

Nutrition

Different Types of Protein

a) Whey Protein

Advantages:

1. Contains 10% intact immunoglobulin proteins that help support the body's immune system (immuno enhancing property)
2. Contains the highest concentration (23-25%) of BCAA. BCAA is important to bodybuilders because they are the integral part of muscle metabolism and are the first amino acids sacrificed during muscle catabolism (ie: in a strict diet) .
3. Has a very high biological value (BV). BV is basically a measure of how well a protein is utilized by the body.
4. Ability to stimulate IGF-1 or insulin growth factor production

Disadvantages:

1. It is the most expensive protein especially ultra filtered ion exchange whey protein isolate.
2. Low in essential amino acid namely phenylalanine.

b) Casein

Advantages:

1. May help regulate transit time of proteins through the gut. This slowing of transit time may help increase absorption of amino acids. Greater protein absorption may help bodybuilders more easily meet the amino acid requirements.
2. Contains very high glutamine content. At 20.5% , it is higher than whey , soy and egg protein. This can help spare muscle during intense training in periods of dieting.

Disadvantages:

1. Not as quite as abundant in BCAA as whey protein
2. Nautral casein sometimes tend to contain moderate to high levels of sodium and lactose.

c) Soy Protein Isolate

Advantages:

1. Contains the highest concentration of amino acids in what is referred to by protein technologies as the “critical cluster”. This includes the BCAA and the 2 conditionally essential aminos- glutamine and arginine. These concentrated source of critical aminos may help bodybuilders spare muscle during a diet phase.
2. A consistent intake of soy protein may enhances one’s endogenous production of thyroxin T 4 and T3 and even insulin , thus increases the metabolic rate.

Disadvantage:

1. Low in essential amino acid namely methionine

d) Egg Protein

1. Provide and outstanding amino acid profile
2. Provides an excellent high quality whole food protein source

What to When and Why

Bulking Up

1. I suggest focusing mainly on the use of whey protein mixed with casein with a 1:1 ratio. This will create a total protein which is very well balanced in overall protein.
2. Other benefits of this combination includes casein’s high glutamine profile which covers for whey’s lower level. Glutamine is indispensable when come to growing muscles.

3. Casein's slow digestion may allow more of the protein mixture to be absorbed from the gut. When you are trying to pack on muscles, it's hard to eat all these foods to support muscle growth, so any digestion enhancement is a plus.

Dieting Down

1. I suggest a combination of soy protein isolate 50%, whey protein 25% and casein 25% would be ideal. Soy protein is dieter's protein due to its ability to help increase metabolism through support of thyroxine production, even during high physical stress and low calorie intake is invaluable.
2. This combination is not only possible balance out any of the shortcomings of soy—namely lack of methionine but also to provide a healthy dose of BCAA and glutamine to help prevent muscle catabolism.
3. The addition of whey protein also brings its unique immuno-enhancing properties to the mixture which is very important during calorie restricted diet.