ANABOLIC MEAL PLANNING

Theory Guide

Content

Introduction

No matter what goal in life you want to accomplish you will have to come up with a strategy, because without it a goal is nothing more than a dream.

Of course, the same applies to meal planning for muscle growth. This theory guide is meant to teach you what strategies and principles are proven to work. In order to give you a complete and concise introduction into fitness nutrition, we have to start with the most abstract principles and work our way towards more practical advice later. So over the next few chapters I want to teach you the most important dieting principles that govern your body composition and will determine whether or not you will reach your goals.

Together they will make up what we call a meal and diet plan and you have to understand each aspect to execute your plan correctly. All of these principles play an important role in your diet but some are a lot more important than others. Here they are:

Chapter 1: The Theory Of Muscle Growth Nutrition

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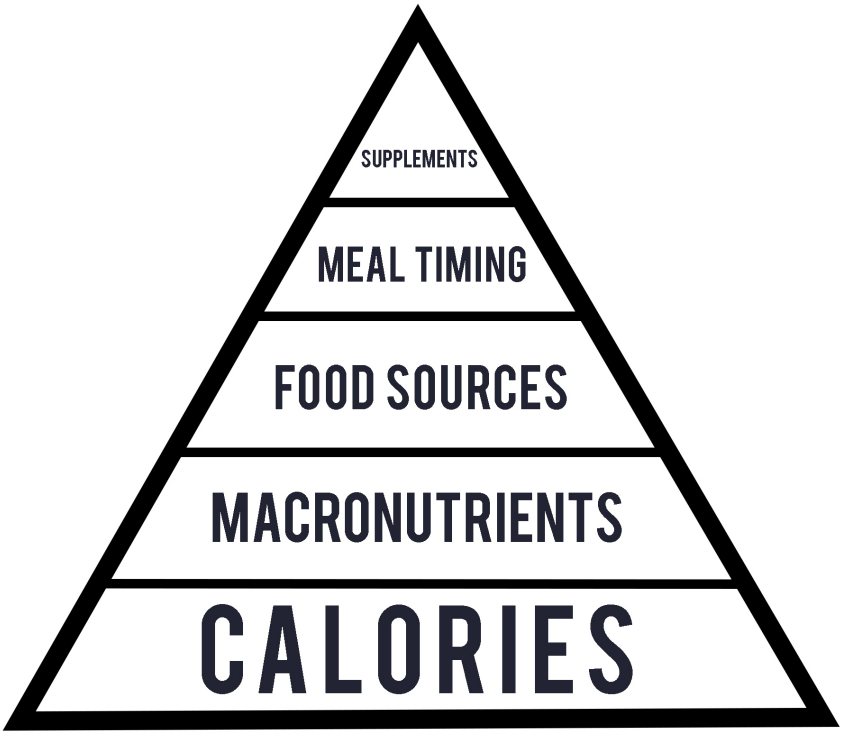
As a fitness and diet coach I always ask myself what's the best way to teach my students about the most important principles of weight loss. There are so many website, books and courses on weight loss that it's easy to get confused and to lose motivation.

To start off this program I want to show you one of the best resources of practical dieting advice I have ever seen. It's amazingly simple yet very effective. It's called the "nutrition pyramid" and designed to show people the different factors that go into weight loss and how important they are. Keep in mind that I didn't invent this concept and credit has to be given to Eric Helms and his Nutrition & Strength Pyramids

Let's have a look.



I'm sure you have seen similar nutritional pyramids before. But they usually include certain foods that should make up your diet. This is not what this pyramid is all about. The nutrition pyramid orders the different aspects of your diet according to their importance towards your diet goal.

As you can see a calories are at the very bottom. What this means is that any diet that is designed for muscle growth purposes has to include sufficient calories. It doesn't matter how healthy you eat or what kind of fancy supplements you take if you don't provide your body with enough energy (in the form of calories) none of that is going to make a difference. We will talk about the right calorie intake later in more detail. For now, just keep in mind that this is the most important aspect of your diet and the base of the pyramid. Without it everything will collapse like a house of cards.

The next important principle are your macronutrients so your daily protein carbs and dietary fats. Your macronutrients will have a large impact on how much muscle you can build within a certain amount of time. Of course, what we want to accomplish is optimal muscle growth so optimizing your macros is extremely important. Most beginners get their calorie deficit right, but mess up macronutrients. So please pay close attention when I talk about the ideal intake of proteins, carbs and fats.

In third place come your food sources, so what type of foods you actually consume. This is a tricky subject and many people ask me why it's not lower on the pyramid meaning more important in your overall diet. What you have to keep in mind is that when it comes to your health food composition is definitely very important. The right foods provide your with important nutrients like vitamins and minerals, whereas the wrong foods will provide only empty calories.

But when we look only at muscle growth and want to design a diet that achieves that, what you eat is actually a lot less important. I know this goes against everything you have been told from gurus preaching to eat this and not that. But the science on this is pretty straightforward. There are countless examples where people have followed very bad diets that still led to muscle growth because they simply made sure to get enough calories and protein.

Of course, this is not what we are going to do in this program and the diet we will set up for you will also be healthy. But I just want you to understand that from a priority standpoint calories and macronutrients are always more important that food sources.

At this point we are already pretty high up the pyramid. Anything that comes after the first three factors of calories, macronutrients and food sources will only have a minor impact on your diet success. This doesn't mean you should neglect the following factors, but make sure you have the first three in place before moving on.

Also, if you lead a busy lifestyle and want to follow a diet that is a simple and straightforward as possible, then make sure you focus on the first two or first three aspects. These alone will account for 85% to 90% of dieting success and are enough to get you great results.

One reason why many people give up their fitness goals is because they overcomplicate things. You don't have to follow a perfect diet to see results as long as you stick to the lower parts of the pyramid. Always get your rocks in place before worrying about your pebbles.

But what if you want to perfect you diet?

Then you can also consider the last two aspects of the nutrition pyramid, which are meal timing and supplements.

Meal timing (which also include meal frequency) basically states how often and what time of day you eat whereas supplements refer to anything that is not considered a normal or natural food.

I will go over them in later parts of the program but like I said before they aren't nearly as important as many fitness gurus make them out to be. Most of the supplements out there are pure hype and only a handful will actually help you in the long run.

The 5 Priorities Of Anabolic Meal Planning

1. Calories
2. Macronutrients
3. Food Sources
4. Meal Timing
5. Supplements

Calories

The single most important factor for diet success are always your calories. From a scientific standpoint whether you gain weight or lose weight is determined by the first law of thermodynamics which states that energy cannot be created or destroyed, it can only be transformed from one type to another.

I don't want to turn this into a physics lesson but when applied to dieting, the first law of thermodynamics states that your body weight is dependent only on the difference between the amount of calories that you consume versus the amount of calories that you burn, which is known as your caloric balance.

Before we go into the different forms of calories balances, let's first talk about what a calorie actually is. A food calorie is the amount of energy needed to raise the temperature of 1 liter of water by 1 degree Celsius. As you can see, calories are a form of energy measurement.

When you eat food, you are consuming the energy that is stored within the food. Your body then uses this energy to produce movement and keep your organism alive. Alternatively, if not all energy is used right away it can also be stored for later use. Some energy can be stored in the muscles and liver as glycogen, but these stores fill up pretty quickly so your body will then stored any additional calories in the form of body fat.

To achieve weight gain we need a positive calorie balance. This occurs when someone consumes MORE calories than he or she burns. Here, your body is provided with more calories than it needs for its daily functions. That means it will store the additional calories in the body. This is usually done by storing body fat but if you follow a well-designed workout plan your body will also start building muscle.

Now that you know the fundamentals behind the right calorie intake let's see how all this dry theory can help us with actual real life dieting. What you need to understand is that your calorie balance will determine how much muscle you can gain and how much fat you can lose over any period of time.

Why?

Because calories are literally the building blocks of body tissues. If you want to build more muscle you not only need to train but you also need to provide your body with the necessary raw materials to form muscle cells. On the other hand, if you want to burn fat you have to make sure that not enough calories are shuttled into fat cells to keep them the same size.

Do you always need a calorie surplus to gain muscle?

After reading the last section you might be convinced that a calorie surplus is always necessary to build muscle. This is not entirely true. Under certain conditions you can get away with a neutral or sometimes even a negative calorie balance, but still build muscle. What are these conditions?

Well, if you exclude steroid use and amazing genetics then the only time where you will be able to lose fat and gain muscle simultaneously is when you are a complete beginner and slightly overweight.

Why?

The body of an untrained beginner reacts extremely well to the stimulus of strength training and will signal muscle growth a lot faster than in experienced lifters. If you combine this ability for fast muscle growth with an extra body fat your body can build muscle even in a calorie deficit because the extra body fat will provide additional energy. Unfortunately, the leaner you are, the less likely you'll be to actually make this happen and the less significant your results will be. Therefore, more experienced trainees and skinny guys will almost always need a small calorie surplus for optimal muscle growth.

