

NUTRITION 3

The most **IMPORTANT** thing that you're doing wrong!

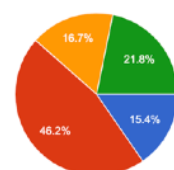


Let's start easy! There are 3 Macro Nutrients as far as we're concerned (alcohol is the 4th but shall be put aside for another discussion) - Carbohydrates, Fats and Protein.

The first two are the primary sources of energy for our bodies and have been discussed at length in our previous Blackfire Nutrition handbooks - this time we are going to focus on Proteins.

[PS Yes; there are times that the body can burn Protein for energy too but this conversion takes place only under extraordinary circumstances and is a metabolically 'costly' process - which means it does not occur frequently so don't be concerned with this for now.]

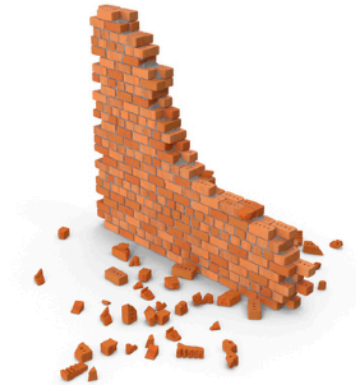
Only 31.4% of CFBF Members said in our recent survey that they track their Protein intake!



We should consider Protein to be the building blocks that our body uses to build everything and anything (did you know our bones too are made from protein - nearly 50%). From Muscles to tissue, skin to hair - they're all made up of proteins.

How it works - the simple explanation

The simplest way to understand it is that your body is like a wall made up of bricks. These bricks break down at a certain rate and are replenished at a certain rate. Both these processes are happening all the time in your body.



So you're probably guessing that if you eat enough protein (more than you're breaking down) you should be okay, right? Well you'd be right but only partially.

How it works - the complex explanation or All Proteins are not the same

Every time you eat a protein your body digests it and breaks it down into Amino Acids. Now there are 21 different Amino Acids and each protein is made through different combinations and amounts of Amino Acids (AA).

Of these 21 AA's there are 9 AA's that are considered to be Essential meaning you must have them to live. They are found in foods like milk, eggs and meat and also a wide variety of plants.

Step 1 - Make sure you are eating more protein than you are breaking down!

So once your body breaks down the Protein you eat the AA's are collected in an Amino Acid pool and it is from this pool that they are combined to be used at different sites in your body. We call this Protein Synthesis and when it's used to build muscle we call it Muscle Protein Synthesis (MPS)

Scientists fed rats a diet that had only corn protein in it and observed the results. What they noticed was that rats on this diet got sick and would eventually die. When the sick rats were fed protein from milk, however, they would get better. This told the scientists that something in milk protein was essential to health of rats, that it was something they couldn't live without.

Eat a wide variety of foods

Here's a very simplified reason why **you should eat protein from a wide variety** - Imagine that you only eat one protein source all day and if it lacks in a certain AA, then your body will not be able to synthesise all the proteins your body needs - even though you are eating 'enough protein'!

Step 2 - Make sure you are eating a wide variety of protein!

Muscle Protein Synthesis and Recovery

As Crossfitters we are always looking to build more strength and performance through more muscle or Muscle Protein Synthesis. The good news is that every time you do High Intensity exercise your body is primed for MPS. All you need to do is eat a good source of Protein and consume enough for it to stimulate MPS.

The other ways to bio hack MPS are *Lift Heavy or do resistance training at least 3 times a week.*

Do Intermittent Fasting - when you break your fast your body goes into Muscle Synthesis overdrive!

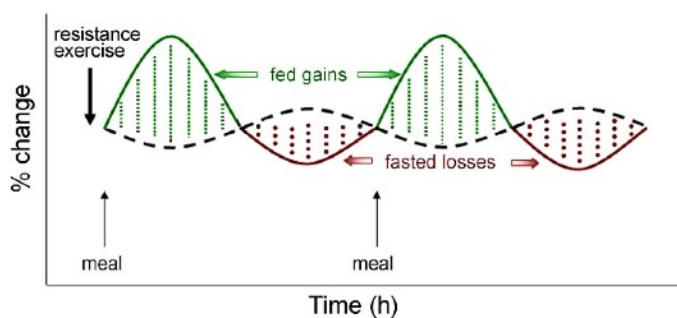
What you need to know!

“How much Protein do I need?”

