

Answers to Frequently Asked Questions on abcbodybuilding.com

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Introduction

Creating an article for frequently asked questions on abcbodybuilding.com has been suggested many times on this site. Such an FAQ would hopefully get members quickly caught up on the fundamentals of bodybuilding, and get them gains in the weight room that much faster.

Because there are so many questions to be answered, it would be almost impossible for a single person, or even a few, to compose and answer all the questions that would need to be addressed in this FAQ. Moreover, as new evidence arises, this FAQ will need to be modified and updated.

Thus, the writers of JHR thought it would be much more effective if we worked together as a cooperative unit to create a FAQ for ABC.

With the help of the educated members on this site, we have worked together to compose a questions and answer article for Frequently Asked Questions on abcbodybuilding.com.

Because the methods suggested on abcbodybuilding.com are cutting edge, and based on the latest scientific experiments, we believe this FAQ will help both the in-experienced, and the more educated and experienced bodybuilder. Therefore, members just arriving at this site, whether they be experienced or in-experienced athletes, would benefit from studying this article.

BASIC BODYBUILDING TERMINOLOGY

What the Heck is a "ZMA"? And what does a "1RM" and "EFA" Mean?

These are all the commonly used acronyms on this site (or bodybuilding in general). Additional examples include (click on the links in blue for additional information):

%BF: [Body fat percentage](#)

1RM: 1 rep max.

BB: barbell

BCAA: [branched chain amino acids](#)

BMI: body mass index

BMR: basal metabolic rate

BP: [bench press](#)

CEE: [creatine ethyl ester](#)

CHO: carbohydrate
DB: dumbbell
DL: [deadlift](#)
DOMS: delayed onset muscle soreness
EAA: [essential amino acids](#)
EFA: [essential fatty acids](#)
GLV: green leafy vegetables
GH: [growth hormone](#)
HGH: [human growth hormone](#)
HIIT: High intensity interval training
HIT: high intensity training
HR: heart rate
HST: hypertrophy specific training
GVT: German volume training
PWO: post workout
RDL: romanian deadlift
RHR: Resting heart rate
ROM: range of motion
SLDL: [straight leg deadlift](#)
TUT: time under tension
VO2MAX: maximal oxygen uptake
ZMA: [Zinc Magnesium Aspartate](#)

What does it Mean to "Cut" or "Bulk?"

Going on a "cut" refers to doing a program which is designed to increase fat loss, while minimizing, or slightly increasing muscle mass. Going on a bulk refers to doing a program which is designed to increase muscle mass, while minimizing, or slightly losing fat.

Sub categories are "clean" and "dirty" bulks. Clean bulks involve consuming calories slightly above maintenance, and consuming foods you would typically consume on a cutting diet, such as oatmeal, with the goal being adding mass, albeit, at a slower rate, while minimizing fat gain. A dirty bulk involves consuming a greater amount of calories, and consuming foods which are more conducive to muscle growth but, also tend to increase fat gain (i.e. higher sugar content, and more saturated fats).

What does it mean to be "Shredded" or "Swole?"

Words such as "shredded," "ripped," "cut," etc. all refer to having a low body fat percentage. This is in particular reference to bodybuilders with a low body fat percentage, and a greater expression of muscle mass than the normal population.

Sayings such as you are looking "swole(n)," "huge", "massive", etc. all refer to an athlete expressing a very impressive amount of muscular hypertrophy (muscle size).

Sometimes, body builders even say that other body builders look "disgusting" or "sick" or "gaunt!" But in the bodybuilding world, this is a good thing! It just means you are getting closer to your goal to becoming a human anatomy chart!

What is JHR?

The Journal of Hyperplasia Research (JHR) is the scientific online publication of abcbodybuilding.com. This journal is composed by credentialed scientists, and contains over 300 articles in its database. Best of all, JHR is available on this very site for FREE. Click [Here](#) for the link to the JHR main page.

You should also be able to find it whenever you come to the site by clicking on the link bar a few inches from the top of the page. You'll see "Journal" wedged between "Forums" and "Lay Journal". The articles are available in standard online format and printer friendly PDF format. There is also a less technical version called the "Laymans JHR" that is available. Click [Here](#) to access Layman's JHR.

JHR was formerly known as "Beyond Failure Magazine" then, "HYPERplasia Magazine", and finally, JHR. Click [Here](#) for information on the transition to HYPERplasia the Magazine, and [Here](#) for more information on the transition to JHR. If you are new to this website or bodybuilding, we recommend beginning with the 1st issue (not technical, yet foundational information) and work your way up from there. You will also want to read the articles composed in layman's JHR. However, if you are looking for certain questions in particular, by clicking on the drop down buttons up above, you can find all of the articles from JHR sorted into articles related to: workouts, nutrition, and anatomy.

What is a Cheat Day or Meal?

This is a meal that doesn't normally fit into your diet. I.e.: pizza on a cut.

What is the Glycemic Index (GI)?

The glycemic index measures how much your blood sugar levels increase within 2-3 hours after consuming a meal. Insulin is the hormone that regulates blood glucose levels. It increases in response to high blood glucose, and stores it. Having low GI carbs can limit insulin production, while high GI carbohydrates increase insulin levels to a greater extent. Below is a ranking based on GI scores:

- Low glycemic carbohydrates – a score of 55 or less
- Moderate GI carbs – a score between 56 and 69
- High GI carbs – a score of 70 or greater

Bodybuilders consume low to moderate Gi carbs such as oatmeal, and wheat bread, most of the day, to minimize fat gain. High glycemic carbs, such as sugars, are typically reserved for post weight training, as fat gain at this time is virtually impossible.

What is Insulin Sensitivity?

While insulin has many functions, the primary focus of studies is on its effects on carbohydrate metabolism.

When you consume carbohydrates, blood glucose rises in the blood stream. You have endocrine cells in your pancreas, called the islets of langerhans. In here, are several

endocrine cells (cells that release hormones). One of these is called beta cells, which release insulin in response to glucose in the blood stream.