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Macronutrients

The last part about the importance of calories was a little dry, right? You might think that this is nothing new and everyone knows that you need to eat enough to gain weight.

I get it.

Calories aren't sexy and counting them definitely isn't groundbreaking advice.

But calorie counting isn't what this program is all about. The last section was just to help you understand that calories matter and anyone saying otherwise is lying to you. So with that out of the way, let's now talk about macronutrients, which are the second most important factor in your diet. Macronutrients are the three main nutrients your body uses for important vital functions. They are protein, carbohydrates and dietary fat.

Protein is one of the basic components of food and makes all life possible. Amino acids are the building blocks of proteins and help provide for the transport of nutrients, oxygen and waste throughout the body. Basically they provide the structure for all tissue in our bodies.

Carbohydrates are the main source of energy for our body and muscles. The role of carbs in weight loss diets is very controversial and always hotly debated. Unlike fat and protein carbs are not essential meaning you could survive without them. But, as you will see later, there are quite a few arguments to still include them in your diet.

Lastly, we have dietary fats. Like carbs, they are primarily energetic, but also essential for hormone production, brain function, and other body processes. There are potentially hundreds of different fatty acids, but just a few dozen are commonly found in the foods we eat.

Now that you have a broad overview of the three macronutrients, let's look at each individually starting with protein.

How Much Protein For Muscle Growth?

Protein is by far the most important macronutrient in your diet. Having enough protein in your system is a necessary requirement to grow muscle mass in a calorie surplus and to maintain it in a calorie deficit. That means you won't build muscle at the ideal rate. This is not what we want to accomplish. Therefore, it's important that you know how much protein you need to consume every day.

Fortunately, this is pretty straightforward. The optimal protein intake lies anywhere between 0.8g to 1.0g per pound of body weight per day. This range is what has shown to maximize muscle growth in clinical studies and should be your daily goal. This assumes you exercise regularly and do some sort of resistance training. If you want to be even more specific about where exactly you fall along this range here are the two factors that will determine this: body fat percentage and activity level.

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Simply put the leaner you are, meaning the more muscle instead of fat you have the more protein your body requires. The same goes for people who are more active (either through their training, during their hobbies, or while working).

If you you're leaner than 10% body fat for males and 20% for females and you are very active and train with high intensity than you probably want to shoot for 1 gram of protein per pound of bodyweight. However, most beginners will get enough with 0.8g of protein per pound.

How Much Fat For Muscle Growth?

On to your ideal fat intake for muscle growth. This is a lot simpler than calculating protein needs. In order to maintain your general health and fitness, you need only around 0.3 grams per pound of fat-free mass per day. Here, “fat-free mass” is everything in your body that isn’t fat, i.e., muscle, water, and bone.

This translates to roughly 15 to 20% of your daily calories for most people and is a target value you should not undercut both when dieting to lose weight and to build muscle.

That might sound like a lot at first but remember that 1 gram of fat has around 9 calories so this only translates to about 45 to 55 grams of fat per day.

How Many Carbs For Muscle Growth?

The role of carbs in fitness is very controversial and always hotly debated. I will try to make setting up your diet as simple as possible, so here is my recommendation based on what we know from scientific studies about optimal carb intake.

If you don't exercise then carbs are completely optional and you can include them or cut them from your diet. But if you regularly exercise then they are pretty much a must. Carbohydrates are the body's preferred energy source and as long as you stick to quality sources you will feel the difference.

So if we assume you exercise, how many grams of carbs do you need?

The most straightforward way is to calculate your protein and fat intakes first and then subtract those from your daily calories. Next, you simply fill the rest of your daily calories with carbs.

It's really that easy.

We will go over an example later in the course, so don't worry if you don't know how to do this, yet.

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Food Sources

Food sources refer to the individual foods you eat and their given nutrition. Among the other aspects of your fitness diet, they rank third in importance (after calorie deficit and macronutrients).

You might ask yourself why this diet aspect is less important than the first two. Don't fitness gurus always tell you that it's super important to eat certain foods and not others. For example, you often hear claims that there are special anabolic foods that will increase testosterone and make muscle growth that much easier.

So why are food sources only in third place?

When it comes to meal planning for fitness, meaning your goals are to lose weight, gain muscle or both, food composition really is a lot less important than people think. As long as you follow the guidelines I showed you regarding calorie consumption and macronutrient intake you will pretty much be guaranteed to reach your goals.

What this means is that consuming enough protein is a lot more important than where this protein comes from (e.g. an egg or a piece of meat). Our bodies are very intelligent organisms and can handle a wide variety of food sources.

Of course, when it comes to being healthy and consuming nutrient-rich meals, there are differences between different foods. So even though the right foods aren't extremely important for your weight loss success, they are important for your overall health.

The Right Protein Sources

Protein quality can be measured in a number of ways. Most often you will hear the concept of bioavailability, which describes what percentage of the protein that you consume is actually absorbed into the bloodstream.

Another indicator of protein quality considers how much of the protein is composed of essential amino acids (which are those your body cannot make itself) and how much of the protein is composed of non-essential amino acids (which are those your body can make itself). Obviously, sources that are rich in essential amino acids are of higher quality in this sense.

In general, protein quality ranks from animal sources to plant sources. Here is a short list of common foods ranked by their protein quality according to the concepts I just mentioned, starting with the most quality sources first.

Whey Protein
(Cooked) Eggs
Beef and Pork
Chicken
Fish and Seafood
Soy Protein and Quinoa
Complementary Plant Sources (e.g. beans and rice)
Isolated Plant Sources (e.g. nuts or whole grains)

What this means is that, all other things equal, your fitness will be better if the proteins higher on the list predominate in your diet over the proteins lower on the list. But - and this is a big but - don' go out and buy buckets full of whey protein powder while consuming nothing else.

First of all, the differences between the foods are very small and will make up only a few percent of diet success at the most. Second, there is nothing worse for your physical and mental health than a completely one-sided diet. For example, even though nuts aren't the highest quality source of protein, they are a great source of healthy fats and micronutrients. The same goes for other plant-based proteins or fish and seafood.

This also means that vegetarian athletes will see great results as long as they make sure to get their protein from a variety of plant sources to ensure they get enough essential amino acids through their diet.

The Right Carbohydrate Sources

Just like protein quality, carbohydrate quality can be measured in a number of ways. The most common is the glycemic index. In its simplest form, the glycemic index is a measure of both how fast a food raises blood glucose levels, and how much it elevates insulin levels.

This measure is generally applied to carbohydrates and ranks them from 0 to 100. The faster a carb is absorbed and the larger its effect on insulin, the closer it will be to 100. Slower absorbing and digesting carbs on the other hand will be closer to zero.

Here is a short list of common carbs and their GI ratings:

Dextrose Powder 100
Honey 87
Bran Flakes 74
White Bread 70
Orange Juice 57
Most Beans 20 - 40
Apples 39
Tomatoes 38
Carrots 35
Peanuts 13

Again, just as with protein quality the glycemic index comes with a big “but”.

Here is the problem: GI rankings are based on the glycemic effects of specific foods that are consumed isolated and fasted state.

That means unless you eat first thing in the morning or after a long fast, you’ll never be consuming your carbohydrates in a fasted state. And even then, a typical fitness meal plan always combines carbohydrates with fats and proteins.

Since fiber and fat slow down digestion and absorption, they will lower the glycemic index of the entire meal. But even if you did consume a high glycemic carbohydrate source alone and in a fasted state, it still won’t affect your health negatively.

Unless you are a diabetic or have a pre-existing health condition, our bodies are very good at keeping blood sugar levels and insulin levels within a healthy range. This applies especially to people who regularly exercise. Â

What this means is that even though the GI index is a nice theoretic concept, in real-world scenarios it’s really not as an important as many people make it out to be. So instead of comparing “fast carbs” and “slow carbs” here is what you should focus on.

First, get the majority of your carb intake (80-90%) from high fiber, minimally processed sources. This includes foods such as oatmeal, rice (brown or white), potatoes, whole grains, fruits and vegetables.

Second, consume your carbs as part of a complete meal with protein and healthy fats. As long as you do these two things you will be fine and there's no need to go crazy about carb composition.

The Right Fat Sources

For your fitness goals, fat sources will be even less important that carb and protein composition. Nonetheless, consuming the right kinds of fats and staying away from others will make a big difference in your overall health.

As you probably know, fats are usually categorizes as saturated, unsaturated or trans fats. Unsaturated fats can further be broken down into monounsaturated and polyunsaturated fats.

You want to make sure to reach your daily fat intake through mainly monounsaturated fats such as avocados, nuts and olive oil. Polyunsaturated fats, which include many vegetable oils and healthy saturated fats (e.g. from coconut oil or grass-fed beef) also have their place in a well-rounded diet.

