A Systematic Annihilation of Pseudo "Scientific" Arguments

Researched and Composed by Gabriel "Venom" Wilson, BSc. (Hons), CSCS

Abstract

I know they're out there…preparing for their next victim. Like a festering malignancy, they have plagued the sport of bodybuilding for what seems an eternity. But, like fat and fiber post-workout, their time has come. They know this, and stand in fear at this very moment. The time comes, yea, is now come, that the Journal of Hyperplasia Research will reveal a whole new world. A world of logic and understanding. A world of science and integrity. A world without pseudo science.

JHR has officially embarked on this mission, dedicating this next year to the unveiling of mysteries. Enter: Destination: Dismantling Fallacies. To commence this momentous occasion, the following journal entry will systematically annihilate numerous pseudo-arguments spewed directly from the mouths of ignorance.

Recommended Readings

February - Dedicated to the Dismantling of Fallacies

Scientific Investigation into the Rationality of Carbohydrate Consumption Criterions in Correlation to Post-Training Anaerobic Depletion Patterns: A series of sub-divisional essays.

Photo Explanation: A typical Pseudo Scientist contemplating the damage he could do, if he only had a brain

Introduction

Logic is the science of evaluating arguments. An argument is a group of statements with one or more premises, which claim to support the conclusion. There are good arguments, and there are bad arguments. The goal of logic is to design a system that distinguishes pseudo arguments from logical arguments. This journal entry will accomplish just this.

Webster's dictionary defines pseudo scientists perfectly with the synonym "sham" as follows [2004]:

> 1 : a trick that deludes : HOAX
>
> 2 : cheap falseness : HYPOCRISY
>
> 3 : an imitation or counterfeit purporting to be genuine
>
> synonym see IMPOSTURE

They define imposture as:

> 1 : the act or practice of deceiving by means of an assumed character or name
>
> 2 : an instance of imposture
>
> synonyms IMPOSTURE, FRAUD, SHAM, FAKE, HUMBUG, COUNTERFEIT mean a thing made to seem other than it is. IMPOSTURE applies to any situation in which a spurious object or performance is passed off as genuine <their claim of environmental concern is an imposture>. FRAUD usually implies a deliberate perversion of the truth <the diary was exposed as a fraud>. SHAM applies to fraudulent imitation of a real thing or action <condemned the election as a sham>. FAKE implies an imitation of or substitution for the genuine but does not necessarily imply dishonesty <these jewels are fakes; the real ones are in the vault>. HUMBUG suggests elaborate pretense usually so flagrant as to be transparent <creating publicity by foisting humbugs on a gullible public>. COUNTERFEIT applies especially to the close imitation of something valuable <20-dollar bills that were counterfeits>.

In other words, pseudo scientists are false scientists—counterfeits. They claim to be the real thing, but in reality, they are nothing. Pseudo scientists manipulate the feeble-minded through numerous fallacious arguments and advertising schemes.

People likely to fall prey to these lies are: newbies, individuals looking for an easy way out, and those without a strong foundation in logic and science.

There is a multitude of problems with individuals that fall prey to pseudo science. If they believe the false lies claimed by these deceivers, they will inevitably fall into a state of depression. For instance, hundreds of advertisement adds make bold claims such as, "I took [insert a supplement] and gained 50 pounds of muscle and lost fat in 3 months!" Or, "After using [insert a weight lifting machine] for 3 months, in combination with a proper diet, I was able to shed 30 pounds of fat, and achieve my goal of competing on stage. Thank you [insert products name]! If I can do it, so can you!" Surely the reader is familiar with this unscientific jargon. Now, the young scientist who falls prey to this will find him/herself on the verge of quitting, soon after they discover that gains will never come this easy. This sport is hard work, and if you are looking to become a pro in a few short years, you're fooling yourself. There is no easy way out, and anyone who thinks so is in for a big disappointment.

It takes years of hard work and dedication to reach a high level of fitness. Learning one's body is an exact science. To elaborate, the reader must understand the principle of individuality. All humans (save for identical twins) are markedly different in their fitness capacities. There are variations in metabolic rate, neural and endocrine regulation, muscular growth, height, structure, etc. This is why people respond better to certain programs than others. With this in mind, it takes time to learn what works best for an individual. Therefore, a judgment should not be made after mere months, or a year of training, as bodybuilding is additive. The athlete should seek for mastery over their body, but to do so, they must have patience.

Now, a pseudo scientist will take this and completely miscue it. Though humans vary in genetic capacity, this is not an excuse to have fat and fiber post-workout under any circumstances. It means that within a scientific framework, the athlete should make proper adjustments according to their bodily needs. This includes testing carb cycles, high volume, moderate volume, shocking methods, periodization; etc. Moreover, all of these variables can be manipulated through training. This means the athlete can manipulate their genetics! Incidentally, this is what the Journal of Hyperplasia Research is all about. Indeed, we do not concede to excuses, nor do we submit to "so called" genetic limitations. We scientifically analyze them, and work to shape the human body into a machine prepared for any fitness task at hand. Enter: Hyperplasia. For more on this concept read, An Introduction to Hyperplasia Magazine. There are several other ways to manipulate genetics; as the reader ventures further into this journal publication, many more will come to the surface.

It also takes a long time to develop ones full capacity. The need for a constant increase in training loads for adaptation leads to extremely demanding training programs. For instance, load for elite athletes is roughly 10 times that of beginners having 6 months experience. Elite weight lifters (Bulgarians) lift around 5,000 tons a year. The load for novices is only 1/10th this level! Moreover, it is noted to take 8+ years to reach an elite (professional) athletic status [Vladimir, 1995]. In other words, there is no easy way out.

Another problem in taking pseudo scientists' word as gospel is the consumption of potentially harmful supplements. People will often ask, "Has anyone ever used [insert a supplement]? I just bought some, and I was wondering if anyone had an opinion on it?" A question like this should be asked before purchasing the supplement—not after. This person may just have wasted his money. Moreover, numerous times people actually take supplements before knowing what they do! For instance, "I just took this supplement this morning, and it seemed like my heart was going to explode! Does anyone know what it does?" This person could have died from taking the word of a pseudo scientist.

Young bodybuilders also may follow horrible programs, and end up wasting months because they followed bad advice.

The stage has been set. It should be evidently clear why JHR is working with such vigor to vanquish these lies. The rest of this article will analyze multitudes of pseudo "scientific" arguments, that the reader may be able to recognize, and refute pseudo science when confronted with it.