Insulin then travels in the blood stream, to its receptor, and starts a cascade of events that leads to the translocation of glut-4 proteins to the plasma membrane. GLUT-4 proteins are glucose carrier molecules stimulated by exercise, insulin, and hypoxia. When translocated to the plasma membrane, they facilitate the transport of glucose into the cell through facilitated diffusion (an energy independent process).

So that is how insulin works in a nut shell.

Now that you understand how it works, you can understand what insulin resistance means.

Insulin Resistance can be defined as a decreased capacity of target tissues to respond to insulin, leading to decreased insulin stimulated-functions, such as glucose disposal rates.

So if you have relatively higher insulin sensitivity, this means that when you consume carbohydrates, you will need a smaller amount of insulin to take in carbohydrates into your cell to be used for energy. Whereas, if you are more insulin resistant, you would need more insulin in response to the same amount of carbohydrates, because insulin's capacity to promote glucose storage is not as potent. So greater insulin sensitivity will increase your energy in the gym, because you can use glucose more readily.

Keeping insulin levels lower is also great, because studies indicate it can promote several adverse side effects, including fat gain.

A few great ways to increase insulin sensitivity is to only have high glycemic carbs post workout, to have a diet high in fiber, consume omega 3 fatty acids, and to exercise.

Soon, Gabriel and Jacob Wilson will publish an FAQ on insulin sensitivity in JHR. So keep an eye out!

What is PCF?

Protein, carbohydrates, and fats (PCF) refers to your distribution of these three macronutrients (nutrients needed in large amounts).

A typical bodybuilding regiment uses a 40/30/30 ratio. But this can vary much, depending on your goals, dietary program, and sport. For instance, athletes who are primarily concerned with performance, rather than body composition, will want to increase their proportion of carbohydrates (often to 60%). However, for a novice bodybuilder, this ratio is a solid foundation.

What is Lean Body Mass?

Lean body mass is the amount one would weigh stripped of all excess fat on their body. It also includes bone, mineral, and water content.

How can I calculate Lean Body Mass?

There are multiple ways but the most realistic way (and cost effective) is body fat calipers. Refer to the following article for more information, [Body Fat Testing Guide](#).

What is Anabolism and Catabolism?

Anabolic/Anabolism- The building of tissues, such as muscle

Catabolic/Catabolism- The degradation of tissues, such as muscle

DIETING VARIABLES

What is a Carbohydrate?

A carbohydrate, also known as a 'carb' is a nutrient composed of three molecules: carbon, hydrogen, and oxygen (CHO). Carbohydrates are the body's primary source of fuel during high intensity exercise (i.e. weight lifting and sprinting); therefore, consuming carbohydrates is vital for performance. A carb can come in the form of sugars, starches, and fibers. Sugars include table sugar, fructose sugar, and lactose sugar found in milk. Predominantly starchy carbs include oatmeal, potatoes, and pasta. While fibers are particularly prevalent in vegetables.

What Kind of carbs should I be Eating at Certain Times of the Day?

This depends on your diet and body type, but there are several well established key times to eat carbohydrates.

Key Times: You should have most of your carbs during breakfast, pre-workout, and the post workout shake (post workout meal would be preferable but again, this is diet dependant). At these times, you are most likely to use the carbs for energy, or to store them as glycogen (the storage form of glucose) for later energy use. Whereas, at other times during the day, the probability of fat gain is greater.

Cutting: Same as above. Here you'll want to replace some of your carbs with some leafy green vegetables to help drop calories.

Bulking: Someone with a slow metabolism may follow the same carb guidelines as those above while someone with a fast metabolism could get away with carbs almost every meal.

At night: Studies indicate that insulin sensitivity is lower at night. Therefore, bodybuilders often taper (lower) carbohydrates later on in the day. A good rule of

thumb is to taper carbs about 4 hours prior to sleeping. For those that work “grave yard shifts” insulin sensitivity will not necessarily be lower at night. This is why we advise tapering it 4 hours prior to *sleeping*, rather than at 8 o'clock at night. So if you typically go to bed at 8 o'clock in the morning, then taper carbs at 4 o'clock in the morning and on. An exception would be if you workout late at night. Typically, after a workout, you should consume carbohydrates—even late at night.

Generally you want your carbs to be High GI *only* in your post weight workout shake. At other times you will want to opt for low to moderate GI alternatives (notice we said moderate..not all your meals have to be oatmeal). Higher GI foods replenish muscle glycogen to a greater extent, so you may want to consume these in your pre workout/post workout meals.

An exception to this would be on a dirty bulk. During which, you may opt to consume higher glycemic carbs during the day. This would be for two primary reasons:

- 1.) To increase muscle growth and energy in the gym
- 2.) To consume more calories. Higher glycemic carbs are typically more palatable (tastier), and easier to consume than lower glycemic carbs. So when you are having a difficult time consuming enough calories to grow, having these types of carbohydrates may help. But we caution that “dirty bulking” should be monitored closely for fat gain, and also be short (4-8 weeks) for health purposes.

Good examples of low-moderate glycemic carbs include:

Any Oats. Instant can be used (this is a moderate GI carb) but old fashioned rolled oats would be more conducive to staying lean (this is a low GI carb). And we are not referring to granola bars or that sort of thing; these are often loaded with sugar content, and are highly refined (low in fiber, vitamins, minerals, etc.).

Brown Rice

Whole Wheat Pasta

Most potatoes

Whole Wheat Bread

Vegetables

Fruits (in moderation - do not make a majority of your calories from fruit. If you are to consume fruit have it earlier in the day)

For more quality foods to consume, refer to the [Bodybuilders Grocery List](#).

What is Protein?

Proteins are nutrients that your bodies use for growth of muscles, and virtually all organs and tissues in your body. Protein is comprised of many smaller molecules, called amino acids (CHON).

What is an Amino Acid?

An amino acid is a small molecule that makes up a protein. There are two types of amino acids in the diet: essential and non essential amino acids.