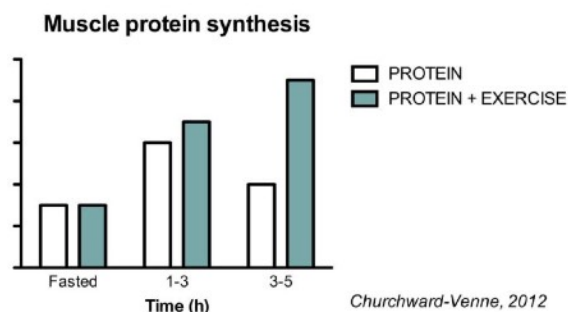
In a day - anywhere from between 1.7gms of protein per kg of bodyweight to 2.4gms. Slide to the higher side if you are older, want to build strength. Slide to the lower side if you are overweight. Eg. an 80kg athlete will need a minimum of $80 \times 1.7 = 136$ gms of Protein/day

“How much Protein should I eat in one meal?”

There seems to be an upper limit and lower limit to the amount of Protein that can be consumed with each meal. For example some studies suggest that the optimal amount of protein that you should eat in one sitting is around 30gms. And since the rate of absorption of Protein is around 10gms per hour - you should have your next meal after 3 hours with another 30gms to spike MPS.



Studies have shown that even without exercising - just by having 30gms of Protein in a meal - your body will build



muscle!

Just not as much if you also combined with exercise!

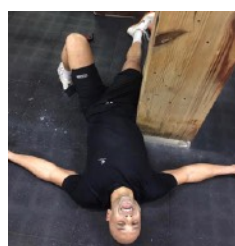
“How do I know if I’m eating enough Protein or not?”

If you are always sore/not recovering fast enough

Losing strength/not gaining strength compared to your peers

Injury Prone

All these are signs of low protein intake. Buy a kitchen scale and weigh out your protein for a day. Many apps/sites exist which will tell you the Protein content of the foods you’re eating.



“I’m older and I don’t workout so I need less Protein right?”

Wrong! If you don’t workout or are older then you don’t need less Protein to trigger MPS - you Need MORE!

“I’m Vegan/Vegetarian”

As mentioned all Protein is broken down in AA’s in your body. The only issue with Vegetable sources is that you usually have to consume more food to get the same amount of AA’s but it isn’t an issue with so many plant based Protein powders on the market.



“What about the days when I’m doing Intermittent Fasting?”

When you fast your body automatically pulls down it’s rate of Protein breakdown. This means on the days that you fast you will actually not need to consume as much Protein as you do on normal days. Studies suggest your Protein requirement is as low as 65% on Fasting days.

“Do I need to supplement with Protein Powders?”

If you aren’t being able to consume enough whole food to meet your Protein requirements then YES you have to supplement. Whey Protein is not ‘artificial’ or does not contain ‘harmful chemicals’. Try to buy unflavoured posers for even less additives. And consider Plant Protein powders if you are Lactose intolerant or Vegan.



“Do I need to take BCAA’s? What are BCAA’s?”

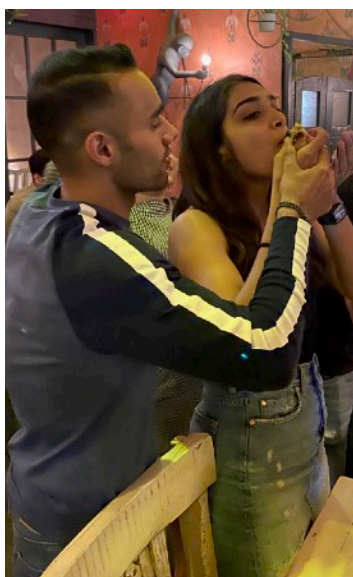
BCAAs make up a large chunk of the body’s total amino acid pool. Together, they represent around 35–40% of all essential amino acids present in your body. Contrary to most other amino acids, BCAAs are mostly broken down in the muscle, rather than in the



liver. Because of this, they are thought to play a role in energy production during exercise BCAAs play several other roles in your body too.

Out of the three, leucine is thought have the biggest impact on your body's capacity to build muscle proteins.

If you are eating enough of Protein and from a wide variety then you do not need to supplement with BCAA's. You are already getting enough.



“What else can I do to increase MPS?”

Since when you sleep is the longest time that you cannot imbibe Protein for MPS - Upon waking up have a meal with around 30gms of Protein to kickstart MPS and just before sleep have a snack or protein shake for the same.

“Any other reasons to eat my Protein?”

Sure! Protein keeps you fuller/satiated for longer so there's less chances of bingeing on junk foods. Also Protein has a higher thermic effect - which means it helps your body increase metabolism or burn more fat. Protein also helps in the secretion of the hormone Glucagon which is kind of the opposite of Insulin and helps in Blood Glucose regulation.

“Interesting, but I don't think this pertains to me.”

Your Head Coach says - If I could go back in time and change just one thing about my health routine then I wouldn't tell myself - “Start Crossfit” or “Lift Heavy”. I'd tell myself - “Eat enough Protein!” This would have impacted my health much more than all the other things combined. That's how important this is!

Hopefully this short write-up answers most of your queries. For any other clarifications or questions please post on our Crossfit Blackfire Whatsapp group or email crossfitblackfire@gmail.com

