

# Protein!

Debbie Gibson tackles the subject that every vegan is asked about, delving into the world of proteins and amino acids



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**W**hy are we still talking about protein and why are amino acids so essential? Protein is discussed a lot when it comes to eating well on a vegan diet. Although it is important to consume the recommended amounts of protein and the right kind of protein, it's not necessarily more difficult to do so if you're vegan. Below we look at why protein is so important and how to easily consume the recommended amounts from plant-based foods.

## What are proteins?

Proteins are the fundamental building blocks of life and play an essential role in keeping us all fit and healthy. Each protein has a complex structure, which is made up of long chains of amino acids, each with a different shape and purpose. In nutritional terms we may refer to

our dietary need for protein, but in actual fact our need is for the amino acids. Amino acids can combine in innumerable different ways in order to form hundreds of thousands of proteins. Given the impact and sheer amount of proteins in the body, there is now a relatively new field of nutrition research, which looks at how proteins and genes interact to influence health: nutrigenomics.

There are 20 amino acids, which combine into chains to form proteins. Nine of these amino acids are considered essential, which means we must obtain them from our diet. The remainder are non-essential, as our bodies can produce these amino acids without requiring dietary intake (transamination).

Amino acids (and so proteins) can be found in both plant and animal-based

foods. The amount and type of amino acids varies widely between these foods, and so the diet we follow can greatly impact on protein intake. In developed countries, animal-based protein foods account for 60-70% of protein intake and so there is a general assumption that this is the only way we get our protein. However, there are numerous plant-based foods that contain enough protein (and in combination the full range of amino acids) to enable sustainable intake of protein whilst consuming a vegan-based diet.

## Why is protein the key to our health and function?

Each cell and every tissue within our bodies contains proteins. The majority of protein is found in the muscle (43%), the blood (16%), and the skin (15%). Protein is used and resynthesized in the body every day in order to: aid growth and repair, maintain cell and organ function, transport and regulate compounds, and a whole host of other things, which basically keep us functioning correctly. This leaves us in no doubt that protein is extremely important and therefore it is imperative to maintain appropriate levels of intake.

Protein is also a source of energy (4 kcal of energy per gram of protein); although generally in the UK diet our bodies only derive 11-15% of energy from protein. Carbohydrates and fats should be the main primary and secondary sources of dietary energy, respectively.