What is a Non Essential Amino Acid?

A non essential amino acid is an amino acid which the body can produce itself or create by dismantling other amino acids and rearranging the pieces.

What is an Essential Amino Acid? And how Should I use Them?

An essential amino acid is one that the body must obtain through the diet. Different sources of protein hold different amounts of amino acids.

You should especially consume essential amino acids pre and post workout. Results indicate that muscle growth can be 300% greater if this is done! Refer to the following link for more information, [Here](#).

What are Fats, and are Fats Bad?

Fat is often given a bad rap. However, it has many vital purposes. These include:

1. Phospholipid structure
2. Cell membrane structure
3. Storage of fat soluble vitamins
4. Production of hormones
5. Storage form of energy (adipose tissue)
6. Supply of energy through beta oxidation.

Not all fats are bad, in fact when trying to gain muscle, fats are the most effective way to get your calories in the surplus with supplying double the energy than protein and carbohydrates.

What Types of Fats should I Consume?

Essential fatty acids are a clear must; particular, omega 3 fats. These types of fats are called essential because your body needs them, but cannot produce them, thus, they must be consumed through diet. Fish are great sources of omega 3 fats. For more information, refer to, [Essential Fatty Acids - An In Depth Analysis](#).

Saturated fats, found in meats, oils, and other products, are vital for the production of anabolic hormones such as testosterone and growth hormone. But they can induce side effects such as decreased insulin sensitivity, increased cholesterol, and fat gain. Thus, the typical recommendation is to keep this to no more than 10% of dietary consumption; though, elite athletes may make some modifications to this, depending

on their goals and program. However, for a novice, following this guideline is a solid foundation for health and growth.

Monounsaturated fats, such as those found in peanut oil, olive oil, and avocados, also increase anabolic hormones, and expedite recovery through various mechanisms. Olive oil in particular has been found to improve markers of health, such as cardiovascular health. Having a tablespoon of olive oil per day would be advantageous.

How Much Water should I Drink?

We advise that an athlete consume 4-6 liters of water per day, minimum, not including pre, during, and post workout water consumption.

Pre-workout, you should sip on 500 ml of water, 30 minutes prior to your workout. During your workout, we recommended 200-400 ml of water every 15 minutes for ample hydration.

Post workout, we advise consuming a 92% water solution, mixed with protein, carbohydrates, and your other supplements.

For more information on water, read [Effect of Plasma Volume on Myofibril Hydration, Nutrient Delivery, and Athletic Performance](#).

For conversion calculations on terms such as liters and milliliters (ml) refer to, [Dextrose, Maltodextrin, and Sodium an In Depth Analysis](#).

Basically, a liter (1000 ml) of water is a very tall cup of water. While the typical size of a water bottle is around 500 ml.

I hear there are different kinds of protein, but I thought protein was protein, what's the deal?

Absolutely not!

Different sources of protein should be consumed at different times of the day. Further, there are poor, and quality sources.

Egg whites and whey protein have the greatest bioavailability, meaning for equal amounts of protein they will stimulate the most muscle protein synthesis compared to another source. Some key protein tips are:

- Whey protein: Fast digestion and high in Leucine.
- Casein protein: Slow digesting protein that coagulates in the stomach and is slowly released into the blood stream.
- Soy protein: Moderately fast digestion but extremely low in leucine. If you eat soy then eat about 30% more grams of protein than you normally would; or, add additional leucine.

Typically, you want to consume fast digesting proteins at these times: breakfast and post workout. Whereas, slow digesting proteins such as casein should be consumed

before bed. Other meals should consist primarily of fast, or moderate digesting proteins (chicken, shrimp, etc.).

How much protein should I have?

Current evidence indicates that you should have at least 1 gram per pound of body weight. So a 200 pound man should consume 200 grams of protein daily.

I still have so many protein questions!!!! How can I learn more?

Read our article on ABC here, [The Ultimate Protein Guide!](#) and our peer reviewed publication here, [Contemporary issues in protein requirements and consumption for resistance trained athletes.](#)

I am always hungry! Help!

Gabriel Wilson, the Vice President of abcbodybuilding.com has done extensive research on hunger regulation. For great tips on regulating hunger, read the following article, [An Investigation of the Satiety Mechanism: A Research Initiative.](#)

Summary tips are given at the bottom of the article.

Should I be avoiding sugar? Does the body need a certain amount or none at all?

Besides fruit sugar, you should typically limit your sugar intake to post weight workout nutrition.

Is Creatine better than Protein?

They are 2 completely different things. Both can be consumed, and will enhance growth and performance. Refer to the questions and answers in here on creatine and protein for more information.

Do you have any tasty, health, novel recipes I can try?

We have an entire forum on our website dedicated to answering this question. It is called the [bodybuilding recipe forum.](#)

Start by reading the following threads in here, [The Ultimate ABC Cutting Cook book!](#) and [Body Builder's Grocery List](#).

Can I have protein bars?

Protein bars can be stored in your car, in case of an emergency, and you absolutely need food. It is definitely better to have a protein bar, than to starve! For this, you can purchase [Champion Nutrition Snac Bars](#).

However, protein bars are not optimal nutrition, and should not be part of an everyday diet.

We have created several healthy alternatives in our recipe section, which can be consumed daily. Here are a few you can try out:

[Venom Protein Bars](#)

[Champion Nutrition Oatmeal Bread](#)

[Sucramdw's Protein Bars](#)

You can find additional recipes in our recipe forum, and we also suggest experimenting yourself! And if you find a good recipe, please share it with us.

How many calories should I eat daily?

This depends entirely on your goals and metabolism. The 13-week diet gives excellent formulas on how to determine your caloric needs. Refer to the following article for more information, [13 Weeks To Hardcore Fat Burning - The Diet](#).

What is fiber, and how much should I consume per day?

Fibers are defined as non-digestible carbohydrates. They are high in plants, and readily found in vegetables, and grains such as oatmeal. Fiber has many beneficial attributes, including increasing satiety (decreasing hunger), increasing insulin sensitivity, increasing fat loss, among other benefits.

