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**100% Effective Natural Hormone Treatment**  
**Menopause, Andropause And Other Hormone Imbalances**  
**Impair Healthy Healing In People Over The Age Of 30!**

**Protein and Endurance Sports**

**By Protica Research**

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Endurance Sports are like music concerts. They start at a low key, setting a steady rhythm and culminate into a crescendo that enralls the spectator and the athlete. And not unlike an orchestra, endurance demands a flawless performance from every organ, testing the limits of their resilience. As each system, conducted by the human will, endures a pace bordering on fatigue, the athlete begins to hear music from the heart. What's often neglected, and considered unnecessary, in endurance sports is a high-protein diet that can expand the aerobic capacity and power the performance.

To sustain effort and delay fatigue, the body needs an adequate supply of oxygen and fuel without accumulating waste products, acids or heat. Greater the intensity of the workout, greater is the efficiency required. The capacity of the cardiovascular and respiratory systems, the fuel stores in the muscle, the hepatic and renal support systems must all expand exponentially to perform in endurance sports. If any of these prerequisites are not met, the internal milieu becomes uncomfortable. Metabolism slows down, to allow excretion of wastes, acids and heat, as fatigue sets in. The aerobic stress of endurance sports provides the necessary stimulus for growth and development. The body is ready to build. All that is needed are the building blocks—the Proteins.

Given an adequate and appropriate supply of proteins, the body remains in a state of positive nitrogen balance. Sufficient protein consumption, along with a high-energy diet also influences the carbohydrate and fat metabolism. In the well-fed state, with sufficient physical activity, dietary proteins stimulate the simultaneous release of the growth hormone and insulin. The combined hormonal influence redirects dietary carbohydrate and fat to the aerobic muscle fibers where they are stored as fuels for exhausting workouts. The consequent increase in muscle stores of glycogen and lipid allows sustained activity for a longer time. With enough proteins, the lean body mass, stamina and performance increase throughout the training program.

Proteins and amino acids also directly supply between 1 to 6 % of the energy needs during a workout. The proportion of energy derived from proteins increases with the intensity of the exercise. Given their role in bodybuilding, proteins are too important to be used as fuel and attempts should be made to minimize this percentage. Studies by Bowtell and Tarnopolsky, report that a high-energy

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(carbohydrate) diet, when combined with an ample protein intake and hydration, has a protein sparing effect under aerobic conditions. However, when the protein intake is inadequate, the high-energy diet fails to protect proteins from being used up as fuel. Therefore, endurance athletes need to ensure high levels of protein intake not only to supply amino acids for growth, but also to make sure that the amino acids don't get burnt up as fuel.

Endurance athletes need proteins but do they need protein supplements? The answer, till recently, was negative for recreational and modest athletes. Protein supplements were advised only for professional athletes and for sportspersons with a diet deficient in proteins. However, these recommendations, based on a parameter called 'nitrogen balance', have often been questioned. Young and Bier propose that there exists a subtle state of protein deficiency, called the 'accommodative' state, where an inadequate protein intake is masked by the breakdown of body

proteins. Measurements based on nitrogen balance do not take the accommodative state into account and are therefore not accurate enough to calculate protein requirements. Mark Tarnopolsky, in a recent review on Protein Requirements in Endurance Athletes, also raises similar questions.

Epidemiological studies, by McKenzie and others, also suggest that the dietary protein intake of up to 20% of athletes may be below levels recommended for sedentary individuals. Then there is always the ambiguous quality and absorbability of a dietary protein. Just eating proteins in diet does not ensure that they will provide all the essential amino acids in adequate quantities. Given the vital role that proteins play in the metabolic and physiological response to aerobic stresses of endurance sports, and the uncertainties regarding dietary protein intake, a protein supplement like Profect®, can go a long way in improving performance.

Adequate training and a Profect diet will take endurance to its limits, to levels where aerobic metabolism stimulates the release of enkephalins, the human equivalent of opium. These enkephalins produce the natural high that is often referred to as the 'flow'. As long as metabolism remains aerobic, the mind is flooded with enkephalins and the systems function in harmony. In 'flow' capacity seems endless and fatigue non-existent. Profect, the perfect protein supplement can do that for you.

### About Protica

Founded in 2001, Protica, Inc. is a nutritional research firm with offices in Lafayette Hill and Conshohocken, Pennsylvania. Protica manufactures capsulized foods, including Profect, a compact, hypoallergenic, ready-to-drink protein beverage containing zero carbohydrates and zero fat. Information on Protica is available at [www.protica.com](http://www.protica.com)

You can also learn about Profect at [www.profect.com](http://www.profect.com)

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## **Sports Supplement**

**By Rolf Rasmusson**

### **Sports Supplement by Rolf Rasmusson**

Sports Supplement - what is it?

We are all aware of what is a nutrition or diet supplement, but what is a sports supplement? A sport supplement is a subcategory of nutrition supplements. The sports supplement is associated with rising sport results, intensifying training, lowering the consequences like muscle pain, etc. Many athletes use some type of sports supplement or supplements, but if you are an athlete you need to be careful as some of the chemicals used in production of supplements or some of the supplements themselves can be on the banned substance list.

Sports Supplement - caffeine.

Caffeine is an example of a sports supplement. Athletes have used caffeine for a long time as it helps them to stay alert and improve endurance. A good thing about caffeine is that there was a lot of research done about it. According to many sport researchers, caffeine supplements claim that caffeine improves athletic performance, increases energy, delays fatigue, improves fat burning, and enhances body fat loss.

Sports Supplement - protein.

Protein is another example of a sports supplement. According to many athletes, high protein diets help

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to increase muscle mass and gain strength. Unfortunately there is no scientific proof of that nowadays. Protein supplements claim that protein supports muscle growth, increases muscle strength and mass, improves recovery, etc. Again, no research is available to prove these claims.

Sports Supplement - creatine.

Creatine is yet another example of a sports supplement. According to many sport researchers, creatine supplements seem to enable muscles to work harder before becoming fatigued. Creatine supplements claim that creatine improves high power performance of short duration, increases muscle mass, delays fatigue. If you are an athlete, you need to be careful about using creatine sports supplements as there is very little research regarding safety of creatine.

Additional interesting content at [www.nutritional-supplement-4u.com](http://www.nutritional-supplement-4u.com)



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