#### THE SECRETS TO QUALITY MUSCLE MASS & STRENGTH GAINS













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#### Introduction

Bulking up, as in bodybuilding, is often seen as synonymous with lifting weights. And for most people that's where the equation ends. As long as they lift weights, they believe they'll get jacked.

However, there's much more than just weightlifting when it comes to bodybuilding essentials. In fact, it's an entire series of components including nutrition, supplementation, and training. Then come rest and recovery, along with lifestyle changes that will help you gain muscle and keep it that way.

You will need to incorporate these and other essentials to get results. And while weights are integral to becoming ripped, they won't get you anywhere alone.

So here we will look at what you need to do and what routines to follow to reach your goals.

# CHAPTER

# THE MINDSET OF A CHAMPION



#### Chapter 1

#### The Mindset of a Champion

Mental toughness is a trait required for success in any field. It's what gives your goals resilience, gets you over adversity and lets you follow through with what you set out to do in the first place.

When it comes to bodybuilding, you don't just need your body but also your mind to collaborate together.

You have to put your mind to the game to win it. For many people, bodybuilding doesn't work out because they don't have their mind in the game.



What separates the successful from others is not only their dedication or motivation but also their mindset. So it's not only your physical competency that will set you apart but also mental attitude towards getting to your goals.

Here's what you need to look for in the mindset of a champion:

#### **Unwavering Dedication**

If you want to build quality muscle mass, you'll need to be very dedicated to your goals. It's a strong set of beliefs you'll need to follow where your goals are defined clearly.

Your dedication, may, at times, be dictated by your physical strength, stamina and endurance. On other occasions, you may be driven on by your eagerness to learn. But whatever the case, you need to believe whole heartedly that you are cut out to achieve your goals.

There will be times when your dedication and determination may waver but you need to stay on course. You'll need constant reminders of why you started this journey in the first place and that thought should keep you on track.

Dedication can also be reinforced if you're always willing to learn. This willingness becomes the driving force for continuing and improving your craft by constant practice. This way you can develop grit and achieve the mindset of a go-getter.

For added motivation you could have posters of professionals on your walls or in your phone. This is another way to stay focused. When you look at those pictures, you'll be reminded of why you started in the first place.

#### **Fight Distraction**

Distractions can make you derail from your priorities and goals. When you lose focus, you lose the game. That's why it's absolutely imperative that you keep distractions away. Even when you're faced with distractions, you need to muster up the determination to ignore them completely.

For instance, if you've already chalked out a workout routine, you need to stick to it no matter what. Champion athletes and bodybuilders know that they have the potential to improve and don't let distractions get in the way. Missing out one day of training can quickly evolve into a pattern of laziness, but champions never let it get to that point.

One thing that works quite well is planning your day beforehand. When you've already planned your day, you're more likely to follow through. Being spontaneous is great, but doesn't always deliver when you have an agenda to follow. Having said that, you can't completely get rid of distractions because they're an integral part of productivity. However, you can train your mind to ignore any distraction that comes your way. Look at the bigger picture and keep yourself focused on that.

#### **Finish What You Started**

Many people start their muscle building routine with a lot of excitement and passion but they don't finish because they either get distracted or become lazy on the way. You need to keep the same level of motivation going on as you had on the first day of your training.

Something that works well for this is to keep track of your progress. If you can see how you're progressing, you'll be tempted to finish what you've started.

To make things easier, you could make a checklist for yourself. Write the different exercises that you have to do on every day of the week. Just ticking off the task from your list will give you a sense of satisfaction. This is necessary if you want to reach the finish line without tiring out or losing focus. Keep telling yourself how close you are to your goals and how much you've achieved so far. Set both short and long term goals to keep going. The short term goals can act as catalysts for long term ones.

#### **Build Positive Mental Habits**

It's very important to build positive mental habits. You'd be surprised to know how much influence your brain has on your body.

To start off, stop comparing yourself to others. This is one of those mental habits that'll always leave you unsatisfied and ungrateful. Stop comparing yourself to other bodybuilders or your buddies in the gym. You've your own goals and they have theirs.

Another mental habit that often brings you down is thinking that you are a failure. So, you weren't able to finish your reps because you had a long day at work. That doesn't make you a failure. It's just one day. Pick yourself up and work harder the next day.

If you have a champion mindset, you won't let any limiting beliefs or destructive self-talk get in the way. Instead, you'll have mastered your mind in such a way that only the positive makes an impression and the negative doesn't become a deterrent.

At the same time, being a perfectionist is also a mental habit that can limit you. If you want everything to be perfect, you end up not even meeting your own standards. Instead, you always criticize yourself. This attitude can easily overwhelm you and that is never good for anything.

If you want to be good at something, that's awesome. You must always remember that everything can't and won't ever be perfect. Don't give yourself a hard time just because you ate one unhealthy snack in a week. That snack might not affect your muscle gains but that self-demotivating will definitely affect your mind.

You have to be your biggest influencer because no one else is going to do it for you.

#### Push Yourself beyond Normal Limits

Always push yourself forward. If you think that you've learnt how to do one thing perfectly, it's time to move on to a harder level. The trick is to get out of your comfort zone and you'd be surprised at the potential your body has.

Put this potential to test and train your body to do harder and better things.

It's a step by step procedure where your body will learn one thing first and then advance to another level. Don't limit yourself to the same exercises that you've been doing for months now. Try new things and test your potential.

To keep your motivation going, get your inspiration from people around you. If you think that there's no one to inspire you, go online and talk to bodybuilders from around the world. Read about people who started with thin schoolboy bodies and are now ripped.