Results indicate that you should consume 25-40 grams of fiber daily. Consuming an excess of 50 grams of fiber daily, can cause side effects, including decreased nutrient absorption. If you are not used to consuming large amounts of fiber, we strongly advise slowly increasing your intake, to allow your body to accommodate.

For more information on fiber, refer to, [Fiber Dynamics Part I](#) and [Fiber Dynamics Part II](#).

TRAINING VARIABLES

Should I start off bulking or cutting first?

A beginner will experience immense muscularity gains when they first begin proper resistance training (proper being a scientifically based routine). It is generally

advised to go on a clean bulk in this period because it maximizes muscular gains that are harder to make later on in a bodybuilding career. It is also possible to lower your body fat % by clean bulking as a beginner, due to the immense shift in your body's nutrient partitioning that it will undergo after the first few workouts. So in this case, we advise eating a few hundred calories above maintenance. The primary changes made will be in the quality of the foods you eat.

But if you feel your weight is in excess, or just "want to get shredded" then there is nothing wrong with that. Bodybuilding is a life time sport, not something you do for 1, 2, or even 3 years and give up; so a few months is just a blink of an eye, really.

If I am bulking, should I still do cardio?

Yes, even if only once a week for 20-30 minutes at a moderate intensity. This will help maintain cardiovascular adaptations, which are vital for health, and recovery; further, when you finally cut you won't have to waste time building up enough endurance to do a good cardio session.

With that said bulking is about a calorie excess, you can't spend too much calories on doing cardio. So at most, 2-3 sessions of 20-30 minutes per week should be more than enough. HIIT can also be performed on a bulk if you wish and a great way to achieve leg hypertrophy. HIIT is described later in this article under a question about optimal cardio intensities.

Why should I take days off between workouts?

Rest is just as important as working out itself. Often, a beginner can make great gains by having more rest days than workout days - but as you progress a higher amount of workout days will be needed to a degree. Your body recovers, and grows, when it is resting so get plenty of it!

This is mainly individual though and depends on your current diet whether bulking, cutting or maintaining. On a bulk you can generally do more in terms of days working out then you can when cutting due to the differences in calories.

Finally, we suggest experimentation with what works best for you - keep logs of various splits you undertake and start looking at trends that occur.

Should I do cardio before or after my workouts?

Optimally no; rather, you should separate your cardio and weight lifting sessions by consuming several meals between them. However, if you do not have time to do cardio anywhere else and wish to cut then some low intensity cardio would be beneficial. Because you want to optimize performance and energy in the weight room, you will want to perform cardio after your workout.

If I train like twice a day everyday for like 3 hours a session will I grow to be big and huge?

As indicated previously, how much you train really depends on your training experience. For a novice, there is absolutely no reason to exceed 1 hour in training duration.

For the elite athlete, doing a marathon in the weight room by training 3 hours per session, is also inadvisable. Results strongly suggest that distributing your practice more will result in greater strength and hypertrophy gains. For instance, if you were to do 2 workouts, 1 hour each, compared to 1 workout, for 2 hours, you would get greater results from the 2 workout sessions. Likewise, if you were to train 2 times per week, for 2 hours total, instead of doing one monster workout for 2-3 hours, you would get greater results from training more frequently. For more information on optimal practice distribution, refer to [Specificity Part VI](#).

Evidence indicates that the optimal workout duration for weight lifting is 60-90 minutes in duration; some elite athletes may be able to extend this to 2 hours. But again, if your practice time can be distributed more, results will be greater. Refer to [Diurnal](#) for more information.

Are free weights better than machines?

As a novice athlete, you want to optimize workout efficiency. Therefore, you want to choose exercises that will activate the most muscle tissue, and metabolize the greatest amount of calories per exercise. Thus, novice athletes should primarily perform free weight, compound movements such as bench press, dead lifts, squats, and bent over rows; so long as they perform them safely, and with correct technique. This can be done by following the tips in our exercise section, asking questions in our forums, and having an experienced athlete, or credentialed strength trainer assist you. Further, lifting with lighter weights until you learn correct form would be wise.

For the advanced athlete, this question becomes difficult. Typically, free weights result in greater muscle mass gains than machines because they work in a natural range of motion which requires stabilization by the muscles used, and also, your capacity to lift heavier weights is greater with free weights; whereas, elite athletes often max out machines, and therefore, are limited with how much they can grow with them.

There are certain machines which are fantastic. Typically, these machines allow you to lift a great deal of weight, which many athletes can never max out. These machines include the leg press, free weight trap and bench machines, among others.

On the other hand, cable equipment and other machines are very convenient way to perform isolation exercises, a different angle of the same exercise, shocks or just save time from loading/unloading a bar. An example is most people get enough trap work from deadlifts/rows but might throw in 2-3 sets of machine shrugs just for a bit of direct stimulus. If a person's delts are lagging they might like the feel of a certain shoulder press machine and then use that after their free weight presses. If a person is not really concentrating on their biceps but wishes to do some shocks then for

convenience they could use a stacked machine that would allow drop sets to be easily done.

Overall machines have a purpose, but a majority of time should be spent on free weights with some cable movements. However, as you advance in this sport, you can afford to spend more and more time on machines. But a relatively greater ratio of free weight work will still need to be employed.

I feel horrible! Should I take a month off?

Results indicate that acute (<4 weeks) and chronic (>4 weeks) of time off can ruin physical conditioning. In order to dissipate fatigue caused by training, but maintain training induced adaptations, a taper should be used. This involves systematically decreasing training load, in order to facilitate a fitness peak. Read our tapering series [Here](#) for more information.

I've been told to run in the morning on an empty stomach, will this help me metabolize fat?

