

HEALTH REFLEX

# PROTEIN GUIDE



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# WHAT IS PROTEIN?

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.

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.



## HOW MUCH DO WE NEED?

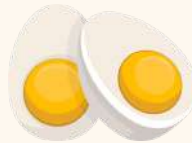
The body can only store a small pool of amino acids at a time so, we need to replenish them regularly through a protein-rich diet. We need to include a source of protein at every meal to stabilise our blood sugar and energy levels and build muscle and healthy bones.

### Where do We Get Protein 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







## PROTEIN ESTIMATIONS

For an inactive person, the estimated intake for protein is 1.2 to 1.6 grams per kg of body weight per day.

Athletes and those undertaking a lot of training or sport should aim for 2 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.



A 60-kilogram female who exercises regularly should have approximately 1.5 grams of protein per kg of body weight per day.

To calculate her daily protein requirement, we 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

**1.2 to 1.6g  
GRAM**

OF  
BODYWEIGHT  
PER DAY

Athletes

**2g GRAMS**

OF  
BODYWEIGHT  
PER DAY

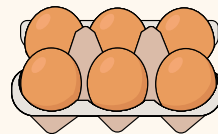
Building  
Muscle

**2.2 GRAMS**

OF  
BODYWEIGHT  
PER DAY

## COMPLETE PROTEINS

- Proteins are made up of 'essential' and 'non-essential' amino acids.
- Essential amino acids are the amino acids our bodies cannot produce and must be consumed through our diet - i.e., the foods we eat.
- 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.
- When a supplement or food is labelled "complete proteins" this means it contains all of the essential amino acids.



Complete proteins are found in eggs, fish, milk, cheese, poultry, meat and most protein powders.





## VEGETARIANS AND VEGANS

- There are plenty of sources of plant-based proteins available, such as seeds, nuts, legumes and grains, and most have some of the essential amino acids.
- However, they don't usually have all of them.
- Therefore it is important to combine a few different protein sources to create a complete protein.
- While you don't need to eat all of the essential amino acids in the same meal, ensure you're consuming all of them in your diet during the day to optimise your intake of amino acids.
- To create a complete protein meal, combine legumes with grains or seeds, for example, beans with brown rice.
- Your body will be able to utilise these proteins and turn them into a complete one.
- Complete plant proteins include quinoa, hemp, hummus (chickpeas and sesame seeds), ABC butter (almonds, brazil and cashew nuts together), porridge and soy milk, and rice and lentils.

## PROTEIN POWDERS

- Food should be your first choice when it comes to consuming protein, however, if you find it difficult to consume enough protein in the day, protein powders make a great addition.
- Generally, protein powders are not necessary for maintaining muscle, bone health and wellbeing, however, it can give you the boost you need to fuel your training.
- Choose clean protein powders with minimal ingredients and with no artificial flavours or sweeteners or numbers.
- Making a breakfast smoothie or a snack in the afternoon with a good quality protein powder can be beneficial to ensure you're meeting your protein requirements.







## PROTEIN DEFICIENCY

- Too little protein is also not good for you. It may cause weakness and an inability to build muscle.
- Too little protein may also cause you to get frequent infections, colds and flus.
- Too little protein may also cause you to feel tired and lethargic.
- Too little protein can also cause mood changes such as irritability and depression as protein is required to create hormones.
- Too little protein can cause tooth decay, allergies and acne.
- Too little protein can also be the cause of poor wound healing, dry and flaky skin.
- Too little protein can also cause digestive issues including fluid retention, diarrhoea, bloating and poor digestion.

## PROTEIN EXCESS

- Too much protein is not good for your body. It can overload the liver and kidneys, putting pressure on them to filter out their end products.
- Too much protein may cause a fluid imbalance (e.g., fluid retention) and/or constipation.
- Too much protein may increase the risk of bone dysfunction as the blood can become acidic with a high protein diet, leaching calcium from the bones to help alkalisise the blood.,
- Too much protein may cause you to have strong body odour as protein is high in nitrogen.