What you should limit or avoid though are trans fats which can be found in highly processed foods. They have been shown to not only have negative effects of muscle growth and fat loss, but are also bad for your overall health.

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Meal Timing & Meal Frequency

Here is the honest truth about meal frequency. It doesn't really matter if you eat three or six meals or anything in between. All studies on different meal frequencies have shown that different setups lead to basically the same results. This also means you don't gain anything from eating several small meals.

No, it doesn't boost your metabolism to any meaningful degree and your overall energy expenditure will be the same as if you ate three large meals. But what about the extreme cases like only two meals per day or more than six?

More than six meals shouldn't be a problem in theory, but for me personally it wouldn't be practical to be preparing meals all the time. Two or even just one meal per day can lead to problems because they would have to be quite big to cover your daily calories.

Also, when it comes to protein you want to ensure a steady supply throughout the day which would be difficult with only one meal as your body would digest all at once and would have a hard time storing any protein for later.

But of course anything is possible and studies on intermittent fasting have shown that if you design your diet correctly and ensure that you consume sources of slow digesting protein, two meals a day can lead to the same results.

But in my opinion, you don't have to overcomplicate things here so I'll just leave it up to you. The most practical scenario is probably one where you eat 3 - 6 six meals throughout the day. Once you have your meal schedule in place, the only other thing you need to worry about are pre- and post-workout meals.

In the rest of this section I will explain protein, carbohydrate and fat timing in more detail.

Protein Timing

You probably heard the age-old advice that you should eat six meals throughout the day to constantly supply your muscle with enough protein that it doesn't break down. The idea is that while our body can store dietary fat (in adipose tissue) and carbohydrates (in the liver and muscles), it cannot store excess protein.

That's why for years bodybuilders religiously planned their meals and always had a protein shake or protein bar with them to avoid going into a catabolic state where your body breaks down muscle tissue.

However, today we know that even though the body cannot store excess protein, it's a lot smarter than many people think and you don't have to eat six meals to grow and maintain muscle tissue, nor do you have to time them exactly three hours apart. Let me explain.

When it comes to protein timing our one and only goal is to create a continual supply of amino acids (from digested protein) into the bloodstream to avoid muscle breakdown. The one important variable we have to look at here is protein digestion.

Protein digestion describes how fast the consumed food is actually broken down into amino acids and absorbed by the gastrointestinal tract. How long this process takes depends on three factors: (1) protein type, (2) meal size, and (3) fat and fiber content.

Protein Type:

The fastest digesting protein is whey, which can clear the GI tract in within one hour. Whole food proteins (e.g. chicken breast, lean beef and fish) come next. These proteins can take a few hours to be absorbed from the GI tract. Last on the list are dairy products. This is because of their casein content, which can take up to seven hours to be absorbed.

Meal Size:

Because our stomach requires a certain time to break down and absorb food simply adding more food will prolong the digestion time of protein. The protein in a normal whey protein shake will usually be digested fairly quickly. But, if you add to that shake some oatmeal the same protein will be digested a lot slower. Even more protein itself can bring down absorption times.

Fat & Fiber Content:

Both fat and fiber will also prolong the digestion of proteins. That's why a big and fatty steak can take as long to be digested as a casein source.

With this in mind there are different strategies to achieve a consistent supply of amino acids in the body. You can eat six small meals and simply follow the old bodybuilder advice. But you can also just eat three meals as long as they are large enough to cover both your daily protein needs and are slowly digested.

Carbohydrate Timing

For carbs, meal frequency is not generally an issue unless you want or need to consume a lot. That means that you can again eat them in two to six meals throughout the day. In theory, carbohydrate meals that are too large to be converted into glycogen will be deposited more as fat tissue. However, from my experience the drawbacks are minimal. What's more important is that you time your carbs according to your workout schedule.

Simply put, you want to eat some form of carbohydrates before and after your workout.

Why?

Because eating carbs before your workout will provide your muscles with additional fuel for your training, which will indirectly affect your muscle growth because you will be able to lift more weight or train more intensively.

Eating carbs after your workout on the other hand will refill glycogen stores which have been depleted in your workout. Also, include carbs in your post-workout meal will quickly raise insulin levels and keep them elevated for longer periods of time. Insulin acts anti-catabolic, which means it lowers the rate of protein breakdown that occurs after exercise.

So you see it's pretty simple. How often you eat carbs throughout the day doesn't really matter as long as you get some before and after your workout. You probably want to know how long before and after you need to consume your carbs and how much exactly. That is what I talk about in the section on pre- and post-workout meals.

Fat Timing

In general, it makes sense to eat less fat and more carbs and protein before and after hard exercises. That's because fat is more difficult for the body to digest, so it also slows down the digestion of anything you eat along with fat.

This is not what you want in your pre-workout meal because you want the carbs and protein to readily available during your training. Therefore, the closer a meal is to your workout the less fat it should have. So, if you like a larger pre-workout meal with more fat, make sure to leave some more time before you hit the gym.

But you can also use fat strategically to your advantage at other times of the day. Because of its ability to slow down digestion, fat can also be used to time meals over long intervals. For example, if for whatever reason you cannot eat anything for a very long time, let's say for the next 8 or more hours, a large amount of fat should be eaten in the meal before that interval.

This high fat intake will not only slow down the absorption of carbs and protein, which allows for consistent blood amino acid and glucose levels, the fat will also help stabilize hunger.

That's also why fatty steaks are so filling. They are high in protein, which is the most filling macronutrient and high in fat, which slows down digestion. Another good application of this strategy is before you go to bed.

If you want to make sure to provide a consistent protein supply to your muscles throughout the night, you can eat a good amount of healthy fats along with your nighttime protein shake. That way you give your body all the necessary building blocks for muscle growth and maintenance even when you sleep.

The Perfect Pre-Workout Meal

Once you know you're getting all of your total macros right for the day, both your pre and post workout meal are the most important meals of the day (and not your breakfast like many people believe). Let's first talk about pre workout nutrition. It's main function is to fuel the workout itself and maximize your performance throughout.

Sounds simple, right?

That's because it is. Unfortunately, the fitness world has really overcomplicated this, and many gurus will sell you super specific recommendations or products that really don't make a difference. Let's cut through all of that nonsense and figure out exactly what you should be eating before your workout. Like I said before this meal is meant to fuel your workout. In a scientific sense it's meant to do three things:

- Reduce muscle glycogen depletion.
- Reduce muscle protein breakdown.
- Reduce post workout cortisol levels.

How exactly do you accomplish this? Easy, you eat carbs and protein before your workout. What this means is, the most important rule of your PRE workout meal is to consume a good amount of both carbs and protein before you train. I know this sounds very simple and maybe too simple to you, but let me tell you way too many people overcomplicate this and fear that if they don't consume x grams of protein and x grams of carbs x minutes before their workout they will build no muscle and lose no fat.

Fortunately, that's not the case and anyone telling you otherwise is probably trying to sell you some overpriced supplement. Of course, I don't want to leave you with no guidelines at all so I will give you a few rough values that you can keep in mind when you prepare your pre workout meal. The true specifics here will always differ from person to person and depend on what time of the day you work out or how much time you actually have before your workout, but it's still a good reference.

If you can, eat a balanced meal with 0.2 to 0.25 g/lbs of your bodyweight (for both carbs and protein) around one hour before your workout. People with a very high body weight should go with their target weight.

In case you don't have time for that and/or your last meal lies more than two hours prior to your training, consume liquid or easily digested protein and carbs 30 minutes before your workout. This could be a protein shake with a banana for example. The liquid will be more easily digested allowing your body to absorb nutrients faster.

I personally, like to eat a normal meal of brown rice and chicken or meat an hour before my workout. You see, this is nothing special just protein and carbs coming from normal foods one to two hours before working out.

This is what is proven to get you the best results and will keep things a simple as possible. There's really no need to get any more complicated than that, and no need to obsess about the specifics. Last but not least, In case you don't like rice and chicken or don't want to eat it every day here are some more suggestions for pre workout meals:

Meals that you can eat up to 1 hour include:

- Oatmeal with whey protein mixed in
- Large chicken sandwich with whole grain bread
- 2x or more hard-boiled eggs on toast
- Whole grain pasta with some sort of protein (again chicken or meat or whatever source of protein you prefer)

Snacks right 30min or less before your workout:

- A banana with a whey protein shake
- Apple wedges with cinnamon and some sort of light protein
- A protein bar

The Perfect Post-Workout Meal

Now that you know what to eat before your workout let's see what best after your workout. Your post-workout meal is meant to supply your body with everything it will need to repair and recover the muscle tissue that was broken down during your workout.

Specifically, the goal of the post-workout meal is to accomplish the following:

- Replenish muscle glycogen that was depleted during your workout
- Reduce muscle protein breakdown caused by exercise
- Reduce muscle soreness and fatigue
- Enhance overall recovery

How can you achieve this?