Unscientific Mantras in the Entertainment Industry

A popular pseudo argument is to follow after famous movie stars or athletes, as they must know what they are doing since they are so successful. This next section will analyze just a few of these arguments while displaying the logical fallacies committed throughout.

Specificity

From Rocky chasing chickens, to Muhammad Ali training under water, the specificity hypothesis has been violated for decades in the sports community. This fallacious mantra has been repeated so many times, one may actually confuse it with science. However, it is far from it. To elaborate, here is a quote from, Energetic Transference Occurring in the Biosphere Part III: Lactate Clearance and Anaerobic Training Adaptations.

> Training adaptations will be viewed as specific to imposed demands placed on participants. Henry (1950) proposed the specificity hypothesis, suggesting that the attributes, which underlie an activity, are specific to that activity, and not transferable (task specific). Sawyer et al. (2002) suggests that an attribute is the underlying capacity within an individual, which allows for the expression of skill (these are presently viewed as genetically predisposed, and typically unaffected by practice). The statistical evidence highly supports these concepts (Sawyer et al., 2002).
>
> It is important to understand that greater transfer, even at the level of energy systems will be realized when training is specific to the criterion task. For example, riding the stationary bike will produce cardiovascular adaptations, but they will not enhance the extraction of the extra oxygen delivered when training the upper extremities (known as arterial venous difference). Maximum Oxygen uptake by an organ is described by Fick's principle. Fick's principle states that the amount of Oxygen utilized by a tissue is defined as the product of blood traveling to that tissue and the extraction of the oxygen delivered. Therefore, adaptations, from a physiological level occur both centrally, peripherally, and at the cellular level itself. These adaptations occur through increased and specific capillarization, increased mitochondria number as well as specific enzymatic activity.
>
> Therefore if a participant seeks to increase mitochondrial density, and therefore enhance the arterial venous difference, they will need to train the upper extremities in an aerobic fashion.
>
> Further, it is important to also understand that these adaptations are also specific to the actual task itself. Biking while standing will activate the motor neuronal pool, as well as various musculatures in a differing manner than biking while seated. Moreover running on a horizontal surface will activate musculature in a different pattern than running on an incline. It is for this reason that coaches will benefit by training their athletes for the event that they will have to face. If a cross-country team is used to running horizontal, and then are faced with running on an incline type of hilly surface, they will be seriously under matched. Therefore, the following recommendations, and adaptations will be heightened when done specific to the task. This factor should be assumed throughout the remainder of the paper.

The specificity hypothesis is a subject JHR plans to thoroughly discuss in the near future. But for now, suffice it to say, swimming in a pool for increasing sprinting speed goes against all science and logic. The logical fallacy committed when a pseudo scientist claims methods such as this must be best since the "pros" do it, will be discussed further on.

Drugs and Sports

Perhaps the most dangerous influence famous athletes can have on pseudo scientists and their followers are promoting drug use. The following quotes demonstrate just a few poor influences given by the sports community:

"We worked hard, but we had a good time. After the muscle-shocking sessions, we drank wine and beer and got drunk and carried on like the old-time weightlifters sometimes it be came pure insanity." ---Arnold Schwarzenegger [Wilson, 2003]

"Steroids aren't as bad as some people make them out to be. Steroids, if used the right way with human growth hormones, can have a profound effect on your life. We're supposed to be built to live 120-130 years, and a combination of steroids and human growth hormones, if taken properly, can add 30 years to your life." ---Jose Conseco [Nick, 2003]

"In emphasizing that his lifestyle choices, rather than the failed tests, had driven his decision to retire from football, Williams told the Herald that he sees nothing wrong with smoking marijuana—that in fact, it's "just a plant." He also said he admired reggae singer Bob Marley, who was reputed to smoke it every day before his death." ---Report from an ESPN article on Ricky Williams recent retirement, and subsequent failed drug test [2004]

In the future, this journal publication will be dedicating entire articles to showing how dangerous drugs such as alcohol are. But for now, it is sufficient to say that they have ***no*** place in this sport. They are not only catabolic, but they are dangerous, and often times illegal. More importantly, recreational drug use is a direct violation of Gods' Law.

Now, getting back to pseudo scientists, what is so sad about these quotes is that the weak minded use statements just like these to justify their disgusting lusts. To demonstrate this, here are some sample quotes. The names will be left unidentified. Each quote is from a different anonymous pseudo scientist [Forums, 2002-2004].

"We worked hard, but we had a good time. After the muscle-shocking sessions, we drank wine and beer and got drunk and carried on like the old-time weightlifters sometimes it be came pure insanity."

-Arnold Schwarzenegger

"Didn't he gain 1/4 of an inch on his thighs after that session? If alcohol seriously affects gains, how was this possible?"

"People drink and smoke to have a good time. Millions of people have a good time with alcohol or weed in moderation. Why can't you? Works both ways."

"In the movie "Pumping Iron" with Arnold, after he wins Mr. Olympia he smokes a joint."

"So we've seen Arnie with a joint after a workout, maybe the effects dull the burn"

Now, here are some examples of influential athletes (not professionals, however) who smoke, and were used as examples to justify its use:

"Hey, [Insert name of influential athlete], you smoke weed sometimes, right? If you do you are a great example of weed not hurting gains."

After this negative influence responded yes, the pseudo scientist replied:

"And you still managed to get huge, so I guess it can't hurt that much!

How sad…here is yet another example; same scenario, different negative, yet equally popular influence:

"I smoke pot probably more often than I should" ---Anonymous influential non-pro athlete

"[Insert name of aforementioned influential athlete], you are in great shape, so its not hurting you too bad. I say that if you are gonna do it, then enjoy it! If you feel guilty about it, then stop. It is a personal decision, but if you make that decision, don't feel bad about it, cause then what's the point? (this little fella looks kinda stoned. haha)"

In support of this, another pseudo scientist replied:

"[Insert name of aforementioned pseudo scientist],
I agree with you 100%. No one…could have said it better…"

In response to this:

"Thanks…it nice to get some recognition."

I am sure it is. *Fools make a mock at sin: but among the righteous there is favor* Proverbs 14:9

It is truly disheartening to see such myths spread by the ignorant. The folly in these "evidences" used to support drug use will be shown throughout this journal entry—though they should be exceedingly evident to anyone reading.

Fat and Fiber Post workout

The current author is unaware of any famous athletes who advertise the wholly ignorant, logically invalid, and completely unscientific protocol of fat and fiber post-workout. However, if this barbaric method is brought into question, the writers of JHR will most happily oblige. For a systematic refutation of this heretical doctrine read, Scientific Investigation into the Rationality of Carbohydrate Consumption

Criterions in Correlation to Post-Training Anaerobic Depletion Patterns: A series of sub-divisional essays.

