



A compilation of short articles

# **Sixty Practical Tips And Ideas For Health And Fitness Nerds**



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## Introduction

Within the time period of roughly a year and a half, I had that little online corner where I would post all sorts and pieces of valuable information I'd stumble upon, while doing my digging in the fitness, bodybuilding and nutrition. Well, that "little corner" no longer exists.

However, upon closing it I thought to myself "There is so much valuable information in here, all delivered in the form of easy to understand, short articles. I ought to preserve it somehow...". That's when I decided to review and put this content in a book...

And that's the result. It's what you see on your screen right now.

If you've read through the table of contents you already have a good idea what information you can find down these pages.

While I know that some of the articles might not be of utmost interest to you, some, or rather many, will provide answers, for which you haven't even known to ask before this book..., but answers you'd rather have now.

I hope and believe that you will find this little book valuable and will often refer to its content for quick answers to questions that might arise in the future.

~Ivan Nikolov

## **Acupressure Better For Relieving Lower Back Pain**

A study, published in the British Medical Journal revealed the following.

Two groups of lower back pain sufferers were assigned either physical therapy or acupressure. Both groups experienced short-term relief but only the group, treated with acupressure experienced less pain 6 months or more after the treatment.

That is good to know, having in mind that every third person suffers from back pain of some sort at some point of their life.

## **Omega-6 Promotes Prostate Cancer Growth**

A new study revealed prostate cancer cells grew twice as fast when exposed to omega-6 fatty acids. Omega-6 fatty acids are polyunsaturated fats, found in large quantities in oils like canola and flax seed and fish oil.

The difference is that canola oil has a lot more omega-6 fats in it than omega-3. This is an unfavorable ratio. Flax seed and fish oils on the other hand have mainly omega-3 fats, which helps to restore the proper ratio omega-6:omega-3.

I guess we (especially men) have another reason now to try to stick to the healthy ratio of not more than 4:1 of omega-6 to omega-3. The best is 2:1.

My suggestion: Use more cold-pressed flax seed oil as well as a good fish oil supplement. Restrict the use of other oils like corn, soy, canola, safflower and sunflower oil.

## **Longer Recovery Periods in HIIT Increase Power**

Scientists found that longer recovery periods (30 sec compared to 10 sec) while doing High Intensity Interval Training cardio help increase the power and decrease the fatigue.

The study was published in the Journal of Strength and Conditioning Research. The group of athletes, who performed the cardio with the short recovery periods didn't allow for their heart rate to go down low enough, which made their cardio workout feel more like an endurance workout.

So, if you are shooting for better endurance you know what to pick. But if you are interested in increasing power then HIIT with longer recovery periods is the way to go.

## **A New Sweetener**

A new sugar and artificial sweeteners substitute is making its way to the dieter's table these days. Its name is oligofructose. It is a subgroup of the inulin – a type of natural fiber.

Oligofructose is not digestible in the human intestines, therefore it has a very low caloric value. It acts like soluble fiber in the digestive tract.

One more good property: it is considered to be a prebiotic – a substance that promotes the growth of probiotics (bifidobacteria). Oh, one more. It bakes as regular sugar.

If you want to try it, you can buy it from [http://www.lowcarbspecialties.com/sweet\\_perfection.html](http://www.lowcarbspecialties.com/sweet_perfection.html)

## **One Set Or Multiple Sets Per Exercise**

In a study done at the University of Florida, trainees with at least one year of experience were divided in two groups. One group did single sets of eight to twelve reps and the other group did three sets within the same rep range.

Both groups showed similar increase in strength and endurance, and equally gained lean muscle mass and lost fat.

I personally had several years of training experience with single sets exercising (not counting the warm up sets). In fact that is how one of the best professional bodybuilders ever, Dorian Yates, used to train.

I, too have to say that the gains are similar if not better when doing single set training.

## **Cinnamon Lowers Blood Sugar Levels?**

Well, it does. If you missed to read about it, the news has been out there for quite some time now.

The active substance in cinnamon that does the trick is a polyphenol called MHCP. It lowers blood sugar levels by mimicking the action of insulin. It's been shown to lower blood sugar levels with 20% on average. It works in both – diabetics and non-diabetics.

So, make sure you use cinnamon in your meals. The powdered cinnamon works just as well as cinnamon in sticks and in capsule form. The doses used in the trials were 1 to 6 grams.

Cinnamon use offers additional benefits. It lowers the “bad” cholesterol levels and it fights free radicals.

## **What Inhibits Calcium Absorption In The Body**

The main things that inhibit calcium absorption are Oxalic and Phytic acids and alcohol. You can find the first one in foods like rhubarb, beet leaves, chard and spinach.

Phytate containing foods are the germs and bran of the grains as well as in legumes.

Caffeine and sodium increase calcium excretion through the kidneys.

## **Which Fish Are Low In Mercury And Which Are High**

Almost all the fish in the world is contaminated with mercury. Some fish species contain more and some less. It depends on where the fish lived and how long it lived.



In general larger and older fish are more heavily contaminated with mercury. Those include: shark, swordfish, king mackerel, tilefish, striped bass, largemouth bass and catfish.

Low in mercury is shrimp, canned light tuna, salmon, pollock and catfish. Note that albacore ("white") canned tuna has more mercury than canned light tuna.

Recommendation: eat fish not more than two times a week (about 12 oz.) and choose from the list of those less contaminated with mercury.

## **What Is Anaerobic Threshold**

Muscles burn glucose in two ways - aerobic and anaerobic, meaning with or without the presence of oxygen. The anaerobic way (without the presence of oxygen) delivers energy faster but the byproduct from it is lactic acid.