You'll feel the urge to push harder once you realize that it can be done and others have done it. If you've got your mind under control, your body will definitely follow.



## WORKOUT ROUTINES FOR INCREASING MUSCLE MASS



#### **Chapter 2**

### Workout Routines for Increasing Muscle Mass

The way you work out to gain muscle will, of course, determine the outcome of your efforts. That's why it's so important to find a routine that caters to your body the best. And for that, you need to consider a few things first.

While the general idea is to lift heavy weights for building muscles, you need to start off by strengthening muscle first. If you're new to all this you may want to engage in some strength and endurance moves before you tackle the weights.

For instance, you can start off with some body weight exercises to strengthen muscles and then move on to lifting weights. And of course, as you make progress you can then add in more weight along with expanding the number of reps as well. Some important considerations when doing so include the following:

#### **Choice of Exercises**

For building mass, low volume training is highly recommended. In broad terms, this training technique prescribes 1-8 sets for each muscle group. The sessions can last anywhere from 20-45 minutes.

The basics of low volume training dictate that the workout routine should have the right stimulation/restoration ratio. What this means is that you need to put a stimulus on the body significant enough to increase muscle without exceeding the body's capacity to tolerate the stress.

So basically, balance is key. You can, of course increase the magnitude of training by adding more volume, training more often or taking rest for a shorter duration between sets. You can also lift heavier weights and train harder on each set.

But since it's a low volume session, you can only increase the volume by so much. So you focus on how you do the few sets that you do. The sets should be stressful enough so that you can only do a few at a time.

At best, you should be able to 3-6 work sets for most muscle groups and up to 8 for the back, being a more complex structure. The exercises for beginners, intermediates and experts are different. You can always start with easier workout routines and then progress to the tougher ones.

#### Number of Sets

#### • Low volume workout

One way to engage in a low volume program is to follow is the 5/3/1 approach.

Before you take this approach, know that your one-rep-max is the amount of weight you can lift for one rep without compromising form. So you need to know your one rep max or 1RM for squats, deadlifts, bench presses and military presses.

Once you have the numbers you can move along. You get to train 3-4 times a week and do one of the four workouts on your training days.

- 1. Squat and assistance work
- 2. Bench press and assistance work
- 3. Deadlift and assistance work
- 4. Overhead and assistance work

You perform each workout once every day with rest days in between. Follow this cycle for 4-6 weeks and then start over again by increasing your stress load.

Now you're at the stage where you don't just pick a heavier weight 5 or 3 or 1 times more per set. Instead, you use 90 % of your one-rep-max.

This program is best suited for those who are new to weight training and will see the most results. The exercises included here are staples of building strength and starting light will let you progress forward faster.

With this system you can realistically accomplish a goal with every one of your workouts.

#### • High volume workout

To take your training to the next level, you can engage in high volume training. This technique allows you to get the most effective pumps with heavier weights. Three ways to do so include:

- Lifting more weights in the same set or rep scheme
- Lifting the same weight for more reps per set
- Performing more sets per workout

When you increase volume, you may be doing so for gaining size or for strength. At the same time, you're also flaunting higher levels of muscle with lower levels of body fat.

This technique brings together a combination of compound and isolation exercises. You can prioritize the compound exercises that use multiple joints and lots of muscle mass so that you have the physical and mental capacity to get more plates on the bar.

When you combine compound and isolation exercises, vary your repetitions to focus on multi joint lifts. You can use higher repetition ranges for isolation exercises.

#### Resistance

Resistance exercises are extremely helpful in building muscle mass. These are specific moves in which you push against a weight. Using a resistance band is a popular way to create tension through your range of motion. It produces something called Progressive Tension, giving you more tension at the end of every repetition. There are a few resistance exercises that you can add to your workout routine.

**Bicep Curls:** For this exercise, keep your legs in a parallel position. Using a resistance band for this exercise, stand in the centre. Keep the other ends around your wrists. Your arms must be close to your body. Now, you need to lift and move the band up and down slowly. When the arm is curling up, squeeze your bicep. Do 20 to 30 reps of this exercise.

**Oblique Twists:** For this exercise, you also have to stand with your legs in a parallel position but they must be more than hip distance apart. Keep your arms straight at your chest level and hold the resistance band. Twist from one side to the other. The trick is to begin this movement from your waist and then twist. As you do so, squeeze your stomach.

Do 20 to 30 reps of this exercise.

**Triceps Kickbacks:** For this exercise, you have to keep the same stature as the bicep curl. Stand in the centre of your resistance band and keep the other ends around your wrists. This is quite similar to a dumbbell kick back as you have to squeeze your arms and shoulder blades using the resistance band. Start squeezing from the top. You need to do 20 to 30 reps of this exercise too.

The point of doing so many reps is to fatigue the muscles. That's how resistance works. Once a certain muscle group is fatigued, you move on to the next one. If you want the exercise to be most effective, you have to do one after another.

In this way, all muscle groups get worked to their full potential at the same time. This helps make muscles stronger and induce division in the musculature.

#### **Rest between Sets**

When you do sets, you need to rest for some time between successive sets. And while this is true for most types of workouts, things tend to be a little different when you're trying to gain muscle.



When you rest in between sets when training, you can flex and pose. This helps blood flow to your muscles keeping them pumped and warm. Not only does flexing and posing give you better control over your muscles, it also lowers the risk of injury.

Also, when you flex and pose, you improve the ability to hold a pose for an extended time. This prevents your muscles from cramping as well.

You can also stretch in between sets for serious muscle gain. Stretching increases flexibility which can bring about greater muscle recruitment. Flexibility also improves form and gives you a greater range of motion. The same also reduces the risk of injury, prevents soreness and promotes faster recovery.