Ghost-Written Articles

It is a sad fact that numerous of the articles pseudo scientists cite as evidence are in fact ghost-written. That is, they are claimed to be written by pro bodybuilders, but are in fact written by some clown pretending to be a pro. The following quotes will display this:

Garrett Downing answers this question as follows [Body Build]:

> It varies. In many cases, the articles are ghostwritten, much in the way many biographies are by celebrities. A professional writer will interview the celeb extensively, in this case, the athlete, and write the article in first person, having gotten a solid sense of how the athlete trains, his philosophy, his verbal style, etc. They might be assigned to do a particular bodypart with a particular athlete, but the info really is what we do, how we train, who we are, etc. There are some athletes who are able to write their own articles. I believe Shawn does, Tom Prince can write well and maybe some others. And, some years ago, former pros like Lee Labrada and Andreas Cahling wrote their own. I gave it try myself. I wrote a short piece with my wife on couple's training in M&F, and we went through the same process any freelance writer would - pitch the story, submit a summary, receive a assignment & deadline and then write the article, which was then edited by their staff before publication. It was a good experience. There is no way that every person who is talented enough to be a pro athlete, could also be able to write. So, the system works quite well - the readers get as close to the horse's mouth, as possible. Know that I speak for FLEX and M&F. The other mags, well, I won't comment too much. I have seen articles attributed to me in them, for which I have no recollection of the interview.

Here are some more quotes from around the bodybuilding community:

> Several companies will pawn off articles, and journals clearly ghost written to take up space, or sell a product. Those who are impressionable will do whatever the ghost writter says, because they believe Bodybuilder X is the one actually making the statement. Its sad. [Wilson, Jacob, Forums; 2003]

> I am constantly bombarded by people saying, "I just read in (You pick the magazine) that Bodybuilder X (You pick the bodybuilder) do 20 sets for curls! Do you think that is a good program? I'm thinking about trying it. He's got huge arms." Magazines are fun to read and quite entertaining, but don't believe everything you read.

> I've been on the inside so you can take this information literally. I don't want to single out any one source of information, but let me tell you that I wouldn't be surprised if each and every bodybuilding publication embellishes from time to time. Most of the articles you see with famous bodybuilder's names attached to them are "ghost written" This means that the bodybuilder did nothing more than allow the magazine to use their name.

I remember while at one major national contest in my youthful years, I was approached to be filmed for an extremely popular video journal. I was really excited and agreed. During the filming they had us perform several exercises, many of which I never did on a regular basis. Then later, I was asked to describe my workouts. When I did, I didn't mention the exercise we performed during the filming. The show host then asked if I ever performed the exercises we did earlier in the gym. I replied, no, not really. He then asked if I could just talk about them. I said, "Sure."

This video journal came out and the exercises were included as "MY WORKOUT PROGRAM!" I couldn't believe it! My friends and I laughed until we cried. "Uh, Steve, I've never seen you do those before." It was a real eye opener to all of us.

Here is the moral to the story. Magazines and different forms of media are here to inform us, but also to entertain. The bottom line to them is selling magazines and products. They won't sell vary many magazines if every month they put the exact same training routine, diet, and supplement program in them. I'm not saying that there isn't great information in certain publications from time to time. There is. What I am saying is don't think that everything you read in print is exactly what "Bodybuilder X" is doing. Use some common sense when formulating your training program. [Guru, Steve; 2000]

It is now probably common knowledge that most of the training articles supposedly written by bodybuilders in the magazines are in fact ghost written and are usually hype driven. [Cosgrove]

The problem is that most of these articles are written by ghost writers. These ghost writers create the articles. Then the pro bodybuilder (who is under contract with the specific magazine publisher) is credited with the article. They throw in a few pictures, put their name at the end and voila! And the mags sell like crazy. Please believe me. I'm not making this stuff up. This is common knowledge in the bodybuilding world. [Following Pros Routine, Newsletter Archive]

Seven Exercises You Should Avoid

There was a recent flex magazine article supposedly written by pro bodybuilder Bob Cicherillo [2003] 2000 NPC USA Super-Heavyweight and Overall Champion. He titled his masterpiece “7 classical exercises you should avoid” and said that the most important one was squats! It was also claimed that barbell rows, bench press, skull crunchers, barbell curls, and, hold your breath…dead lifts, should be avoided! This is quite typical; lower the standard, and more people will reach the standard. It's just a way of appealing to the masses rather than catering to only the most elite athletes.

Of course, newbies would love this because they can train like wimps and still get great gains. But once they find out this article was written by a pseudo scientist, they will sorely regret that decision.

Dorian Yates

There are numerous articles out where Dorian Yates "writes" some girlie man workout, which supposedly got him his colossal calves, such as 2 sets of seated calf raises and 2 sets of barbell calf raises. These articles are laughable, and again, just appealing to the masses. In order to be freaky, you must train freaky—period.

For a complete analysis of this myth read, So You Want To Be Freaky? and The Greatest Training Method Of All Time!

Appealing to the Masses

For more typical examples of appealing to the masses read, My Humorous Observations about Lazy People and How The Fitness Industry Preys on Them.

Fallacies

Fallacies are bad arguments, which can be deceiving because they usually contain bad reasoning beyond just false premises. These are often referred to as "non sequitur," which means in Latin, "it does not follow." In other words, the premises, whether true or not, do not actually support the conclusion.

The next section will analyze numerous fallacies committed by pseudo scientists. Though specific examples will be given, this can be applied to hundreds of different arguments.

Arguing from Ignorance

This tragic fallacy is perhaps the most commonly committed among pseudo scientists. Often times, people claim because they are ignorant of a method, it must not be valid. Or conversely, because they have only seen one method, it must be true.

Some examples are:

"I don't recall reading about one professional bodybuilder listing a proper post-workout shake in their diet. Therefore, pros don't have proper post-workout shakes"

"I have never seen this method, so it's not effective."

A person's ignorance has no bearing on the truth whatsoever. This is equivalent to saying, "I have never heard that driving drunk is illegal; therefore, it is not." This is usually accompanied with a multitude of other fallacies, such as appealing to unqualified authority. It is impossible to argue against such faulty logic.