When during anaerobic exercise lactic acid starts builds up faster than it is removed from a muscle (or a group of muscles), a person reaches his anaerobic threshold. At that point we get the well-known feeling of fatigue and pain.

An athlete can increase his/her anaerobic threshold through exercise. HIIT (High Intensity Interval Training) cardio is one of the physical activities, which do that.

## **Fatigue From Isotonic And Isometric Training**

Isotonic means you contract the muscle and the muscle fiber shortens like in a regular exercise with two phases – positive (concentric) and negative (eccentric).

Isometric means you contract the muscle but the muscle fiber remains the same in length. Example: you do biceps curls, curl half way, stop and hold it there for a few seconds.

In a new study it became apparent that doing isotonic contractions causes your **muscle fibers to fail**, while doing isometric (static) training causes your **central nervous system (CNS)** to fail.

This is important to remember as this way now you can train for either muscle or nervous system failure, or you can reconsider your workout to train for both types of failure during a single workout.

## **Fast Reps Execution Or Slow Reps Execution**

Scientists found that fast rep training increases the muscle strength while slow rep training increase muscle size. The effects were most noticeable with three sets of each exercise.

The reps the control groups were doing ranged between 6 and 8-rep max of one arm biceps curls.

The conclusion: cycle your rep speed so that you can benefit from both types of exercising. This way you will be working on both - strength and muscle size.

Take around 3-4 sec. for the positive and the negative part of the slow reps and do 1 sec both ways for the fast reps.

## **Higher Levels Of Cholesterol Good For Training**

Based on studies, trainees who eat higher cholesterol diets gain more strength and muscle mass than those who don't.

For good sources of dietary cholesterol consider coconut oil and egg yolks.

Scientists recognize that hereditary factors play a major role for one's levels of blood cholesterol.

So, if you don't have high cholesterol occurrence in your family, eat dietary cholesterol. It is needed for the production of testosterone, it is essential for the brain tissue as well.

## The Importance Of Arginine Supplementation Before Workout

Did you know that Arginine, taken about 30 min. before workout increases Nitric Oxide (NO)? This in turn leads to dilation of the blood vessels. What follows is more blood gets into the muscle, and with more blood come more muscle building nutrients and oxygen.

The recommended dose of Arginine is 3 – 5 gr. 30 min to 1 hour before workout.

## Krill Oil? What is it?

Krill oil is similar to fish oil in that it contains a lot of omega-3 fatty acids. These were the kind that counteract high cholesterol levels and are important for the heart and brain functions.

Krill oil is derived from small, shrimp-like crustaceans, used for food by whales.

Why is also important to take enough omega-3's? Because contemporary diets overload our bodies with omega-6 fatty acids, thus causing imbalance between the omega-3 and omega-6 in favor of the omega-6 fats.

In most oils the ratio between these two is about 1:20. The ratio that's considered healthy is 1:4 to 1:2!

So, take your omega-3's every day, as you are taking enough of the omega-6 already.

## Lower Body Muscles And Appropriate Exercises

Researchers found that the two lower body exercises **squat** and **step-up** work the lower body muscles in a different way.

For example squats hit the gluteus maximus the hardest; gluteus medius is worked best by step-ups and rectus femoris (quadriceps) is trained the hardest by squats again.

So, in order to train the whole lower body you will have to cycle these two exercises.

## **Co Q10 – An Energy Booster**

I recently read about a study, conducted in the University of Iowa that says Coenzyme Q10 helped 20 people, who were diagnosed with chronic fatigue syndrome, to get rid of 90 percent of their symptoms.

Not only but Co Q10 also doubled their energy levels. The doses used in the study were 100 mg a day for a period of three months.

Co Q10 helps muscle cells convert oxygen into energy.

If this naturally occurring compound did that for people with chronic fatigue imagine what it would do for bodybuilders after an intense resistance workout.

## **Supplements And Knee Pain**

Do you know what the function of glucosamine and chondroitin is?

Glucosamine is the building material of connective tissues, and chondroitin act as a lubricant, so your joints don't rub against each other.

Researchers found that 79 percent of men who supplemented with glucosamine and chondroitin experienced decreased knee pain. The doses were 1,500 mg and 1,200 mg respectively.

## **How Much Vitamin C Should We Take?**

Researchers recently discovered that high doses of Vitamin C slow down the recovery process.

After intense running, athletes were given 1000mg of the vitamin daily. They reported loss in muscle strength for up to one week.

It turns out that 1000mg of Vitamin C daily may slow down the recovery process while 500mg daily speed it up.

Based on this and another recent study, researchers now recommend a dose of 500mg of Vitamin C daily for greater benefits.

## **Backward Walking Burns More Calories**

Researchers discovered that walking backward burns 25% more calories compared to forward walking. This is due to the faster pace of the steps of the backward walking.

Researchers also say that this type of walking increases the heart rate by 47% and the oxygen use by 78%, compared to normal (forward) walking.

From this I can conclude that the same holds true for the backward running, compared to normal running. I am not one to volunteer to run backwards, though...

## **Glycemic Index Changes In Baked Potatoes**

Did you know that potatoes have rather high Glycemic Index (GI). Baked potatoes have even higher GI, compared to raw.

Scientists found that when potatoes are refrigerated after thermal preparation, their GI decreases. Moreover, when reheated they still retain their low GI.

The take home message - if you like baked potatoes (even sweet potatoes)

don't eat them immediately after baking them. Toss them in the fridge for an hour or two and then eat them - cold or reheated.

## **HDL Cholesterol And Carbs**

The topic of this article is HDL. As we all know that's the good cholesterol.