# POWER BUILDING



#### **Chapter 3**

#### **Power Building Lifestyle**

Bodybuilding or building muscle mass doesn't mean that you have to lead a life of deprivation. You need to keep a balance in your life so that all your efforts in building strength or muscle mass are not lost. If your lifestyle is in accordance with the muscle building regime you are following, then you're golden.

Once you attain your muscle building goals, you also have to maintain them or get better. If you thought getting to the goals was hard, you'd be surprised to know that maintaining your gains is even harder. You need to alter your lifestyle according to your muscle building routine so that you can create a balance and keep your gains.

#### **Mix Your Workouts**

A good muscle building lifestyle needs timely changes in workouts. You should add variety to your workout plans so that your exercises don't end up being ineffective. For instance, if you've been doing 5 sets of a particular exercise every day for the past three months, there will be a time when your body reaches a plateau.

At this point, you need to increase the resistance levels of your body and expose it to newer and harder challenges.

There is a difference between your endurance levels at Month 1 and Month 6. So, as your endurance levels change, your workouts should change too. After all, variety is the spice of life. Performing the same routine can cause injuries due to overuse of the same joints. Always try to hit different angles in your workout to develop that full and complete physique and fortunately, there are limitless exercises out there to help you hit different angles.

Do you ever get bored of things just because you are doing them so much? Well, the same happens with workouts. When you keep doing the same exercise every single day, you'll surely get bored of it and you will call it quits. Mix up your workouts and bring some change in your routine so that you can also feel excited to try out new exercises.

#### **Adequate Sleep**

Sleeping for 8 to 10 hours daily is very important for your muscle building routine. During slumber, your body breaks down the proteins present in it to yield amino acids and then use them for energy.

But when you eat before going to bed, this process is reversed. Your body starts to make proteins using the food that you've eaten. Some experts also encourage nocturnal sleeping which is waking up in the middle of the night to eat.

Also, during slumber, growth takes place. As someone looking to gain quality muscle mass, this is very important for you. In men, more than 50% of the Human Growth Hormone is secreted when the body's in a sleep cycle. This means that if you don't get adequate sleep, the levels of this hormone reduce significantly. As a result of this, your muscle gain also suffers and you don't want all your efforts in the gym to go to waste, do you?

When you sleep, your body repairs damaged muscle cells and replenishes immune cells. This is also important for bodybuilders because the human body needs substantial recovery time if it's to perform in the gym daily.



Sleeping also recharges your brain because levels of adenosine are reduced during slumber. This keeps you alert during your workouts. Without proper sleep, you won't have the motivation that comes with alertness.

If you struggle with your sleep patterns, cut down on alcohol and caffeine levels. Also, don't take sleeping pills as they only work initially and later cause disturbed sleep patterns. Train your body to sleep at a certain time every night and eventually your body will adapt to this routine.

#### **Schedule Regular Recovery Time**

Recovery is very important. Some people completely overlook this essential factor and train without any planning. You need to give your body time to repair otherwise there can be problems.

- You won't have the same strength level to work out every day if you don't give your body time to rest
- Your endurance will also decrease if you train the same muscles without giving them a break
- If you overdo an exercise, your body can get injured and you may have to face muscle sprains or tears

So if you don't give your muscles time to rebuild, you'll probably end up doing more harm than good to yourself. Your body will only start repairing once it gets adequate rest. As such, it's essential to plan your workout accordingly.

Ideally, you should take a break of 2 to 3 days before you train the same muscles again. For example, if you do an intense forearm workout one day, then you must wait for 48 to 72 hours before you train your forearms again. Studies regarding this issue show evidence of this to be true. One such study involved working with three different groups. All the groups did the same volume of workouts but the pattern was different.

Bodybuilders from one group did the assigned volume in one day, the others in two days while the third group did the same volume of workouts in three days with breaks. It was seen that the group which worked out three days a week with breaks had more gains even though the volume of workout was the same as the other two groups.

#### Hydration

Water is the most important nutrient for the human body as it's the medium for transport and numerous bodily reactions. Not only does water hydrate, it also keeps your joints healthy. Your joints contain synovial fluid which is mostly water. And a lack of water weakens your joints by reducing synovial fluid.

This fluid reduces friction between joints to prevent inflammation and increase flexibility. When the levels of this fluid reduce, you find it hard to exercise and there's a greater likelihood of you getting injured. When you work out, you lose a lot of water through sweat and need to replenish this water loss by drinking lots of water.

A lack of water also increases fatigue. If you don't drinking enough water, you'll face problems like low endurance levels and fatigue. While water doesn't give energy directly to the body, it is the medium in which major reactions occur.

It also keeps your brain healthy. In the absence of sufficient amounts of water, your brain will be tired and that will decrease your levels of alertness and concentration.

Water is also important for making your muscles stay toned. If you don't drink enough water, your skin becomes saggy. On the contrary, sufficient levels of water help make your muscles more resilient and toned.

For most individuals, 8 to 13 glasses of water a day are recommended, but if you're trying to increase muscle mass, you need to drink more water. This is because you lose more water through physical activity in the form of sweat. Always keep a water bottle with you in the gym and outside. It's evident that your lifestyle has a huge impact on the overall results of your body building endeavors. So make sure your lifestyle compliments your routine in the gym.



# DIET FOR INCREASING MUSCLE MASS



#### **Chapter 4**

#### **Diet for Increasing Muscle Mass**

Diet is perhaps that component of your muscle building program which will make achieving your goals so much easier when planned correctly.

