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# The Ultimate Guide to Protein Supplements



Flip through any exercise magazine and, judging by all the attention protein supplements get, it appears protein and fitness somehow go hand-in-hand. And it is true: Protein can help promote a healthy weight and help muscles recover after a good workout. But what exactly is protein, and when it comes to supplements, which type of protein is best? Read on to learn about the different sources of protein powder and which ones stand apart from the rest.

## Protein 101—The Need-to-Know

Protein is a macronutrient found in many foods such as meats, dairy products, nuts, and beans, to name a few. It's comprised of amino acids, the building blocks of lean body tissue that promote healthy skin, hair, bones, fingernails, as well as (drum roll, please) muscles.

While many experts suggest getting the bulk of our protein from whole food sources, protein supplements can make it easier to get those amino acids on-the-go. But not all protein supplements are created equal. Before dissecting the pros and cons of different protein sources it's important to understand two ways protein supplements are often classified:

- 1. Protein Concentrate vs. Isolate:** Protein is derived from various food sources and is "concentrated" by removing the non-protein parts. The result: a powder that's 70 to 85 percent pure protein (with the remaining 15 to 30 percent consisting mostly of carbohydrates and fat). Taking the concentration process a step further, "isolation" removes a much higher percentage of non-protein content. The additional processing yields a premium protein that is up to 95 percent pure.
- 2. Complete vs. Incomplete Protein:** Amino acids that cannot be produced by the body are known as essential amino acids. "Complete proteins" contain all nine essential amino acids, whereas "incomplete proteins" contain some, but not all, of the essential amino acids.

OK, now we are ready to dive into the fun stuff. Here is a detailed look at the most common protein powder supplements on the market, and what their pros and cons mean for you.

## What's Up With Supps?—Protein Comparison

- 1. Whey Protein** – The most popular protein supplement on the market today, whey is a by-product in the process of turning milk into cheese.
 

**Pros:** Whey protein has been shown to promote lean muscle growth and fat loss, as well as support cardiovascular health and a healthy metabolism. Whey is also quickly absorbed by the body, making it useful for post-workout recovery. Bonus: This inexpensive source of complete protein comes in a variety of flavors ranging from tried-and-true vanilla to decadent chocolate-mint ice cream.

**Cons:** The sugar found in milk (lactose) is a common allergen that can make whey indigestible for some. And while those tasty flavors make whey a yummy choice, they often (depending on the brand) come with a host of less-than-desirable artificial sweeteners and chemicals.
- 2. Casein Protein** – Here's another protein powder that comes straight from the cow (figuratively speaking). Casein is produced using a separation process applied to liquid milk that can concentrate or isolate protein while removing the carbs and fats.
 

**Pros:** Casein protein powder offers similar benefits to whey protein but with a different release process. Because casein digests over a long period of time, research has found it's an optimal protein choice before bed. (Yum—bedtime protein shake!)

**Cons:** Casein is a by-product of milk, making it allergenic to some individuals. Also, it's not ideal as a post-workout supplement because it's absorbed so slowly. After exercise the body craves nutrients to replenish and rebuild—which is best left to whey or a combination of the two. Casein is also more expensive than whey, and often contains more artificial ingredients to help make it more palatable.

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  - Cons:** Casein is a by-product of milk, making it allergenic to some, much like whey. Also, it's not ideal as a post-workout supplement because it's absorbed so slowly. After exercise the body craves nutrients to replenish and rebuild—which is best left to whey or a combination of the two. Casein also more expensive than whey, and often contains many artificial ingredients to help make it more palatable.
- 3. Egg Protein** – Egg protein comes from, well, eggs! It is a complete protein made by separating out the yolks and dehydrating the egg whites.
  - Pros:** Aside from just protein, egg protein powders are rich in vitamins and minerals that can contribute to a healthy diet.
  - Cons:** Allergies to eggs are common, similar to milk allergies, especially in children and young adults. Egg protein is also one of the most expensive protein supplements available, which is likely why Rocky Balboa did it this way.

- 4. Soy Protein** – Soy beans are one of the few plant protein sources that offer all of the essential amino acids. The protein is concentrated or isolated after the soy beans have been hulled and dried into soy flour (which also makes for delicious pancakes!).  
**Pros:** Protein from the soy bean may help improve the body's immune function and promote bone health. Soy may also help prevent cardiovascular disease and reduce the risk of certain cancers.  
**Cons:** In recent years, soy has come under heavy scrutiny because it is often genetically modified to produce greater crop yields. Some research has also singled out soy due to its effects on hormone levels. Many foods are already full of soy due to its extremely low-cost protein. This has led some to question whether adding even more dietary soy (via protein supplements) is a wise choice.
- 5. Rice Protein** – News flash: There is protein in rice! Although often thought of as a carbohydrate only, brown rice is becoming a standard source for vegetarian protein powder.  
**Pros:** Protein aside, brown rice protein is considered a good source of complex carbohydrates, vitamin B, and fiber. It's also hypoallergenic, meaning it's easily digestible and therefore almost entirely used by the body, not relieved as waste.  
**Cons:** Unlike soy, rice protein is a plant-based option that's deficient in some amino acids and therefore should not comprise the main source of dietary protein.
- 6. Hemp Protein** – Hemp protein is derived from the seeds of the cannabis plant that's gained popularity in recent years. (And yes, we are talking strictly about hemp as a food source here!)  
**Pros:** Often referred to as a "superfood" due to its mix of essential fatty acids, hemp includes all 21 amino acids (making it a complete protein) and is vegan-friendly and extremely hypoallergenic.  
**Cons:** Since hemp is only harvested in mass quantities in select countries due to its association with cannabis, it is often the most expensive protein powder available.
- 7. Pea Protein** – Thought you've seen them all? Pea protein comes from the yellow split pea, making it a popular choice for vegetarians and vegans alike.  
**Pros:** As with most plant-based proteins, pea protein is hypoallergenic. And with few additives or artificial ingredients, this one appeals to those looking for protein sources closest to the whole-food source. Don't like peas? Don't worry, the protein version doesn't taste like mush!  
**Cons:** Isolated pea protein is often considered complete because it can contain the spectrum of essential amino acids. Even still, it remains deficient in certain amino acids and should not be used as a primary source of dietary protein.
- 8. Weight Gainer** – Looking to bulk up? Weight gainer combines protein, often whey, with a mix of high-carbohydrate ingredients that makes it much more calorie-dense than typical protein powders. It is often used by bodybuilders who are looking to pack on the pounds, or by serious athletes who have difficulty consuming enough calories to offset the large amount they burn through intense training.  
**Pros:** Jam-packed with calories, weight gainers allow people to consume more calories than they could through food alone. They also help keep the grocery bill in check by delivering calories at a (slightly more) economical price.  
**Cons:** Unsurprisingly, weight gainers often contain many additives, artificial sweeteners, and fillers so that they can pack the calorie and protein punch their users are looking for, and the huge calorie count in these products doesn't necessarily translate to more muscle. In fact, all those extra calories will be stored as fat if not needed for recovery after intense exercise.

#### **To the Protein Aisle!—The Takeaway**

When it comes to protein powders, there really is something for everyone. Just keep in mind that when it comes to buying protein, as in life, "You get what you pay for." Low-cost proteins often use inexpensive protein blends that may not be very digestible by the body.

It is also worth noting that the amount of protein required by the body depends on a person's activity level, physical size, and gender. Testing various sources and quantities of protein can help determine a mix that works best. And just because it's easy to chug a shake after a workout doesn't mean protein powders should replace whole foods entirely. Protein powders are supplements, best used to supplement a healthy diet of nutritious whole foods.

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