When your blood work shows that HDL is lower than 40 that means you are in danger of heart disease. Ideally it should be over 60.

Researchers discovered that when increasing the carbohydrate consumption, HDL levels decrease.

So, if you are a heavy carb eater think again. Among some of the other negatives that high carb eating offers there is this one, too. The truth is you can't live without carbs, but you shouldn't over-eat them too. Be moderate – good for low body fat levels, good for your blood vessel, too.

## **Do You Throw Up After A Very Intense Workout?**

It hasn't happened to me but I know of a few people who would run to the locker room after several heavy sets of squats, and would throw up.

Why is that? Is it a sign of a good workout?

It turns out vomiting after a workout can be a sign of blood lactate build up. Lactate is a by-product of the anaerobic/glycolytic energy pathway.

Obviously you should choose a level of intensity that corresponds to your body's ability to effectively metabolize lactate. Slow down if your lactate threshold is not high enough.

## **Explosive Exercise Increases Power**

Study showed that explosive exercise (like hang clean) caused subjects to exert more power in their second exercise (squat in this study).

Scientists speculated that the effect is achieved through chemical changes, occurring in the muscle during the first (explosive) exercise, which cause more of the muscle fibers to contract in the following exercise.

## **When You Should Use A Training Belt And When You Shouldn't**

A research on spinal biomechanics showed that wearing a lifting belt doesn't decrease the possibility for back injury. That is why it is very important to train your core muscles as a complete package and not only the 6-pack (the rectus abdominis).

It is appropriate to wear a belt when doing heavy and maximal lifts. It will increase the core stability, allowing for better performance. However, you will not need your belt in regular training sessions.

## **Insulin Resistance And The Waist Circumference Correlation**

What is insulin resistance? In a few words if your body is often provoked, through high GI carbohydrates, to release high quantities of insulin, your tissues will eventually become insulin resistant. That is they will stop responding to insulin. This is the first step in developing diabetes type II.

Scientists discovered that fat build up in the middle section is a better predictor of insulin resistance than Body Mass Index (BMI), aerobic capacity or fat percentage.

The abdominal fat was measured as waist circumference.

## **Aminogen - The Hottest Ingredient In Protein Formulas**

I few supplement companies started adding Aminogen in their whey protein formulas. Aminogen is a natural protein digestive enzyme.

One recent double-blind placebo study demonstrated that Aminogen increased nitrogen retention by 32 % (nitrogen is what separates proteins from carbs and fats). It also increased the total amount of amino acids, absorbed in the muscle by 82%.

What does this mean? It means that if Aminogen is added to your protein formula, the possibilities for muscle gains are more solid with almost double the amino acids absorbed!

And you know well that amino acids are the muscle building blocks. When shopping for protein, look for Aminogen in the ingredients list on the nutrition facts label.

## **Foods Don't Contain What They Once Used To**

Facts came out this year to expose the shocking truth: fruit, vegetables, grains, meat and even milk contain significantly fewer vitamins, minerals and even protein compared to what the levels were 50 years ago.

One study demonstrated that the iron content in 15 different meats decreased with 47%, copper dropped 60%, and magnesium was about 10% lower.

## **Leucine – The Muscle Builder**

In a study training subjects were given placebo - only carbohydrate meal, only Leucine meal or carbohydrate and Leucine meal. Leucine is the main amino acid, responsible for the muscle building effect of protein.

Researchers found that the carbohydrate meal didn't produce any anabolic effect, the meal with Leucine had some anabolic effect on the skeletal muscle, but the meal with carbohydrates and Leucine had the greatest anabolic effect.



Conclusion – take some carbohydrates in your post-workout meal if you want to gain more muscle mass. Protein by itself will work some but it will do its job a lot better if combined with carbs.

## **The Lifting Belt – Good Or Not... Again?**

The debate continues... I wrote a while ago about the workouts with lifting belt.

Now there are some studies out there, which suggest that using a lifting belt in your heaviest sets may (what a word - “may” - - it “WILL” or it “WILL NOT”?!) help you increase your core strength, protect your spine, enhance your power.

The different studies found: 23% increase in the activity during heavy squats; 10% increase in the activity of the abdominal muscles; 10% increase in repetition speed while doing squats (more power); and decreased compression on the spinal discs (decreased chance for injury).

Again, use your lifting belt primarily in you heaviest sets that require core stability and more power. Such are squats, dead lifts, leg presses.

## **Rowing Or Biking? Which Is Better?**

In a recent study scientists discovered that when people exercise on a rowing machine, they burn 40 – 50 percent more fat, compared to exercising on the stationary bicycle.

Yes, sitting on the bike looks easier and you can watch the TV in front of you, but are you doing a lot to improve your cardio-vascular system, and are you doing enough for fat loss? No. Now it is even proven by science.

And why is that? Well, rowing is an exercise that involves a lot more muscle groups, compared to bicycling. Rowing works the whole body while stationary bike works mostly your lower body (quads and hamstrings).

## **Omega-3 Fats Treat Inflammation?**

Did you know that omega-3 fatty acids have anti-inflammatory properties, such as those of other non-steroidal anti-inflammatory non-prescription drugs?

What is the common thing between aspirin, ibuprofen and acetaminophen? They all inhibit the production of the inflammation-inducing enzyme Cyclooxygenase 2 (COX 2).

Well, the same is valid for omega-3. So, if you want to protect your body from inflammation, or fight with already existing such condition eat more omega-3 rich fish (like salmon, tuna), and take extra fish oil and flax seed oil.