You know that you can work out all that you want, but if you eat the wrong foods, you won't get the results. Here are some tips on how to eat right when you want to increase your muscle mass.

#### Eat at Home

Eating out frequently doesn't only affect your health but can also slow down the process of increasing lean muscle mass.

Most of the food that you eat outside is processed. This food is low in nutrients so doesn't really benefit the muscles much.
It also has a very low fiber and protein count, which further contributes to the problem. Processed food is also rich in refined carbohydrates and sugary ingredients. These ingredients don't help in muscle building at all and are harmful if over-consumed.

Cooking at home means that you have complete control over what you eat and what you avoid. You can try out different recipes that aim at building muscle mass.

## **Plenty of Protein**

Broadly speaking, building muscle mass is divided into two main phases. In the first phase, breakdown of components takes place. This happens when you work out or do resistance training.

The second phase is the synthesis phase in which synthesis of muscle cells takes place. This is the phase for which you need to take a lot of proteins.

Protein is the essential nutrient for muscle building. Proteins are involved in the repair of damaged muscle cells and building up of new muscle fibers. The muscle fibers are made up of two main proteins called actin and myosin. To synthesize these proteins, you need to take in different amino acids. Some of the amino acids are present in the body and are called as non-essential while the ones you take from food are called essential amino acids.

You can get these proteins from foods like eggs, meat, cheese and fish.

You can either get your proteins from food or use proteinaceous supplements. These formulas are present in powder and soft gel forms. Health experts suggest that you must have at least 20 grams of protein in every meal or snack you eat, if you wish to increase muscle mass.

### **Snack Often**

It's also important to snack often if you want to increase muscle mass. The trick is to bulk up on your intake of nutrients especially proteins. With many hearty options available, it's easy enough to sneak proteins into the mix. Protein snacks will keep you energized and also provide your body with nutrients needed to make new muscle cells and form muscle proteins.

Contrary to popular snacking trends, you shouldn't eat sugary foods as these can slow you down. Instead, you need to eat healthy snacks for building muscle mass. Some snack ideas for building muscle mass are given below:

- Have a tin of tuna. You can also eat it with brown rice to increase the carb and protein intake.
- Smoothies are great muscle-building snacks as they have milk which is rich in casein protein.
- Cheese is a protein-rich snack.
- Greek yogurt helps build muscle mass. You can make a snack out of it by adding berries or almonds to it.

If you're on the go, you can make Power Bites to keep you boosted. You can make these without baking and keep them in the refrigerator for later use.

To make these bites, blend together ¼ cup of raw oats, two scoops of a protein powder (chocolate or vanilla), 2 table spoons of honey and a spoon of natural peanut butter. Roll the mixture into small balls. To really boost up the calorie count, you can also add dried fruits or nuts to this mixture. If you develop a taste for these, you might never need to buy a protein bar again.

## **Best Foods to Bulk Up**

There are lots of foods that are high in nutrients best suited for your building muscle mass. Just consuming a few grams of these foods, will give you a lot of calories. Some of these foods are mentioned below.



## Nuts

Nuts are rich in energy as they have monounsaturated fats that are healthy for you. Making nuts a good choice for bulking up is the fact that even a small serving of nuts can give you a lot of calories.

Only 50 grams of nuts contain 300 calories. To make things even better, nuts are a dense source of magnesium, selenium and phosphorus.

All of these minerals are essential for building muscle mass. Nut butters are also rich in calories so you can snack on anything that has peanut butter in it for bulking up.

One sandwich using peanut butter contains 420 calories and 15 grams of proteins. It's also rich in copper, magnesium, potassium and different vitamins. This is a low-cost, bulky and tasteful snack option for people looking to increase muscle mass.

## **Eggs whites**

Not only are eggs a rich source of protein, they are also great for bulking up. Each egg contains about 90 calories with a protein to fat ratio of 60:1. Plus the protein content in egg whites is readily utilized for protein synthesis. An omelet for breakfast is a great way to start your day with a filling meal.

## **Smoothies**

Smoothies are an effective way to bulk up especially if you're too busy to prepare elaborate meals. A smoothie made with whey protein, milk and bananas contain about 400 calories.

Along with that, it also contains 31 grams of proteins and 10 grams of fats. Due to the presence of healthy ingredients, smoothies are also rich in vitamins and minerals.

Coupled with the high calorie count, this factor further assists in increasing lean muscle mass.

## **Beans and legumes**

Not only are beans and legumes an excellent source of protein, they are also chock full of fiber.

While the benefits of protein for muscle building are obvious, fiber does its part by maintaining proper insulin response. This is critical for muscle growth as it enhances glycogen levels in muscle cells and creates a favorable environment for growth.

## Salmon

Eating fatty fish is recommended even for the general population and if you're doing extensive workouts, you should eat at least 3 servings of salmon or other fatty fish in a week. Salmon is rich in healthy fats and proteins.

The healthy omega-3 monounsaturated fats present in fatty fish are very good for lean bulking. Fish is not only rich in calories but also helps improve joint care.

This factors in significantly as you need to have healthy joints if you want to continue your intense training sessions.

## **Beef Steak**

Each steak of beef contains about 320 calories. It is the most protein-rich food on this list, containing 36 grams. Also, 2 grams of carbohydrates and 15 grams of fats are present in a single beef steak.

Beef is a rich source of creatine which is an amino acid needed for muscle growth. Eating only a pound of beef gives you five grams of creatine. This assists in increasing muscle strength and accelerates the process of muscle growth. Beef provides 3 more grams of creatine as compared to red meat or lamb meat.

