

Plant-based protein

Protein, one of the three [macronutrients](#) found in food, is made up of components called amino acids. There are 22 amino acids, nine of which are considered essential because they can't be produced by your body and must be obtained from your diet. [Plant-based protein sources](#) contain a less optimal amino acid profile than animal protein sources. This makes it important to eat a variety of these plant-based foods throughout the day in order to meet the body's protein requirements, especially if you are following a strict vegetarian or [vegan diet](#). Examples of plant-based protein sources include:

- Beans and legumes
- Grains
- Nuts and seeds
- Soy and soy products

Health benefits of plant-based protein

During digestion, your body will break down protein into amino acids, which are used for a number of functions, including:

- Building body tissues (e.g., bone, muscle, nails, skin)
- Producing hormones
- Supporting neurotransmitter function (the transmission of signals from nerve cells)



Special considerations

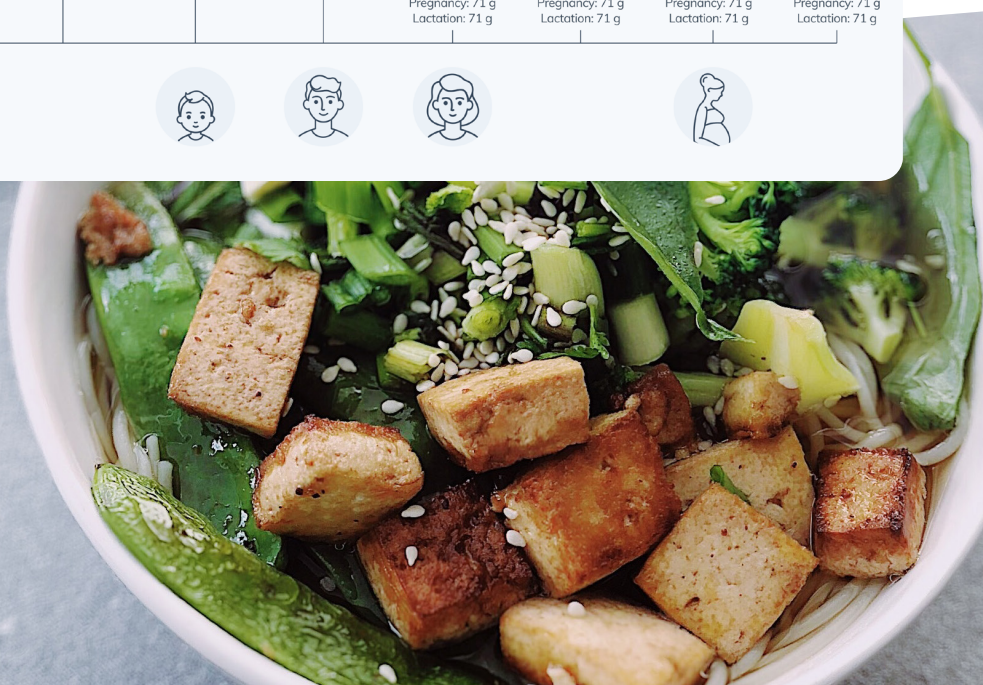
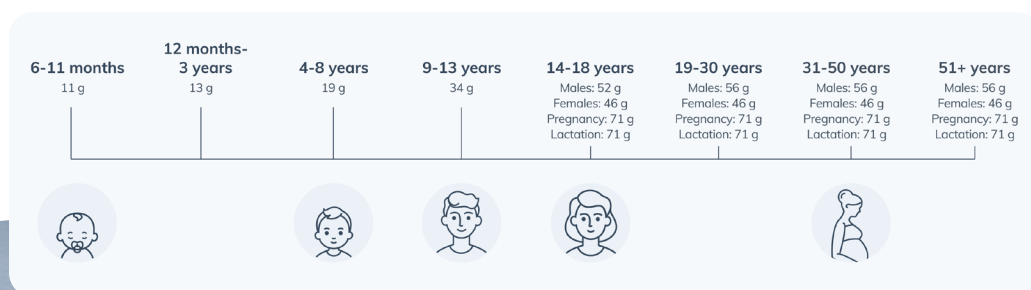
Plant-based protein sources may contain lower levels of the amino acids cysteine, lysine, methionine, and threonine. It was previously thought that it is necessary to consume plant-based foods with complementary amino acid profiles together in one meal, referred to as protein combining, in order to obtain these amino acids. However, research suggests that strict protein combining isn't required and consuming sufficient energy as well as a variety of plant-based protein sources throughout the day should provide adequate amino acids.

There is also some evidence that suggests that the protein found in plant sources may be difficult to digest. To help improve their digestibility, use preparation methods such as soaking or sprouting legumes and grains prior to cooking.

Recommended daily intake of protein

According to the Institutes of Medicine, the Recommended Dietary Allowance (RDA) for adults is 0.8 g of protein per kg of body weight daily, or 0.36 g per lb of body weight. For instance, the recommended daily protein intake for a 155 lb (70 kg) individual is approximately 56 g.

Keep in mind that this target may vary based on individual activity level, age, and health status. The following timeline provides the RDA and Adequate Intake (AI) of protein for various populations.



Dietary sources of plant-based protein

The quantities of protein provided below are based on typical serving sizes of each source. Quantities may vary depending on brand and preparation methods.

Dietary sources of plant-based protein



Tempeh

34 g/1 cup (166 g)



Tofu, firm

22 g/0.5 cup (126 g)



Edamame, cooked

19 g/1 cup (160 g)



Seitan (gluten-based meat substitute)

17 g/2.5 oz (76 g)



Lentils, cooked

16 g/1 cup (180 g)



Black beans, cooked

16 g/1 cup (180 g)



Mung beans, cooked

12 g/1 cup (185 g)



Hemp seeds, hulled

9 g/3 tbsp (30 g)



Peanuts, roasted

8 g/1 oz (28 g)



Quinoa, cooked

7 g/1 cup (170 g)



Almonds, roasted

6 g/1 oz (28 g)



Pistachios, roasted, shelled

6 g/1 oz (28 g)



Wild rice, cooked

6 g/1 cup (164 g)



Sunflower seeds, roasted, shelled

5 g/1 oz (28 g)



References

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This handout was developed and medically reviewed by Fullscript's Integrative Medical Advisory team.

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