## **Facts About Water intake**

Did you know that about 60% of the body is water? Muscles are comprised of water in a great percentage.

That's why when we get dehydrated our muscles look smaller. Not only that, but after only 2% water loss the ability to work hard drops with 15%.

It is important to remember that you should never wait until you feel thirsty. It is a well known fact that by the time you feel this way you are already dehydrated.

So, drink enough water daily. The absolute minimum should be about 10 glasses.

## **Benefits From Single Leg Training**

Single leg exercises, like for example single leg squat and leg press, are shown to develop muscles that to a great degree are not used, in comparison to when the same exercises are done the classical way – using both legs.

This type of leg exercise execution also helps improve the posture and from there the more efficient utilization of the muscles in the lower body.

## **Locking Out Or Not Locking Out Your Joints While Exercising?**

There are certain exercises, during which you should not lock your joints at the end of the rep.

Examples are squats and leg press. Locking out in these exercises might lead to overstretching of the connective tissues and consequent injuries.

Yet there are other exercises, where locking is required for maximizing the range of motion and for peaking in the contraction. Such exercises include triceps push-down and leg extensions.

Here are the exercises during which you should restrain from locking: squat, leg press, leg curl, bench press.

Following are some exercises that are safe for locking out: triceps push-down, leg extension, lat pull-down, biceps curl (standing).

## **The Difference Between White, Brown And Turbinado Sugar**

Someone told you that brown sugar is better than white... You might also know about turbinado sugar – the one they use in protein smoothies at places where athletes and health oriented people go to get their “healthy”, muscle building concoctions.

But what’s the difference between the different types of sugar? Is any of them better, safer?

White sugar is derived through processing of sugarcane syrup to sucrose and molasses. Sucrose is actually the white, table sugar we know. All the nutrients are stripped from it and can be found in the molasses.

Brown sugar is white sugar with part of the molasses added back. The darker the color the more of the molasses it has.

Turbinado sugar is the type that undergoes the least amount of processing. During the refining process only the molasses on the surface have been removed, leaving the rest where it belongs. In this sense turbinado sugar is the least unhealthy of all.

However, keep in mind that all the three types still contain the same amount of carbohydrates and subsequently calories per teaspoon.

My advice is stay away from any refined sugar, but if you have to have it pick the turbinado type.

## **Strength Increase – The Right Approach**

Scientists analyzed data from 177 studies to determine what the best approach for strength increase is. Then they published their findings in The Journal of Strength and Conditioning Research. Below is what they found:

- Untrained individuals will increase their strength and power if they use 60% of their one rep max weight, workout three times a week, and do 4 sets total for each muscle group
- Those who occasionally exercise will benefit from using weights at their 80% of the one rep max, train a muscle group twice a week, and perform 4 sets for a muscle group
- Experienced athletes do best with weights at 85% of their one rep max, train a muscle group twice a week, and do 8 sets per muscle group

Ultimately you should do whatever works best for your body characteristics and level of experience. Still, knowing what science says, and applying it to see how these findings work for you makes a lot of sense.

## **Another Way To Reduce Inflammation**

Almost every athlete has suffered some sort of injury at some point in his/her career.

It is a well know fact that the sooner the athlete takes measures to reduce and subsequently eliminate inflammation, the lesser the recovery time.

A new supplement that recently hit the market, now exhibits in studies strong anti-inflammatory effect. Its other capabilities were well known even before its effectiveness against inflammation was recognized.

They include: strong antioxidant properties and vasodilatation (widening of the blood vessels due to the stimulation of Nitric Oxide production).

Scientists found that when administered in 200-300mg doses, **Pycnogenol** reduces the levels of the COX1 and COX2 enzymes, which are strongly related to inflammation.

Considering its strong anti-oxidant activities (Pycnogenol is a strong mix of bioflavonoids), and its vasodilating properties, this supplement appears to be a valuable addition to the bodybuilder's supplementation.

But given the fact that it also reduces inflammation, if proven to really work in more independent studies, Pycnogenol will most likely be the next big hit in health promotion and healing for athletes.

## **Heaviest Exercises In The Beginning Or At The End - Does It Matter?**

As you might know squats are one of the heaviest and most challenging on the system exercises. Some people like to do them at the beginning of the workout, some leave them last, and yet some ignore them completely.

Researchers examined the first two groups to find out if there was any difference in their performance. That is if squats were done in the beginning of the workout or in the end.

They determined that if this exercise was left for the end of the workout, the athletes were able to perform far less repetitions than if the same exercise was first.

Building a great upper body and complete package is impossible without squats. Heavy squats develop strength and ultimately muscle mass.

If you want to have a well balanced physique, you have to do heavy squats – at least some times. When are you capable of lifting the heaviest? You know it...in the beginning of your training session.

## **Capsacin For Fat Loss**

Australian researchers recently found that if overweight people were given chilly peppers their insulin levels dropped by a third. Insulin is the hormone, which regulates blood sugar levels and can ultimately make us fat.

They suggest that this effect might be due to the eventual capabilities of Capsacin to improve the insulin-processing function of the liver.

There have also been suggestions that very hot food temporarily increases the body temperature, thus elevating the calorie expenditure.

Ultimately, adding hot sauce to our food might turn out to be beneficial for both athletes and enthusiasts on their quest for fat loss.

## **Aerobic Exercise And Colon Cancer**

Scientists recently found that doing aerobic exercises for 5 hours a week decreases the incidence of colon cancer with 13%. That's in comparison to sedentary individuals.

It is thought that the reason is cell division slow down in the colon. It is a well-known fact that cancer cells divide faster than normal cells... One more vote in favor of cardio activities.

