Protein Supplements - are they Worthwhile?

Protein supplements are common among young adults, particularly males, who often use them to aid body building. A plethora of products exist on the market, from shakes to powders to bars. Before spending money on these supplements, it is wise to consider:

Protein is a key nutrient needed by the body to build and repair tissue, provide structure, serve as an enzyme to begin cellular processes, and form hormones (among other functions). The Recommended Dietary Allowance (RDA) for sedentary individuals is 0.8 grams protein per kilogram body weight per day. Some research suggests that athletes need more protein to support their increased rate of muscle breakdown and synthesis. Recommendations typically range from 1.0-2.0 grams protein per kilogram body weight per day, depending on type and intensity of activity. For example, a person weighing 150 lbs. (68.2 kg) would need about 55 grams of protein if he was sedentary and 136 grams of protein if he was an active weight lifter.

Most people in developed countries (even vegetarians) are able to meet their protein needs through food. Meats, poultry, and fish have ~ 20-25 grams of protein per 3-4 ounce serving; legumes contain about the same amount of protein per 1 ½ cup serving; dairy products provide about 8 grams per 8 ounce serving. Protein is even present in small amounts in grain products, fruits, and vegetables.

- Are they safe?
- Are they effective?
- Are they worth the cost?

For some athletes, protein supplements can help meet their higher needs. Whey protein is popular because of it is low fat and rich in branched chain amino acids, which may help delay fatigue. Some evidence suggests it may boost immune function and actually increase muscle mass. For example, studies of weight lifters taking whey protein creatine monohydreate, or. creatine plus whey showed greater strength gains than subjects who consumed a high carbohydrate diet or a placebo. Yet responses varied among individuals, and strength gains were not seen at all muscle sites measured. More research is needed to support the muscle building ability of weigh protein. Whey appears to be safe, though rare allergic reactions have been reported.

Different methods of processing can impact the beneficial effects of whey, and supplements vary in taste, texture, and total protein content. Like many protein supplements, whey can be expensive, ranging from $0.94-2.69 per serving. Protein-rich foods are usually less expensive. For people on a budget, it is far less costly to boost protein intake through extra food instead of supplements.

The bottom line: Protein supplements (including whey) are generally safe, though the extent to which they help increase muscle mass remains to be seen. Supplements can help athletes meet their increased protein needs, but most people can meet their needs without supplements. Eating extra protein-rich food is a cheaper way to augment protein intake.

Resources

Burke et al (2001) The effect of whey protein supplementation with and without creatine monohydrate combined with resistance training on lean tissue mass and muscle strength. Int J Spot Nutr Exerc Metab 11(3):349-364

Cribb et al (2007) Effects of whey isolate, creatine, and resistance training on muscle hypertrophy. Med Sci Sports Exerc 39(2):298-307

Fink HH, Burgoon LA, Mikesky AE (2006) Practical applications in sports nutrition. Jones and Bartlett Publishers, Sudbury, MA

Supplement Watch Web site – search for whey protein

If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: **Dial-A-Nurse at 333-2700.**

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: **http://www.mckinley.uiuc.edu**