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**Abstract:** Protein shakes are good for the general body, athletes, and people seeking weight loss if used for the right reasons; being if they use it at the right time, of the right doses, and of the correct type of protein. “Proteins are large molecules (complex organic compounds) that consist of amino acids, sugars, and lipids” (Flores). Protein supplies the body with the essential amino acids. It is a necessity for all types of people to consume protein daily; no matter if you aren’t active or if you workout vigorously. Athletes should consume larger amounts of protein than people who don’t work out regularly. Protein helps restore torn muscles after working out, but also helps muscles recover quicker. People who are seeking to lose weight should also consume protein shakes. Instead of drinking protein after an intense workout or as a meal replacement, for weight loss, people should substitute or drink them as a snack in between meals. Protein satiates the body longer, so you feel fuller for longer. Protein is good for the body. It supplies the body with fuel for maximum energy if used correctly.

Complete analysis of Whey and Soy Proteins; and how

 Protein Shakes are beneficial to certain body types.

Say you and your friend are going on a high-intensity hike for a long period of time. You should consume protein in little amounts at every meal. After your hikes you should drink a protein shake to keep muscles repaired. One strategy researchers say to use is to “Repair muscle damage and combat fatigue from huge days (think Rainier ascent) by consuming a total of .5 to .75 grams of protein per pound of your body weight per day” (“Smarter”). Everyone, no matter how active one is, must ingest proteins daily. People that exercise, regularly – vigorously, need more protein because they are using their muscles more. The actual proteins serve many functions within our bodies. The article found in The Gale Encyclopedia of Science says,

they digest foods and turn them into energy, they move our bodies and move molecules about within our cells; they let some substances pass through cell membranes while keeping others out; they turn light into chemical energy, making both vision and photosynthesis possible; they allow cells to detect and react to hormones and toxins in their surroundings; and, as antibodies, they protect our bodies against foreign invaders (“Proteins”).

Athletes need to consume the most amounts of protein of all types of people. For strength athletes, “protein shakes can also help repair damage to muscles that can occur with serious bodybuilding,” whereas, “an endurance athlete may find it easier to train with the help of protein shakes […] because they help the body recover from intense exercise” (Gelfand). Protein gives the muscles energy and helps the muscles recover faster. People who exercise heavily or regularly need more protein because they need more energy. Those looking to lose weight should also consume protein shakes. Protein shakes are good for weight loss because they supply the body with necessary amounts of proteins without the added calories. Katherine Zeratsky, a medical researcher for Mayo, says, “If you rely on protein shakes for regular meals, however, you’ll miss out on the nutritional benefits of whole foods” (Zeratsky).Protein shakes should not be used for meal replacements because protein shakes do not provide the necessary nutrients your body needs, like fiber. Protein shakes are good for the general body, athletes, and people seeking weight loss if used for the right reasons; and at the right time, in the right doses, and of the correct type of protein.

 Proteins are “large molecules (complex organic compounds) that consist of amino acids, sugars, and lipids” (Flores). There are two main types of protein, which are each processed and used differently in the body. The main type of protein used by people is Whey. “Whey protein is a protein found in milk, fast absorbing, stays in your body for a shorter time and a good supplement after intense workouts” (Gelfand). Another type is Soy protein. “Soy protein is a plant based source of protein, as digestible as other sources of protein, known for its antioxidant capabilities and a good supplement for [occasional] meal replacement” (Gelfand). Soy protein is considered only for girls because some believe soy lowers blood levels of testosterone or reduces lean body mass. This is a fallacy because it is just as effective as other types of protein and doesn’t affect men differently than women. Whey and Soy proteins are digested a little differently but “recent studies have suggested soy to be as effective, if not more so, than whey in terms of its ability to promote gains in lean muscle mass” (Robson). Proteins work specifically in the body. For humans, “protein substances make up the muscles, ligaments, tendons, organs, glands, nails, hair, and many vital body fluids, and are essential for the growth of bones” (Balch 34). Each protein is made up of amino acids. “Amino acids (proteins’ building blocks) help maintain electrolyte balance, boost immune system function, and synthesize hormones” (“Smarter”). Each amino acid chain builds proteins to give fuel to the body. It is important to fuel the body with not only protein but other nutrients. Protein is a key nutrient but, “without question, carbohydrates are the very best fuel for moderate and high intensity exercise” (Mannie). Carbohydrates and proteins are also primary nutrients for fueling the brain. James Balch, an author in Prescription for Nutritional Healing says, “Proteins are a necessary part of every living cell in the body” (Balch 34). He says, “Next to water, protein makes up the greatest portion of our body weight” (Balch 34). Protein gives the muscles energy and helps the muscles recover faster. People who exercise heavily or regularly need more protein because they need more energy. Rather than drinking a protein shake, “some of the better sources for quality protein are lean meats, poultry, fish, eggs, low-fat dairy products, beans/legumes, and a variety of nuts” (Mannie). When looking to buy protein powder, look for low carbohydrate, low fat and all natural powders. An article for *Correct Weight Loss Blog* says, “Many shakes have an abundance of carbohydrates in them. These are usually designed for those looking to build muscles” (“When”). A downside to some whey protein brands is that “a lot of them contain lots of additives. It may be a good idea to look for “natural” whey protein without additives” (“When”). Some protein powders are nutrient rich for enhancing the immune system. Some good sources for protein on the go can be: Clif Builder’s bar Chocolate Mint; 20 grams of protein and 270 calories or Balance Bar Sweet & Salty Peanut Butter; 15 grams protein and 200 calories.

