Dynamic Chiropractic

Dietary Protein Recommendations

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For many years, there has been disagreement on the amount of protein humans require. This argument has been raised once again due to the success of many popular high-protein weight-loss diets (which I will address in an upcoming article). The RDA for protein is 0.8 grams per kilogram of body weight per day (.364 gr/lb/bw/d).[1]

For years, athletes have ignored the published protein guidelines and consumed amounts far in excess of the government's recommendation.[2] Some quality research has demonstrated that RDA levels for those involved in athletics are inadequate and may impede recovery or limit muscle growth.[3] It is generally accepted that endurance athletes should consume 1.2 to 1.4 grams of protein per kilogram of body weight per day.[3] Strength and power athletes are recommended to consume protein between 1.4 and 1.8 grams per kilogram of body weight per day.[3] Although there are no recommendations for people with musculoskeletal injuries, hospital guidelines have been published.[4] For general surgery, it is recommended that protein levels be 1.5 grams per kilogram of body weight per day. For cases of multiple trauma, levels are between 1.5 and 2.0 grams per kilogram of body weight per day. Finally, for burns and severe sepsis, protein levels are recommended at 2.5 grams per kilogram of body weight per day.

Chiropractic Patients

I am often asked how much protein chiropractic patients need. I answer that question by asking other questions:

1. How much protein does the patient normally consume?
2. What is the nature and extent of the injury or disorder?
3. What is the patient's current level of activity?
4. Are there any other health issues facing the patient?

The patient in good health who already consumes plenty of protein, has normal activity levels, and comes in three times for a stiff back after yardwork needs nothing but a new rake. Conversely, the vegetarian distance runner who just suffered high-impact whiplash trauma requires a careful review of her diet. The goal with protein is maintaining a positive nitrogen balance. For example, people with immobilized fractures had increases in urinary nitrogen excretion that indicated an additional 16 to 49 grams a day were needed to maintain a positive protein balance.[11] According to Bucci, a protein deficiency delays all aspects of healing, including a lengthening of the inflammatory phase.[4] To be safe, patients with serious injuries should probably consume "general surgery" levels.

Adverse Effects of High-Protein Diets

There is no evidence high-protein diets cause kidney damage in healthy individuals.[5,6] Recent studies have shown no impairment of kidney function when athletes consume protein at a level of 2.8 grams per kilogram of body weight.[6]

Concern about this is extrapolated from the evidence that high-protein diets exacerbate pre-existing kidney disorders,[7] and that when dietary protein is reduced in persons suffering with kidney disease, the progression to end-stage dysfunction has been retarded or halted.[8] As Lemon comments, if high-protein diets caused healthy kidneys to become dysfunctional, one would expect to see many athletes develop kidney problems,[5] since athletes have consumed amounts of dietary protein far greater than the RDA requirements for many years.[2]

Protein can cause elevated urinary calcium levels.[9] Individuals on high-protein diets should make sure their "all-source" intake of calcium (foods and supplements) is at or above 1,200mg per day. Athletes who use commercial protein powders should be advised to choose readily available brands that provide calcium with the protein.

Protein can also increase fluid loss through the urine.[10] This can be monitored by regular weighing and replacement of postactivity weight loss, with a minimum of one pint (16 oz) of fluid for each pound lost following exercise. For those trying to lose weight, it is important not to confuse fluid loss with body fat reduction. Individuals consuming high amounts of protein for the purposes of weight loss should increase their daily fluid levels proportionate to the percentage of protein they are consuming above the RDA.

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