## **What Is Ginkgo Biloba?**

Ginkgo biloba is known for its properties to increase blood flow to the brain, which helps improve memory and concentration. People use it also to deal with depression and headaches.

Ginkgo is most effective if it is standardized for minimum 24% flavone glycosides and minimum 6% terpene lactones.

The normal dose is 120mg taken in two equal doses a day. It also works in a single dose, but double the amount.

Other than its memory enhancing properties ginkgo is also an antioxidant, which makes it especially valuable for athletes. Not only do you improve your cognitive function but you get one more natural antioxidant to fight the free radicals, created through stress.

And what is an intense workout? It's stress of course. Does it contribute to the free radical increase? Absolutely!

### **Quicker Post-Workout Rehydration**

Not only do you provoke better anabolic response after an intense workout, but you also re-hydrate faster by drinking a carbohydrate/protein drink.

Scientists found that such drink helps you restore your water levels 40% faster compared to when you don't have any recovery drink after a workout, and 15% faster compared to only protein drink.

The study was done in the St. Cloud State University.

### **How To Avoid Quitting Before Reaching Your Fitness Goal**

Researchers from the University of Iowa found that focusing on the actions that lead to your fitness goal (fat-loss) and not on the actual goal helped more with sticking to it and not giving up.

They suggest breaking up the big goal into a list of actions that lead to it, and then making everything possible to follow this list one step (action) at a time.

## How Much Calcium Do We Actually Absorb?

The benefits from taking adequate doses of calcium are numerous, both for sedentary individuals and for athletes. Its bone formation properties as well as its effects on fat loss are well known today.

Taking a calcium pill of 500mg doesn't mean that 500mg get in your system actually. There is available calcium, but there is also something called "absorbable" calcium.

For example calcium carbonate and citrate are the two salts with the most absorbable calcium – 40% and 21% respectively.

The same holds true for most of the calcium containing foods. Milk and milk products have the highest levels of absorbable calcium followed by some dark leafy greens and calcium fortified foods.

There are some vegetables, which are well known for their high calcium content. However, they contain certain compounds, which bind to the calcium in them and render it not absorbable. Example: spinach – only 2% of its calcium reaches the blood stream.

Athletes, especially those involved in the sport of bodybuilding should be very considerate about these facts. The simple reason is the individuals, practicing this type of physical activity normally require higher levels of calcium due to their higher protein intake. Calcium is the mineral that the body uses to neutralize the protein.

## Liquid Omega-3 Vs. Gel Caps

Not only are the omega-3 benefits well pronounced in athletes, but also in just about anybody else. I've written many times about omega-3's and their benefits for lowering cholesterol levels, brain function, inflammation sites, etc.

Just read a study suggesting that emulsified (thick liquid) omega-3 oils have higher bioavailability than the conventional fish oil in gel caps. The difference – 71%!



The only emulsified omega-3 product that I know of at this time is Coromega. Their web site: [coromega.com](http://coromega.com).

If you're an athlete and haven't started taking fish oil yet, you better consider starting taking this healthy supplement soon. Without it your body repairs slower after heavy and intense workouts, also any eventual inflammation healing takes longer than what it would take if you were taking omega-3.

### **Omega-3's For Fat Loss**

Overweight female subjects were divided in two groups. The first group was put on a low-calorie diet and 2.8 g. of Omega-3 fatty acids. The second group took placebo instead of Omega-3's.

Three weeks into the study the group, taking the Omega-3's lost more body weight, compared to the placebo group. The subjects also decreased their hip circumference twice as much, compared to the controlled group.

The study was done recently in the Czech Republic. What else the researchers discovered was when checking the blood of the participants in the study, they noticed that the Omega-3 group exhibited increased fat oxidation and decreased fat synthesis.

Sources of Omega-3: Salmon, cod, herring, trout, fish oil caps.  
Minimum dose: 1-2g a day.

### **More Effective Pushup Exercise**

Scientists from New Zealand studied people who performed push-ups on a Swiss-ball instead on the floor. What they determined was that doing this exercise with this particular piece of equipment made the triceps work 30 percent more than the regular push-ups.

The reason is it takes a lot more work for the triceps to do all the stabilization work, which ultimately leads to involving more muscle fibers into the movement.

The bigger percentage of muscle recruited, the better the chances for strength and muscle growth.

## **Excessive Testosterone And The Consequences**

Researchers from Yale University found that abnormal levels of the male sex hormone testosterone cause damage to brain cells.

For this to happen, however, your blood levels of testosterone must be 10 times the normal levels or higher. This can be only achieved with the administration of external (exogenous) testosterone.

Quite the opposite, it turned out that estrogen – the female sex hormone protects brain cells.

I suppose athletes who are into natural bodybuilding needn't worry about their brains self-destructing.

## **Fast Or Slow Reps – Which Is Better?**

Scientists from the University of Connecticut performed a study to find out whether slow or fast speed for rep execution is more beneficial. This is what they found.

Performing the reps fast was superior in aspects like peak force, power, number of reps completed, and total volume.

Moreover, the participants in the study reported that when performing the reps with slower speed the effort put into each rep seemed a lot greater.

Based on this latest research you may consider performing each repetition with maximum speed. This will ensure increase in all of the above mentioned aspect.

## **Why Sugar-Loaded Drinks Make You Fat**

Researchers from the Penn State University made an interesting observation.

They determined that replacing the water drink with diet soda or regular, sugar-loaded soda during lunch doesn't diminish the amount of food being consumed.

In simpler words if you had a glass of water with your lunch meal you'd still eat as much as you would if you had diet or regular carbonated beverage.