Contradictions

Another problem with using ghost-written articles to justify a method is that they are incredibly diverse. You could support almost any method from these articles. As such, it is impossible to determine what method is best according to the "pros". Let's look at some examples:

Workout nutrition: Jay Cutler recommends a high fructose carbonated liquid post-workout [Stiefel, 2004]; while Flex Wheeler strictly forbids having fructose post-workout [2004]; a flex magazine article [Stoppani, 2003] recommended half of a maltodextrin (40-80 grams) and whey protein shake 30 minutes before a workout, and to sip the rest during the workout; then to have 50 grams of protein and 40-100 grams of dextrose immediately post-workout; then they recommend to have another post workout shake 1 hour later consisting of 20-40 grams of maltodextrin, and an equal amount of whey protein. That is a whopping 220 grams of simple carbs in a matter of hours! He also stresses in his notes that the most important meal of all is having glucose right before your workout. Another issue of flex [2002] recommended a get big drink containing various forms of carbohydrates. One common trend is that virtually every single issue of flex magazine recommends simple carbs post-workout, along with an easily digested form of protein. To quote them, [2002] "as FLEX readers should know by now, taking a drink containing essential amino acids and carbs immediately after training enhances anabolic metabolism in muscle that's been exercised." So even from these ghost-written articles, pseudo scientists could not support fat and fiber post-workout; only horrible forms of simple carbohydrates such as coke.

Moreover, in contrast to the aforementioned sugar tip pre-workout, a flex roundtable demonstrated numerous contradictory results [Stiefel, 1998]. In this article, various athletes and scientists were asked what they recommended pre-workout. Debbie Houck (a personal trainer; clients include Ms. International Yolanda Huges) recommends low glycemic carbohydrates such as grapefruit and sweet potatoes along with a source of protein such as steak, and some fats. Chris Street (flex science editor) recommends eating whatever you like! And Milos Scarvey recommends having complex carbs such as oatmeal. So what will it be—dextrose, or oatmeal pre-workout?

The contradictions go on and on, ranging from only doing HIIT workouts, only doing high volume, a combination of both, etc. One could conjure up numerous doctrines from such sources.

Such instability demonstrates the shaky foundation upon which pseudo scientists base their methods.

Ad Hoc Modifications

In 1919, Karl Popper made a scientific breakthrough, in establishing that in order for something to be a theory, it must be falsifiable, and many theories in that day—and currently—were/are not. The fallacy committed when scientists do this is called an *ad hoc modification*; this is when you keep adjusting your hypothesis to fit the evidence.

Evolution is the prototypical example of an ad hoc modification. Here is an example from Al Gore (1992):

> Human evolution, of course, is responsible for our very long period of childhood, during much of which we are almost completely dependent on our parents. As Ashley Montagu first pointed out decades ago, evolution encouraged the development of larger and larger human brains, but our origins in the primate family placed a limit on the ability of the birth canal to

> accommodate babies with ever-larger heads. Nature's solution was to encourage an extremely long period of dependence on the nurturing parent during infancy and childhood, allowing both mind and body to continue developing in an almost gestational way long after birth.

Hilarious…Neanderthals—a supposed evolutionary ancestor to humans, but in reality, just downgraded human fossils—have larger brain cases than modern humans! By Al Gore's own standards evolution is false.

And how does Gore know this stuff about natures plan? You want to know? He made it up. This is the problem with evolution: it's not a scientific theory. Evolution predicts nothing—it accommodates.

Al Gore could turn this around and say disease and suffering prove evolution is true, because only random chance could produce that, not a loving God—showing his ignorance of the fall. Or, he could point to any design in nature and say evolution did it. But there is no proof for this claim whatsoever. The problem with evolution is that it does not predict, but rather, accommodates; therefore, it is not a theory. It's a completely self supporting hypotheses—one big Ad Hoc fallacy.

Professor Peter Medawar, a renowned British scientist, a biologist, and winner of two Nobel Prizes states (Ungred, 1982), "I think Popper is incomparably the greatest philosopher of science that has ever been." And in his autobiography Unended Quest, Karl Popper writes (Ungred, 1982), "I have come to the conclusion [that] Darwinism is not a testable scientific theory, but a metaphysical research prograinine - a possible framework for testable scientific theories . . . This is of course the reason why Darwinism has been almost universally accepted. Its theory of adaptation was the first nontheistic one that was convincing; and theism was worse than an open admission of failure, for it created the impression that on ultimate explanation has been reached."

With the foundation laid, the ad hoc fallacy can be applied directly to pseudo scientists.

Now, some may claim that the previous discussion of grouping athletes influencing pseudo scientists to consume drugs, to ghost-written articles influencing them to have ice cream post-workout, is a red herring. But this only displays the opposition's ignorance of logic.

A pseudo scientists that uses, for instance, what the "pros" do to support their program, are living examples of ad hoc modifications. What's interesting is some of these same people also have asked for science to support some claims, while on the other hand, used pseudo science to support another. Their hypocrisy is truly astonishing.

To elaborate, how do these individuals choose which "pro" to replicate? For, as shown above, the "pros" in ghost-written articles, have an astounding variability in their program design. So who is to say which pro is the correct one to follow? No one—it is completely arbitrary, and the person may choose to follow whomever they wish. Moreover, if they happen to see a scientific theory which fits with their ideal scheme, they can use this for support as well. The problem is they make no true

prediction which can be falsified, and therefore, lack a scientific theory. They are essentially a living ad hoc modification.

Appealing to Unqualified Authority

An appeal to unqualified authority is when the arguer cites an authority that lacks credibility or is unqualified. The source cited may be unqualified for various reasons such as: prejudice, lacking credentials in the perspective field, a motive to lie or give misinformation, etc.

Pseudo scientists use this fallacy on a constant basis. And it is perhaps the most destructive one of all (discussed next). One example may be:

> The owner of [insert any supplement/brand name] says that it is perfectly safe. Furthermore, his advertisement ads have several claims of people gaining 50 pounds of muscle and losing fat in a month on it! Therefore, it must be a safe and effective supplement.

Clearly, this owner is completely biased. If this individual had admitted that his supplements were dangerous, it would have opened the door for the government to put regulations on them, which would then cause his company to lose money. Thus, because this individual has a clear motive to lie, they should not be taken at face value. This is appealing to unqualified authority.

Another common example is in reference to big people. Pseudo scientists often source their vast experience with bodybuilders to support their ad hoc modifications. It may go like this:

> The biggest guy in my gym says having milk is optimal post-workout. This guy is a monster, so obviously he knows his stuff on nutrition! Therefore, milk is great post-workout!

Typical…Just because someone is huge does not make them a scientific expert in everything. It does not mean they know sensory motor; it does not mean they understand sports psychology; it does not mean they understand nutrition; it simply means they are big. Conversely, some individuals relate being huge to being a stupid jock. Both are fallacious doctrines. To come to any other conclusion *just* from outward appearance is fallacious, and a typical form of appealing to unqualified authority.

