

Protein article research: overview



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Protein Article Research Sara Langrell December 15, 2011 Nutrition SCI/241

Dr. Venessa Lee Abstract: Athletes have been searching for years for a way to reduce the amount of recovery time between work outs. Based on this issue there has been quite a lot of research conducted to find out what can be done, if anything, to either reduce or eliminate recovery time. One of the theories is to increase protein intake above the daily recommended amount, thereby providing the body with additional amino acids that promote recovery. Although this seems like the perfect solution, there are some flaws.

It would appear that not only do you need additional proteins but an additional source of fuel to allow the proteins to do their job, therefore all in all a balance must be struck. The recovery time needed from an intense work out is a direct result of the lengthening, or even sometimes, tearing of muscles. If the work out is too intense muscles can actually be damaged.

The damage can be classified into three different categories: Type I, Type II and Type III. Type I muscle damage is classified as the soreness that occurs 24-48 hours after unaccustomed exercise. Type II is classified as an acute disabling pain either from the complete tearing of the muscle and fascia or the disruption of a few fibres with the fascia remaining intact. 1 Type III is classified as a cramp or soreness that occurs either during or directly following a workout. 1 Because of these issues, many hours of research have been conducted to try to determine if there is anything that can be done to slow or even eliminate the damage done to the muscle during exercise.

When muscles are stretched or damaged proteins are both broken down and synthesized all at the same time. The breakdown is not all bad for the body, as it regulates potentially damaging and dysfunctional proteins. 2 In direct

response to the breakdown, the synthesis that occurs would seem to be good for the body; however it can cause an imbalance in muscle proteins. 1 Based on research it has been determined that replacing amino acids during and after exercise helps to balance the protein deficiency and assist in the repair process. Many of the recommended ways to do this is to increase protein intake or possibly opt for an amino acid replacement supplement.

Dependent upon the type of exercise you are prone to will determine the type of supplement that would be recommended. Checking with a physician would be the best bet before beginning any type of therapy. Bibliography:

1.) Nosaka, Kazunori PhD, Muscle damage and amino acid supplementation: Does it aid recovery from muscle damage? International SportMed Journal, Vo. 8 No. 2, 2007, pp. 54-67
2.) Phillips SM, Protein requirement and supplementation in strength sports. Nutrition, Vol. 20, 2004, pp. 689-695.