

# PROTEIN

EAT2LIVE, NUTRITION COUNSELLING

## FOOD ELEMENTS

What is food made of?

The body is continually renewing parts of itself, such as red blood cells (every 120 days), the cells in the digestive tract (every 3-5 days) and all of your skin cells (every 7 years). To be able to maintain this activity your body needs replenishment with nutrients and energy from food, frequently.

Food is made up of 3 main components:

IF MORE ENERGY IS  
CONSUMED THAN  
EXPENDED, THE EXCESS IS  
STORED: CAUSING WEIGHT  
GAIN

Protein, Carbohydrates and Fat. These are the "macronutrients" and are the larger parts of food. The smaller components of food, the "macronutrients" consist of vitamins and minerals. Other parts of food include fibre, water and phytochemicals. The body needs all of these nutrients to

function, grow and to maintain and repair itself.

## WHAT IS PROTEIN?

Protein is an essential nutrient containing long chains of amino acids which are used by the body to build and replace structures such as muscle, hair, connective tissue and cell membranes. Protein has a functional role in the body; making enzymes to carry out chemical reactions and making messengers such as hormones.

Another function of protein in the body is as a regulator. It helps to regulate the fluid balance in the tissues and organs as well as balancing the acid-base in body fluids. Protein can also be sacrificed by the body to supply energy and glucose when there is starvation or insufficient carbohydrate intake.

## PROTEIN

Why are we obsessed with protein at the moment?

There are a lot of processed foods out there at the moment that are "high protein", and everywhere you look we are being told that we should be eating more protein, but **do we really need all this extra protein? And is it doing us more harm than good?**

Because protein is a macronutrient we need it in reasonably large quantities. This

means that it needs to make up 10-35% of our daily dietary intake. So for an average male (19-50 years old) who weighs about 95kg this would equal about 79g per day (0.84g/kg/day) and for an average female (19-50 years old) who weighs about 75kg this equals about 56g protein per day (0.75g/kg/day). To put that into perspective, these foods

have the following amounts of protein:

1 cup plain yoghurt	= 13g
1 small steak	= 21g
¼ cup cheese	= 7g
½ cup beans	= 8g
1 small can tuna	= 20g
1 cup Hi-Lo milk	= 8g
Total	= 77g

Protein provides the same energy as carbohydrates i.e. 17kJ per gram but its role as a fuel source is relatively low compared to carbohydrates and fats.

Most foods contain a mixture of protein, carbohydrates and fats. Many foods other than meats contain protein, such as legumes, cheese, eggs, nuts and seeds.

The following website has a handy calculator for the various nutrient components of foods including protein:

<https://www.webmd.com/diet/healthtool-food-calorie-counter>

#### **Why do we need protein?**

We need protein for all of the functions that it plays in our body (see box) as well as the fact that old proteins are constantly being broken down and replaced. The body doesn't have an energy storage form of protein like it does for carbohydrates and fats and so relies on dietary protein for replenishment.

#### **Protein Supplements: do we need them or are we wasting our money?**

People take protein supplements for various reasons. Athletes take them to build extra muscles for example. However, eating excess protein does not build extra muscles, carrying out resistance type exercises builds extra muscles. Similarly, people trying to lose weight will eat extra

protein to protect their muscles from wasting while dieting and to feel fuller for longer. Whilst protein can make you feel fuller, eating excess protein can displace other nutrients causing an imbalance in energy and nutrients. As protein has the same kilojoule value as carbohydrates, eating more protein instead of wholegrain/complex carbohydrates is depriving your body and brain of the energy that it requires from glucose (broken down from the carbohydrates) as well as important fibre and other nutrients.

In fact, some protein supplements can cause more harm than good, such as excess single amino acid powders, which do not occur naturally in foods and can cause toxicity.

The take home message is this: Most healthy people eating a Western style diet usually get more than adequate protein. Excess protein intake displaces other important nutrients and fibre and may be harmful. The best diet is one that has a good variety of foods and contains plenty of unprocessed whole foods: Vegetables, fruit, complex carbohydrates, legumes, nuts, seeds and lean protein.

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