By giving your body the same macronutrients you did in the pre workout meal: Carbs and Protein. Again, your primary goal with your post-workout meal is to consume a good amount of both carbs and protein in some form soon after your workout.

How much protein and carbs exactly?

Again around 0.2 to 0.25 g/lbs of your body weight (for both carbs and protein). If you're really hungry you can increase the carbs, too. These are just general values to keep in mind.

When should you eat your post-workout meal?

Timing should be around 1 - 2 hours after your workout and pre- and post-workout meals shouldn't be separated by more than 3 - 4 hours. That means if you had a large meal an hour before your workout you have more time afterwards to prepare your post workout meal.

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Supplements

We all know that supplements can never replace proper diet planning and nutrition, but they can help you reach your fitness goals faster. Unfortunately, with so many different supplements on the market it can difficult to choose the right ones. I remember how intimidated I was after my first visit to the local supplement store, where they had literally hundreds of powders, bars and pills.

It's also not helpful that most supplement ads make promises that are often exaggerated and sometimes even flat-out lies. You should always be skeptical when someone tells you they lost crazy amounts of fat with some new product, especially if they're trying to sell it to you.

The simple truth is that the supplement industry is huge. Huge as in BILLIONS of dollars. It is also true that most of that money is spent on worthless supplements that won't have any effect on muscle growth or fat loss. So to help you find the ones that are worth their price tag, here is my short list of the best muscle building supplements for beginners.

#1 Beginner Supplement: Protein Powder

Protein powder is probably the single most popular workout supplement. This is because when you want to build muscle through strength training your body requires more protein for a muscle repair and growth after a workout. While this doesn't mean you have to use protein powders to reach your recommended daily protein intake, consuming enough protein every day can be tricky.

Especially when you don't have time to prepare high protein meals all the time, a good protein powder can really make your life easier. That is why most athletes and bodybuilders use protein powders in addition to a balanced diet. You probably already know this and might just be asking yourself which protein powder is best.

From whey to casein to vegan, there are a lot of options to choose from and within the fitness and bodybuilding community there is always a lot of discussion about which is best. But as I explain here, it most likely won't matter all that much which kind of protein you buy as long as you take it regularly. So just go with the one you like best (unless it's soy or beef protein).

Optimal dosage: max. 30% - 50% of your daily protein intake

#2 Beginner Supplement: Creatine

Creatine is an organic acid that helps supply the muscle cells with energy during high-intensity, short-duration exercise. Along with protein powder, it is one of the few supplements that actually delivers on its promise to help you see more gains.

Unfortunately, due to its popularity there are also a lot of misconception about creatine. No, creatine won't harm your kidneys unless you have an already existing condition, study after study has proven this. It also doesn't build muscle by itself, but it will increase your strength level.

If you have read my Ultimate Beginner's Guide To Building Muscle, you know that only way to ensure long-term muscle growth is by applying progressive overload. You have to continually increase the tension placed on your muscle to force it to adapt (=and grow). By enabling you to lift heavier weight, creatine will indirectly help you build more muscle but you will still have to put in the work.

Here is an in-depth article on how to take creatine correctly. It will teach you everything you need to know about the optimal dosage and timing etc.

Optimal dosage: 3 - 5 grams per day

Why Most Pre-Workout Supplements Are Overrated

Pre-workout supplements are a difficult subject because even though they work, most of them are extremely overpriced. Why exactly?

Even though they often want to make you believe that their effects are due to the newest discoveries in nutrition research or some kind of increase in testosterone in reality in 99% of the cases the boost comes caffeine.

Yup. That's all there is to it. Yes, there are some other ingredients like l-tyrosine and citrulline that will also add to this, but the heavy lifting is almost always done by the caffeine. This is also why most people feel almost no boost when taking caffeine free pre workout supplements.

Virtually all pre-workout supplements contain 100-300 milligrams of caffeine in each serving. This by itself is nothing bad, of course. As long as you don't overdose and go off it every few weeks caffeine is a safe supplement. BUT, you don't need to pay 30 or 40 bucks for a supplement to get it. This is why most of the mainstream pre-workout products are a waste money. Plain and simple.

You will save a lot of money if you simply buy caffeine and maybe citrulline separately and take both 30 to 45 minutes before your workout (100-200mg caffeine and 3000-6000mg of citrulline). That way you will be able to test out different dosages and adjust the potency depending on your energy levels, mood, or on the specific type of exercise you'll be doing. It's simple, easy to consume and will replicate the majority of the effects you'd get from a standard commercial pre-workout, but at a much lower price.

Chapter 2:
Setting Up Your Diet

Chapter 2: How To Set Up Your Muscle Growth Diet

Now that we covered the nutrition theory, let's get to the actual diet. Using the diet priorities I outlined in the last chapter, we can come up with a 5-step game plan that covers all the important aspects of a successful diet.

Here is what it looks like:

1. Calculate your ideal calorie intake
2. Calculate your ideal macronutrient intake
3. Choose the right food sources
4. Decide on meal frequency & timing
5. Add the right supplements

As you can see, the first step will be to calculate your calorie intake. This is fairly easy and can be done using an online calculator. Once you have your daily calories, we can use this value to determine your ideal macronutrient intakes for protein, fat and carbs.

Next, I will help you find the right food sources to build your individual meal plan. And lastly, you can decide on a meal frequency and meal timing schedule that best fits your lifestyle, while also adding a few supplements to really get the most out of your diet.

Step 1: How To Calculate Your Ideal Calorie Intake

The first step to finding your ideal calorie intake is figuring out your total daily energy expenditure (TDEE). Your TDEE is the number of calories that your body burns in one day. It is calculated by estimating how many calories you burn while resting (= Basal Metabolic Rate) and adding a certain number of calories on top, depending on how active you are. If you were to consume roughly the same amount of calories as your TDEE your weight would stay the same. So to reach a negative calorie balance (= calorie deficit), you want to consume fewer calories than your TDEE.

There are two ways you can calculate your TDEE. Either by using the excel sheet that is included in this program or by using an online calculator such as this one. Both will ask for your age, weight, height and weekly exercise and then automatically calculate your TDEE. Keep in mind that in both cases the result will not be 100% accurate, as we all have different metabolisms and BMRs. But they will give you a good idea of how many calories you need to consume in order to maintain your current weight. If this is still not exact enough for you or you feel the value you got from the online calculator is a little off you want to do the following:

1. Use the estimated TDEE value and consume around this number of calories every day for a week.
2. Next, weight yourself every day (naked and on an empty stomach) and monitor changes in weight.

If you are losing weight, the estimated TDEE was too low and you should increase it by 100 calories. If you are gaining weight, the estimated TDEE was too high and you should decrease it by 100 calories. Continue this strategy until your weight stagnates which is the point where you have found your true TDEE.

How To Create The Optimal Calorie Surplus

Once you have calculated your TDEE, you will probably ask yourself how much you need to add to reach the optimal calorie surplus. Obviously, the larger your calorie surplus the quicker you'll gain weight. In theory, you could gain several pounds per week, if only you ate enough. Unfortunately, there is a limit to the calories the human body can put towards building muscle tissue. Consume more calories than that and you won't speed up muscle growth but will definitely get fatter.

So, in theory you would want your calorie surplus to be large enough to provide plenty of energy for muscle growth, but no additional calories to gain unnecessary fat. Sadly, in practice this is almost impossible and unless you have crazy genetics, you will always gain some extra fat. Your goal will then be to minimize fat gains while maximizing muscle gains.

So how many calories do you need to add to hit your optimal calorie surplus? This part is probably the most controversial part of any bulking diet.

Some people will tell you to "lean bulk" by adding only around 10% of additional calories to your TDEE to avoid gaining any unnecessary fat in the process. This is what I talked about earlier. However, sometimes when introducing a calorie surplus your metabolism will speed up and erase such a tiny surplus. There is no one-size-fits-all solution here and you have to narrow in on your optimal calorie surplus over time.

So how do you do that?

Based on what we know about the ideal rate of weight gain when building muscle, your optimal calorie surplus will lie anywhere between 10-20% above your TDEE. That means you should shoot for one of the two values and make any necessary adjustments if you feel you are gaining too much or too little weight.

If you are a skinny guy, start with a larger calorie surplus (around 15% - 20%) and lower it if you are gaining too much fat. If you have a normal metabolism or used to be overweight, start with a smaller calorie surplus (around 10%) and raise it if you aren't gaining enough weight.

How do you know you are gaining weight at the ideal rate?

How fast you can gain muscle depends on several factors, most notably your workout, diet plan and your genetic predisposition. While you may see noticeable results after your first weeks of training, for most people, substantial results will take a few months. Beginners, training under optimal conditions, can expect to build around 2 pounds of muscle mass per month (women around half of that). That's 0.5 pounds per week. Now, due to the inevitable fat gains, your overall weight will increase by more than 0.5 pounds per week, but it shouldn't be more than 1 pound per week (probably less than that). With this in mind, weigh yourself at least once a week. Raise or lower your calorie count depending if you are below or above the ideal rate of weight gain. That's pretty much it.