This is also perhaps the highest form of disrespect one could give to the writers of JHR, and the thousands of scientists who have dedicated their entire lives to understanding the numerous variables in the field of kinesiology. Moreover, the writers of this publication and numerous other experts in the field of kinesiology are bodybuilders themselves.

Now, think about it for a minute; does the aforementioned fallacy sound familiar? I'll give the reader a minute to ponder…that's right, it's called ***racism***.

Stereotyping

Stereotyping is the fallacy of attributing a characteristic to all members of a certain group, or an individual in that group. This fallacious doctrine ignores the individuality of people, and assumes that all members of a given population must share the same traits displayed by all, some, or perhaps few members in a group. Placing a trait on someone before even knowing them is an act of pre-judging (prejudice) and subject to error.

Now, no matter what the person's intention was, or whether the given stereotype was meant as a compliment, it is still dangerous, fallacious, and often an offensive doctrine. Incidentally, stereotyping is the essence of racism.

Racism is a prejudice against people from other so called 'races.' This ideology incorrectly classifies humans by superficial characteristics such as skin, eye shape, etc. Most often, this results in the justification of disdain for other people. Examples of this have been seen for ages through groups such as the Ku Klux Klan.

However, when thoroughly investigated, the idea of different races has been shown to be a complete myth. For instance, the DNA of any two people in the world would differ by only 0.2%. Furthermore, only 6% of this can be linked to racial categories [New Scientist, 1995]. Another topic is skin color, which is one of the most popular methods of determining race. However, we all have the skin pigment known as melanin. Simply put, the more melanin you have, the darker you will be; the less you have, the lighter you will be; hence, different skin colors [American Broadcasting Corporation News, 1998]. But this is by the same means—melanin—just more or less. Race is also designated by certain features. For example, Asian eyes differ from typical Caucasian eyes. This is not a different attribute, but as with melanin, more of the same feature. You see, fat plays a prime role in the shape of the eye. Asians typically have more fat around their eyes, while Caucasians tend to have less, producing different shaped eyes. But again, it's just more or less of the same feature, nothing new genetically [American Broadcasting Corporation News, 1998].

Additionally, all people groups can interbreed showing biological differences are very small. Practically all secular scientists now believe that all humans came from one original population. Moreover, a large amount of scientists would claim that, biologically, there is only one race—the human Race. All humans today are in fact classified under the same title homo sapiens sapiens [New Scientist, 1995].

Race is cultural, but biologically fallacious. For instance, ABC News science states [American Broadcasting Corporation News, 1998], "What the facts show is that there are differences among us, but they stem from culture, not race." This same news paper again states, "More and more scientists find that the differences which set us apart are cultural, not racial. Some even say the word 'race' should be abandoned because it is meaningless." The current author is certainly one of them. The term is highly fallacious. The article continues, "We accept the idea of race because it's a convenient way of putting people into broad categories, frequently to suppress them…the most hideous example was provided by Hitler's Germany. And racial prejudice remains common throughout the world."

Furthermore, a scientist at the advancement of science convention in Atlanta in 1997 stated [Holtz, 1997], "Race is a social construct derived mainly from perception conditioned by events of recorded history, and it has no basic biological reality." A

1998 article in the Journal of counseling and development [1998] argued that the word, "race" should be discarded as it is completely meaningless.

Dr Douglas C. Wallace, professor of molecular genetics at Emory University School of Medicine in Atlanta, states [2000], "The criteria that people use for race are based entirely on external features that we are programmed to recognize..." Simply put, the only reason we make a big deal of these minute differences is because we have been trained to do so in our secular society.

Now, relating this back to the topic of discussion. It is clear that pseudo scientists are once again committing a horrible fallacy. As discussed previously, they most commonly stereotype bodybuilders; therefore, promoting a dangerous, fallacious ideology. The current author would implore anyone doing this to abandon such puerile acts.

"Don't knock it if you have not tried it"

This fallacious argument claims that if you have not tried something, you do not have to right to discredit it. By that logic, if one wants to see if jumping off a bridge will kill them, they'll have to do it to find out!

What these individuals do not understand is that empirical data can give the athlete assurance that a protocol is not optimal—i.e. science has unequivocally displayed that fat and fiber post-workout is poison. How science does this will be discussed more further on.

False Cause Fallacy—Isolated Examples

Unscientific jargon is often spewed out of the mouths of pseudo scientists in the form of isolated examples. This is perhaps used more often than any fallacious argument.

This is known as anecdotal evidence and holds ***zero*** bearing in the scientific community. When pseudo scientists use isolated examples to prove something, this is known as a false cause fallacy.

A false cause fallacy transpires when the link between the premises and conclusions depends on an imagined casual connection that probably, or does not definitively exist.

A type of false cause fallacy is known as an oversimplified cause. Consequently, this is the most oft committed fallacy in this category. This argument takes place when a multitude of causes are responsible for an event, and the arguer selects one of them as the sole cause.

A great example would be Jay Cutler. A pseudo scientist would claim, "Jay has coke which is high in fructose post-workout, and look how huge he is! That must be the best post-workout shake, because he obviously got great gains on it!" This ignoramus ignores the thousands of other reasons why Jay is huge. This includes: diet, drugs, training for numerous years, hard work and dedication, genetics, etc. There is no way to conclude anything from such an isolated, unscientific example. Results clearly demonstrate that having fructose post-workout is foolish; if he in fact

does have this (which cannot be determined from unreliable sources) than he is without a doubt hurting his gains immensely. However, this can be overcome by a multitude of other factors.

Another vital aspect about science is that it must be controlled, and replicable. In other words, these results must be repeated in a controlled experiment, by other scientists with various set variables to conclude causality. Repetition assures that it was not a fluke, and making the experiment controlled eliminates the chance of committing hundreds of fallacies (namely, an oversimplified cause).

Another fallacy is the post hoc ergo propter hoc, which means, "after this, therefore on account of this" This is another type of false cause fallacy.

This fallacious argument presupposes that because an event precedes another, it caused it. This is not sufficient evidence, however, for a casual connection. For example, if a black cat crossed your path, and later you tripped and hurt your leg, that does not prove that black cats are bad luck. This type of fallacy is the foundation for superstitions such as wearing a "lucky" shirt every squat day.

