

Optimum Sports Nutrition

Your Competitive Edge

by Dr. Michael Colgan

Physiological Dynamics

The final principle of nutrition you need to know is physiological dynamics. Unlike drugs, nutrients do not have rapid effects. No quick fix. The business of nutrition is to build a better body. That has to wait on Nature to turn over body cells. A blood cell lasts 60 - 120 days. In 3 - 4 months your whole blood supply is completely replaced. In 6 months almost all the proteins in your body die and are replaced, even the DNA of your genes. In a year all your bones and even the enamel of your teeth is replaced, constructed entirely out of the nutrients you eat.

This time course is well illustrated by the course of deficiency diseases. If I remove all the vitamin C from your diet, within 4 weeks blood vitamin C will drop to zero. But, you will see no symptoms of disease at 4 weeks. You have to wait until enough of the healthy cells have been replaced by unhealthy cells. It is another 12 weeks before the symptoms of scurvy start to ravage your body.

So when you implement an optimum nutrition program, don't expect rapid results. In one of our studies at the Colgan Institute, runners were supplemented to try to improve their hemoglobin, hemotocrit, and red blood cell count. But after one month of supplementation, there was no improvement at all. After 6 months, however, all three indices were significantly increased.

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Think of it this way. If you take a neglected houseplant and start feeding and watering it, the leaves may perk up a bit from the improved nutrition. But you have to wait for the old leaves to die off and the new leaves to grow before you get a really healthy plant. It is the same with the human body. When you start feeding it better, you have to wait on the physiological dynamics of the body to grow new improved cells in the improved nutrient medium. After 18 years in sports nutrition, the shortest program we will give any athlete is six months.

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