

# PROTEIN REQUIREMENTS

Why protein is arguably the most important macronutrient...



## Feel fuller, longer

By James Rush

Are you someone that has a large appetite? When our aim is to lose fat, by default we need to be in a calorie deficit (eating fewer calories than we need). Protein helps support this goal because it is the most satiating macronutrient, making us feel fuller for longer which can be much needed when hunger kicks in as you will be eating less.

*Did you know?* When you lose 1kg of body fat, your appetite increases by 100kcal. This is your body trying to get you back to your "normal weight" that it is so accustomed to. You could eat the same size meals as you did when you were at your heavier weight. It just isn't fair.

## Blood sugar regulation

Having your protein equally split out throughout the day can help with the above point as well as balancing our blood sugar. Pairing protein with carbohydrates will lower the GI value (glycemic index) of that carb when broken down with protein, therefore having less effect on blood sugar, giving a more *controlled* energy supply.

## Protein slightly speeds up our metabolism

Yep! Protein has a *small* thermogenic effect which means impact on energy expenditure (calories burned) is higher in comparison to fats and carbs. The thermal effect of food comes from how much energy the body requires to break down food. As protein often comes from animal sources it can be tougher to digest; even chewing takes more effort and then the stomach needs to produce digestive enzymes to be able to absorb nutrients and energy.

## Helps prevent muscle loss in a calorie deficit!

During weight loss we lose mass from both muscle and fat, this is unavoidable, but we want to *minimize* the loss of muscle and utilize fat loss as much as possible. We do this by eating adequate amounts of protein to support the preservation of current tissue (lifting weights will also encourage the body to hold on to muscle). To keep track of how much fat we are losing I recommend skin fold measuring with calipers.

AT A GLANCE

WHY PROTEIN SHOULD BE YOUR FOCUS

IMPACTS ON THE METABOLISM AND MUSCLE PRESERVATION

PROTEIN AND AGING

ENSURE YOU'RE EATING ENOUGH PROTEIN WHATEVER YOUR GOALS





## Sarcopenia + Protein Requirements

Adequate protein required that is deemed safe for a human being is now known to be 1g per kg of body weight. The World Health Organisation currently states this as 0.8g/kg but we now know this to be inadequate. The NHS in the UK prescribes patients in hospital to the 0.8g/kg level of protein in their diet which is proven to be insufficient to get better, especially when we consider a lot of people in hospital are of the aging population and combine this with needing to heal wounds or recover from illness/injury, extra protein is obviously required. In fact, if a loved one is in hospital, consider taking them whey protein rather than grapes as it will help free up those hospital beds sooner and get them home quicker and healing better.

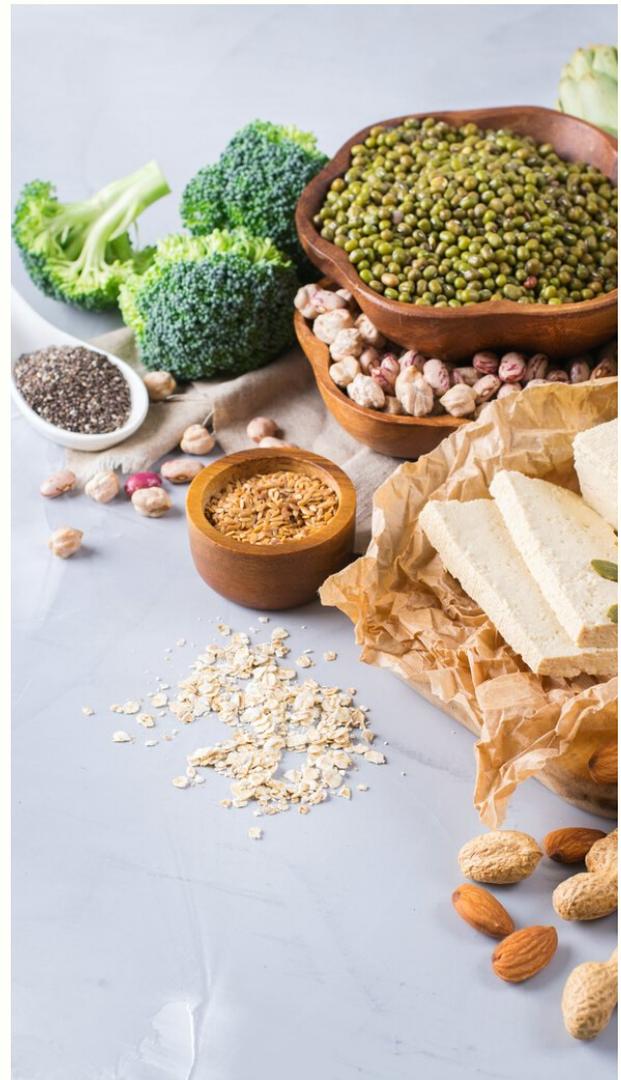
For the aging population (30 years +, yes, really!) we need to be on top of our protein intake to limit sarcopenia (the degenerative loss of muscle mass as we age). We need adequate protein to not only maintain muscles but to help build new tissue and in order to do this we need the essential amino acid; leucine. Leucine is the golden ticket of the amino acids for muscle growth as it is required for the signalling process in the upper cell membrane to tell our cells to grow. Cell growth relies on electronic signalling which leucine is a huge part of. It's also reliant on fats for this signalling process which is why it is advised to take 2-12g of fish oils every day to help improve anabolic resistance with aging.

### A note on plant-based proteins

Although plant based proteins can be high in protein, they do not offer a complete amino acid profile every time. It is therefore my recommendation that vegetarians and vegans look to supplement leucine or at least eat enough **complete** proteins to fulfill the 2.5-3.5g required each day! Complete plant proteins: soy, quinoa, buckwheat, Quorn, rice and beans *when eaten together*, seitan.

## Grow baby grow

Protein is required to promote growth, repair damaged cells, and synthesize hormones. It can come from a variety of sources, but animal sources provide the essential amino acid profile and are considered **complete** proteins. Multiple studies all agree that those who engage in regular exercise require more dietary protein than sedentary individuals. Furthermore, evidence indicates that ingesting protein before or after exercise can enhance our recovery, immune function and growth and maintenance of lean body mass.



## Protein Tips

- Protein shakes are a great way of getting in protein on the go or when you're short of your target
- Constant protein consumption can actually inhibit muscle growth! Eating a portion of protein every 2.5-4hr is sufficient to stimulate muscle protein synthesis.
- "Bulking" is actually rubbish. There's no study EVER to prove that being in a calorie *surplus* is better for muscle gain. You can gain muscle in a calorie deficit or at maintenance calories. If you are looking to optimise muscle growth then eating just an extra 100kcal above your maintenance is more than enough!
- There is an anabolic window of opportunity but this is open for at least 24hr after resistance training! So YES you can drive home and have a shower before eating some protein! You won't lose your "gains".
- Older people do not eat enough protein so if you're ever visiting an elderly relative, why not make them a whey protein hot chocolate? Don't tell them - they'll think it's steroids (haha).