Here are a few common examples of the FC fallacy put to practice:

"I cut out my post-workout shake the last two weeks and am starting to notice some more cuts. This must mean I am burning fat!" Or it could simply mean you lost subcutaneous water due to a rapid decrease in muscle glycogen. For every gram of muscle glycogen 2.7 grams of water are stored in the cell due to increased osmolarity. By cutting out his/her post-workout shake this individual would lose water rapidly, which certainly would contribute to added definition.

This is also why people think the Atkins diet works so well. They go on it and immediately lose 5 pounds of water weight in a week due to low carb dieting, notice more cuts, and assume that this method is effective for burning fat. But it is not only an ineffective form of fat-burning, but hazardous to ones health.

"I was doing 20-30 sets of biceps for the last year and saw slow gains; then, this guy told me I was overtraining. So I cut my sets down to 7, and my biceps look bigger after just two weeks! I am sticking with this for now on." So many people fall prey to this lie. There are numerous problems with this. First, one should never stick with the same program year round. To optimize gains, a periodization split should be designed. This subject will be revolutionized very soon in future issues of JHR. For now refer to, The Greatest Training Method Of All Time! Second, this method is known as tapering, and is very effective in the short term if used correctly. This, again, will be discussed *very* soon in this journal publication. Thirdly, overtraining can be achieved through numerous means, and is dependent on the amount of stress the participant's body can handle. In this scenario, a close analysis should be taken on the athlete's fitness level, diet, sleep, supplements, and all other factors involved.

There are numerous other examples, but, as clearly displayed, using isolated examples to support anything is completely illogical. However, studying trends in modern day sports and in the history of sports is mandatory for any scientist. From here, an accurate experiment can be designed to see whether or not these methods

are effective. But skipping the scientific method and going straight from observation to conclusion is foolhardy, and subject to error.

"I Can't Ignore the Results"

In order to justify fallacious protocols, some pseudo scientists have claimed that from their "vast" amounts of studies from ghost-written, fallacy-laden articles, they simply, "can't ignore the results." If only these individuals would take a moment to contemplate the magnitude of their hypocrisy. Here is a translation of this statement:

1. I can ignore the clear evidence that numerous articles in supplement magazines are ghost-written.
2. I can ignore the fact that I am committing hundreds of fallacies to support my protocol.
3. I can ignore the fact that there are hundreds of contradictions from athletes in these articles.
4. I can ignore the fact that I am a living ad hoc modification, and may choose whatever protocol I wish.
5. I can ignore all scientific and empirical data.
6. But I *can't* ignore the illogical, unscientific, wholly ignorant dogma I choose to selectively accept.

What a sad existence…

Answering a Fool According to their Folly

Proverbs 26:5

Answer a fool according to his folly, lest he be wise in his own conceit.

Ignoring the fact that there are numerous ghost-written articles, which give contradictory advices; the false cause fallacy being committed; that pseudo scientists are not omniscient; and therefore, cannot possibly tell what every pro really does; and the numerous other aforementioned fallacies. And instead, taking the presupposition that say most pros *do* follow a certain protocol, and that these accounts are indeed accurate. Even with these assumptions, the folly of this "scientific" analysis by pseudo scientists is still glaring.

The argument says:

> I simply can't ignore the numerous accounts of professional bodybuilders using similar protocols and getting excellent results. Therefore, [insert a fallacious method] must be best.

This fallacy is known as appealing to popularity, derived from the Greek word 'Ad Populum.' Its form is like so:

1. Most people believe X
2. Therefore, X is true.

A person succumbs to this fallacy when they accept a certain claim being true, simply on the account that most people do it, or support it. Consequently, this fallacy is often the pillar for advertisement. Here are some examples to accentuate the fallacious nature of this:

- Millions of people smoke, including athletes, and still live long healthy lives; therefore, smoking is perfectly healthy.
- It used to be common for Americans to have slaves, and we are the greatest country in existence, and pre-dominantly Christian. So having slaves is not morally wrong.
- Most people believe the earth is flat; therefore, it must be flat.
- Everyone lies; it's not that big of a deal.
- Of course you want to use [insert a product]. Why, 80% of Americans use this product!
- There are millions of abortions every year; obviously it's ok to have an abortion.

It is interesting that evolutionists use this same tactic.

Concerning this, Don Batten and Carl Wieland, writers for AIG—the number one creation science site in existence—in response to the question, 'How would you react to people who say that evolution must be right because most scientists agree with it?' state [1998]:

> I don't think it's very sensible to say that. Major breakthroughs in science often occur when people don't believe what the rest believe. Science progresses as new ideas replace old ones. It's the radicals who often make the breakthroughs.

Dr Jonathan D. Sarfati, one of the top creation scientists in existence and an incredible logician sums this section up nicely:

> Take courage that if their best arguments are slander and appeal to authority, then it shows that they haven't any rational answers. One thing to ask them is, since when is truth decided by majority vote?

Straw Man

A straw man fallacy is committed when an arguer sets up a false argument against their opponent, and utterly crushes it. This person then claims the argument has been demolished.

A pseudo scientist may claim that this article somehow seeks to discredit historians or the act of observing and studying the athlete; however, this is a straw man argument.

Anyone who has studied this journal publication knows that the authors are in fact intense intellects of historical exercise science. Indeed, history has its place in the scientific community. In fact, observation is the very groundwork upon which science was founded—enter the scientific method.

Scientific Method:

Observation

Formulating an Hypothesis

Predictions

Tests

The problem with pseudo scientists is that they observe, and come to an often erroneous conclusion from there; thereby, leaving themselves open to a multitude of fallacies.

Science seeks to take an observation and come to a logical conclusion by eliminating the possibility of numerous fallacies and sampling errors. By following the scientific method, a conclusion can boldly be affirmed.

Knowlden (2004) gave a perfect example of how to apply the scientific method:

> The scientific method entails using 1) Observation, 2) Formulation of a hypothesis, 3) Making predictions via the hypothesis, 4) Using experimentation to test these predictions.
>
> Under such a model, the scientific conclusion via experimentation shows that high GI carbohydrate post-workout predictions are well-founded.
>
> The science demonstrates high GI carbohydrates are optimal post-workout in regards to:

- Increasing anabolic hormones
- Increasing glycogen synthesis rates (recovery)
- Increasing protein synthesis rates (hypertrophy/ hyperplasia)
- Allowing maximal fat oxidation to transpire

> These are but a few of the predictions made regarding this prototype of post-workout nutrition that have been confirmed by science. This selection is most profound in light of this journal entry.
>
> It is now well-established that hypertrophy athletes following body building programs should incorporate high GI carbohydrate sources following a training session for maximal recovery and anabolic enhancement.