Most people say protein shakes after workouts builds muscle. A common misconception is for people to think that the protein is adding muscle mass where in fact, “adding protein doesn’t add muscle mass” (Gelfand). The protein helps repair the muscles that were torn during working out and eventually builds muscle over time. It’s the lifting that is building the muscles while protein is repairing them. Athletes need to consume larger amounts of protein than people who don’t work out regularly. It is important for athletes to eat protein right after an intense workout but also just as important to eat it throughout the day. An average person is recommended .75 g of protein per kilogram of body weight (45-56 g of protein) a day. The International Society of Sports Nutrition (ISSN) recommends, “For endurance athletes: 1 to 1.6 g of protein per kilogram of body weight daily, depending on intensity and duration of exercise and the training status of the athlete, for strength or power athletes: 1.6 to 2 g of protein per kilogram of body weight daily” (Gelfand). When you look on the back of a protein shake container, the label often says “take 30 minutes after workout for maximum results” (Hendrick). The study done by Bill Hendrick suggests “that muscles may make better use of dietary amino acids eaten 24 hours after exercise, regardless of exercise load as the exercise is being performed until fatigue” (Hendrick). If you consume protein after exercise or throughout the day, it has the same affect because protein is protein. Although, studies have shown protein shakes taken within 30 minutes of a workout actually help the recovery of the muscles more rather than the building of muscle mass. It is important that people don’t load up on protein before exercising because researchers say “Protein-dense meals during exercise may cause stomach upset and contribute to dehydration. Plus, protein won’t convert to usable energy as quickly as carbs” (“Smarter”). When taking protein shakes, athletes need to remember that what they eat in everyday meals also contains protein. It is important for athletes especially, to consume larger amounts of protein, but “Athletes must be cognizant of not displacing the high-priority carbohydrates with excessive protein, or they will negate their primary energy source” (Mannie). More is not necessarily better in this instance. For athletes, both soy and whey proteins are beneficial. Both proteins “may provide a more prolonged, deliberate release of amino acids to key muscle groups” (Robson). Researcher David Robson also says, “athletes who incorporate both soy and whey protein in their nutritional regimens may benefit from their different rates of digestion and amino acid absorption” (Robson). The difference is that whey protein is digested faster. Kris Gethin, editor in chief of BodyBuilding.com, says “Whey is one of the fastest digesting proteins available,” which means “faster recovery and faster results” (“Whey”). Because whey is quickly digestible, it is better for after intense workouts and before meals. It contains the antioxidant glutathione, which is an immune system enhancer. Soy is digested slower and more gradual for a more “full complement of amino acids” so that muscles being exercised stay larger and stronger (Robson). Soy has a complete amino acid profile. Research shows, just like whey protein, “soy enhances athletic performance. The isoflavones found in soy protein produce antioxidant effects, which speed recovery and reduce muscle soreness and inflammation” (Robson). Athletes have a different way of consuming protein than those searching for weight loss; but both benefit from protein shakes.

People seeking weight loss should pay closer attention to when and what types of protein shakes they should drink. People believe that if they skip a heavy meal and replace it with a protein shake, they will lose weight. “When a dieter does this, [they] could inadvertently be putting [there] body into starvation mode as the calorie deficit may be too large” (“When”). A chicken pasta dinner has about 500 calories. By replacing it with a protein shake that has 180 calories in it; enough meals like this starves the body leaving it even hungrier so you end up eating more. Not to mention the lack of nutrients you a protein shake has over pasta with chicken. Protein shakes should be added into your weight loss plan carefully; “it acts as a high quality source of protein. When coupled with a healthy diet and exercise, it is an ample source of protein for your body to build much-needed muscles” (“When”). Correct Weight Loss Blog says, “The best way to supplement with protein shakes for weight loss is by having them between meals” (“When”). Supplementing protein shakes between meals helps keep your metabolism at its highest; which is when you are eating meals every few hours. Katherine Zeratsky of Mayo Clinic says most “manufacturers of protein shakes may claim that their products decrease body fat or promote weight loss, but protein shakes aren’t a magic bullet for weight loss” (Zeratsky). It is still important to exercise daily and eat healthy. Proteins are always a better choice though than carbs or sugars. Protein satiates the body longer and keeps you fuller than carbohydrate based foods. It is also important to consume good fats as well. Fats like mono and polyunsaturated fats that are found in plant based oils, nuts, seeds and grains are good sources of energy for long, low intensity days. If you are on the go and can’t grab nuts or seeds, that’s when a protein shake comes in handy. The type of protein that is better for weight loss is typically whey, just because it stays in the body shorter so it acts as a snack. If you are looking to substitute an occasional meal, choose soy because it digests slower and satiates the body longer. For people searching for weight loss, protein shakes should be used as a snack.

Athletes, people seeking weight loss, and people concerned with overall health of their bodies should drink protein shakes. They need to make sure to use them for the right reasons, at the right times, of the right doses, and of the correct type of protein. Protein is good for the body. It gives the body fuel for energy. It is important for people to fuel their bodies. A nutritionist, Ken Mannie, says, “Fueling the body and mind helps student-athletes perform optimally in the classroom, in the weight room, and in competition” (Mannie). “Remember that, no engineered, commercial product can match the quality and balance of good old-fashioned food” (Mannie). Natural ways of getting protein is almost better than buying it in a processed or powder form. But if you need something quick or on-the-go, especially athletes, protein shakes are a good source. Most athletes use protein shakes after workouts to enhance performance and recover better. Protein powder in a smoothie in the morning for someone who exercises not on a regular base is good as well. Protein shakes can be beneficial to the body and work wonders if used properly.

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