An example:

Let's assume your TDEE is 2500 calories. To calculate your ideal calorie surplus you would add 10% - 20% on top of that 2500 calories to get between 2750 and 3000 calories. Like I said before, if you prefer to "lean bulk" go with the smaller value of 2750 calories. If instead you want to gain mass fast and don't mind a bit more fat gain go with the higher value of 3000 calories. During the rest of the program and for easier calculations I will use a value in the middle and go with an even 2800 calories.

Step 2: How To Calculate Your Macronutrient Intakes

Let's recap the daily intakes for each macronutrient from chapter 1:

Protein: 0.8 - 1 gram per pound of bodyweight (more muscle & less body fat —> more protein)

Fat: 15% - 35% of daily calories

Carbs: The rest of your daily calories

Using these values we can calculate the ideal protein, fat and carb intakes. Let's start with protein.

How To Calculate Your Daily Protein Intake

The optimal protein intake is about 0.8g to 1.0g per pound of body weight per day (note: if you are significantly overweight use your target body weight rather than your current body weight).

So for a 180lb man, we would choose an average intake of somewhere between 145g and 180g of protein per day. The lower your body fat percentage and the more muscle you have, the more protein your body requires. The same goes for people that are more active (either through their training, during their hobbies, or while working).

If you are a man and leaner than 10% body fat or a woman and leaner than 20% and very active you probably want to shoot for 1 gram of protein per pound of body weight. The same applies if your diet includes a very large calorie deficit. However, most beginners will get enough with 0.8g of protein per pound body weight.

How To Calculate Your Daily Fat Intake

Your fat intake should be around 15% to 35% of your daily calories. Going below 15% could hurt your hormone production and general health. Going above 35% will leave less room for carbs, which means your workout performance will likely suffer.

You will have to experiment a little to figure out where exactly you lie between these two extremes. Keep in mind that the more fat you consume the less room you have for carbs and vice versa.

As an example, if you consume 2800 calories daily your fat intake will be between 420 and 980 calories. That might sound like a lot at first but remember that 1 gram of fat has 9 calories so this example these values only translate to about 46 - 108 grams of fat per day. If you have no idea with which value to start go with an even 25% (in this case 700 calories or 77 gram).

How To Calculate Your Daily Carb Intake

Now that you have both your daily protein and daily fat intake, calculating your carb intake is relatively easy. You just subtract protein and fat intakes from your daily calories. For these calculations you need to know that 1 gram of protein or carbs has 4 calories and 1 gram of fat has 9 calories.

Your calculation would then look something like this:

2800 daily calories
- 580 calories from 145g protein
- 700 calories from 77g fat
= 1520 calories for carbs (380 grams)

This means if you are left with 1520 daily calories for carbs. Because 1 gram carbs has 4 calories this translates to 380 grams. Therefore, your daily calorie and macronutrient intake looks like this:

2800 daily calories
145g protein
77g fat
380g carbs

Step 3: Choosing The Right Food Sources

Choosing the right food sources for your meal plan is a lot easier than you might think. First you reserve 80% to 90% of your daily calories for quality, nutrient-rich foods. These are the foods most people would regard as “clean” or “healthy”.

Simply make a list of the foods you like and that would make your meal plan enjoyable and use them to fill your daily protein, fat and carb intakes. You can use the suggestions below. Next, you can fill the remaining 10% - 20% with your favorite junk food or candy.

Yup, it’s that easy. On the next page you will find a few suggestions to help you get started.

Good Sources Of Carbohydrates

(Brown) Rice

Whole Grain Pastas / Breads / Cereals

(Sweet) Potatoes

Quinoa

Oatmeal

Vegetables

Fruits

Lentils & Beans

Good Sources Of Protein:

Chicken Breast

Fish (Tuna, Salmon, Halibut)

Lean Beef and Veal

Yogurt

Milk

Eggs

Vegetarian/Vegan Sources Of Protein:

Green peas

Beans

Quinoa

Nuts & Nut Butter (high in calories!)

Chickpeas

Tofu

Hemp

Good Sources Of Fat:

Avocados

Olive Oil

Nuts & Nut Butter

Seeds

Fatty Fish

Coconut Oil

I Don’t Know How To Select My Foods - What Should I Do?

I understand that as a beginner you might not know how to select the right foods for your diet. You might even be overwhelmed by this dietary freedom and would like a more restrictive approach.

In that case, I recommend you either take one of the sample meals plan included in the program or you head over to eatthismuch.com and let them generate one for you. I have recorded a video showing you how to use this free tool.

Step 4: Setting Up Meal Timing & Frequency

Now that we have determined how many calories and protein, carbs and fats you should eat every day we have to come up with a meal structure. Meal structure refers to how your diet is set up taking into consideration the 4 following variables:

1.) Number of Meals
2.) Protein Intake Around Activity
3.) Carb Intake Around Activity
4.) Fat Intake Around Activity

As for your number of meals, anything between 3 and 6 meals per day is both effective and realistic. Like I said in the lesson on meal frequency you can get away with only two meals but it makes things more complicated than they need to be. In this section I am going to assume our 180 lbs man eats 5 meals per day. If you eat fewer meals, don't worry and simply combine two meals. So step one in our meal structure is done and we now have to add the right macro intakes to each meal.

Let's start with protein.

In general protein timing is not a very important factor in your diet as long as you consume some of it before and after your workout. In the lesson on pre and post workouts you learned that this should be around 0.2 g/lbs of your body weight. Let's assume he wants to roughly maintain his body weight, so he would have to consume around 35 grams of protein pre and post workout

Meal 1
Meal 2
Meal 3 (Pre-workout): 35g protein
Meal 4 (Post-workout): 35g protein
Meal 5

This leaves us with 75 grams of protein that we will evenly consume throughout the day.

Meal 1: 25g protein
Meal 2: 25g protein
Meal 3 (Pre-workout): 35g protein
Meal 4 (Post-workout): 35g protein
Meal 5: 25g protein

On to carbs.

Just as with protein you want to provide your body with carbs before and after your workout. And again it should be at least 0.2 g/lbs of your target bodyweight. Since going higher than this isn't really a problem as these are simply some guidelines, I will assume that our 25 year old eats 0.4 g/lbs before his workout and 0.5 g/lbs after his workout as he just go out of the gym and is hungry.

Meal 1: 25g protein
Meal 2: 25g protein
Meal 3 (Pre-workout): 35g protein, 75g carbs
Meal 4 (Post-workout): 35g protein, 90g carbs
Meal 5: 25g protein

This still leaves us with 215 grams of carbs for the rest of the day. How you divide them up is really up to you. You might want to eat a large breakfast or a snack before before bed. For the sake of simplicity I will divide it up evenly among the meals but feel free to change this up according to your lifestyle.

Meal 1: 25g protein, 70g carbs
Meal 2: 25g protein, 70g carbs
Meal 3 (Pre-workout): 35g protein, 55g carbs
Meal 4 (Post-workout): 35g protein, 70g carbs
Meal 5: 25g protein, 70g carbs

Last on the list is fat timing.

Fat timing should be the least of your concern, since it really doesn't matter. Like I said before the only time it can have a negative effect is right before your workout as it slows down the digestion of both carbs and proteins. So if you eat your pre workout meal very close to your workout keep this in mind. At this point though I think things are complicated enough so we will just divide the 77 grams evenly throughout our meals. This leaves us with the following meal structure.

Meal 1: 25g protein, 35g carbs, 15g fat
Meal 2: 25g protein, 35g carbs, 15g fat
Meal 3 (Pre-workout): 35g protein, 55g carbs, 15g fat
Meal 4 (Post-workout): 35g protein, 70g carbs, 15g fat
Meal 5: 25g protein, 35g carbs, 15g fat

Please keep in mind that this is just one example and that the numbers are rounded to the nearest value. Don’t let my structure confuse you. Meal timing isn’t very important and you can divide your meals pretty much as you see fit, as long as you follow the rules of pre- and post-workout meals.

Step 5: Adding The Right Supplements To Your Diet

Like I said in chapter 1, supplements will affect your diet only in a very minor way. Maybe 5-10 percent of the overall results. I usually recommend only two supplements: protein powder and creatine. They are proven to work and have pretty much no side effects in healthy adults.

Protein Powder

Many students ask me if you absolutely need protein powder to build muscle. The answer is no. While you can theoretically get all your necessary protein from whole food sources, consuming enough protein that way can be tricky, especially when you don't have time to prepare high protein meals all the time. That is why most athletes and bodybuilders use protein powders in addition to a balanced diet. So if you are crunched for time, a good protein powder can really make your life easier.

How should you take protein powder?

