- Proteins—nutrition



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Why do we need protein?

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What actually is protein and why is it so important for our bodies? We go back to basics

Protein is a nutrient that's essential for the body to function normally. Made from molecules known as amino acids, protein is found in a variety of different foods, but that doesn't mean all protein sources are created equal.

Although meat is the first thing that comes to mind when many people think of protein, there are plenty of other great protein sources – some of which come with added fibre and extra health benefits.

Before we explore the different ways to get protein in your diet, let us find out what protein is and why it is so important for keeping your body healthy.

What is protein?

Protein is a molecule that's found in all living things. Although many of us think of protein as something found in food, protein refers to all the different structures created from nature's building blocks: amino acids.

Different amino acids are combined to make proteins, but there are 20 that are most commonly used in animals and plants. By changing the order and combination of these amino acids, a wide variety of proteins can be made.

Proteins are responsible for everything from providing structure to making hormones to speeding up chemical reactions. It's not just humans that use proteins for these

Whole food protein vs protein powders

You might be considering supplementing your diet with protein powders, bars or shakes, but it's important to compare the pros and cons of taking supplements with eating more high-protein foods throughout the day.

Whole food protein

- Essential for overall health
- Contains a variety of nutrients
- Eaten as a meal or snack and absorbed more slowly
- Protein in its natural form

Protein powder

- May benefit people trying to gain muscle or avoid losing it
- Lacks other nutrients, including fat
- Convenient and quickly absorbed
- Very high amino acid content, but added preservatives, colours, and sugar

30 DAYS TO Increase Your Protein

purposes – other animals and even plants need proteins to survive.

For us to produce the proteins our bodies need, we have to include plenty of protein-rich foods in our diet.

How does the body use protein?

Although we need to eat protein to support the body's normal functions, we can't use the protein we eat as it is. First, we need to break it down into the amino acids it's made up of. Only then can the amino acids be used to build all the proteins we need for functions such as:

- building and maintaining muscle
- supporting the immune system
- making hair and skin
- speeding up the body's chemicals reactions
- producing hormones
- transporting nutrients around the body

Once broken down, amino acids can also be used as an energy source to power the body.

Although all amino acids are important, nine are known as 'essential', as the body cannot make them itself. This means we need to get all our essential amino acids from our diet, which is where complete proteins come in.

Telling the difference between complete and incomplete proteins

Although we need them for our body to function as it should, we are unable to synthesise the nine essential amino acids ourselves. These amino acids are valine, histidine, isoleucine, leucine, lysine, methionine phenylalanine, threonine and tryptophan.

Complete protein contains all nine of these amino acids, meaning you can get all your essential amino acids in one place. Protein that comes from animals is complete – this includes things like meat, eggs, dairy and fish. Some plant proteins, like Quorn, soya and quinoa, are also complete.

Incomplete proteins are lacking at least one of the nine essential amino acids. Although most plant protein sources are incomplete, they are each missing different amino acids. By combining different plant-based proteins, you can still get all the essential acids you need.

Where can you get your protein from?

Protein is found in a variety of foods, including meat, fish, dairy, eggs, and some plant-based foods.

Although meat is a complete protein that contains all nine of the essential amino acids, it is often higher in fat than other protein sources. A high-meat diet is also linked to an increased risk in heart disease, diabetes, and even some types of cancer.

The NHS recommends limiting yourself to a maximum of 70g of red meat a day and opting for leaner cuts of meat, which can help you cut down your fat intake while still meeting your protein requirements.

Fish tends to be a lower-fat source

PROTEIN'S ROLE IN THE BODY

Metabolism

The protein you eat is broken down into amino acids to fuel the cells in your body, alongside fats and sugars.

Not only this, but amino acids are also used to build the proteins that support your cells' metabolic reactions. Types of proteins known as enzymes are responsible for speeding up the chemical reactions that are powering your body and keeping you alive. They also help to get rid of the waste products that are produced.





Muscle growth

Eating enough protein is key for both muscle growth and for muscle maintenance. Your muscles are constantly being built up, broken down, and repaired. To do this effectively, you need to be getting enough amino acids in the form of protein.

If you are not eating enough protein, then your body may start to break down your own muscle protein in order to get the amino acids that it is lacking and not replacing it.

Immune function

Your immune system helps protect you from a variety of diseases and infections. Protein's building blocks, amino acids, are necessary for many different parts of the immune system to function properly.

Amino acids are needed to make immune cells, to create the chemicals for cells to communicate with each other, and for the body to produce antibodies. Without enough protein in your diet, your immune system cannot protect you efficiently.



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of complete protein than meat, and it's good to eat at least two portions of fish a week.

Peas, beans and lentils are all great plant-based protein sources that are also high in fibre, which can help you to feel fuller for longer. Combine beans and pulses with wholegrains and/or animal protein to make sure you're getting enough of all nine essential amino acids.

Although tofu, soya and Quorn are complete proteins and can make up part of a healthy diet, not all meat alternatives are as healthy as they seem. Make sure to check out the packaging to see how much salt and fat these products contain.

When thinking about how much protein to eat, it's good to aim for two portions a day. As a rough guide, one portion of protein is about enough to fill the palm of your hand. How much each person needs varies depending on a few factors, including their age, gender and activity levels. If you're more active, you may need to increase your protein intake.



Staying full

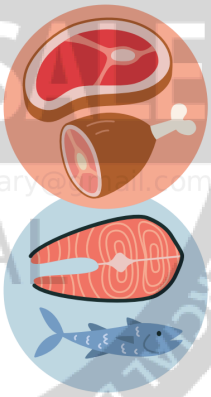
A diet that's rich in protein can help you to stay fuller for longer.

As both animal and plant proteins have complicated structures, it takes a while for the digestive enzymes in the gut to break them down. Protein also decreases the release of hunger hormones and stimulates the release of fullness hormones.

Protein's satiating properties make it helpful for avoiding overeating and weight gain.

PROTEIN AND

different diets



Omnivore protein sources

As an omnivore, a huge variety of protein sources are available to you. Although it's great to have so many complete proteins to choose from, eating too much red or processed meat can lead to health problems.

It's a good idea to cut down on your red meat if you are eating more than 90g a day – aim for 70g a day or less instead. Try swapping it out for lean meats, fish, eggs, or dairy-based protein sources instead.

You don't need to exclude meat, but there are some clear health benefits to cutting down and having one meat-free meal a week where you have fish or a vegetarian protein-source. If a meat-free meal seems unachievable, swap out half the mince in your Bolognese with lentils or substitute some of the lamb in your stew with butter beans.



Vegetarian protein sources

Dairy products (like Greek yoghurt or cottage cheese), eggs, wholegrains (like quinoa or wholewheat pasta), nuts, seeds and legumes are all amazing vegetarian protein sources.

Although eggs and dairy products tend to have all of the nine essential amino acids, it's a good idea to eat a variety of plant-based protein sources as well as they have tonnes of added health benefits.

Some mock meat products contain quite a lot of protein, but they're often ultra-processed and loaded with fat and salt. It's OK to eat them occasionally, but it's best to get the majority of your protein from unprocessed plant proteins, dairy and eggs.



Vegan protein sources

As most vegan protein sources are incomplete and lacking at least one of the essential amino acids, you'll need to eat a combination of different plant proteins such as legumes, nuts and wholegrains to get everything you need.

Tofu, quinoa and vegan Quorn are all complete proteins, and can be good to include in your diet. Just make sure to check how much salt and sugar is added to marinated or flavoured tofu and meat alternatives – they're not always as healthy as they seem.

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