

PEAK PERFORMANCE

Part Three
In a Series by
Dr. Fred Hatfield

AMINO ACID BALANCE

• *People on high-protein diets tend to be protein starved, paradoxically; those on a high-carbohydrate diet generally are in much better amino acid balance.* Over the years it's been customary for athletes to think, "If I want to excel in my sport, if I want to become big and strong, I must eat more protein — specifically, animal protein. Yes, there seems to be a certain logic in football players, wrestlers, bodybuilders, weightlifters and boxers making meat the main course of their diet. After all, these strength athletes are the "lions" of the sports world, and who ever heard of lions sitting down to a meal of nuts, fruits and vegetables?

Yet when biochemical analysis is done, revealing how the body is functioning, that traditional, seemingly logical theory of sports nutrition just doesn't hold up. The direct feedback from athletes on a high-protein diet (consisting of more than 2 grams of protein per kilogram of bodyweight per day) is that they are very unhealthy, tend to suffer from nutritional allergies, have problems with their kidneys and other organs, and — remarkably — are protein starved (as was the case with the karate instructor mentioned earlier).

Scientists in Georgia tested athletes who were taking in more than 2 grams per kilogram of bodyweight of animal protein a day, yet their bodies were assimilating only about 30 grams. These individuals actually were losing muscle weight and strength because they were intolerant to that excessive amount of protein. Their bodies were not able to break it down. If you take in too much protein, the body gets to a point where it actually seems to turn off the assimilation process, as if to say, "Hey, you're putting in too much. I can't handle it. There's too much for me to break down and de-toxify. So, forget it, I'm shutting down."

As far as amino acid analysis is concerned, no one seriously would suggest that such testing is imperative for everyone active in sports. The weekend or recreational athlete really doesn't need to worry about body chemistry and maximum performance. Most serious athletes may not see a need for sophisticated biochemical testing, either. For such individuals, a basically sound diet (minimum 70% carbohydrate, with 1.2-1.8 grams of protein per kilogram of bodyweight per day), daily vitamin-mineral supplementation, and a careful, intelligent amino acid program (high in branch-chain amino acids; ie., a formula specially designed for athletes) should serve the nutritional needs adequately.

But at the elite level in athletics, sophisticated bioanalytic techniques such as amino acid analysis are important, if not imperative. After all, athletic performance has entered the high-tech age. And it hardly makes sense to use highly scientific training techniques and the most advanced equipment while leaving one's nutrition up to chance.

Editor's Note: We are extremely fortunate to have Dr. Fred Hatfield share some of his insightful training ideas on achieving peak athletic performance without drugs. Dr. Hatfield is a prolific and creative writer of over fifteen books on weight training. After spending years as a track and field athlete, soccer player, gymnast, olympic weightlifter and bodybuilder, Dr. Hatfield turned to the sport of powerlifting. He is known as Dr. Squat and his 1014 squat in Hawaii this year was another world record; one of many set by this champion of champions.

So the elite modern athlete intent on maximum performance can — and should — take steps to ensure that the body is biochemically correct and balanced. It's important to check whether the thyroid, adrenals and liver are functioning properly. Is there a sufficient amount of vitamins and minerals in the body? Most important of all, it's crucial for such an athlete to make sure there are no blocks in any of the amino acid cycles, the metabolic pathways in the body.

And how do you make sure there are no blocks? The only way to find out is by undergoing an amino acid analysis.

OTHER TIPS

• *Athletes should not take the amino acids arginine and ornithine in high doses (2,000 or more milligrams per day).* Despite what Durk Pearson and Sandy Shaw say in their bestselling book, *Life Extension*, supplementing with these amino acids is not the last word. Large doses of arginine and ornithine throw off the amino acid metabolism. It's also known that taking large amounts of arginine causes an increased susceptibility to oral herpes. For best results, take these amino acids in small quantities (1200 mg/day).

• *When supplementing the diet with vitamins, pass on the Vitamin D.* Tests show that Vitamin D can affect amino acid cycles in the body. If you're taking a multi-vitamin, choose one that has a low amount of D — no higher than the RDA.

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