This comes to show that since the amount of calories consumed is relatively the same you always end up consuming far more calories with the regular soda due to the sugar content in it.

On the flip side there is a large number of people, even in the bodybuilding and fitness world, who have gotten themselves in the habit of drinking diet soda thinking that this way they are consuming less of the food. Well, the observation of these scientists shows that not to be the case.

So, do your body a favor. Stick to regular water. It's the healthiest possible choice and it won't make you fat.

## **Eating Sugar Leads To More Sugar Cravings**

Here is an interesting experiment done by Australian researchers. What they did was they proved that when we eat more sugar-loaded snacks, we crave more of the sweet stuff at our next meal.

What they did was they chose two high in sugar bars – one of them containing protein and fiber, the other with almost no protein and fiber in it. However, the second one had the same calorie content as the first one, thus being higher in sugars.

The researchers determined that those who ate the bar with protein and fiber actually had 16 percent less sugar in their next meal, compared to those who ate the bar, almost entirely consisting of carbs.

This is favorable news for bodybuilders and fitness athletes as we always balance our meals with fair amounts of each of the three main nutrients – carbohydrates, proteins and fats.

That actually might be one of the many reasons why people with this type of nutrition habits and lifestyle are actually fitter than those who don't exercise and don't follow a sound meal plan.

## **Skipping Breakfast And Subsequent Metabolism Alterations**

Not eating breakfast can slow down your metabolism with 10%.

Considering that an average person burns about 1,500 calories a day at least, it is not difficult to estimate how much 10% is.

Imagine this. By decreasing your metabolic rate with that much you actually burn at least 150 calories less than what you would usually burn.

Having in mind that one pound of fat has 3,600 calories you either fail to burn a pound of fat approximately every 25 days or you gain a pound if you still keep your calorie intake the same during the rest of the day.

Suggestion: Dump 3 – 4 tbsp of quick oats in a bowl the night before, add fat free milk or water in the morning and microwave for one minute. Add a few frozen strawberries and a scoop of whey protein.

It takes 2 minutes to prepare and another 2 – 5 to eat.

## **Help Your Heart Rate Slow Down Faster After Intense Exercise**

It was recently established that if you want your heart rate to slow down faster after an exhaustive type of physical activity, you should lie down on your back instead of sitting upright. Studies showed that doing this helped the heart slow down 25% faster.

The scientists gave the following explanation: When the body is in a seated position most of the blood gathers in the muscles, which causes the heart to beat faster and the body to maintain slightly lower temperature.

But when the body is in a horizontal position the heart beats slower and the body temperature is higher, making the body produce more sweat. This in its turn helps the body cool faster, too.

## **Avoid Stretching Before Workout?**

Yes and no. It depends on what type of stretching you are thinking of.

If you have in mind the most well known, classic type of stretching, where you stretch to a certain degree and then hold for a certain number of seconds, that's the static stretching. It's the stretching you want to avoid before your weights training routine.

But if you thought dynamic stretches then you hit right on the spot.

Dynamic stretches are the type where you bring a muscle to a stretched position for a very short period of time, such as in arm and leg swings, rotations, etc. This is the type of stretching you should do before your workout as a part of the warming up routine.

As soon as you are finished with the training session, make sure you stretch the already trained muscles passively. Yes, I am talking about the type of stretching, which you should avoid upon beginning of your workout.

And why you should avoid it? Static stretching causes your muscles to relax, thus making them more prone to injuries. That is the main reason. You shouldn't fear injuries due to your muscles being relaxed once you're done with your workout because you are not going to do anything that might put your muscles in danger.

That's why you do static stretching at the end. And as a matter of fact you can and should do it in all throughout the day except right before weight training session.

## How Fast Do Our Muscles Grow

Guessing for the answer is actually what almost all of us do...

Including me until I read about the study, done by U.K. scientists, in which they discovered that it takes as little as 3 weeks to see noticeable muscle growth.

What happened was the researchers closely monitored people who did leg extensions for four sets of seven reps 3 times a week. They found that the athletes gained on average 0.2 percent muscle mass a day.

If you ask me, that's huge. Think about it for a moment. If you train certain muscle group 3 times a week that's 156 workouts a year. If this muscle group grew with 0.2 percent a day that makes for more than 30% increase. Now, tell me if you wouldn't like that?

Of course there is no such thing as constant and steady muscle growth, but still if you ask me I'd be content with even half of that increase in a single year.

In conclusion this study is another strong vote for the "train each muscle group 3 times a week - intense" concept, which is becoming more and more popular in the sport of bodybuilding.

## What Are You Losing - Fat Or Muscle?

You know what the difference is between weight loss and fat loss. The first one means you're losing weight – fat and muscle. The second one means you're losing fat, but keeping your muscles. And the second option is the one you should be aiming at.

But, how can you tell if you're losing both fat and muscle or mainly fat? There is a way. Before you start you need to know not only how much you weigh, but also how much you lift and for how many reps you can do in each of the basic, multi-joint moves.

Here is how it works. Let's take bench press for example. Say you weigh 200lb and you bench press 235lb for 10 reps.

Now, take the bench press number and divide it by your body weight. Write this down.

As you are losing body weight keep recording what weight you use to bench 10 times. To check if your weight loss comes mainly from fat loss or fat and muscle together, divide the 10 reps bench press weight by your most current body weight just like you did in the beginning. If this number is dropping – you are losing muscle tissue along with the fat.

This means you need to correct your meals and exercise program. In regards to the exercise you need to lift heavy weights to challenge the muscles, which in turn means they need to stay as big as they are in order to be able cope with this same weight the next time they are challenged with it.