For a free lesson on how to study history read (Wilson, 2004), Hippocrates - Was He Hardcore?

Reasoning

To avoid wasting time with pseudo scientists, it is advisable to attempt to reason with them. Try and get a standard by which to determine truth. For instance, if they say they go off science, after engaging with an individual for a while, you may ask, "If I explain from a scientific standpoint why fat and fiber post-workout is poison, will you stop taking it?" If they respond yes, then continue the discussion. If they respond, "Of course not! I will continue to take it no matter what you say," or say this indirectly, by, for example, completely ignoring the clear evidence provided, leave the debate and stop wasting your time.

Burden of Proof

Ultimately, the burden of proof falls on the readers to be responsible with their bodies. As such, though pseudo scientists have done a great job of deceiving the masses, it ultimately is every individual's responsibility to find the truth out for themselves. This article seeks to inform the reader of these many deceptions, that he or she may make educated, logical decisions in their bodybuilding career.

I would implore the reader to constantly think logically as a scientist. Ask questions; seek to understand why you are doing a given program, and the logic behind it.

An example of a careless action, which shows no responsibility, is purchasing a supplement, and often times using it *before* even knowing what it does, or the possible side effects! Here is a general rule of thumb: *never* take a supplement, do a workout program, or follow anyone's advice without at least having some idea behind the method. Don't take this the wrong way, it takes years to become a master in this field, but you should at least have some general knowledge on the topic, and ask reliable sources what their thoughts are on the matter before doing anything. If you cannot find an adequate answer to your question, always take the safe side, and do not take a supplement—for instance—when you do not definitively understand that it is safe.

Laying the Foundation

> *Therefore whosoever heareth these sayings of mine, and doeth them, I will liken him unto a wise man, which built his house upon a rock: And the rain descended, and the floods came, and the winds blew, and beat upon that house; and it fell not: for it was founded upon a rock. And every one that heareth these sayings of mine, and doeth them not, shall be likened unto a foolish man, which built his house upon the sand: And the rain descended, and the floods came, and the winds blew, and beat upon that house; and it fell: and great was the fall of it.* --- Matthew 7:24-27

One who builds his scientific foundation upon pseudo science is like the foolish man above who built his house on the sand—such a foundation is destined to fall. It is the goal of this article to give the reader a proper foundation upon which their scientific minds may take root in and grow. As the apostle Paul says, "That we henceforth be no more children, tossed to and fro, and carried about with every wind of doctrine, by the sleight of men, and cunning craftiness, whereby they lie in wait to deceive. Ephesians 4:14" It is a sad fact that millions of advertisers cunningly seek to deceive the feeble minded; however, with this foundation in place, the reader need no longer

fear these deceivers. Now, the reader will see right through these lies, and simply laugh when confronted with them.

The true foundation a scientist must base their decisions on is empirical, logical, scientific data. Pseudo science has no place in this community.

Now, in the near future, JHR will be delving into the vigorous nature of scientific experiments, and why the hundreds of journals we source each month in our articles are so reliable. This entry will just give a little taste of how trustworthy these results are, and why a scientists should base their foundation upon them.

Integrity of JHR Staff

The rigorous nature and reliability of true science can be displayed no better way than through, ***The Journal of Hyperplasia Research***. This section begins with a quote from Mr. Knowlden on the goal of JHR [2004; Hyperplasia Havoc]:

> Science seeks to find truth in the universe, and does so with a series of questions, from which testable predictions are made, which ultimately reveal the verity of hypotheses.
>
> **"What is truth?"**
>
> This very question was asked of Jesus, at His trial by Governor Pilate.
>
> Inquiry of the absolute truth is the aspiration of science, and thus the quest of
>
> **JHR**.
>
> It has always been the motto of both myself, and my esteemed colleagues, to seek the truth at all costs, and dismiss psuedo-science that is spewed from the mouths of ignorance.
>
> The *Journal of Hyperplasia Research* shall foster the dissemination of basic and applied research as it interacts to the sphere of hypertrophic/hyperplastic expansions, through theoretical outlets.

President Wilson adds [2004; dismantling fallacies]:

> Thousands of lives have adopted the scientific lifestyle presented and outlined in our pages. Moreover, numerous fallacies have been vanquished. We stand for true, scientifically derived knowledge, as opposed to opinionated, unsubstantiated rubbish.
>
> Several occurrences have stewed in the ABC research studio as of late. Indeed, research beyond the bodybuilder's wildest imagination has been conducted.
>
> Ours is a world which will not give in nor relinquish its position. We will not back down; we are here to stay, and most importantly to explode. We are, in a phrase: Scientifically Hardcore.

The scientists of this publication have dedicated their lives to this sport. Each and every answer; each refuted myth; each scientific journal entry is the result of thousands of hours of scientific hard-core investigation. Additionally, we peer review each other's work, and have other experts do the same for us. This includes our editor, and fellow JHR writer, Tuf. Moreover, we are constantly keeping up to date with the top scientific data, as it presents itself. Each issue in this journal is backed by literally hundreds of the top scientists in the world, performing empirical, logical, scientific experiments. Further, if anyone has a question or dispute about the information presented here, as long as they come with respect and in a logical manner, they can freely discuss it live with the authors of this publication any time they wish in our online forums.

JHR has made its goal very clear; there is no hidden agenda. To quote MR. Knowlden on this goal, [2004; Hyperplasia Havoc], "**ABC** is drawing rapidly upon its imminent destiny… the entrance into an age of advanced technology, and by this to stand alone as the final source of body building information available in existence."

Statistics

To state it bluntly: math=power. The more math the readers know, the better scientists they will be. Of particular interest to kinesiologists is the study of statistics.

A *statistic* is a single numerical score, which characterizes an entire set of scores. *Statistics* is the science of collecting, organizing, analyzing and interpreting data. One of the most common forms of statistics used by scientists is inferential statistics, which are tools that tell us how much confidence we can have when generalizing from a sample to a population. This is vital, because samples must be used when doing statistics, as populations are often times not realistic. However, with proper sampling, one can obtain incredibly reliable results. Numerous factors are taken into consideration when conducting an accurate experiment. No better example, however, can be given on the reliability of a scientific experiment than the *null hypothesis*.

Null Hypothesis

The null hypothesis states that the difference between means in the population is zero. Thus, any difference seen is simply due to sampling errors. It is denoted as follows: H_o: u_1-u_2=0 where H_o=null hypothesis u_1=symbol for the population mean of group one and u_2 =symbol for the population mean of the other group. Another way to define H_o is to say the observed difference between means was created by sampling error, the difference between means was statistically significant; which means that the null hypothesis was rejected. Or conversely, the experiment was not statistically significant; meaning the null hypothesis was not rejected.

