, scant and burning urination) It should not be taken on a regular basis.

Glutamine:

Since it appeared on the scene, I've claimed that supplemental glutamine has had little value except in cases of severe trauma or wasting. (i.e., burn victims, AIDs patients, etc.) And even in those cases, it was intravenous glutamine which imparted any effect.

I have a friend who works for The Research Center of Miami and he did a study, funded by a supplement major company, to show the benefits of oral glutamine on healthy athletes.

The final results: No effect.

(I guess the company won't be releasing those findings any time soon.)

Ribose:

This is another compound that hasn't held up well to scrutiny. But bodybuilders are pretty smart. They catch on after a while and sales of Ribose have tanked.

Flax Seed Oil:

There have been new studies that contradict original findings and suggest Flax Seed Oil can encourage tumor growth of the prostate -- proving that most of the people doing these

tests don't know shit. Until there's conclusive evidence, I'd recommend getting your Omega 3's from fish oil.

Blair Protein:

I've often spoken of the brilliance of Rheo Blair and how his original formula was the paradigm to the modern day protein formula. Blair's attempt at achieving the amino acid ratio of human mother's milk was decades before its time and I believe that none of today's protein blends are quite as good or have quite the same taste and texture. The last person to make the original formula was a personal friend of Rheos by the name of Freddie Lindblad who made up batches for a few select customers until he died in 1998. Freddie was a veritable encyclopedia of bodybuilding history and a true gentleman. His method of doing business was to first send the product, along with a note that said; "Pay when you can." People like that just don't exist anymore.

After Freddie's death, the company that made the raw materials for Blair's Protein took over the business. I've spoken to the owners and urged them to never change a thing about original formula. They promised they wouldn't. I then went about ordering 25 pounds of protein, and wouldn't you know it ...they changed it. When I approached them on this they gave me all sorts of lame excuses and went on about how the new formula was "better." To me, that's like ordering a Mercedes and having a Ford Focus delivered along with a declaration that "it's better."

Two years later, after customers resounded their dismay and dissatisfaction, the company sent out flyers to all their customers saying that they went back to the original formula. Meanwhile, the representative who distributed the promo claimed he was new to the company and had nothing to do with the change, yet his name appeared on promo packages from years prior! Busted.

On top of all this, Dan Gallapoo, a mutual friend of Freddie Lindblad, contacted ABCO labs, the people who provided the ingredients for Blair and told him that one of the ingredients is no longer available, therefore the "original" formula can not be reproduced.

Bottom Line: Maybe they got their act together, but I feel, if you can't trust someone completely, you can't trust them at all. And these people have misled their customers more than once. Therefore, I wouldn't buy the "new" Blair's protein.

If you want to reproduce the original formula, your best bet is to make your own mixture (as close as possible) which would be around 50% high lactose milk casein, (* see end of chapter) 25% whey, 10% egg white, 10% whole egg and 5% colostrum. Blair used no sweeteners and the best tasting natural vanilla beans ever -- for which, you're on your own. Blair insisted the powder be mixed with cream to complete the optimum fat and amino acid ratio. If that's a bit too heavy for you, use Half and Half and a scoop of ice cream along with some vanilla extract. It was also recommended that 2 raw eggs be

included into the mix. There's always the risk of salmonella, but that's usually the case among newborns and the elderly. Raw egg whites contain Avidin which can make you very sick if they aren't completely fresh. Nevertheless, hundreds of old time bodybuilders, myself included, used this combination for years with no problems, but I can't guarantee that would be the case with you. Grow at your own risk!

For a complete listing of supplements which I recommend, refer to the "Super Fuel" section of "The Bodybuilding Truth." There were a few that were overlooked, however.

One such supplement which I would highly recommend is TMG (trimethylglycine). This substance is also known as Betain and was a popular additive to many of those "Metabolic Optimizers" that were around in the 80's and early 90's. TMG is a methyl donor which lowers homocysteine while simultaneously raising SAMe levels. It also acts as a liver protectant. This makes it extremely beneficial to bodybuilders using anabolics. There's even been favorable research showing it effective in treating arthritis and depression!

TMG works in the liver in helping to metabolize fat as well as increasing detoxifying liver enzymes and increasing glutathione levels. (Glutathione is considered by many Life Extension practitioners to be the very best antioxidant and anti-aging nutrient.) It shows no side effects even in dosages as high as 6 grams a day yet produces many of its benefits with as little as 500mgs daily. It's also a bargain. A weekly dose will run you about a buck.