This is a controversial topic. You will have greater muscle loss by performing cardio on an empty stomach; however, fat loss will also be greater. Unfortunately, there are no experiments which have determined exactly how much muscle loss, or fat loss will change by performing cardio in the morning, compared to another time during the day. As a novice athlete, we advise that you perform cardio after a meal; there is no reason at this stage to do such potentially risky, and muscle wasting protocol. If you do decide to do this contrary to our advice, than we strongly advise consuming essential amino acids and glutamine prior to your workout, to decrease muscle loss.

What is Periodization?

Organizing your workout design to achieve specific goals. Refer to these articles for more information, [How do I use Periodization?](#)

What are compound lifts?

These are any movements that require using more than one joint to perform the exercise (i.e. you must flex your knee and hip joints, during squats, making this a compound movement).

How do I learn about more exercises, and how to do exercises like squats, and dead lifts?

We have one of the top exercise databases in existence. Refer to our exercise section here, [Animated Exercises](#), [Slide Show Exercises](#).

How much Sleep do I need?

This is highly individual. The basic outlines for good sleep is:

- 1) Have a good sleep environment with a comfortable temperature, no external distractions like a leaking tap and a nice bed
- 2) Your natural circadian rhythms will dictate when you will sleep/wake up - and these are the best times to go by. So listen to your body when it is telling you to sleep! Some people sleep later or earlier in the night for shorter or longer times..there is nothing wrong with that.

Generally 8 hours is needed for most people

Results indicate that taking a short 30-45 minute nap during the day can also facilitate recovery.

For more information on sleep, refer to the 3 part Z-factor series [Here](#).

What is better for fat metabolism: HIIT or Moderate Intensity cardio?

First, to define our terms, HIIT (High intensity interval training) consists of alternating bouts of sprints, and jogging. While moderate intensity cardio is typically classified as cardio between 50-70% vo2 max.

Through extensive research on this topic, we have determined that cardio performed at 65% of VO2 max will optimize total fat oxidation. Performing a high intensity cardio session before a moderate intensity cardio session, may further augment this process. For instance, you may perform a 10-20 minute HIIT routine, followed by a 30-60 minute moderate intensity routine. For more information on this, and how to calculate your VO2 max, click [Here](#).

Do you have any routines for advanced athletes?

Absolutely! Click [here](#) to read about them.

All this information on diet and training is great! But can you give me some information on how to put this all together for a cutting and bulking routine?

Sure! We have written numerous articles which are easy to follow, and will help you achieve your goals fast and efficiently. Go here for more information, [I want to metabolize fat and gain muscle...help!](#)

SUPPLEMENTS

I want to get serious with my bodybuilding, so what kind of supplements should I look for, and what should I avoid?

Serious with bodybuilding would mean getting a serious diet. Therefore, before investing money into supplements, we strongly advise learning correct dieting and training principles; otherwise, your money will go to waste. Supplements are only a part of the equation. Some good supplements are:

Whey protein powder
Multivitamin, mineral, and anti-oxidant formulas
Calcium
ZMA (Zinc/Magnesium/B6 pre sleep formula)
Vitamin C
Fish Oil
Creatine
Glutamine
HMB
Branch chain amino acid (BCAA) powder
Essential amino acids
Vitamin A
Vitamin E

Among others. For information on these supplements refer to our Nutrition article section [Here](#) and our Store [Here](#).

What is HMB?

Beta-hydroxy-beta-methyl-butyrate (HMB) is a metabolite of the essential amino acid leucine. It is purported to be an anti-catabolic agent.

Fellow writers of JHR and credentialed scientists, Gabriel and Jacob Wilson, have done extensive research on this supplement, and currently have a paper under review in a refereed journal. Here is a summary of their suggestions.

1. Countless studies show there are no side effects
2. There are actually health benefits including various markers of heart related disease. It decreases blood pressure, and cholesterol and LDL cholesterol; but current evidence suggests this is only if you have hypercholesterolemia.
3. Current evidence suggests taking 3 grams per day, spread into 3 dosages. But there are only 2 studies that have tested taking more; neither found positive results, but with certain variables being manipulated, more may be advantageous. Some athletes take 6 grams per day.
4. No studies have tested the effects of timing relative to exercise on HMB. Gabriel and Jacob are doing it right now at FSU. It is hypothesized that pre-workout may be the best time to take HMB.
5. 1 gram of HMB peaks after 2-3 hours of ingestion; 3 grams peak in 1 hour. Its half life is 2.5 hours. Therefore, you should take it throughout the day.

What is Whey Protein?

Whey is a fast digesting source of protein, great for taking after a workout and in the morning. Click [Here](#) for more information.

What is Glutamine?

Glutamine is an amino acid that decreases catabolism; increases muscle recovery, and strengthens the immune system. It is the most abundant form of amino acid in the body but is quickly depleted after a strenuous workout. Therefore, supplementation with glutamine is beneficial for athletes.

If you are on a very tight budget, you should have glutamine at least post-exercise. Otherwise, we recommend having it a minimum of 3 times a day: in the morning, post exercise, and pre-sleep. Pre-exercise would be another time to implement this conditionally essential amino. Other than that, there is no particular portion in the day for glutamine supplementation; one time is as good as another. In states of stress, such as sickness and overtraining, or if you feel you are nearing overtraining, you may want to double your dosage, depending on your previous consumption; regardless, definitely make a substantial increase in your glutamine intake. Lastly, the majority of scientific authorities recommend 5 grams of glutamine per serving.

For more information on Glutamine, Click [Here](#).

What is Creatine?

Creatine is a naturally occurring substance in the body and is mostly stored in muscle. Creatine can be thought of as a high power fuel used for energy during high intensity exercise (such as weight training or sprinting). Supplementing with creatine monohydrate has been shown to increase the body's supply of this high powered fuel and in turn improve high intensity sporting performance. For bodybuilders this means an increased energy store which will allow for a greater work rate in the gym.

With review of the appropriate literature we recommend the utilization of a loading period when supplementing with creatine. Loading should occur for 5 consecutive days, with individuals consuming 20 grams of creatine daily in 5 gram doses spread 3-4 hours apart. Such feeding protocols have been unequivocally shown to increase muscle creatine content and increase work capacity. Following a loading period, muscle creatine levels can be maintained with a 5 g dose daily each morning and an additional 5 g dose on days on which the individual is partaking in vigorous, high intensity exercise, such as weight training.