Your daily dose of protein supplements will depend on how much total protein you need to consume per day. Like I mentioned earlier, 0.8 - 1 gram per pound of bodyweight works as a good rule of thumb. But keep in mind that the majority of your diet should always be based on whole foods, which applies not only to protein but all macronutrients.

So try to build your diet around quality protein sources and use protein powder only as a supplement and not as a substitute. Depending on your lifestyle, required protein intake and willingness to cook I suggest you get around a third to half (maximum!) of your protein from protein shakes.

In regards to whey protein timing it makes sense to take a regular dose of 25-30-gram, either 1 hour to 30 minutes before your workout or right after your workout. That doesn't mean you have to chug down your shake as soon as you get done with your last set. The myth of the "anabolic window" has basically been debunked. Anytime within a couple of hours is usually just fine.

Creatine

When wanting to build muscle, creatine is one of the few supplements that actually delivers on its promise to help you see more gains. Moreover, study after study has proven that creatine is safe and so far no side effects could be found in healthy adults.

1. Which Form Of Creatine Should You Use?

The research is clear on this one. Creatine monohydrate is still the most effective form of creatine. While its variations like kre-alkalyn or creatine ethyl ester are often sold for more than double the normal creatine price, scientific studies showed no additional benefits. If you want to save money without sacrificing results, go with a traditional creatine monohydrate supplement. To make sure you are getting 100% monohydrate, look for the Creapure trademark, one of the most well-known suppliers of creatine monohydrate in the world.

2. When Should You Take Creatine?

Creatine doesn't have immediate effects, so its timing really doesn't matter. This also means taking it before your exercise won't lead to increase strength (right away). In practice, this means you can take creatine whenever it fits you best. I personally like to drink it in the morning along with a protein shake, simply because that way I have to worry about one less supplement throughout the day.

3. How Much Creatine Should You Take?

3 - 5 grams per day, which is about a teaspoon. This is enough to saturate the muscle within 2 - 4 weeks and enough for maintenance afterward. Taking more won't lead to better results as you will pee out the excess creatine.

4. With What Liquid Should You Mix Creatine?

Whatever drink you prefer. It used to be common practice to mix creatine with a high sugar drink or some kind of juice, but research has again shown that this leads to no increase in creatine uptake. The spike in insulin levels triggered by the sugar might lead to faster absorption, but as explained above, this doesn't lead to better performance.

5. Do You Need A Loading Phase?

No. Some people like to do a “loading phase”, which involves taking 20 grams per day for 5 - 7 days before switching to the recommended dose of 3 - 5 grams per day. Whether or not you want to do this is up to you. The higher initial dose will lead to a faster saturation of the muscle cells, but only by a few days and the normal dose will also get you there.

6. Do You Have To Cycle Creatine?

No. There are no studies that linked continued creatine use with health risks in healthy adults. If for some reason you want or have to stop taking creatine, your body won’t undergo any withdrawal symptoms (besides the decrease in strength).

Chapter 3: Optimizing Your Diet & Helpful Tips

Chapter 3:
Optimizing Your Diet

In the last chapter you learned how to set up your ideal muscle growth diet. Even though that's pretty much all you need to see results, there are a few aspects of dieting I also want to give you a few additional dieting tips that will help you out.

How To Make A Homemade Mass Gainer Shake

Most readily sold mass gainer shakes consist of low quality carbs and huge amounts of added sugar. Even though this will make you gain weight, you could just as well eat a bunch of chocolate.

Some supplement companies will refuse this claim by pointing to the low amount of sugar their product carries. In most cases, however, they simply use maltodextrin as a sugar substitute. While maltodextrin is technically a complex carb, it is broken down very rapidly and has similar effects on blood sugar and insulin levels.

So before I share with you my recipe for a cheap and healthy homemade mass gainer shake, let's talk about why you need one in the first place.

Why Do I Need A Mass Gainer Shake, Anyway?

A mass (or weight) gainer supplement is designed for people who have a hard time putting on weight. The typical hardgainer will feel like he or she can't gain any weight no matter how much they eat. While this might sound like heaven for people trying to lose weight, it actually sucks for people looking to build muscle mass.

For them eating becomes a chore and sticking to their diet plan means hard work. If you fall into this category I'm gonna make your life a lot easier by showing you how to prepare a quality mass gainer shake. Back when I used to be skinny, I would drink one or two of these bad boys a day and trust me they worked!

The Recipe

Ingredients:

Dry Oats - 80 Grams (= 1 cup)

Protein Powder - 1 Scoop

Banana - 1 Medium Size

Peanut Butter (or Any Other Nut Butter) - 1 Table Spoon

Milk or Water - 350ml (= 1.5 Cups)

Nutritional Values (with Milk):

825 Calories

107.6 grams Carbs

22.5 grams Fat

51.8 grams Protein

—> Mix everything in a blender or magic bullet. It's up to you whether you want to use milk or water. I personally have a slight lactose intolerance, which is why I prefer to drink the shake with water. Feel free to also add ice or frozen berries. Cheers!

How To Increase Testosterone Naturally & Safely

One of the most common questions asked by my students is: how can you increase testosterone levels without using steroids? This is a valid question because we all know that testosterone is the primary hormone responsible for muscle growth, sex drive, and oftentimes overall well being in man. No wonder guys want more of it. What's interesting though is the fact that there are also quite a few women who'd prefer to have higher testosterone levels. Their bodies of course also produce testosterone but in smaller amounts. So the question then is. Are there safe strategies we can use to naturally increase our testosterone levels?

And the answer is yes, definitely. What you have to understand, though is that these strategies have limits. Many people who ask how to increase their testosterone are beginners looking for a fast and easy way to build more muscle. Even though the strategies I'm going to talk about are proven to work they will not make you look like a bodybuilder or double the amount of muscle you can build within a month. Much of your body's ability to produce testosterone is limited by your genetics. What we can try to do is to take advantage of your full potential, which will have a positive impact on your muscle gains and overall mood. But don't think of this as some sort of diet hack that will make you become the incredible hulk without ever having set foot in a gym. Also, what I want to make clear from the beginning is that I'm not going to talk about some sort of testosterone boosting supplement.

Why?

Because the vast majority of the supplements marketed as “testosterone boosters” simply don’t work. None of the legal testosterone supplements will have a significant impact on your testosterone levels and/or your ability to build muscle. That’s the honest truth. Even though most sales pitches will tell you otherwise, they are mostly a waste of time and money. With that being said, here are some legit ways to increase your testosterone level.

1. Higher Fat Intake

Dietary fat is extremely important for the production of hormones including testosterone. We know from various studies that diets low in fat can lead to lower testosterone levels, and diets higher in fat can increase testosterone levels. Therefore, you want to make sure to include enough (healthy) sources of unsaturated fats in your meal plan.

How much fat should you eat per day to make sure you are getting enough?

Don't go below 15% of your daily calories, which is the normal minimum required to maintain health. You can also test things out you can go a little higher until 30% to see if you notice any differences. Of course, that fat should still come from a good mix of saturated, monounsaturated and polyunsaturated fats.

2. Check Your Vitamin D Levels

Vitamin D is one the most common supplements in the health and fitness industry. For a good reason: It's important for your immunity, bone health, mood and of course testosterone production. Unfortunately, many Europeans and North Americans have vitamin d deficiencies especially during the winter so bringing your vitamin d level back to normal can help with testosterone production.

But how can you find out if you are deficient? Simple. Talk to your doctor and do a blood test. It might cost a bit, but it's an investment in your health. If you are really deficient, your doctor will tell you to take an adequate dose of Vitamin D to get your level back to normal asap. Afterwards, you can continue with a smaller dose for maintenance to keep your vitamin D levels balanced.

3. Zinc

Like vitamin D, studies have shown a link between zinc deficiencies and decreased testosterone levels. Increasing your zinc levels through supplementation will also boost your testosterone, but only if you are truly deficient. In case you are already getting enough zinc, supplements won't benefit your much (at least not in regards to testosterone).

Since zinc also has a positive impact on your immunity I supplement with a fairly standard dose of 10mg per day. Alternatively, you could also increase your consumption of foods high in zinc such as shellfish, beef, lamb, certain nuts and seeds, etc. but I'm not a big fan of micromanaging.

4. Limit Alcohol

As you can probably imagine large and excessive amounts of alcohol can potentially harm your testosterone levels. So my advice is pretty straightforward here. Try to limit alcohol. You don't have to stop drinking entirely but when you're going to drink, stay within the realm of "moderate" alcohol consumption and you will probably be just fine (20g/day for men and 10g/day for women). But the more you exceed "moderate" the more detrimental it's going to become.

5. Sufficient Sleep

Studies show an association between insufficient amounts of sleep and lower testosterone levels. Studies, where participants had to sleep less than 5 hours per night, showed an immediate 10-15% reduction in testosterone levels. Now very few people will sleep less than 5 hours of course but I know quite a few who sleep only around 6. This is usually not sufficient. Anywhere between 7-9 hours of sleep per night will be ideal for most people and going below this will negatively impact your testosterone levels and your overall health.

