GET FIT TO PLAY SPORT, NOT PLAY SPORT TO GET FIT

Pro-Am Sports Injury Clinic

Volume 4 Issue 10 Oct 2011

Protein and its importance to injury healing and injury prevention

What is protein?

Protein is made up of amino acids 22 different types to allow the body to function. 8 of these must come from diet alone and you can find them in meat, dairy, eggs, and fish. Protein is required to help growth, maintenance and repair of all cells. Protein is a major component of all muscles, tissues and organs in the body and is vital for practically all bodily functions. Its also used to help build up our immune system.

Protein and injury?

The first thing your body does when you get injured is start the inflammatory response. Inflammation helps to confine the injury to the injury site and is the start of the healing process. Its only when inflammation is over produced that it becomes a problem which is why you use ice in the first few days of injury. At some point the body starts to send special cells called fibroblasts and these cells help synthesize connective tissue comprised of collagen which helps to close the injury site. Collagen is the main protein of connective tissue and is mainly found in ligaments , tendons and skin. When you sustain an injury it is important to make sure your body has a good supply of protein. 1.7 grams of protein per kilogram of body weight is important through injury. As an athlete you should already be reaching this amount. Every meal you have should have some protein in it and should constitute 15% of your daily food intake.

Protein and injury prevention?

There is no doubt that training smartly and using the correct equipment prevents injury but how else can you stop frustrating little niggles from occurring? Have you looked at your diet? Your diet does not just provide energy it helps you to recover and adapt to your training. The biggest mistake people make is lowering carbohydrate intake when trying to lose weight. This could lead to your body using your protein supplies or even converting muscle tissue into fuel. This will leave you prone to injury as your muscle tissue has little protein left to repair itself.

You must make sure you are eating enough food to fuel your daily activities. Most importantly research is showing the best time to get protein into the body is before and straight after strenuous exercise. As with many sports you may find it hard to eat the amount of food to give you the right amount of calories and this is where many of the protein drinks and bars may come in handy especially if you are short of time but they are no substitute for a good well balanced meal. Working out how many calories you need for your daily activities is vital as you may not be getting enough which can lead to injury or you may be having too much which means the excess will be stored as fat. There are many books and websites to help you. Its simple to work out. Here are some that i found http://www.kentsport.org/pdfs/nutrition_sportsheet.pdf

http://www.muscletech.com/resources/tools/calculators/caloric.shtml

The following are articles going into more depth about diet when injured

http://www.sportsinjurybulletin.com/archive/protein-overuse.html

http://www.pponline.co.uk/encyc/sports-nutrition-can-you-eat-your-way-to-recovery-41113

Example

A 60kg person taking part in exercise 6-7 times a week should have a protein intake of 1.7 grams per kilogram which is 102 total grams of protein a day. This could be met by having 3 ounces of meat (21g) 3 ounces of fish (21g), one glass of milk (8g), one cup of oatmeal (6g), two cups of rice (18g), three cups of mixed vegetables (15g) and two ounces of cheese (14g).

Questions or comments? E-mail us at Jenna@proamsportsinjury.co.uk or call 01723 363332