



ALL ABOUT PROTEIN

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Most individuals know that protein is important for our muscles, but the role of protein stretches so much further than just that, protein is such an important part of our diet. Then, there comes all the questions around protein; how much should we be having, should we be having plant or animal proteins, what is the difference between whey and casein? Hopefully this article will shed some light on all your protein questions.

1. WHAT ARE PROTEINS?

We find proteins throughout our entire bodies – in our bones, muscles, skin, hair and nearly every other tissue or body part. Protein is made up of long chains of amino acids that join together. Amino acids are the building blocks of proteins which help form the thousands of proteins in our bodies^{1,2}. We get 20 different amino acids and of these, 9 amino acids are essential - meaning our bodies cannot produce these, therefore we need to obtain these from our diet¹.

2. THE IMPORTANT ROLE OF PROTEIN

As a nutrient, protein performs various roles and functions in our body. We need to obtain an adequate amount of protein in our diet to help build, maintain and repair body tissues^{1,3,4}. Many of the body's structural components are made up of protein. Proteins make up many enzymes and hormones which help to regulate body processes and chemical reactions. Proteins play an important role in our immune systems and help fight off infections¹.

3. ANIMAL VS. PLANT PROTEINS

We can obtain protein from two different sources, namely animal proteins and plant proteins. Animal proteins usually contain all the essential amino acids and are therefore referred to as being a complete protein^{1,5}. So, they make great protein sources but can often be high in fat. Therefore, we want to try choose more of the lean options such as poultry (chicken, turkey, duck), lean mince and a diversity of seafood (fish, shellfish, mollusks) are your best bet. Eggs can be a great choice too. When it comes to dairy foods, choose low-fat or fat-free options and aim for 2 servings per day¹. Red meat and processed meat can be enjoyed in moderation and swap out unhealthy cooking methods for healthier ones⁵.

Plant proteins are also an excellent way to obtain protein as they are lower in fat. They also contain healthy fats, fibre and are a lot lighter on the wallet. Plant proteins are therefore a win for your health. Think of options like beans, split peas, chickpeas, lentils, soy, whole-grains, nuts and seeds. Plant proteins usually do not contain all amino acids and are therefore



called an incomplete protein, if most of your protein comes from plant sources, make sure that you mix and match your sources to ensure none of the “essential” components are missing^{1,5}.

4. DIFFERENCE BETWEEN WHEY, CASEIN AND SOY

The predominant forms of protein found in sports nutrition are:

- **Casein**

Casein is a complete protein source that is derived from dairy ($\pm 80\%$ of the protein). It's known as a slower-digesting protein, which is why you'll see it suggested before bed, or as part of a meal replacement shake. It plays a major role during growth and development^{1,6}.

- **Whey**

Whey protein is a high-quality protein made from milk ($\pm 20\%$ of the protein) and has a high concentration of branched-chain amino acids (BCAAs), particularly leucine. It is well-known for its quick absorption rate and easy digestion⁶. It is often recommended immediately after exercise as part of a post-workout regimen and is commonly used in many protein supplements.

- **Soy**

Soy protein is a protein that is isolated from the soybean. Soy offers multiple health benefits such as decreasing cancer risk, cardiovascular disease risk as well as obesity prevention and control. Soy is higher in the amino acids glutamine and arginine compared to whey and casein¹.

- **Protein blends**

Some products contain protein blends where they incorporate whey, casein and soy into one blend. Blending these proteins together can help maintain a positive protein balance over a course of time^{1,6}. Studies have shown it extends muscle protein synthesis longer compared to having the proteins in isolation due to:

- Different digestion rates
- Prolonged delivery of amino acids
- Repairs muscle consistently over a longer period
- Balanced amino acid profile: Glutamine & arginine (soy) and BCAAs (whey)
- Ideal protein combination for muscle protein synthesis and recovery

HOW FUTURELIFE® HIGH PROTEIN Smart food™ PROVIDES COMPLETE NUTRITION:

A 75g serving of FUTURELIFE® HIGH PROTEIN Smart food™ mixed with low-fat milk, is a nutritionally complete and balanced meal as it provides an internationally recommended blend of energy from Carbohydrates, Proteins and Fats⁷. It



is the first and only scientifically formulated, low GI food that is high in energy. It is formulated using a key ingredient called SmartMaize™ which is the result of a patented cooking process, which gives it a distinct profile and a “unique fingerprint”. It is also high in dietary fibre and contains inulin, made from whole grains (which gives this product its “grainy” texture) to ensure optimal digestion and immune support.

FUTURELIFE® HIGH PROTEIN Smart food™ is made from a blend of researched proteins known as SmartProtein^{3D}. It is high in protein and contains 19 amino acids. It is formulated using unique FutureSoy, providing 35% of energy from protein (23g of protein per 75g serving). It is high in Omega-3 and naturally free from trans fatty acids and cholesterol.

The product contains 23 Vitamins and Minerals delivering 50%+ of daily requirements for all vitamins and most minerals⁶. Additionally, it contains functional ingredients namely fibre and inulin (great for everyday digestive health) as well as SUPRO® Soy Protein Isolate (sourced from soybeans, the protein is ‘isolated’ from the rest of the soybean components, making it 90% protein). Containing all the essential amino acids, it is equivalent in protein quality to animal protein, contains no cholesterol and is almost fat free. SUPRO® Soy Protein Isolate is beneficially added into our unique SmartProtein^{3D} blend and is a registered trademark of DuPont and affiliates. FUTURELIFE® HIGH PROTEIN Smart food™ is therefore smart food for complete nutrition with SmartProtein^{3D}. To learn more visit www.futurelife.co.za.

CONCLUSION

Now that we are protein boffins, it makes choices around healthier eating that much easier. With the countless benefits and relatively easy way to reach our protein needs daily, we can rest assured knowing we are on the right track. Enjoy a variety of protein from different sources, make everyday healthy decisions, drink enough water, ensure you get a good night’s rest, exercise frequently and enjoy time with your family. This is not only great for your health, but your soul too.

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