6. Watch Stress

The more stressed you are, the more cortisol will be released by your body. While short-term elevations of cortisol levels aren't a problem, long-term elevation will hurt your overall health, well being and also your testosterone levels. Stress comes in many forms

Most people will be thinking of the typical stuff: issues with your job, school work, family, friends, partner etc. This kind of stress is often mental and reducing it will most likely be something that you should talk about with your therapist and not your diet coach.

But there is also physical stress. For example, not enough sleep or overtraining or the wrong kind of training. Excessive diet restrictions and digestive issues also count as physical stress. These are all things you can easily change. This program alone should help you to avoid dumb diets. For the right workouts either check out my other courses or talk to a personal trainer you trust. Simply keep in mind that whatever can do in your life to reduce stress (and thus keep your cortisol levels where you want them to be) will benefit your testosterone levels and your overall well being.

Chapter 4: FAQ

Chapter 4: FAQ

The last chapter of this book is all about frequently asked questions. Here is a list of what we will talk about:

- I Can't Reach My Daily Calories - What Should I Do?
- How Much Muscle Can You Gain In A Week/Month/Year?
- How Important Are Genetics In Building Muscle?
- Can You Build Muscle As A Vegan?
- Intermittent Fasting Explained: Does It Help With Muscle Growth?
- What Should You Eat Before Bed To Build Muscle?

I Can't Reach My Calories - What Should I Do?

As you now know, creating a calorie surplus is vital to optimal muscle growth. If you naturally have a big appetite this shouldn't be a problem, but many skinny people are not used to consuming large amounts of foods and for them, reaching their daily required calories can feel like a chore. If you want to gain muscle but are having trouble consuming enough calories because you simply feel full all the time, here are a few tips to help you out.

1. Include high calorie foods in your diet

Obviously, not all foods are equally calorie dense. If you have a small appetite and eat primarily chicken breast and brown rice you will have a hard time reaching your daily calories. That isn't to say you shouldn't eat lean proteins or high fiber carbs, but some additional calorie-dense foods can really help you out.

Good options include olive oil, fatty fish, dark chocolate or a handful of nuts. All of them are fairly high in calories, but also provide you with important nutrients and vitamins. Adding them to your meal plan will easily bump up your calories.

2. Eat more frequently

Many skinny people regularly skip meals and go hours without eating anything. Doing this isn't bad per se, but it definitely makes creating a calorie surplus more difficult. Having to eat 3000 calories in two meals is possible, but only if both of them are big meals. If you don't like eating that much at one time, go with several smaller meals instead. Don't skip breakfast and also have some snacks ready.

3. Use high calorie shakes

Mass gainer shakes are a super convenient and easy way to reach your daily calories. Even though there are readily made shakes available, I recommend you mix your own. I explain how to make one in Chapter 3.

How Much Muscle Can You Gain In A Week/Month/Year?

Here is a question for you: After training abs, do you take off your shirt and look for immediate results? I know everyone at my gym does - including me. Obviously, it's a pointless habit and we all know that muscle growth takes time and improvements don't happen overnight. Still, if you want to optimize your workouts, it's an important question to ask how much muscle gain you can expect over a certain period of time.

Knowing this will not only help you get a sense of perspective where you personally stand, but also keep you from buying into shady marketing and products that promise to deliver results after only a few days.

Before we go into the numbers, I need to clarify something. Many people, especially those not satisfied with their results, believe that how much muscle you can build in a week, month or years depends entirely on genetics. While it is true that they always play a big role, bad genetics are usually not the reason for below average muscle growth, but instead a lack of the right workout, diet and mindset.

Note: The numbers below are all based on data from Lyle McDonald, one of the most respected researchers in bodybuilding. The values represent the average muscle growth one can expect under optimal conditions. Unfortunately, there is little data available for women, so we have to use the old rule of thumb of halving the men's growth rate.

How Much Muscle Can You Gain In A Week?

1st Year Training:

0.25 - 0.5 pounds (=0.125 - 0.25 kg) of lean muscle mass per week for men

0.125 - 0.25 pounds (=0.0625 - 0.125 kg) of lean muscle mass per week for women

2nd Year Training:

0.125 - 0.25 pounds (=0.0625 - 0.125 kg) of lean muscle mass per week for men

0.0625 - 0.125 pounds (=0.03125 - 0.0625 kg) of lean muscle mass per week for women

3rd Year Training:

0.0625 - 0.125 pounds (=0.03125 - 0.0625 kg) of lean muscle mass per week for men

0.03125 - 0.0625 pounds (=0.0156 - 0.03125 kg) of lean muscle mass per week for women

How Much Muscle Can You Grow In A Month?

1st Year Training:

1 - 2 pounds (= 0.5 - 1 kg) of lean muscle mass per month for men

0.5 - 1 pound (= 0.25 - 0.5 kg) of lean muscle mass per month for women

2nd Year Training:

0.5 - 1 pound (= 0.25 - 0.5 kg) of lean muscle mass per month for men

0.25 - 0.5 pounds (= 0.125 - 0.25 kg) of lean muscle mass per month for women

3rd Year Training:

0.25 - 0.5 pounds (= 0.125 - 0.25 kg) of lean muscle mass per week for men

0.125 - 0.25 pounds (= 0.0625 - 0.125 kg) of lean muscle mass per week for women

How Much Muscle Can You Build In A Year?

1st Year Training:
20 - 25 pounds (= 10 - 12 kg) of lean muscle mass for men
10 - 12 pounds (= 5 - 6 kg) of lean muscle mass for women

2nd Year Training:
10 - 12 pounds (= 5 - 6 kg) of lean muscle mass for men
5 - 6 pounds (= 2.5 - 3 kg) of lean muscle mass for women

3rd Year Training:
5 - 6 pounds (= 2.5 - 3 kg) of lean muscle mass for men
2.5 - 3 pounds (= 1.25 - 1.5 kg) of lean muscle mass for women

How Important Are Genetics In Building Muscle?

Let me give you the bad news first: Genetics matter. That's the simple truth. As with everything in life, building muscle comes easier to some people than others. I remember almost falling into a small depression a few years ago after seeing a picture of Dwayne Johnson / The Rock from back when he was fifteen. He had just started lifting weights and his lats was already huge, which was something I had been lacking for a long time.

When seeing such obvious genetic differences, you might ask yourself what exactly distinguishes someone with good genetics from someone with average or bad genetics. Here is a list of the most important factors that will play a role in your muscle building success:

1. Fast Twitch Vs. Low Twitch Muscle Fibers

There are two general types of muscle fiber: slow-twitch (type 1) and fast-twitch (type 2). Slow-twitch fibers are weaker but able to contract for longer periods of time, which makes them ideal for endurance training and cardio. Fast-twitch fibers are designed for shorter, more intense activity. They possess a greater capacity for strength and size gains.

The ratio of slow-twitch to fast-twitch fibers differs from individual to individual. Someone with more slow-twitch fibers will have an advantage in long distance running, while someone with more fast-twitch fibers will excel in activities such as sprinting or strength training.

The distribution of both types can also differ within each muscle group. For example, you might have more fast-twitch fibers in your chest and legs and thus see faster strength gains in these areas of your body.

2. Body Type

Even though I am not a big fan of the traditional classifications according to the three somatotypes (ectomorph, endomorph and mesomorph), because they are simply too broad, there is no doubt that people are built differently. Your bone structure and muscle shape are largely determined by genetics and there is little you can do to change them.

Your metabolism also plays a huge goal when it comes to losing and gaining weight. Some people will put on more fat than others, even if both followed the diet and exercise regimen, simply because their bodies burn more calories on a regular basis.

3. Hormone Levels

On average, men have more than 10 times the amount of testosterone in their blood than women. But even among men, individual hormone levels can vary greatly between individuals. While strength training increases the release of anabolic hormones over time, some people have naturally higher levels, giving them a clear genetic advantage.

Think You Have Bad Genetics? Here's What To Do!

If you are a beginner and saw little success in the gym so far, you're probably wondering if you have below average genetics for muscle growth. I know I was when I started out. What you need to know though, is that this question is pointless and even dangerous.

By definition, genetics cannot be changed. We all have to play the cards we've been dealt and even if it sometimes seems that way, no one got a perfect hand. Most people use their bad genetics as an excuse for their lack of improvement. Over time they convince themselves that they have tried everything in their power and the only thing holding them back is something out of their reach.

Not only is this mindset toxic for intelligent goal setting, it's complete nonsense for 99% of trainees out there. Even if you truly have bad genetics, your body is still designed to adapt to its environment, otherwise your ancestors would long have gone extinct. This means that as long as you understand the simple logic behind building muscle and follow a well designed workout and diet plan, you will see results.