Now, at the onset of a study, an experimenter must choose a research hypothesis. The scientist usually chooses either a directional hypothesis, which states that one particular group average is higher than the other; or a non-directional hypothesis, which states that there is a difference among samples, but they are not predicting which one is higher.

Here is the issue: if you do not reject the null hypothesis, it means you have two hypotheses: the null hypothesis and the research hypothesis. Thus, one cannot verify the results. This, however, does not mean you accept the null hypothesis; it simply means that the results are inconclusive. The goal in a scientific experiment is to reject the null hypothesis, that a proper conclusion can be drawn from the experiment. With the use of powerful inferential statistics, this can be done, and a conclusion drawn with great assurance of accuracy.

Rejecting the Null Hypothesis

An inferential test of the null hypothesis tells us the probability that it is true—this is usually donated with the simple "p". Usually, the null is rejected at the .05 level. The author is certain the reader is familiar with this term: $p<.05$. And now, the reader should understand the significance of this. This means that the probability that the null hypothesis is true (i.e. the differences seen between means is due to sampling error) is 5 out of 100. Again, the level of significance must be chosen at the onset of an experiment. Some scientists choose an even higher level of significance—usually as low as .01 or .001. However, whether the research hypothesis was rejected at a statistically significant level or not, the scientists will still customarily list the probability of the null being true, so that the reader may make their own conclusion from there. For example, if the scientists chose to high of a p level (i.e. .001), and the p was .01, that is still a low probability; not rejecting the null would most likely result in a type 1 error; thus, this is valuable information to add.

To elaborate, two types of errors can be made here: type 1 (alpha) or type 2 (beta). Type 1 errors occur when someone rejects the null hypothesis *when* it was correct. So for instance, if you read in the paper that the probability of it raining today is $p<.3$, and you trust that level of significance, and go for a hike with your summer clothes on, and it rains, this was a type one error.

A type II error occurs when one fails to reject the null hypothesis *when* it was false. A beta error is more likely to occur if a high level of significance was chosen (i.e. .001); this is why it is important to still list the results for the reader. Though the scientists may conclude that his experiment was not statistically significant, if he choose a research hypothesis at the .001 level, and got results at the .05 level, it is very likely that this is a result of a type II error; as such, the reader can have a high level of confidence in the results, though the scientists did not reject the null himself.

There are numerous inferential tests which allow one to calculate the null. However, this will not be covered today. For now, it is just important to realize how reliable scientific experiments are.

Now, in everyday life, if there is a chance in 5 out of 100, or even less that something will occur, the null hypothesis is almost always rejected. For instance, if there is a chance of 1 out of 100 that a tornado will hit your house tomorrow, the reader would be squatting in their front room this time tomorrow, because the probability of that event occurring is preposterous.

Here is a great quote from Venom [2004; Glutamine—The Conditionally Essential Amino Acid] portraying the null hypothesis put to use:

> Most importantly, glutamine has been shown to assist athletes in immune regulation. This is vital because plasma glutamine decreases after strenuous work. Keast et al. performed a great experiment to test this [64]. He utilized two exercising groups. Group 1 consisted of seven randomly selected male athletes who utilized a treadmill at 0, 30%, 60%, 90% and 120% of their VO2 max. The latter group was composed of five advanced male athletes. They performed two gut-wrenching interval training sessions per day for ten days, followed by a six-day recovery period. Glutamine concentrations dropped rapidly from 1244 +/- 121 mumol/L on average to 702 +/- 101 mumol/L after exercise at 90% VO2max ($P < 0.05$) and to 560 +/- 79 mumol/L at 120% VO2max ($P < 0.001$). They concluded that, "Reduced plasma glutamine concentrations may provide a good indication of severe exercise stress."

These results once again demonstrated glutamine to be a conditionally essential amino acid at the .05 and .001 levels respectively—that's reliability!

Now, if the author was to perform his own experiment on the effects of having fat and fiber post-workout compared to having dextrose/maltodextrin and whey protein, his research hypothesis would be that the latter method is superior to the former by extreme orders of magnitude; significance would be chosen at the .000001 level, as the probability of the null hypothesis being correct is implausible, as clearly displayed by Knowlden [2004, Scientific Investigation into the Rationality of Carbohydrate Consumption Criterions in Correlation to Post-Training Anaerobic Depletion]. If, on the other hand, one were test that fat and fiber post-workout was advantageous, it may be wise to choose the null hypothesis in this experiment, as any result stating otherwise was clearly due to poor sampling.

In conclusion, rejection of the null hypothesis can give scientists great confidence in their results. This is just a taste of the rigorous nature, and reliability of empirical science. How one puts their trust in pseudo science is beyond all rational thought.

Practical Applications

1. Young scientists should not fill their minds with garbage—i.e., lies spread by pseudo scientists. Simply put, the person that does so will be eaten alive. They will chew you up, and spit you out like a bone. Moreover, if one truly seeks to succeed in this field, they have no time to waste reading ghost-written, unscientific, worthless magazines. If the reader seeks to become a great scientist, every minute of their life needs to be spent on serious research—especially early in your career.
2. Once the reader feels he/she has reached a level of scientific maturity, if one wishes, it would be acceptable to read magazines full of lies and deceit, as the reader should now be fully equipped with the weapons to refute those myths, and may simply read them to perhaps dissipate the reactive inhibition, and relax from a hard days work with a good laugh.
3. Though it would be acceptable to read such magazines, it would behoove the serious scientist to partition a greater portion of their time to serious publications such as ***The Journal of Hyperplasia Research***. The current author prefers not to fill his mind with this garbage at all; but rather chooses to dissipate the reactive inhibition by other means.

4. Begin thinking like a scientist. Ask scientific questions; seek scientific answers. Doing so will guard the reader's mind against the wiles of pseudo science, and develop the reader into a true scientist.
5. Be patient; do not search for the easy way out. A primary reason people give in to pseudo science is because it looks so tempting. Be not deceived; there is only one way to obtain freak, and that is through hard work and dedication. Taking what seems to be the easy way out, will only lead to the reader's downfall.

Conclusion

The fact is, the opinion of one author in this journal publication is the result of thousands of hours of research.

The time has come to make a decision my friends. You can continue to follow pseudo science or you can choose to follow a foundation laid upon a rock—the foundation of logic and science.

Where we go from here, is a choice I leave to you.

Keep it Hardcore,

Venom

Executive of Bioenergetic Research

Venom@abcbodybuilding.com

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