Further analysis of the literature causes us to make the following recommendations. While supplementing with creatine monohydrate, athletes should remain well hydrated especially during the loading phase. It is not necessary to intake large amounts of simple carbohydrates in conjunction with creatine monohydrate feeding. Muscle creatine stores can be adequately increased without such practices which could be detrimental to an athlete's diet. Creatine should only be taken in the presence of simple carbohydrates following vigorous high intensity exercise when

athletes would be administering simple carbohydrates anyway. More information regarding the necessity of feeding simple CHO post vigorous exercise can be found in ABC's [The Window of Opportunity](#) article. Creatine users should adhere to the recommended dosages. Significantly increased dosages will not increase muscle creatine content further but may place undue stress on internal organs such as the kidneys. Creatine users should avoid caffeine use during their loading period. Caffeine use may impair creatine's performance enhancing effect. Where possible, creatine feeding should be timed to take place closely following exercise. This may increase creatine uptake rates.

For more information, click [here](#).

What is Leucine?

Leucine is an essential amino acid. Results indicate that it may be the most important amino acid contributing to muscle growth. Optimal dosages per meal range between 2-5 grams, depending on body weight. For more information on leucine refer to, [Leucine - The Key to Anabolism](#).

What are BCAA's?

Branch chain amino acids (BCAA's) are a special class of 3 amino acids called leucine, isoleucine, and valine. BCAAs are essential amino acids, and make up greater than one third of muscle protein. Evidence suggests that BCAAs are preferentially oxidized when amino acids serve as substrates, and that exercise greatly increases this process. Studies indicate that BCAA's taken prior to exercise lower protein degradation (breakdown), increase protein synthesis, and delay fatigue.

For more information, read under the essential amino acid question and answer.

What is ZMA?

ZMA stands for a combination of the supplements Zinc, Magnesium, and Vitamin b6. Supplementing with these vitamins and minerals has been found to increase the anabolic hormone testosterone, and augment strength and growth.

Here are some easy guidelines to follow:

a. Take ZMA 30 minutes before bed on an empty stomach. You can eat this 30 minutes prior to your last meal, or consume it 60-120 minutes after your last meal. This is to assure maximum absorption.

The reason why we say to take it 30 minutes before bedtime is because zinc's effect on healing, tissue repair, and muscle growth is maximized during sleep. The largest daily burst of natural growth hormone occurs during stage 3 and 4 sleep (about an hour and a half after going to sleep). Insulin, testosterone, zinc, and magnesium increase the effect of growth hormone. Therefore, this is the time you want zinc and magnesium at a peak level in the bloodstream.

- b. The dosage should consist of: Magnesium: 450 milligrams (mg), Zinc: 30mg, and b6: 50 mg
- c. Do not take anything that has calcium in it with ZMA, as calcium competes with the absorption with ZMA.

For more information read [Supplement Review ZMA and How it Works.](#)

What about Joint Support Formulas?

Typical joint support formulas contain glucosamine, chondroitin, and MSM.

Glucosamine and Chondroitin sulfate are the building blocks of proteoglycans, tendons, ligaments, and cartilage. Therefore, these ingredients are vital to joint support. Supplementing with this will help maintain healthy joints, repairing injuries, and preventing them years to come.

MSM has been found to protect joints from injury and inflammation. Further, it is synergistic with Glucosamine. For instance, a study found that MSM effectively relieved symptoms of arthritis, joint pain, and various other ailments in 18,000 suffering participants.

Together, these three powerhouses will help keep your body free of injury, and ready to go to war in the iron jungle!

We advise [Champion Nutrition Proflex](#), which contains all 3 of these ingredients.

What about Vitamins and Minerals?

We advise consuming a multi-mineral/vitamin formula, a multi-anti-oxidant formula, and a vitamin b complex formula, daily. Some choose to purchase key anti-oxidants, such as vitamin C, E, and A, separately. Anti-oxidants in particular, should be taken post exercise.

For more information on vitamins and minerals refer to the following articles:

[Role of Antioxidant Supplementation in Response to Exercise Induced Oxidative Stress](#)

[Sodium - A comprehensive Analysis](#)

[Vitamin B-Complex](#)

What is dextrose and Maltodextrin?

Dextrose, commonly called glucose, d-glucose, or blood sugar, occurs naturally in food, and is moderately sweet. It is a monosaccharide (basic unit of carbohydrates, $C_6H_{12}O_6$) and has a high glycemic index (digested carbohydrates ability to raise blood glucose levels, also called GI) ranking at 100.

Maltodextrin is a sweet, easily digested carbohydrate made from cornstarch. The starch is cooked, and then acid and/or enzymes (a process similar to that used by the body to digest carbohydrates) are used to break the starch into smaller chains (3-20 chains in maltodextrin).

We advise a 50/50 combination of dextrose and maltodextrin in your post weight workout shake. Specific serving sizes are shown in our post workout calculator, listed in this FAQ under post workout nutrition.

You can purchase these products in powder form online at many websites, or a local brewery. If you would like to support this website, you can also purchase maltodextrin [Here](#).

For more information, read this [Dextrose, Maltodextrin, and Sodium an In Depth Analysis](#).

NUTRIENT TIMING

What should I eat for Breakfast?

You want a fast digesting source of protein, a starchy carbohydrate (typically, moderate to low GI) and low fat meal. The goal is to quickly halt catabolism after fasting through the night. A sample meal would be:

1 cup of oatmeal
40 grams of whey protein
.5-1 L of water
Supplements

What should I eat pre-sleep?

You should have a slow digesting source of protein, such as steak or cottage cheese (this is high in the slow digesting protein, casein), a source of fat such as fish oil, and leafy greens, such as broccoli or lettuce. Starchy carbohydrates should be minimized at this meal. The goal is to provide a steady, long lasting flow of nutrients that will stay with you during the night.