## PROTEIN AND FOOD SOURCES

Food Source	Amount	Grams of Protein
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### MEAT PRODUCTS

1 egg (raw)	50g	5-6g
2 egg whites (raw)	70g	7-8g
1 small egg (boiled)	1	4g
1 large egg (boiled)	1	7g
Anchovies	5	5.8g
Chicken	100g cooked (lean)	20-30g
Beef	100g cooked (lean)	30g
Lamb	100g cooked (lean)	30g
Pork	100g cooked (lean)	30g
Fish	100g cooked	30g
Ham, chicken or turkey	25g sliced	4g
Tuna/Salmon	100g tinned	20g
Oysters, raw	50g	6g



### DAIRY PRODUCTS

Milk, cow, goat or soy	60g/3 tablespoons	10g
Yoghurt, Greek full fat	250g	11-12g
Cottage cheese	100g	15-18g
Feta cheese	28g	4g
Goats cheese (soft/chev)	100g	18g-19g
Haloumi cheese	30g	6g
Mozzarella	60g	11-12g



## PROTEIN AND FOOD SOURCES

Food Source	Amount	Grams of Protein
<b>NON ANIMAL PRODUCTS</b>		
Adzuki beans	1 cup	17g
Almond butter	1 Tbs	2g
Almonds	1/4 cup	7g
Baked beans	100g	6g
Black beans	1 cup	15g
Brazil nuts	1/4 cup	5g
Bread (gluten-free)	1 small slice	3g
Bread (sourdough)	1 small slice	3.8g
Bread (wholegrain)	1 small slice	3.6g
Brown rice	1/2 cup cooked	2.3g
Broccoli	1 cup	4g
Cannellini beans	100g	17g
Cashews	1/4 cup	4g
Cashew butter	2 tbsp	4-5g
Chickpeas	1 cup	15g
Flaxseed	1/4 cup	5g
Hazelnut	1/4 cup	5g
Hemp seeds	3 Tbs	11g
Hummus	1 Tbsp	1.2g
Kidney beans	1 cup	15g



## PROTEIN AND FOOD SOURCES

Food Source	Amount	Grams of Protein
<b>NON ANIMAL PRODUCTS</b>		
Lentils	1 cup	18g
Macadamias	1/4 cup	2g
Muesli (not toasted)	100g	11g
Muesli (toasted)	100g	9g
Pine nuts	1/4 cup	4g
Peanut	1/4 cup	8g
Peanut butter	2 tbsp	7-9g
Pumpkin seed	1/4 cup	7g
Quinoa (dry)	85g	12g
Quinoa (cooked)	1 cup	5g
Rolled oats 100g	2/3 cup	11-14g
Soy milk	250ml	7g
Sunflower seeds	1/4 cup	8g
Tahini	2 tbsp	6g
Tempeh	100g	19g
Tofu	100g	12g
Walnuts	1/4 cup	5g
White rice	1/2 cup cooked	2.1g
Whole wheat bread	2 slices	4-6g





## Examples of how you can meet your daily protein requirements

### Plant Based Protein - 1 Day Menu

#### 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 protein

#### LUNCH:

- salad vegetables,
- 1 cup broccoli (4g),
- ½ cup cooked quinoa (5g) and
- 150g tofu (18g)

= 27g protein

#### DINNER:

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

= 21.7g protein

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

### Animal Based Protein - 1 day Menu

#### BREAKFAST:

- 2 large boiled eggs (14g),
- 1 piece of sourdough toast (3.8g) and
- ¼ avocado

= 17g protein

#### POST-GYM SNACK:

- Protein powder (20g),
- ¼ cup flaxseeds (5g),
- ½ cup of frozen berries and water

= 25g protein

#### LUNCH:

- Mixed salad vegetables,
- 100g salmon (25g) and
- ½ cup cooked brown rice (2.3g)

= 27.3g protein

#### DINNER:

- 100g cooked chicken (20-25g),
- 1 cup of broccoli (4g) and salad

= 24-29g protein

This equals approximately 93.3g of protein