## Avocado

Avocado on toast is a great snack option for people who want to bulk up. Eating two slices of toast with half an avocado spread on it gives you 485 calories. Although this snack is a bit low in protein, it contains about 38 grams of fats. The high concentration of minerals, vitamin A and healthy fats makes up for the lack of protein in this snack. So, if you couple your resistance training with the right kind of foods, you'll get your results faster.



# SUPPLEMENTATION FOR MUSCLE MASS



# **Chapter 5**

# **Supplementation for Muscle Mass**

If you're aiming for building muscle mass, you're probably familiar with a number of supplements to enhance results. However, you have to remember that "supplements" are meant to supplement you diet and not replace it.

While they can add to achieving results, they can by no means act as substitutes for a well-balanced diet and a solid training program.

## **Importance of Supplements for Body Building**

The right supplements can be extremely important for body building. These are compounds that aren't naturally present in your body or aren't present in sufficient amounts which makes it essential to take them from the outside. If you have a routine where you consume more calories than you burn and have more protein than you break down, you are well on your way.



Plus when you pair this up with a challenging exercise program, you set yourself up for success. Adding in certain supplements that cater to muscle gain needs specifically can help you go a long way. The following may help you gain more muscle with the right diet and exercise program:

## Creatine

Creatine is an organic acid which is nitrogenous in nature. It contains amino acids like glycine, methionine and arginine. These amino acids play a role in increasing muscle mass by repairing any damaged muscle tissue and forming new muscle cells. Our body already has creatine in skeletal muscles and the brain.

Creatine assists in muscle building by allowing your body work harder and for a longer time. It lets you do more sets and reps.

Supplements containing creatine help to increase the phosphocreatine reserves present in the body. When needed for energy, these reserves are broken down and the energy can be used in intense workout sessions.

Health experts believe that creatine is the most effective supplement for increasing lean muscle mass and making muscles strong. It enhances performance in anaerobic exercises and increases the fiber size in the muscles.

Muscles are made up of actin and myosin fibers. When the fiber size is increased, muscles grow and that increases muscle mass as a whole. Creatine also improves endurance in the muscles which means that muscles are able to perform for a longer time without tiring.

For increasing muscle mass, you should take about 3 to 6 grams of creatine every day. There is a process called 'creatine loading' in which the user takes 10 to 20 grams of the supplement for about 2 weeks.

This reduces the time that you need for seeing the results of this supplement. After this time, you can go back to using 3 grams each day.

There are different forms of creatine but the best one for muscle building is creatine monohydrate. This form is cheaper than others and has better bioavailability.

When using supplements for muscle building, users are also concerned about the possible side effects. Creatine, being the most studied supplement for muscle building, hasn't shown any side effects so far.

It doesn't tear out the muscle cells or harm the kidneys, as some people speculate. Along with men, women who want to build muscle mass can also use creatine as it's safe for both genders.

## **Beta Alanine**

Beta Alanine is an amino acid that's naturally found in the body in skeletal muscles. This amino acid isn't directly involved in forming muscle cells or even proteins.

Instead, it actually forms carnosine in the body by joining with L Histidine. The amount of carnosine your body can make doesn't depend on the amount of histidine present but on the amount of beta alanine.

Although the body has processes for forming beta alanine, the best way to get this amino acid is from supplements. It helps form carnosine, which then plays a role in increasing muscle performance for intense workouts.

During high intensity workouts, the lactic acid concentration in the muscles increases. This increases acidity in the muscles and causes fatigue. Carnosine assists in reducing this acidity so that you don't tire quickly.

Carnosine has buffering capabilities and it levels out hydrogen ions that accumulate in the muscles during workouts. Most supplement plans include taking beta alanine for 28 days so that the carnosine levels in the body are maximized.

Beta alanine also increases endurance during intense anaerobic exercises such as sprinting and weightlifting.

Your body has a VO2 max which is the percentage of oxygen that the body can make use of. In the presence of beta alanine, your body's VO2 max increases from 90 to 115%. With such high oxygen consumption, muscles get sufficient amount of oxygen that they need for better performance.

Beta alanine does have a side effect that it causes paresthesia. This is a condition in which the user feels a prickly sensation on the hands and face. This can last for more than an hour if high doses of beta alanine are taken. Despite that, beta alanine helps boost muscle building by forming carnosine which increases fatigue threshold and buffers muscle acidity.

A study published by *International Journal of Sports Nutrition and Exercise Metabolism* showed that beta alanine actually helped enhance the effect of creatine when taken in conjunction.

#### **BCCAs**

Amino acids are the monomers that form proteins. Since muscles are made up of proteins, any supplement that contains amino acids is good for muscle building. Branched chain amino acids are those amino acids that have branched side chains.

The three major BCCAs are Leucine, Valine and Isoleucine. BCCAs are involved in the synthesis of Glutamine which is important for muscle building. It helps in protein synthesis and balance the nitrogen levels. Both these factors contribute to muscle building. On their own, BCCAs reduce fatigue in the muscle cells. When the body needs extra energy during workouts, it breaks down these amino acids for energy. So, you can work out for a longer time. Also, these amino acids accelerate recovery time.

Your muscles need to recover for the next workout so BCCAs play a role in recovering and rejuvenating your muscles. BCCAs are also involved in enhancing protein absorption in the body so that these nutrients are not lost and can be put to good use in the muscles.

During exercise, the body produces a hormone called serotonin which increases fatigue. Branched chain amino acids lower the levels of this hormone to reduce fatigue. These amino acids are present in legumes, meat and dairy products. If your diet is rich in these foods, you may not need to take synthetic supplements for getting these amino acids.