What Should I eat Pre-workout?

60-90 minutes pre-workout, you should consume a starchy carbohydrate such as oatmeal, potatoes, or pasta, combined with a moderate to fast digesting source of protein, such as chicken, egg whites, or whey protein.

30 minutes prior to your workout, you should consume essential amino acids. Results indicate that this will increase protein synthesis (muscle growth) by 300%. In fact, results show that if you do not have amino acids within 1 hour prior to and after your workout, you may not even grow significantly in a 3 month time span!

We advise [Champion Nutrition Amino Acid Shooter Pre-workout](#). This formula contains creatine, and all the essential amino acids in the perfect ratio and dosage

for muscle growth; further, you can also get a version with stimulants that will enhance energy in the gym.

We also advise having glutamine, HMB, and green tea at these times, if you use these supplements.

You should also have an additional 500 ml of water 30 minutes prior to training (not counting the water that you mix with your amino acids).

Many athletes also consume carbohydrates and electrolytes (such as sodium) during their workouts. For athletes that do so, we suggest the product [Revenge Sport & Pro](#).

The anti-catabolic milieu created by the combination of carbohydrates and glutamine in Revenge Pro, will be helpful to growth. However, because body builders are concerned with body composition, having carbs during your workout may not be advisable to staying lean, as they will block fat oxidation. Furthermore, because workout sessions of body builders are typically short (often 1 hour in length) this supplement may not be necessary. Therefore, we can only firmly recommend consuming carbohydrates during your workout to endurance athletes, who train for 2+ hours per session. The efficacy of such a formula for these types of athletes is very clear.

What is the “Window of Opportunity” (Post workout Nutrition)?

The "Window opportunity" Refers to the time frame after a workout or cardio where nutrient uptake is greatly shifted towards the musculature and your body is very sensitive to the actions of the hormone insulin, and protein synthesis (muscle growth) is heightened in response to a meal. This time frame lasts about 3 hours, but as soon as you finish your workout the effects quickly diminish over this time period.

What should I consume Post workout?

For post weights, you should follow our guidelines prescribed in our article, [The Window of Opportunity](#).

Start by reading our layman versions here, [The Window of Opportunity - Layman's version \(Semi-technical\)](#) and [The Window of Opportunity - Layman's version \(Non-technical\)](#).

You can simply plug in your stats into our post workout shake calculator, and a formula will pop out! Access this here, [The Ultimate Post Workout Shake Calculator](#)

Second, it is absolutely **imperative** that you consume a starchy, low-moderate GI carbohydrates, 60-90 minutes following this post workout shake. This will help stabilize blood sugar levels, and keep in you a state of muscle growth. A sample meal would consist of oatmeal and egg whites.

For a typically cardio session, ranging 30-60 minutes in duration, you should consume a meal consisting of starchy, low glycemic carbohydrates, and a quality,

medium to fast digesting source of protein. A sample meal would consist of oatmeal and egg whites.

ONLINE FORUM QUESTIONS

What are some basic tips for asking good questions on the online forums at abcbodybuilding.com?

Step 1) Before posting a question, go to <http://www.abcbodybuilding.com/> and select the subject area you are interested in from the menu. We advise studying this FAQ, first. Start trying to find articles that relate to your topic. There is a very good chance the topic has been covered before. Read up on the topic. Sit on the information for a few days to see if you have the answer you were looking for. If it does, be grateful that you learned something. If it doesn't, move on.

Step 2) Figure out what you need to know. Come up with key words that relate to the topic and plug them into the search feature of the message board. Review the results; sit on the information to see if it answered your question. If it didn't, consider starting a thread to address the topic.

Step 3) Come up with a clear thread title - it should be meaningful, honest and reveal what you are trying to find out

Step 4) Determine which forum to post your topic in. This is very easy to determine. Don't post workout questions in the supplement section, and don't post nutrition question in the forum rules section. These questions should all go to their respective forums.

Step 5) Draft your post in word-processing application or in your email client. This ensures that it isn't lost if the site hic-ups and doesn't initially accept your post. Most importantly, it will give you the chance to run spell check. You don't have to be a spelling B champion to post here; but it will increase your credibility and the response rate to your posts if you spell words somewhat accurately.

Step 6) Supply enough information for the people here to gain a little insight into your issue. Some people provide back ground information in their signature (age, height, type of workout they are on, phase you are presently in (cutting/bulking) and gender) others will supply it with the post. Important things that you may wish to include are details about your diet, your workout history, your present health, injury information if it is impacting your workouts.

Probably the most important factor that you can provide, even more important than your question, is your goal. Very often, the answer has less to do with what you ask and more to do with what you are trying to achieve. Understand that you don't know something and may not have the ability to phrase your question in a way that makes sense to us because we are used to talking about things in a jargon dependent way. Let us know what you are hoping to achieve because we may not get this out of your question.

E.G.

Bad - how many reps should I do for bench press?

Good - I've been working out for 3 months and I'm trying to gain mass in my upper

pecs and find that I don't get a good pump from incline barbell press. How many reps should I do?

For the first question, I'd be inclined to say 8 because I think the number 8 looks like a snow man, and that is the right answer. You should do 8 reps for bench press, some of the time.

For the second question, given your newness to the sport I'd make the assumption that you don't know how to fully contract the pec muscles, so my advice would first focus on helping you learn body awareness. I'd then be inclined to suggest increasing the reps until you feel the fatigue so you learn the feeling you are going for. I'd suggest that you switch over to dumbbell press because that will increase the range of motion which could help you work the pecs better. I'd recommend some machine pec fly or pec deck work to limit the involvement of supporting muscles to allow you to get a really good contraction and increase blood flow into the muscle. Then I'd give you a rep range of 8-12 and encourage you to work at that level once you've learned how to make your pecs contract completely.

Step 7) Proof read your question, correcting grammar and spelling as much as you can and translate it into English instead of "txt msg" speak - doing these things ensure a robust search feature and it annoys the least amount of people.