Forget about finding it in overpriced bodybuilding formulations. Get it from a wholesale outlet or the generic brand at a health food store.

L-Theanine has been found to promote relaxation without any sedative effects. People with chronic anxiety have reported relief from the use of 200mgs daily -- in some cases superior to that of treatment with anti-anxiety medication. May be anti-catabolic. Taken with Inositol and GABA at night may add to the depth of sleep and increase release of GH.

Potassium: You might be saying; 'Well, this doesn't sound too exciting! Maybe so, but this mundane mineral may be more important to muscle growth than we previously perceived. For what it's worth, Russian scientists have been claiming that potassium is anabolic in nature and Soviet strength coaches recommend it for their athletes. Potassium also has the duel effect of balancing sodium levels and working as a diuretic which in turn produces a "lean look." (Is it a coincidence that MetRx contains a staggering 1240 mgs of potassium?!) Most Multi vitamin/mineral tablets are low in potassium so a supplement is recommended. Individual potassium supplements usually come in a 99mg dosage. (Only 3% of the RDA)

Too much potassium can have an adverse effect on heart rhythm so don't go overboard. Two or three 99mg caps along with a balanced diet should serve most bodybuilders just fine.

IP-6: This is a truly fascinating compound. IP-6 (Inositol Hexaphosphate Phytic Acid) is present in all living cells and has natural "killer cell" activity. It inhibits tumor cell formation and growth. It's being touted as "the discovery of the century" due to its potential for preventing cancer. (Time will tell.) Early studies suggest it has powerful antioxidant properties that ward off viruses and infections, increases blood circulation and prevents the formation of kidney stones. It also scavenges excess iron from the body. (Good news for steroid users since blood platelets may increase from the use of anabolics). A daily recommended dose is 2000mgs on an empty stomach. Highly recommended.

Amino Acids: They're back baby! Actually, I don't know why they fell out of favor. It could be that amino acids aren't the most economical form of supplemental protein. You'd need about 40 one gram tablets to equal the protein content of a single MRP and the cost would be ten times as much. But aminos offer certain advantages, mainly, that they can be added to a low protein meal. Let's face it -- sometimes a shake just doesn't cut it. And if you're not in the mood for meat, your options are limited for a high protein meal. Adding a handful of aminos to an otherwise low protein meal can tilt the protein ration more favorably. Also, the better aminos use hydrolyzed protein which is the most easily digestible and fastest absorbed form of protein. So why aren't meal replacements made with hydrolyzed protein? If they were you'd throw up. It tastes like death. But in a capsule it isn't a problem.

Digestive Enzymes: Enzymes such as Bromelain and Papaya were popular supplements back in the 60's as they're an aid in the breakdown and utilization of protein. (Meat tenderizers are made from papaya enzyme.) With all the crap they sell today, it's odd that enzymes have been dismissed. Everybody wants more protein, but we can only access a few molecules at a time. Why not get the most out of each one? When embarking on a weight gain program, there's an additional burden on the digestive system and enzymes can ease the discomfort and help to make the most of what you eat. They can't hurt. And they're cheap too. Ginger Root will also help in digestion as well as soothing that "stuffed" feeling from too many protein drinks.

HOMEMADE PROTEIN DRINKS

I think MRP's, for the most part, are a waste of money, unless you really love the taste of one brand or another. I take a multi-vitamin so why do I need to pay top dollar for more of them in an MRP? Nobody drinks them for the vitamins anyway. They drink them for the protein. And if that's the case, you can make you own for just a few cents a serving.

I'd like to address the sweetness factor in making protein drinks. Personally, I think all artificial sweeteners taste like vomit. They're fine as a sweetening enhancer but some sugar is still needed. I believe the fear of sugar is a little overstated. A couple of spoonfuls a day isn't going to kill you, especially if your goal is to build bulk. What's more absurd is when people substitute dextrose or maltodextrin for sucrose. Not only do they not taste as good but they're less sweet, requiring more of it, which adds to more carb calories. Fructose may seen like a logical choice since it's as sweet as sucrose and it doesn't cause a surge in insulin but it has a fruity aftertaste that just doesn't work with vanilla or chocolate. Besides, an insulin surge after a workout isn't a bad idea anyway. Try mixing some Nestles Quik with a spoonful of cocoa and a packet of sucralose with 2 scoops of protein powder. You'll have the best tasting protein shake you ever tasted and it'll cost a fraction of any pre-packed MRP.