All three branch chain amino acids are equally important. A ratio of 3:1:1 for Leucine to Isoleucine and Valine is good for building muscle mass.

#### HMB

HMB or Beta-hydroxy beta-methylburtyrate is produced in the body during Leucine processing. It's helpful in preventing muscle breakdown.

During high intensity workout, muscles undergo wear and tear. HMB prevents this from happening so that minimum muscle loss takes place. It also increases the levels of protein synthesis which is a great way for increasing muscle mass.

Studies have shown that people who take 3 to 6 grams of HMB daily have more gains that people who don't.

HMB also improves recovery. During exercise, your muscles undergo micro-tear and get sore due to a buildup of hydrogen ions. HMB reduces the time needed for recovery by elevating protein synthesis to repair the muscles that have been damaged. Being able to exercise harder and longer, you will experience an increase in muscle mass.

Before you take any supplementation for building muscle mass, read up on the side effects of the synthetic supplements and only take the recommended dosage.



# CARDIO FOR MUSCLE BUILDING



# **Chapter 6**

# **Cardio for Muscle Building**

Many bodybuilders flinch at the mention of the word "cardio" as they know that cardio burns fats. If the whole point of your tough exercise and diet regime is to gain muscle, why would you want to do something that burns fats? It just defeats the whole purpose, doesn't it?

There is scientific evidence to back up this fact. A study was published in the *Journal of Applied Physiology* which touched on this topic. The study included a group performing 10 weeks of intense training along with cardio.

It was found that cardio burnt more fat as compared to only weightlifting. The downside was that cardio also reduced the strength gains. There are also other studies to prove that cardio does cut down the muscle gain when integrated with resistance training.

## **Importance of Cardio in Muscle Building**

So cardio becomes a controversial topic when trying to bulk up. The question remains does cardio counter muscle gain? Well, it certainly can if you do it wrong. But it's not all that bad if you know how to do it properly.

When you work out to gain muscle, think of cardio as conditioning. It's the means through which you can improve your heart health. A healthy heart means better blood flow to the muscles which further means a sufficient supply of oxygen and nutrients to the musculature. But it's important that you do cardio without losing any muscle.

According to Joe Holder, a Nike coach, you need to train both your aerobic and anaerobic systems if you want your cardio to complement your muscle building routine.

Your anaerobic system provides energy for a short span of time, ranging from a few seconds to a minute. In this time, no oxygen is involved. The anaerobic phase is further divided into the alactic and lactic phase. Lactic acid is produced in the lactic phase while it is absent in the alactic phase. On the other hand, the aerobic system involves oxygen and provides energy for long-term use by breaking down essential nutrients in the body.

## **Dos of Cardio**

If you plan on integrating cardio into your existing exercise routine, you need to do it properly and with extreme thought.

First of all, you need to consider the number of days you'll be doing cardio for. Experts suggest that you should do cardio only for two days a week if you don't want to lose muscle. The maximum number of days could be three but if you exceed that, you'll end up losing muscle.

Sprint exercises are the best kind of cardio that you can do to preserve your muscle mass.

You may have seen professional runners being so buff despite running all the time? Well, it's because sprints work your anaerobic systems which means the energy comes from short spurts rather than burning of any major nutrient in the body. Also, sprints help improve recovery. They give your body time to build itself and repair any torn muscle. It will also help you in the gym because sprinting exercises increase your work capacity and give you massive energy.



Do 10 rounds of sprints on a treadmill at a speed of 10mph. Make each round 10 seconds and take a 10 second rest between each round. To skip the part where the treadmill is accelerating, it's good to jump on the treadmill when your desired speed has been achieved by it. It might seem very easy when you read it here but this routine really pumps you up. Try to take shorter breaks.

Limit your cardio to less than 20 minutes. It's been seen in different studies that cardio done longer than that actually burns muscle mass. Low intensity cardio is much better if you want to preserve muscle mass.

During low intensity cardio, your body burns less fat as compared to high intensity cardio. Also, it builds endurance so you have a better performance during your gym routine.

At the same time, low intensity cardio is easier on the joints. This is also a considering factor for bodybuilders as they don't want to get injured doing cardio. This can easily render them unfit for their actual muscle building exercises.

Another smart way to incorporate cardio into your routine is to use it as a warm up for your strength training. Limit the cardio time to 10 minutes so that it doesn't interfere with your workouts later.

Performing a longer low intensity cardio session before intense training not only burns more fat but also interferes with increasing gains.

## Don'ts of Cardio

High intensity cardio is good for a lot of things, but not necessarily for bulking up. In fact, it's one of the don'ts when you want to build or maintain muscle mass.

It's been seen in studies that high intensity cardio is better at burning fat than low intensity. It gives your body the ability to burn fat even hours after the workout is done. Also, it increases the aerobic capacity of the body. This means the body goes in an aerobic phase where it burns nutrients for energy in the presence of oxygen.

The same also increases oxygen consumption after workouts which only adds to the aerobic capacity. High intensity cardio is suitable for utilizing muscle mass which is something you need to avoid when you're strength training.

Another "don't" of cardio is long sessions. Don't do cardio for too long. Even when you do low intensity cardio, make sure the sessions are not any longer than 20 minutes. Also, don't do longer cardio sessions right before resistance training. It'll only leave you exhausted and in bad shape for training.

When you want to bulk up, there's definitely no need to do cardio every day. As mentioned earlier, you can do cardio on two to three days. If you do high intensity cardio, mix it up and maybe do low intensity for two days and high intensity for one.