Step 8) Post the question and be prepared to answer any follow-up questions that the members post. If you look after your threads, you'll get more responses in the long run and you'll get better quality answers. You'll also be helping to create content that will be useful to the community as a whole.

Step 9) Keep in mind that the community owes you nothing and if it decides to help you, you are lucky. Keep checking back on the thread frequently to make sure you don't leave anyone waiting for information they need to answer your question.

Step 10) Be courteous, ignore the tone of any replies and focus on the written message. It's easy to read a negative invective into completely neutral prose given the flatness of the internet medium - take this to mean that I think your a jerk moron ONLY if I tell you I think you are a jerk moron. Me laughing out load at your question doesn't mean anything other than I laughed at something you said because I found it funny.

SPORT PSYCHOLOGY

How do I set goals?

Fellow writers of JHR, Adam Knowlden and Gabriel Wilson have done extensive research on this topic. Click [Here](#) for more information.

My life is a mess!!! How do I get rid of the stress in my life

Read and follow the tips given in our 6 part series on Exercise and Stress by clicking [Here](#).

I am just not motivated to do this...what do you suggest?

Gabriel Wilson has done extensive research on motivation. The aforementioned articles on goal setting will help you, as well as the stress management series. We also advise the following articles:

[The Effects of External Rewards on Intrinsic Motivation](#)

[The Effects of External Rewards on Intrinsic Motivation - Practical Applications](#)

[The HYPERplasia Challenge Research Article](#)

[The HYPERplasia Challenge Interviews](#)

[Competition \(Part 1\)—the Struggle for Excellence or Victory?](#)

[Competition \(Part 2\)—the Struggle for Excellence or Victory?](#)

We have several formats which may help to facilitate your motivation.

We have performed several competitions online, and some people have enjoyed this. This occurs several times per year; the dates vary, so you must keep an eye on the front page to learn when the next one will be. Also, if you make requests for another competition in the forums, the probability of the Administrators starting one will be greater. Click [Here](#) for details on how this competition typically works.

A novel game we have created on here, is a cooperation forum. Here, you can cooperate with other members in an online journal. Click [Here](#) for details.

Lastly, we have an online journal section which is excellent. Here, you can post all details about yourself in an online journal, and members will come and give you feedback on your program. This is a great way to develop friendships, increase motivation, and learn.

One way or another, we strongly advise getting involved in this community. A support group is absolutely vital to your success; particularly, at the onset of training. By interacting with the members on this site, you will quickly break through training slumps, and they will also encourage you when you are down, among other benefits.

MISCELLANEOUS

What if I am interested in becoming a serious and educated bodybuilder?

Than we strongly encourage you to study JHR, and get active in our online forums.

How can I determine real science, from pseudo science, and marketing jargon?

Great question!

One of our primary goals here on ABC, is to empower our members with knowledge, and get them to be self dependent, educated scientists, bodybuilders, and consumers of products. We have written several articles with just this in mind. Refer to the following articles for more information on this topic, [Unlocking the Strategies for Marketing Cultural Paradigms](#) and [Pseudo Science](#).

How can I give back to the ABC Community?

By reading this article, you have already given back: the satisfaction of seeing athletes grow and succeed in this sport, and in life, is what is most important to us.

However, if you are interested in helping this site grow, then there are several avenues to contribute.

First, you can become a member in our online forums. Here, you can interact with some of the top minds in the field of exercise scientist, and elite bodybuilders. You can also write all the moderators and ask them questions about their articles. Here are their addresses:

President Wilson: jwilson@abcbodybuilding.com

Venom: Venom@abcbodybuilding.com

Old School: oldschoolabcbbing@gmail.com

NJI: Nick@abcbodybuilding.com

Coz: Coz@abcbodybuilding.com

William Ustav: williu@chello.se

We also have an online nutrition store that you can purchase from [Here](#). Every single dime you contribute to this store will go back into the site. So truly, your money spent here is an investment into the future of bodybuilding.

Lastly, we would love to here about your ABC testimony. Click [here](#) to share your testimony with us.

What about God and the Spiritual Aspect of Life? How does this influence the bodybuilding lifestyle?

It has always been the motto the founders of abcbodybuilding.com, to seek the truth at all costs, and dismiss psuedo-science that is spewed from the mouths of ignorance.

The Almighty and science are not incompatible and in fact are inseparable. God has given us science for the presentation of His glory. It is with this paradigmatic stance that knowledge in its truest essence will present itself.

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.

Proverbs 25:2

It is the glory of God to conceal a matter, But the glory of kings is to search out a matter.

In light of this scripture it is the current mission statement of *The Journal of Hyperplasia Research* is to unveil the truths of science, to the glory of God, and to the triumph of our sport.

We believe that in order to reach your true potential as a bodybuilder, you must optimize mental, physical, and spiritual growth. Therefore, we have sought to provide an avenue where all three of these aspects of life can be augmented through this website.

The foundation and principles of this website were in fact founded upon the teachings of Jesus Christ, and the Holy Bible. Thus, you will see that we discuss scripture throughout our articles, as we believe they are very pertinent to the real world. We also have engaged in many excellent biblical discussions in our online forums, and even have a sanctuary where people can discuss God and Christ. To read our bible studies, click [Here](#).

What if I have more questions?

Again, we advise studying JHR, and getting active in our online forums. Our community is very friendly, and you will learn so much and have a great time by interacting with the athletes on this site.

Additionally, you can also write all the moderators and ask them questions. Here are the addresses:

President Wilson: jwilson@abcbodybuilding.com

Venom: Venom@abcbodybuilding.com

Old School: oldschoolabcbbing@gmail.com

NJI: Nick@abcbodybuilding.com

Coz: Coz@abcbodybuilding.com

William Ustav: williu@chello.se

We hope you have found this FAQ helpful, friends. We look forward to seeing you around the site, and hearing about your success.

Sincerely,

The abcbodybuilding.com Community