### **Another Vote For Protein Shake Close To Workout Time**

You already know about the so called “metabolic window”. That’s the 2-hour period right after the workouts when your body assimilates nutrients twice as fast, compared to any other time during the day.

This is also the time when you are less susceptible to storing carbohydrates as fat.

In a recent study seventeen men were divided in to two groups – one group drank protein shakes immediately before and after the workout, the other group – 5 hours outside of workout time.

What the researchers discovered was after just ten weeks the group who had protein shakes on both sides of their workouts gained twice as much muscle, compared to those who had their shakes wide apart.

The conclusion: Drinking a fast-digestible protein shake should be a priority prior to your workout. This way you will end up using less of your own muscle proteins during an intense session, and more of the nutrients in your blood stream.

Also, down one protein shake right after workout to immediately stop the catabolic process, induced by the pain levels and the micro tears of the muscle fibers, and to start rebuilding the damaged tissues right away.

## **What Exactly Is Sugar Alcohol?**

We, bodybuilders, and in fact anybody, who understands the importance of proper nutrition, often avoid foods containing sugar. Some foods are sweetened with non-caloric sweeteners, some of them with sugar alcohols.

We know about the non-nutritive sweeteners, but what are sugar alcohols?

Sugar Alcohols (also known as polyols) are hydrogenated carbohydrates, whose structure resembles that of alcohols. That's where their name comes from.

The most common sugar alcohols are sorbitol, mannitol, maltitol, erithritol and xylitol. They are almost as sweet as table sugar at half the calories. The reason is they are poorly absorbed in the intestines.

That's the main reason why in higher quantities (30gr and more) they can cause stomach discomfort, bloating and diarrhea. Exception is only the erithritol, which is absorbed in the intestines but is excreted unchanged.

Sugar alcohols are usually added to sugar free foods to mask the strong aftertaste of non-caloric sweeteners. If a food is sugar free but it's sweetened with sugar alcohols, the sugar alcohols have to be listed on the nutrition facts label.

As a person who realizes the importance of moderating insulin levels, you should certainly avoid high glycemic carbohydrates as well as refined sugars.

If you have to use sweeteners go with erithritol if the others cause stomach discomfort. If you want to go absolutely calorie free go with the non-nutritive sweetener stevia.

## **The Latest On Read Meat – Eat Or Avoid**

This is like the fats and the belief that fat is the enemy back in the 80's and the early 90's. Now, I guess the same is going to happen with read meat.



We, bodybuilders know that red meat is what gives us the most strength and lets us put on muscle the fastest.

But for the last several years we have also known that red meat is hard for digestion, can sit in the guts for months and sometimes years, slowly releasing toxins in the body.

Studies in the latest years have also shown that red meats cause oxidative damage (free radicals) and inflammation processes in the body – two of the main causes of cancer.

Australian scientists now say that red meat, consumed even in higher quantities does not cause more inflammation and free radical damage. They suggest that the only the processed red meat like salami and hot dogs are a risk factor.

Why? It is due to all of the additives that are added to preserve taste, freshness, add color, etc.

We were let to believe we should stray away from consuming red meat too often. Although the latest findings of the Australian researchers, I still think that until more is known about the interactions of red meat with the human digestive system and ultimately the entire body we, the bodybuilders and other athletes are not cleared to go back to eating this type of meat every day or some times even twice a day.

My advice is to be on the safe side. Stick to eating fish and occasionally chicken (unless the chicken is the so called free range). For the extra boost in strength take your creatine monohydrate and wait for more studies on this topic.

## **How To Detect Lower Body Strength Imbalance**

I just read a very interesting article. It made me think of that for a minute. It was about favoring one leg or another while training quads.

I personally do both unilateral (one leg at a time) and simultaneous lifts. I incorporate those in my smith-machine squats and leg presses. And I can tell I still feel slight difference between the strength of my right and left leg.

For example if I start a unilateral exercise with my right leg the left leg usually struggles to complete the number of reps I performed with the right one. But if I start with my left leg I can complete the set with the exact same number of reps I did with the right leg without feeling any difference.

What researchers say is try this exercise and see if you have imbalance in the strength of your legs. Try this in your workout: Leap forward five times, using only one of your legs. The fifth time land on both feet. Repeat the same with the other leg. If the difference in the total distance is more than 10% then you have an imbalance.

In this case unilateral exercises will help you a lot. Just don't forget if you determine one of your legs is weaker than the other, start your exercise with the weaker leg and follow with the stronger for the same number of reps you were able to complete with the weaker. That's very important as it will give the weaker side a chance to catch up.

## **Exercising For Stronger Core**

That's right. Training your core means not moving a muscle in most cases.

Why is that? Because your core muscles are there to prevent your body from potentially damaging movements in the mid section. This way the core muscles protect your spine from injury.

Basically while every other muscle group in the body has to be trained with movements, the core can be strengthened with exercises like plank on a swiss ball, swiss ball knee tuck, glute-bridge.

Fact is stronger core muscles can decrease lower back pain with 30 percent. And adding swiss ball to your core exercises can make you four times more stable in the mid section. This is good not only for avoiding lower back problems, but also for improving body posture.

The conclusion - less possibility for injury and pain, and more aesthetic look.

## Caffeine And Soreness – How Do These Two Relate?

Soreness is an issue every bodybuilder and athlete has to deal with. The means are different – recovery techniques, pain relievers, etc.

In a study at the University of Georgia researchers found that caffeine dose (in a pill form) equal to two cups of coffee (around 200 mg) fights exercise induced soreness more successfully than pain relievers.