And most importantly, don't make your cardio exercises a chore that you get sick of. Enjoy your cardio and make it a fun routine for yourself. Sprints or cycling or even swimming can be a boring task for some people if they're not made for it.

For some people, bodybuilding and weightlifting is the only fun thing. But, you have to make your cardio fun so that you are tempted to do it.

Cardio is supposed to condition your heart so make your routine full of variety. Don't stick to one pattern. Change your cardio pattern just like you change your intense workout routine. For the first week of the month, try to do low intensity and then moderate intensity for the next week and high intensity every once in a while.

Don't let your leg day and cardio fall on the same day. It'll leave you exhausted and you won't be able to do either of them with concentration or motivation. At least let there be a one day break between your leg day and your high intensity cardio day.

So, you can say that cardio is a good way for you to keep on track and to condition your body and heart. Just remember to not overdo anything because your body needs a break from time to time.

# CHAPTER

# TRACKING PROGRESS



# **Chapter 7**

## **Tracking Progress**

When you start an intense training program and you've got the supplements and diet plan ready, you need to work towards keeping track of your progress too.

It's something that most people tend to ignore as they don't realize the importance of this practice. You need to keep a track of your progress so that you can monitor your overall fitness progress.

Based on this info, you can then make changes to your diet or exercise plan. If you don't track your progress, how'd you know if your struggle has given any results? Similarly, you wouldn't know if you need to increase the amount of sets or reps you do.

Some people have set a time frame for themselves in which they have to reach a certain "gains goal". To reach this goal in the set time span, you need to track your progress. Here are a few ways in which you can track your progress and make changes in your muscle gain routine along the way.

## Keep a Journal

Journals can be tedious and boring but are probably the most effective method of tracking your progress. For muscle gain, you need to have a workout routine with varying reps and sets for each exercise.



Also, your diet should contain snacks and meals specific for muscle gain.

Since, it's not possible to keep all this information in your head without getting confused or mixing it all up, it's best to record it all. To keep a track of all this, get a journal and pen down your daily eating plan and exercise habits. If you use supplements, you can also record results you've seen from that supplement in your journal.

Experts suggest that you should change your plan after every two months. When you do that, either get a new journal or change the format of your existing one. This'll make it easier for you to track your progress with different plans.

For instance, if you change a supplement after two months, you can write all the pros and cons in your journal. This'll give you a clear idea of which formula works the best for you or which workout plan is the most effective.

You can also write your short-term goals in your journal that you need to reach in two or three months' time. If your goal is to reach 10 sets of any particular exercise, your journal will help you monitor how quickly you reach your goal and how close you are to it. You can write the following things in your journal:

- Write about the amount of time you spend in the gym every day.
- Also, you can write if you felt energized or fatigued during your visit to the gym any day.
- Write about how a particular supplement changed the way you feel or how long you were able to work out.

## Weighing Scale

It's very convenient to track your progress using a weighing scale because it's something that is easily accessible. You might not be able to observe any changes on daily basis but you'll be able to see any noticeable changes if you check your weight after each week of your plan.

If your plan includes bulking up on high calorie foods to build muscle, then you'll be able to see the results on a weighing scale. One important thing to remember is that the weight gain you see on a weighing scale may not necessarily be muscle. The weight could be water weight or fat. If you're clean bulking, then there's a likelihood that the weight gain you see on your scale is muscle. You should still measure your body muscle composition to see if the weight you are gaining is actually muscle or not.

## **Body Fat Composition**

You can measure your body fat composition using body callipers. These are special devices that measure fats from several regions of the body where fat deposition is maximum.

These regions are different for men and women but mainly involve abdomen, hips, arms, thighs and chest. When measuring muscle mass, you have to assume that the mass that you've put on is fat.

To track your progress, you must first know your body weight before you started your muscle building plan. Of that weight, you must measure the fat mass. This can be done by various methods and you can get it determined by an expert for accurate measurements. You have to measure the fat composition by subtracting the amount of fat in kg from the total body fat. If you weigh 50 kgs and 5 kg of that is fat mass, then you have to measure your further fat composition from that information.

Say after you start your muscle building routine, your weight increases to 70 kgs. If 5 kg of the 50 was fat, then it means that of the 20kg you have put on, the same percentage would be fat from that amount too. That percentage would be 10% and the 10% of 20kg is 2kg. This means now your overall body weight is 70kgs of which 7 kgs is fat mass and the rest is your body organs, blood and water.

In this way, you can keep a track of how much fat you've put on. It's just an assumption that this is muscle mass which it could be since you are bulking up.

## Measurements

Another way to track your progress is to measure. This is probably the simplest way to track your progress and to visibly monitor how much muscle you've gained. For this, you need to take a measuring tape and measure your biceps, chest, calves and legs. You can also measure your stomach and forearms to see how much muscle gain you've achieved.

You can actually measure a lot of different parts of the body but these are the main areas that you should measure to track your progress. For example, if you started with your biceps at 8 inches and after a few months of your training, the size increases to 10 or 12 inches, it'll give you a clear idea that your routine's working well and you've actually gained muscle.

## **Take Pictures**

This is one of the more fun ways to keep track of your progress. When you start your routine for building muscle mass, take a picture of yourself in the mirror. Then, track your progress by taking a picture every week or two times a month.

When you put all these pictures together, you'll be able to see the changes that occurred in your body over time.
If you want, you can also print out the pictures and paste them in your journal to keep your log updated. This is a great way for keeping yourself motivated.

Sometimes, the results may be a bit subtle and you won't really see them on yourself. But when you put all the pictures together and compare them, it becomes easier to see the difference in your gains. If you feel that the pictures aren't showing any difference, then you may need to make some changes in your diet, workout or even your supplements.