IS THERE A GENIE IN THE BOTTLE? LAY IT ON ME!

A product that isn't a supplement to be ingested but is a topical solution is Emu oil. I don't know how or why this stuff works so well, but it does. It's an odorless oil that is massaged into sore muscles and stiff joints to relieve pain and inflammation. It contains no analgesic and unlike methyl salicyclates (like Ben Gay), it doesn't produce warmth in the area. My personal experience suggests it works. Cramped muscles that have always taken days to heal, even with the use of BenGay, Capsicum, Absorbine Jr., Tiger Balm and everything else commercially available, have become virtually pain free overnight after using Emu oil. It's certainly worth a try.

There's a chapter in The Bodybuilding Truth ("Secrets From The Golden Age of Bodybuilding") where I mentioned using yohimbe topically to remove subcutaneous water and maybe even a little fat. Well, the concept has caught on. There's a product called YOHIMBURN and it's a topical gel. The one difference is, YOHIMBURN contains Yohim-BINE which is the more active component of Yohimbe and thought to be effective in targeting "A2" receptors (stubborn fat pockets) by producing more norephedrine in the area where the yohimbine is applied. YOHIMBURN is pricey (retail \$79.00) but the consensus on it is very positive. You can make your own by mixing yohimbine capsules with aloe vera and even add some peppermint oil to mask the odor...but it'll be gritty, it'll stain, and it'll stink. You're better off going with the YOHIMBURN.

You may still want to use the sweat belt and Vaseline trick to lose subcutaneous water. Adding some BenGay and/or capsicum will enhance the "sweat factor." For deeper water removal, THIOMUCASE is a good choice. It also has a skin tightening effect. For non-estrogenic gyno, you may want to give Preparation H a try. That's right, the hemorrhoid medication. It's designed to shrink enflamed tissue and might help reduce progesterone induced swollen nipples. Better yet, some DHT (or Proviron) mixed with DMSO will work very well on gyno.

LECITHIN, one of my favorite supplements, is rich in fat emulsifying choline. Phosphatidylcholine is used in cosmetic surgery to break up fat pockets and applied topically may have a fat burning effect. Products such as "Cutting Gel" use lecithin as the active ingredient. Price \$79.95. A bottle of lecithin: About \$5.00.

No topical ointment is an end-all-be-all solution to fat or gyno or wrinkles or any cosmetic condition that requires extensive attention. But these products may give you that "extra edge" in the battle toward getting as lean as possible.

*Note: Rheo Blair was convinced that lactose was the perfect carbohydrate choice since it was animal in origin. It digested slowly, therefore imparting a long term anabolic/anticatabolic effect, yet it's insulogenic -- forcing nutrients into the bloodstream and muscle tissues. Blair also believed other nutrients were absorbed better in the presence of lactose. It's uncertain how he came about these conclusions. But who am I to disagree with a genius?

Free Bonus Five: GROWTH HORMONE -- For The Last Time

Although it's been around for over 10 years, Growth Hormone maintains a certain mystique to it. This is due, for the most part, to its inaccessibility. GH is simply out of the budget of most bodybuilders.

Still, there are the stories. It'll help you keep gains in-between cycles. It'll burn off fat. It'll enhance the effect of other anabolics. And although there's an element of truth to these claims, they are also grossly exaggerated.

There are other, more cost effective compounds that do this much better. HCG helps to maintain gains in between cycles -- which is why HCG is often passed off as Growth Hormone. (Both consist of a powder mixed with a sterile solution.) As far as burning fat, GH does so by accelerating the use of carbs, which incidentally can induce symptoms of hypoglycemia and instigate nervousness and anxiety. Over the counter supplements such as Alpha Lipoic Acid or even Vanadyl Sulfate will accomplish this task, without the hefty price tag. And as far as GH adding to the effect of other anabolics, well...so will adding more anabolics! Again, at a fraction of the cost.

Although it supposedly works better, or "synergistically" in conjunction with steroids, I feel the only way to test the benefits of GH is to do it without any other chemical assistance, which is what both my wife and I did for the course of six months. (This was through a doctor friend involved in the Life Extension field so we got the goods at a wholesale price and knew it was real.)