This is another vote for caffeine. Keep in mind, though that through making you sore your body is trying to tell you something - you need to pay more attention to the recovery. So, masking the soreness over time might lead to overtraining.

Another thing to keep in mind is, although all its benefits, caffeine is acidic to your system. And if you follow a high-protein diet you are already acidic any way. Factor that when opting for caffeine as a possible soreness suppressant.

## Processed Meats And Lung Disease Connection

Bodybuilders and athletes, who practice on a more professional level don't allow processed meats in their diets, but active (and of course sedentary) people with less knowledge about proper nutrition still haven't entirely excluded these from their daily menus.

Researchers from the Columbia University found that frequent consumption of cured meats can lead to lung disease known as COPD (chronic obstructive pulmonary disease).

What causes problems in this area is actually a preservative, added in processed meats. It's called **nitrites**.

It is speculated that nitrites produce reactive nitrogen chemicals, which cause lung damage, similar to the damage from emphysema.

Processed meats don't have a place in a healthy diet for at least one more reason - they are usually high in saturated fats.

# Recommended Resources That Will Help You Tremendously Increase The Effectiveness Of Your Training

## Fitness Nutrition Advisor – FitNA for IvanNikolov.com

If there is one thing that's probably undermining your successful training, regardless if it is for fat loss, muscle gain or simply maintenance, it is **MOST LIKELY** your inability to set up a goal supporting meal plan that is easy to follow.

What will **FitNA** do for you? It will:

- Determine your daily calorie intake for your chosen goal
- Determine your protein, carbohydrate and fat intake for each of your meals
- Generate a suggested meal plan, using foods from previously approved from me lists of healthy foods
- Let you edit and replace foods in your meals without changing the allotted calorie numbers for each of your meals
- Generate “take-out snack” recipes with your unique serving doses and protein:carb:fat ratios
- Generate a grocery list
- Let you print out your meal plans, take-out snack recipes and grocery list
- Let you even edit and replace with your own the suggested daily calories or protein:carb:fat ratios (if you are more advanced user and you want to have that extra control)

**FitNA** is the central part of the **FitNA** membership at IvanNikolov.com. What else is in there to work synergistically with the power of **FitNA**? The membership also includes:

- Carefully selected and proven to work muscle building programs
- Fat loss programs for beginners, experienced users as well as plateaued (stuck) users

- Videos library
- Learning center
- Resources (calculators, printable log sheets, bodybuilding and sports nutrition news feeds)

To learn more go to [Fitness Nutrition Advisor](#)

## Virtual Personal Training

Here is how I see it from the client's perspective:

The client decides that the only thing that stops him from achieving her goal is having a professional and experienced personal fitness trainer. She goes ahead and does some shopping around. She finds the trainer that will best suit her personal needs. His rate is **\$60/h.** with the purchase of a package of ten sessions - **approximately a month worth of one-on-one training.**

Or...

She knows that she is disciplined enough and will follow professional guidance without the real need for “babysitting”. She also knows that she can not afford a local personal trainer, even with their cheapest rates. She then goes online and searches for a virtual personal training program, which is provided by an **accomplished athlete and fitness coach.**

Which scenario do you personally like more?

See, nowadays the existing technology allows for expensive one-on-one training to be 100% replaced by virtual (online) training.

I really start to wonder how people willingly agree to pay me such large amounts of money for one-on-one training (to see my at the gym), when they could get basically the same service (and in fact a lot more... ..remember... technology) for a fraction of what they usually pay.

Doesn't this make you think, too?

If you belong to the group of the self-conscious, success-driven and disciplined people, and you consider, or have considered in the past to hire a personal trainer, you may want to find out more about my [VIRTUAL PERSONAL COACHING](#) program.

## About Ivan

Ivan Nikolov was born in Bulgaria, East Europe. He moved in the United States when he was 28. Since then Ivan has been continually working on bettering his physique, as well as personality. In just a few short years he managed to establish himself as one of the top natural bodybuilding athletes, while competing for the prestigious Musclemenia World contests. He has been often referred to as a role model and an inspiration for all those, who seek the way to improve their physiques through living a healthy lifestyle.

Ivan has competed in many national and international contests. He has consistently placed among the top five natural athletes in his class in all his international shows. His best achievement was his overall win of the NPC Tampa Bay Classic in 2004, while competing with non-tested athletes.

Ivan has been featured in many online and offline publications. His articles on exercise and sports nutrition appear in numerous web sites around the globe. He has been photographed by some of the best photographers - masters of the representation of male's physique. Among them Pat Lee, J.D. Kirkpatrick, Impact Photography, Charles Worthington. Ivan's photographs have appeared in EMO, Best of Men's Workout (published only once a year), Natural Muscle, Olymp, Olympian's News. He was featured as Mr. Superfit in the October's issue of Men's Exercise.

In 2004 Ivan took part as an extra in the Hollywood production "The Manchurian Candidate", featuring Denzel Washington and Meryl Streep. The same year Ivan was invited to participate in another project, showcasing 5 up and coming bodybuilders. The project became popular by the name Prime Cuts: Volume One.

Ivan holds Masters Degree in Industrial Management, as well as Bodybuilding Trainer and Massage and Chinese Remedial Gymnastics certifications from the Bulgarian National Sports Academy.

Ivan's most recent project is [FitNA](#) - a fitness nutrition software program, which is available to members of his web site IvanNikolov.com. [FitNA](#) is a unique tool, developed especially with the bodybuilding and fitness enthusiast's needs in mind. Its main features are a customized weekly menu builder and a grocery list generator. All the calculations are based on the unique fitness profile of the individual as well as his/her unique fitness goal.