

roam



THE 101 ON

PROTEIN

EVERYTHING YOU
NEED TO KNOW



Protein is a macronutrient that is important for everyone, regardless of whether they are sedentary or active. Proteins are in charge of cell growth and maintenance, provide energy, and are important for a number of physiological processes.

This guide will cover:

- what protein is
- why it is important
- how your body digests protein
- how much protein you need
- considerations for plant-based diets.



WHAT IS PROTEIN?

Protein is one of the three macronutrients, along with carbohydrates and fat. Carbohydrates and fat tend to monopolise airtime in mass media, with mass opinion either exalting or demonising one or the other.

Protein meanwhile works behind the scenes, laying the groundwork for our body's numerous functions. They are in charge of cell growth and maintenance, as well as a number of our body's processes.

Proteins are composed of amino acids, which are joined together in long chains. Our DNA encodes for 20 different amino acids that can be used to make proteins. The sequence of amino acids in a protein determines its three-dimensional structure, which dictates its function.

Of the 20 amino acids, nine are essential. This means that they cannot be produced by the body and must therefore come from our diets. The remaining 11 non-essential amino acids can be created by the body from other substances.

WHY IS PROTEIN IMPORTANT FOR EVERYONE?

Proteins have a wide range of purposes in the body. Without protein, the body would be unable to build new cells or repair damaged ones.

Protein is responsible for muscle growth and repair, and makes up the structure of our muscles, hair, nails, and skin.

Proteins can also be used as enzymes to speed up chemical reactions, provide structure to cells and tissues, and transport molecules from one location to another. Proteins may also be used as energy for exercise or made into hormones such as insulin, estrogen, and testosterone.

Protein also helps the immune system to protect the body from infection. If you are an athlete or generally active, you need enough protein to help your muscles recover after exercise.





AS WE GROW

Adolescence is a time of significant physical change, and protein plays a critical role in supporting this growth. It helps us to build muscle mass and make our bones stronger.

Without enough protein, we may experience stunted growth or delayed puberty. So make sure to include plenty of protein-rich foods in your diet if you want to reach your full potential during your teenage years!

AS WE AGE

As we get older, our muscles don't respond (that is, grow and repair) as quickly when we consume protein. We need to be extra vigilant at getting enough. Otherwise we might experience tiredness, weakness, and difficulty maintaining muscle.

From the age of 40 onwards, we gradually lose muscle mass. But by getting enough protein and regular strength exercise, we can help to slow down this process. Getting enough protein also helps to keep our bones strong, reducing the risk of osteoporosis and other age-related conditions.



HOW PROTEIN IS DIGESTED

Protein is a large, three-dimensional molecule, which resembles origami. The body goes through multiple stages to 'unfold' proteins and break them down into individual amino acids.

The journey starts in the mouth. Chewing food makes it easier for digestive enzymes to start unfolding the proteins later on.

When the food arrives in the stomach, a digestive enzyme called pepsin splits the protein molecules into smaller chains called peptides. Your half-digested food then moves into the small intestine where the peptides are broken down into amino acids – the smaller building blocks of protein.

These amino acids are then absorbed through the intestine wall and enter the bloodstream, where they are transported to the liver. The liver acts as a central train station, where it collects all the amino acids and re-distributes them out to areas of the body where they are needed.

Most amino acids are then put back together to make other proteins that fulfil important roles within the body.

Having enough protein in your diet will make sure that there is a constant supply of amino acids to maintain the amino acid pool. This means that new proteins in the body can be made without running short of protein-building blocks.

HOW MUCH PROTEIN DO YOU NEED?

IN A DAY - The amount of protein you need depends on many factors, including your age, physical activity level, and body mass.

DAILY PROTEIN REQUIREMENTS – A GENERAL GUIDE

	Grams of protein per kg of body weight per day	Daily protein intake for a 70kg person
Minimal physical activity (maintenance)	1.2 to 1.6	84 to 112 g
Moderate physical activity with 1-2 harder workouts each week	1.4 to 2.0	98 to 140 g
High physical activity with 1-2 harder workouts each week	1.7 to 2.2	119 to 154 g
World Health Organization minimum Recommended Daily Intake (RDI)	0.8 to 1.0	56 to 70 g

For people that complete high volumes of training, including at high intensity, research shows that a higher protein intake (about 1.7 to 2.2 g/kg/day) can benefit muscle strength, training quality, and performance. This includes endurance sports such as running, cycling and swimming.

The World Health Organization's Recommended Dietary Intake (RDI) for protein is 0.8 to 1.0 grams per kg of body weight. This recommendation is to meet minimum daily protein needs, it does not reflect optimal protein requirements.