Your body might build muscle at a rate slower than normal, but if you trust in the process and give it some time, the results will come. I have yet to see someone who truly committed to the goal of building muscle not look better after a couple of months of training.

Can You Build Muscle As A Vegan?

Many people believe that vegans cannot build muscle and will inevitably suffer from protein and vitamin deficiencies. Others think that veganism is the best thing since the invention of the internet and that they have to convert everyone they see to become a vegan. So who's right and what is the vegan diet really all about?

As you probably know vegetarians do not eat meat, fish, or poultry. Vegans, in addition to being vegetarian, do not consume other animal products and by-products such as eggs, dairy products and honey. While some people will choose to go vegan because of environmental or ethical reasons, I will talk about it only from a fitness and health standpoint. Since the field of veganism is so broad we will start with a rather simple question can you build muscle as a vegan.

And the answer is yes absolutely, but it's more difficult than on a normal diet. The main reason for this is protein. As numerous studies have shown, a high-protein diet is very important for building muscle. Our bodies simply need amino acids derived from protein to repair and grow muscle tissue. Without it, you won't provide your body with the material for muscle growth. When we look at vegan diets and compare them to traditional diets from a macronutritional perspective, the main difference is protein intake.

That’s because if you have been following my advice on healthy carbohydrate and fat foods, you will already be getting most of these macronutrients from plant-based sources like grains, fruits, vegetables or nuts. All this doesn’t change when you go vegan.

Your protein intake does change, however. Basically, you replace high-quality protein foods like meat or eggs with lower-quality protein foods like grains, beans or nuts. Now, don’t get me wrong beans, grains, and nuts are very healthy foods and generally quality sources of protein as part of a balanced diet. You run into a problem though when you use them as your single source of protein.

Why?

Because plant-based proteins come with two drawbacks. First, plant-based protein generally have an inferior amino acid profile which means that they contain fewer of the 9 essential amino acids. Amino acids are the “building blocks” of protein and tissues in the body, which obviously includes muscle tissue. Our body needs all 21 amino acids to stay alive, and we have to get 9 of them through our foods (the so-called essential amino acids).

Many vegetables and fruits, for example, are low in one or more of the essential amino acids, so they aren't particularly suited for muscle building purposes. But don't worry, there is a simple solution for this if you are vegan: Don’t rely on these as your only protein source.

For example, nuts beans and legumes are great vegan protein sources and as long as you don't rely on one single food source for protein, you will definitely get all the essential amino acids your body needs. There are even complementary proteins that will give you a complete amino acid profile as part of a meal (even though you don't have to get all essential amino acids in every single meal). Here are a few good examples:

Rice and beans

Tofu with brown rice or quinoa

Hummus and whole-grain pitas

Whole-grain noodles with peanut sauce

The second problem with plant-based proteins is that they are digested less efficient than their animal protein counterparts. This means eating 100 grams of lean beef isn't the same as eating 100 grams of pea protein. Pea protein has less muscle-building potential than beef protein. What this means is that as a vegan who wants to build muscle you also make up for the lower rate of absorption. Doing this isn't impossible but it is more difficult than simply relying on meat and dairy as your protein source. To help you out here are a few protein sources that should make up the majority of your daily protein:

Grains (e.g. wheat, rice and oats)

Legumes (e.g. beans and lentils)

Nuts (e.g. peanuts almonds or walnuts)

Seeds (e.g. quinoa and buckwheat)

What About Micronutrient Deficiencies?

You've probably heard that going vegan does increase the risk of various nutritional deficiencies. This is true. The most common ones are deficiencies in:

Vitamins D and B12
Iron
Calcium
Zinc
Omega-3 fatty acids

Many vegans will tell you that these common deficiencies can be avoided by simply adding certain foods to your diet. While this is true in theory, things look a lot different in practice. For example, to get the same amount of calcium from vegetables as from dairy products you will have to consume multiple servings instead of just one. The same goes for zinc. Unless you want to micromanage your diet and always check your micronutrient intake this means you will have to supplement. Supplementing Vitamins D, B12 and omega-3 fatty acids is actually fairly common among experienced vegans and something I would recommend.

So What's My Conclusion On The Vegan Diet?

You can build plenty of muscle and strength as a vegan if you know what you're doing. You will have to closely monitor your foods and protein sources and probably invest more time towards meal planning to avoid deficiencies. If you are willing to do all these things the vegan diet can definitely be a healthy alternative and help you gain muscle.

Intermittent Fasting: Does It Help With Muscle Growth?

Even though the concept of fasting has literally been around for centuries, the idea of intermittent fasting has only become popular over the last few years. But let's not get ahead of ourselves.

What is intermittent fasting anyway?

The average person probably eats food from around 8 AM to maybe 9 PM in the form of various meals and snacks. That means you eat for around 13 hours and then eat nothing for about 11 hours. Once you stop eating and your body has processed all the food from your last meal you will go into a fasted state which lasts for around 6-7 hours.

Intermittent fasting doubles this fasted state by having you fast for 16 hours and eat for 8. Some diets even go as far as 20h fasting and 4 hours eating. What happens when you do this? Proponents of the intermittent fasting diet will tell you that longer fasting will lower insulin levels, increase testosterone, help will cellular repair and gene expression.

Sounds pretty amazing, right?

Not so fast, the problem with this is that all these changes (if they actually take place and aren't made up) are so small that they won't make a noticeable difference.

At least that's what a meta study of over 40 studies on intermittent fasting found. The scientists concluded that intermittent fasting is not superior to traditional dieting and found no significant benefits related to body composition, fat loss, insulin sensitivity, or hormones.

This means that much of the marketing done in the name of IF is made up or completely exaggerated. That said, I do belief this dieting approach can make sense for people that fall into two categories.

1. Anyone who doesn't have the time or discipline to eat 5 or 6 meals per day and prefers to eat large amounts of food within a small time frame. Meal frequency and meal timing are a lot less important than most people think. What matters is how much you eat (in calories) and what (in nutrients). Intermittent fasting takes this to the extreme and has you eating large amounts of food within a few hours. If this approach appeals to you than go ahead and try it out. I personally am completely happy with the traditional approach and feel weak when I go several hours without food, but that might be different for you.

2. The second category of people who might benefit from intermittent fasting are those who have trouble keeping calories in check when wanting to lose weight. Since you will be consuming most of your food in just a few hours, it'll be easier to monitor your calorie intake and stick to a calorie deficit. If you don't allow yourself to eat outside the 6 hour window you already eliminate one of the biggest reasons why people don't succeed at dieting: High calorie snacks. I don't have this problem and have dieted successfully for years, so again this approach isn't my favorite but if it fits your lifestyle and preferences go ahead and give it a try.

What Should You Eat Before Bed To Build Muscle

If you are hitting the gym and want to build muscle you want to eat at night to make sure you give your body enough nutrients for muscle growth. The problem is you might not know what to eat to achieve this. Here is my advice to you:

Building muscle comes down to a few things, mostly creating the right stimulus through your workout and giving your body the necessary building blocks to repair and grow muscle tissue. The most important nutritional building blocks are of course a few extra calories and enough protein.

These two aspects, a small calorie surplus and your macronutrients, are by far the most important factors to successful muscle growth. That said, the right muscle building diet should make room for correct meal timing. And this is where healthy muscle building snacks right before bedtime come into play. What should you eat before bed to ensure muscle growth during your sleep?

Your best bet for a nighttime snack is protein. Why? Because unlike for fat and carbs, our body does not have a dedicated storage system for protein. So it does make sense to regularly consume some protein throughout the day. That doesn't mean of course that you will lose muscle unless you drink a protein shake every 3 hours as it was believed for so long. In fact, you won't actually lose muscle until your glycogen stores are depleted which takes a lot longer than 3 hours.

But it still makes sense to get a good amount of protein before a longer fast so your body can continue to build more muscle. Sleeping classifies as a longer fast, so getting some protein before you sleep is a good idea.

How much protein and what kind is best before bed?

As you probably know whey protein is usually considered the most complete protein source in regards to muscle growth. That's because of its good amino acid profile and how fast its digested. But this fast rate of digestion can be a problem before you go to bed. Your body will process around 10 grams of whey protein per hour, which means that a normal shake of 30 grams will last you 3 hours, which is less than your normal night of sleep.

So to prolong the effect of protein digestion you can do two things. You can change the protein source to a slower digesting one like egg protein or casein protein, which are absorbed a lot slower. Or you can add some healthy fat to your bedtime snack, which also slows down digestion. That's also why many fitness coaches recommend a protein avocado mix before you sleep.

If you don't like protein powder and only want to go with whole foods you can also try some cottage cheese or Greek yogurt maybe with a bit of olive oil. Just make sure this extra meal fits into your total calories and macros and to eat everything within 30 minutes of going to bed. As you can see the right late-night muscle building snack doesn't have to be very fancy or complicated.