



WHAT IS PROTEIN?

Protein is one of the three macronutrients, alongside carbohydrates and fats. It's the macronutrient made up of amino acids, 'the building blocks' for our muscles, bones, tissues, organs, hair and nails.

While higher amounts of protein are required for athletes, protein is a necessity for everyone; it's integral for modulating hormones, regulating the metabolism, building enzymes and creating antibodies that are vital for our immunity.

WHERE DO WE GET IT FROM?

LEGUMES

adzuki beans, broad beans, butter beans, chickpeas, kidney beans, lima beans, lentils, mung beans, peas, tempeh and tofu

ANIMAL

dairy (cheese, yoghurt, etc.), eggs, fish (tuna, cod and sardines), meat and poultry

SEEDS

chia, flaxseeds, hemp, pumpkin, quinoa, sesame and sunflower

GRAINS

amaranth, barley, oats, polenta, rice, rye, spelt and wheat

HOW MUCH DO WE NEED?

The body can only store a small pool of amino acids at a time so, we need to replenish them regularly through a protein-rich diet. We need to include a source of protein at every meal to stabilise our blood sugar and energy levels and build muscle and healthy bones.

PROTEIN ESTIMATIONS

For an inactive person, the estimated intake for protein is 1 grams per kg of body weight per day.

Athletes and those undertaking a lot of training or sport should aim for 1.5-1.8 grams of protein per kg of body weight daily. When trying to increase muscle mass, protein intake can go as high as 2.0 grams per kg of body weight per day, with added training too.

As an example...

a 60-kilogram female undergoing regular training should have approximately 1.5 grams of protein per kg of body weight per day. To calculate her daily protein requirement, use the following formula:

Weight x 1.5 grams of protein = grams of protein per day.

60kg x 1.5 grams
= 90 grams of protein per day.

Inactive Person

1
GRAM
OF BODYWEIGHT
PER DAY

Athletes

1.5 - 1.8
GRAMS
OF BODYWEIGHT
PER DAY

Building Muscle

2
GRAMS
OF BODYWEIGHT
PER DAY

COMPLETE PROTEINS

Have you heard of 'essential' and 'non-essential' amino acids? This is where they come into play.

Essential amino acids are the amino acids our bodies cannot produce and must be consumed through the diet. The essential amino acids are arginine, histidine, isoleucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine.

Non-essential amino acids are the ones our bodies can produce. These include alanine, asparagine, aspartic acid, cysteine, glutamic acid, glutamine, glycine, proline, serine and tyrosine.

Foods labelled 'complete proteins' contain all of the essential amino acids.

Complete proteins are available in eggs, fish, milk, cheese, poultry, meat and most protein powders. If these are all animal proteins, what are vegetarians and vegans meant to do?

PROTEIN AND FOOD SOURCES

ANIMAL-BASED

<i>Source</i>	<i>Amount</i>	<i>Protein (serve/gram)</i>
1 egg (raw)	50g	5-6
2 egg whites (raw)	70g	7-8
1 small egg (boiled)	1	4
1 large egg (boiled)	1	7
Anchovies	5	5.8
Bacon	2 slices (thick style)	10-12
Chicken	100g cooked	20-25
Cottage cheese	100g	15-18
Feta cheese	28g	4
Fish	120g	20
Goats cheese (soft/chev)	100 g	18-19
Goats milk	250ml	8
Greek Yoghurt full fat	150 g	11-12
Ground Turkey	85kg	23
Haloumi cheese	30g	6
Lean Beef or Lamb	120g	25
Milk	250ml	8-10
Mozzarella	60 g	11-12
Oysters	50g (raw)	6
Pork	100g	20-22
Ricotta cheese	100g	11
Salmon	100g	25
Snapper / Swordfish	85g	21
Tuna (canned)	100g	25

PLANT-BASED

<i>Source</i>	<i>Amount</i>	<i>Protein (serve/gram)</i>
Adzuki beans	1 cup	17
Almond butter	1 Tbs	2
Almonds	¼ cup	7
Baked beans	100g	6
Black beans	1 cup	15
Brazil nuts	¼ cup	5
Bread (gluten-free)	1 small slice	3
Bread (sourdough)	1 small slice	3.8
Bread (wholegrain)	1 small slice	3.6
Brown rice	1/2 cup cooked	2.3
Broccoli	1 cup	4
Cannellini beans	100g	17
Cashews	¼ cup	4
Cashew butter	2 tbsp	4-5
Chickpeas	1 cup	15
Flaxseed	¼ cup	5
Hazelnut	¼ cup	5
Hemp seeds	3 tablespoons	11
Hummus	1 tbsp	1.2
Kidney beans	1 cup	15
Lentils	1 cup	18
Macadamias	¼ cup	2
Muesli (not toasted)	100g	11
Muesli (toasted)	100g	9
Pine nuts	¼ cup	4

PLANT-BASED *Continued*

<i>Source</i>	<i>Amount</i>	<i>Protein (serve/gram)</i>
Peanut	¼ cup	8
Peanut butter	2 tbsp	7-9
Pumpkin seed	¼ cup	7
Quinoa (dry)	85g	12
Quinoa (cooked)	1 cup	5
Rolled oats	100g (2/3 a cup)	11-14
Soymilk	250ml	7 TEIN
Sunflower seeds	¼ cup	8
Tahini	2 tbsp	6
Tempeh	100g	19
Tofu	100 grams	12
Walnuts	¼ cup	5
White rice	1/2 cup cooked	2.1
Whole wheat bread	2 slices	4-6G

Example of a protein-rich day

PLANT-BASED

BREAKFAST: 2/3 cup cooked oats (11-14g), 2 tbsp almond butter (4 g) and ½ cup soya milk (7g) = 21-25g protein

POST-GYM SNACK: protein powder (20g), ¼ cup flaxseeds (5g), ½ cup of frozen blueberries and water = 25g

LUNCH: salad vegetables, 1 cup broccoli (4g), ½ cup cooked quinoa (5g) and 150g tofu (18g) = 27g

DINNER: 1 cup adzuki beans (17), ½ cup cooked brown rice (2.3), salad vegetables and 2 tbsp hummus (2.4g) = 21.7

This equals approx. 94.7g of protein for the day.

Example of a protein-rich day

ANIMAL-BASED

BREAKFAST: 2 large boiled eggs (14g), 1 piece of sourdough toast (3.8g) and ¼ avocado = 17g

POST-GYM SNACK: protein powder (20g), ¼ cup flaxseeds (5g), ½ cup of frozen blueberries and water = 25g

LUNCH: mixed salad vegetables, 100g salmon (25g) and ½ cup cooked brown rice (2.3g) = 27.3g

DINNER: 100g cooked chicken (20-25g), 1 cup of broccoli (4g) and salad = 24-29g

This equals approximately 93.3g of protein