FOR EACH SERVING

You should aim to consume at least 20 grams of protein or about 0.3 grams per kilogram of body weight per serving. When you eat protein, it starts a process in your body called muscle protein synthesis.

This occurs when your body starts producing new muscle proteins.

However, your body's capacity for muscle protein synthesis has a limit. If you eat more than 40 grams of protein in a single serve, muscle protein synthesis will not necessarily improve. Instead, those proteins will be broken down into amino acids and used as energy rather than being built up in muscles.



WHEN DO I NEED IT?

Consume protein evenly throughout the day, rather than eating it in a single meal. **Aim for 20 to 30 grams of protein per meal or snack for the greatest benefit.** Spreading your protein intake this way will also keep you feeling satisfied and less likely to reach for the lollies and chips!

TRACK HOW MUCH PROTEIN YOU EAT

SOME EXAMPLES

GRAMS OF PROTEIN

150g of chicken breast	40 grams
1 cup canned chickpeas	11 grams
2 medium sized eggs	8 grams
1 cup cooked quinoa	7 grams

An app like Easy Diet Diary is a great way to estimate how much protein, fat, and carbohydrates are in different foods.

Use Easy Diet Diary for a week or two to get an understanding of how much protein you eat each day, and then use that data to make any changes to your eating habits.



IDEAS FOR CONSUMING ROAM PROTEIN

FOR BREAKFAST – with a shake, smoothie, cereal, or oatmeal. Consuming pea protein in the morning will promote a feeling of satiety and will leave you less likely to get mid-morning cravings. Pea protein will not spike your blood sugar; making it a great option for people looking to keep their blood glucose levels under control.

BEFORE AND AFTER EXERCISE – these are great opportunities for protein to stimulate muscle protein synthesis and enhance recovery. Protein intake after exercise is the most effective way to induce muscle protein synthesis (i.e. muscle growth and repair)^[1,2]. However, there is nothing wrong with consuming protein before exercise. A protein shake can “fill a gap” before a training session, as it doesn’t sit too heavily in the stomach. The protein will refill your body’s pool of amino acids so that they can be used later.

A note on protein and exercise: Consuming protein-rich foods immediately after exercise is best for improving muscle protein synthesis, muscle adaptation, and quickening muscle recovery^[1]. However, all is not lost if you don’t manage to get protein in straight away. Your muscles remain receptive to protein for up to 48 hours after a workout. The best strategy is to consistently meet your daily protein needs which will help to maximise muscle adaptations and muscle protein synthesis.

BEFORE SLEEP – some evidence shows that consuming protein in the evening before bedtime will replenish your pool of amino acids, thus giving your body plenty of “building blocks” to utilise while you sleep. Consuming protein a couple of hours before bed could work well for you, especially if you prefer to exercise in the late afternoon or evening.

PROTEIN AND PLANT-BASED EATING

Daily protein requirements do not change if you follow a plant-based or vegan diet. But you must be sure to include a variety of plant-based protein sources to meet amino acid requirements.

Plant-based athletes tend to consume less protein compared to people that include meat in their diets. You generally need to eat bigger portions of plant-based food to get enough protein. For example, 1 cup of cooked quinoa contains about 7 grams of protein. Also, the digestibility of some plant-based foods is lower compared to that of animal products^[3].

This is where plant-based protein powders are helpful. Evidence shows that both pea protein and whey protein isolate produce similar outcomes when it comes to muscle protein synthesis, body composition, and performance^[4]. With some know-how and planning, it's possible to get all the protein you need from plant-based sources!

Apps like Easy Diet Diary and My Fitness Pal are great tools for calculating how much protein (as well as carbohydrate, fat, and sodium) is in your meal.



ROAM PROTEIN

When we developed Roam Protein, we set ourselves some non-negotiables.

ROAM PROTEIN HAD TO:

Use the best ingredients

Taste great

Provide over 20 grams of protein per serve

Have no stevia-laden aftertaste nor chalky texture

Be suitable for people that follow plant-based diets

Be accessible for athletes that compete under World Anti-Doping Agency (WADA) rules.

We're proud to have achieved this.

Made with just five hand-selected ingredients, Roam Protein is made from high-quality Canadian golden peas and is sweetened naturally with monk fruit extract.



TESTED FOR WORLD ANTI-DOPING AGENCY BANNED SUBSTANCES

Are you an athlete subject to anti-doping control?

Roam Protein is Human and Supplement Tested Australia (HASTA) certified, meaning that every batch of protein that we produce passes a comprehensive drug testing screen. Our protein powders have an exceptionally low risk of containing substances prohibited by the World Anti-Doping Agency (WADA).

