



WHEY'ING UP YOUR OPTIONS

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When it comes to proteins in sport, is whey as good as it gets? Whey is great, but did you know that there are many other protein alternatives also offering an array of benefits. In this article I'll explore the key benefits of three of the most popular options (whey, soya and casein) as well as the alternative option of a blend, to help you decide which will be best for your specific requirements. There are also many lesser-known protein sources emerging which will be covered in an upcoming article.

WHEY

Whey, along with casein, is a protein naturally found in milk, making it unsuitable for vegans or someone with a milk protein allergy. It is a fast-release protein with a very high bioavailability, meaning that it is quickly and easily digested to be available and absorbed by the body. This characteristic makes it ideal for muscle repair immediately following exercise. It also has a more complete amino acid profile when compared to its sister protein, casein. Whey protein contains all of the essential amino acids, which cannot be produced by the body and should therefore be taken in by the diet¹. It is also rich in branched chain amino acids (BCAAs), which, among other benefits, prevent protein breakdown and stimulate muscle protein synthesis.

Whey can be purchased in concentrate, isolate or hydrolysate form. Whey protein concentrate contains between 30-90% protein (depending on the level of concentration) alongside low levels of fat and carbohydrates. Isolates undergo further processing to remove the other macronutrients and contain a minimum of 90% protein. Hydrolysates are partly hydrolysed (digested) proteins making them even more easily available to the body².

SOYA

Soya is a plant-based complete protein making it a suitable protein source for vegans. Soya has a high biological value, containing all of the essential amino acids³. It is also rich in micronutrients and has health benefits that include reduced risk of heart disease and certain cancers⁴. Soya has a slower digestion rate to whey, which may be beneficial in some instances as it allows for extended absorption of amino acids over a longer period⁵. While whey is richer in BCAAs, soya is richer in glutamine and arginine⁵.

Soya is also available in 3 forms; a texturised form, as well as a concentrate and isolates form. The two latter are the ones you are most likely to come across in your sports products. Soy concentrate will contain a minimum of 65% protein while soy isolate is more pure, containing at least 90% protein³.



CASEIN

As previously mentioned, casein is the other, more abundant, but also complete protein derived from milk. You could compare casein to your uncle who insists on posting his Christmas cards instead of emailing, it's slow, but it gets the job done! The slower rate of digestion associated with casein results in a longer, steady release of amino acids into the body providing for prolonged, slow protein synthesis⁶. Casein makes an ideal protein source when you will not be able to fuel up for a few hours, for example before bed. It is also rich in the amino acid Glutamine.

PROTEIN BLENDS

Now, while reading this article you may have been thinking to yourself that it could be a good idea to combine these proteins as they each provide different speed release and amino acid ratio benefits.

Well, fortunately FUTURELIFE® have done just that in their SmartProtein 3D blend found in FUTURELIFE® HIGH PROTEIN Smart Food™, FUTURELIFE® High Protein and High Protein LITE Smartbars and FUTURELIFE® Smart Drink™.

For your peace of mind, there is scientific backing to explain why and how a blend of whey, soya and casein can enhance muscle protein synthesis post exercise^{7,8}. The below table taken from Gregory L Paul's article published in the journal of the American College of Nutrition explains the rationale:

SmartProtein^{3D}® benefits

	Complete Protein	Digestion Rate	Adds Lean Body Mass	High In Leucine	High In Glutamine	High In Arginine	Anti-oxidant Activity
Whey Protein	✓	Fast	✓	✓			
+ Soya Protein	✓	Inter-mediate	✓		✓	✓	✓
+ Casein	✓	Slow			✓		
= Combination i.e. SmartProtein ^{3D}	✓	Pro-longed	✓	✓	✓	✓	✓



Conclusion

As you can see, whey protein offers great benefits, but so do other protein sources and it makes sense to use a blend to combine these benefits. Hopefully these explanations have opened your eyes to what is just the beginning of a growing range of protein options available to us.

WHERE DOES FUTURELIFE® FIT IN?

Take advantage of the benefits that a protein blend can offer by enjoying the various FUTURELIFE® products which contain the protein blend SmartProtein3D. To see more information on the various products, visit www.futurelife.co.za

REFERENCES

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