In all fairness, my wife's assessment was a bit more positive. She suffers from Epstein-Barr syndrome and the little "lift" the GH provided was a welcome treat. As far as fat loss, the results were far from impressive. Her bodyfat percentage dropped one percentage point but she was also training especially hard at the time so I wouldn't put too much stock into the GH advantage.

My own experience was less positive. I hated the jitters it gave me and the lethargy that soon followed from the glycogen crash. I noticed little difference in strength, muscle tone or fat loss and all I could think was; 'This stuff costs two hundred dollars a week? Hell, a hundred dollars a week worth of Dianabol will produce ten times the results! So what's so great about it?'

Of course, everyone is different and I've known people who use it for replacement purposes (the way it was intended to be used) and are very happy with the results. (Although it will supress natural levels). Some pro bodybuilders like it because it's simply "more drug" that hits different receptors than the anabolics. Others feel it's worthwhile if you're on year 'round. Once or twice a year, you can go off steroids for a

month or so and just use GH to maintain your muscle. The validity of this thinking is suspect, however. I believe anyone who spends that much money on something isn't willing to be objective enough to question whether or not its cost was warranted. It's easier to just think; 'Yeah, it works.'

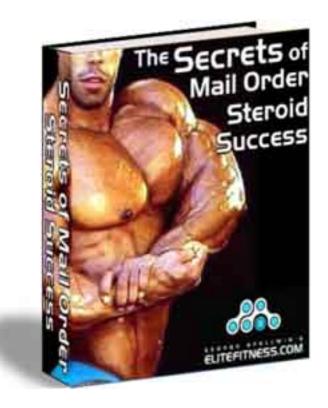
There's something else to consider with GH therapy. In dosages necessary for bodybuilding purposes, it will enlarge cartilage. That means a bigger nose and bigger ears and in some extreme cases, it can enlarge bone growth leading to an extended jaw, elbows and fingers. It ain't pretty. For this reason, GH is known for causing joint pain, numbness and tingling in the hands, tendonitus and carpal tunnel. And as anyone who follows professional bodybuilding can tell you, it also enlarges the intestines leading to that ugly protruding gut you see on professional bodybuilders. Maybe I'm old fashioned, but I always thought the ideal was to have as small a waist as possible. This is the "size for the sake of size" concept gone awry. The absurdity of the quest for gargantuan proportions is off the chart.

Most distressing, and seldom addressed is the fact that GH will accelerate the growth of a tumor, which is nothing to dismiss lightly. It's been shown that adults develop and live with benign tumors much of their life without repercussions. Our natural immune system keeps them that way. But even if they aren't malignant, do you really want to give these tumors more ammunition?

(Note: Exogenous GH does not affect IGF-1 in the same manner as natural secretion. For more on this, check out the chapter "You Can't Grow Without It." Page 155)

Bottom Line on GH: It just isn't worth the cost and it just isn't worth the risk. If you want to keep your natural levels as high as possible, the best thing you can do is SQUAT and SLEEP!

And that's all I have to say about it.



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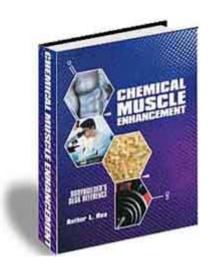
Ironman Magazine excerpt...

"Several books are available that purport to be guides for producing massive physiques using various anabolic drugs. Most of these books are merely picture books of various drugs, with text that reads like it was copied from drug inserts... As such, they offer little practical value."

"One book differs in that respect. Chemical Muscle Enhancement."

"For those who are insistent in knowing just what the champs take, *Chemical Muscle Enhancement* is THE book to read. The author, Mr. Author L. Rea, has over 16 years of academic background, but more importantly, he has worked with athletes for over 20 years. I found it virtually error-free in the aspect of scientific facts."

"Trust me, this book is not for the squeamish, and Mr. Rea is a definite drug "guru" bringing to mind the late Dan **Duchaine in his early days of** hardcore writing. Rea shares Dan's hands-on experience, not merely armchair philosophy. The book discusses every anabolic drug available, and also describes real-world methods of using such drugs. You will learn what can go wrong when making yourself a one-person scientific experiment. But if you so choose, I can't think of a better guidebook to current anabolic drug usage than Chemical Muscle Enhancement. This book is without question, the **Underground Steroid** Handbook of the 21st Century."



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-- **Jerry Brainium**, bodybuilding journalist Ironman Magazine