Certifying a product involves not just testing, but verification of the manufacturing quality controls that are in place. Roam Protein has the “HASTA Certified” seal on the package, which means that every batch we make is tested for over 200 WADA prohibited substances.



HASTA™
used under licence



OUR FAVOURITE SMOOTHIE RECIPIES

CHOC BANANA SMOOTHIE

1 serve Roam Chocolate Protein

1 packet Roam Energy Nut Butter

1 medium banana

300mL milk or water

¼ tsp cinnamon (optional)

Pinch of salt

Add all ingredients into a blender or food processor and blitz until desired consistency is reached.

STRAWBERRY AND VANILLA SMOOTHIE

1 serve Roam Vanilla Protein

Handful of strawberries (fresh or frozen)

300mL milk or water

¼ C Coconut yoghurt or Greek yoghurt

¼ C cashews (optional)

Pinch of salt

Add all ingredients into a blender or food processor and blitz until desired consistency is reached.





FREQUENTLY ASKED QUESTIONS

CAN I GAIN MUSCLE MASS (BULK) WITH PEA PROTEIN?

Yes, absolutely. The nutritional value of Roam Protein is similar to dairy-based proteins. Importantly, pea protein has three branched chain amino acids (BCAAs), including a key amino acid, leucine, for stimulating muscle protein synthesis, muscle repair, and growth.

To increase your muscle mass, consume protein at regular intervals during the day and combine your protein intake with resistance exercise or strength training.

There is evidence that a dose of about 20 grams of protein can elicit optimal stimulation of muscle protein synthesis in younger individuals^[5]. Each serving of Roam Pea Protein contains 22 grams (Chocolate) and 23 grams of protein (Vanilla).

IS ROAM PROTEIN SAFE TO CONSUME DURING PREGNANCY AND BREAST FEEDING?

Yes. Increasing protein consumption from various protein-rich sources, including Roam Protein, is not only safe but also recommended to ensure that it keeps you healthy during pregnancy and supports the healthy development of your baby.

Protein requirements increase as early as 16 weeks of gestation, not only in the final stages of pregnancy^[6].

Your daily protein needs will depend on your body size and current level of physical activity. Still, as a general guideline, you should aim for at least 1.2 grams of protein per kilogram of body weight per day during the initial stages of your pregnancy, and increase this to 1.5 grams of protein/kg/day in the later stages^[7]. Roam Protein is also safe for consumption while you are breast feeding.

I HAVE FOOD ALLERGIES AND INTOLERANCES. IS ROAM PROTEIN RIGHT FOR ME?

Our protein is made from Canadian golden peas – which are completely natural and GMO-free. Roam Protein is vegan and **DOES NOT CONTAIN:**

- ✗ Bee products (propolis, royal jelly, bee pollen)
- ✗ Peanuts
- ✗ Dairy
- ✗ Sesame seeds
- ✗ Eggs
- ✗ Soy
- ✗ Gluten
- ✗ Sulphites
- ✗ Lupin
- ✗ Tree nuts

Pea protein is a good alternative to whey protein for those that suffer from lactose intolerance, gut discomfort or food allergies.



WHAT IS THE DIFFERENCE BETWEEN PEA AND WHEY PROTEIN POWDER?

Whey is made from animal protein and pea protein is plant-based. Both types of protein have their own benefits and drawbacks.

Whey protein is a complete protein, meaning it contains all the essential amino acids your body needs. It's also easily absorbed by the body and has a high biological value, which means it's efficient at repairing and building muscle tissue. However, whey protein can be hard to digest for some people, and it's not suitable for those who are lactose-intolerant or vegan.

Vegan protein powders are made from plants, such as peas, rice or hemp. Pea protein is a particularly good source of vegan protein as it's easy to digest. It's also low in fat and calories.

Pea protein is not a complete protein, because it only has a small amount of the essential amino acid, methionine. But this shouldn't be an issue if you are consuming a well-balanced diet that includes a variety of plant-based proteins throughout the day.

Overall, pea protein has a better essential amino acid make-up compared with other plant-based proteins. It is a great option for vegans, vegetarians, or those who are looking for an alternative to whey protein.

Pea protein is also environmentally friendly, as it requires less water and land to produce than whey protein. For those looking for a healthy and sustainable protein powder, pea protein is a great option.

REFERENCES

- [1] <https://doi.org/10.1080/O2640414.2011.619204>
[2] <https://doi.org/10.1152/jappphysiol.91351.2008>
[3] <https://doi.org/10.1016/j.nut.2010.08.024>

- [4] <https://doi.org/10.1186/1475-2891-12-86>
[5] <https://doi.org/10.3945/ajcn.112.055517>
[6] <https://doi.org/10.3945/jn.114.198622>
[7] <https://doi.org/10.3945/an.115.011817>