Tracking your progress is a great way of ensuring that you don't end up wasting your time and not getting any results. You should check your progress every week so that you can reach your short-term and long-term goals on time.



# BEST FITNESS APPS TO MEASURE PROGRESS



### **Chapter 8**

## Best Fitness Apps to Measure Progress

You can even use technology to measure the progress that you make.

There are so many apps that you use for a number of things every day. But did you know that there are apps for tracking your progress too? There are apps set up by different developers that you can use for tracking your progress and measuring your gains.

#### Nike Training Club

This is an app developed by the leading producer of athletic products in the world. Their app gives you access to more than 180 personalized workouts and all for free. Just think of this app as your own personal trainer for gaining muscle mass. These workouts are aimed at increasing endurance and muscle gain. If you want to track your progress, you can do it with this app as it adapts the workout plans to your needs.

The notable feature of this app is that it is suited for everyone. Whether you're a beginner or an intermediate level exerciser, this app caters to your needs. It has a "Picks for You" feature which tells you about workouts that are suitable for you.

You can choose the kind of workouts you want to do such as the ones that increase muscle mass and the app will recommend them for you on daily basis.

The app also gives you expert advice which comes from leading Nike trainers with tips included on increasing muscle mass and getting toned muscles. With time based and rep based options, you can choose the one that is suitable for you.

In this way, you can track the amount of time you spend in the gym every day or the number of reps you're able to pull off.

If you do any other activities than just training in the gym such as playing basketball or running, that can also be tracked by this app. Your runs will be stored by the app and the progress of other activities will also be monitored by the app.

#### **Garmin Fit**

Garmin fit is another app that can be used to track progress. You can pair it with a compatible Garmin device and track your physical activity.

The app has a My Day Page on which you can see your health data. It'll give you a statistical value of your physical activity. Just turn on your GPS and you can measure your distance (if you're running) or your elevation if you're training for building muscle.

On the app, you can create your own workouts personalized to your needs. This app can also be synced with other apps such as Strava or MyFitnessPal allowing you to track your progress from different apps on one platform.

One distinguishing feature of this app is that it lets you connect with other users so you can track your progress against other users too. The app also tracks the amount of calories you take in or you need based on your age, height and weight. With the app open, you can also listen to your favourite music while you plan.

#### **JEFIT Workout Tracker**

The JEFIT app is a fitness tracker app that you can use for tracking your progress in the gym. It's a gym trainer app which is filled with free fitness programmes that are aimed at keeping the user fit.

There are 1300 different exercises in the app and the developers have also added animations for the user to see how these exercises are done.

The fitness tracker gives you progress reports so that you can see how well you're doing or which changes you need to make. There's a resting timer too so that you can rest for an optimum time between successive workouts. The app also gives you an option for goal setting that it will then track for you.

One of the most noteworthy features of this app is that it gives different kinds of workout plans. You can customize the plans for yourself to 3 day, 4 day or 5 day splints. You can sync your data on Cloud and if you don't have WiFi, the app will still work offline. The interface is quite user-friendly and overall, the app is free.

#### **Fitness Pal**

Fitness Pal is an app that many people are aware of. It has a calorie counter for the user to track their calories. If you do muscle building exercises, you can use the calorie counter to see if you have gained weight.

Also, there is a BMI and Body fat calculator. This is very important for keeping a track of your progress in muscle building routines. Body fat mass is used to determine the amount of muscle gained. There are different gym exercises on the app with instructions and animations. If you're not happy with the results you get from your existing routine, you can learn new muscle building exercises from the app.

There are also meal plans on the app for people working for muscle building. So, you can track your progress in the gym and monitor the calorie intake at the same time. Create your workout log in the app and you can track your intense workouts as well as the results. You can also track your calories with the in-built Calorie Tracker and use the Pedometer to track the steps you are taking if you have taken up walking as an extra activity.

My Fitness Pal also has a heart tracker to track your heart rate. The good news is that it's free, works offline and can also be synced with other apps such as Garmin Fit.

#### **IMuscle**

IMuscle is a tracking app for people who want to gain muscle in a specific part of the body. There's an anatomical figure on the app from where you can choose which part of the body you want workout plans for.

There's also detailed animation of different muscles on the app so that you can see how you need to train. Along with primary exercises, the app also tracks your secondary muscle gains. You can track the statistics for individual exercises you do or for the whole workout. There's also an option to track your body measurements. This is suitable for people who want to gain muscle mass. They can monitor the different parts of the body and how they have increased in size.

The app tracks workouts with weight and the number of reps and sets you do. There's a digital trainer to give you tips and advice on how to make your workouts more fruitful.

#### Workout Trainer

This is another fitness app that you can use for tracking your progress. The app lets you choose any stage, whether you are a beginner, intermediate or expert. Set a goal for yourself and the app will track how close you are to your goal. You can also connect this app to your Smart watch for better tracking.

If you subscribe to the app, you can also get a one-on-one fitness trainer for yourself online. This trainer will customize the workouts for you and you will also be accountable to this trainer. If you don't want to pay, you can still enjoy different workout plans that are devised by expert coaches.

As you can see, it's quite easy to track your performance with an app since your smartphone is almost always with you. Also, different apps are equipped with training tracker, customized workouts and calorie trackers.

## Conclusion

So now that you know a bit more about the essentials of muscle gain and strength, you can put together a more comprehensive plan to execute.



Beginners may still be the lucky ones in the bunch as no matter what they do they're bound to put on some muscle. But when you work on a more advanced level, knowing how to optimize results is the only way to enhance your bodybuilding results.