*Too much of a good thing*
**When Protein
Becomes Toxic**Karl Mincin, Clinical Nutritionist

Nutrition is a delicate balancing act. Ironically, the signs and symptoms of nutrient deficiency are often identical to those of excess or toxicity. It is nearly impossible to induce true protein deficiency. Protein toxicity on the other hand is increasingly common. When adequate calories are consumed protein deficiency never occurs, even if those calories come exclusively from plant foods. Protein is not spelled M-E-A-T. While some health conditions can in the short term respond well to a high protein diet, it is not without adverse consequence in the long run.

Most official nutrition organizations recommend a fairly modest protein intake. The DRI (Dietary Reference Intake) is 0.8 grams of protein per kilogram of body weight, or 0.36 grams per pound. This amounts to: 56 grams per day for the average sedentary man, which is more than adequate. The reality is that most people easily get twice this amount without even trying or thinking about it. With concerted effort to eat a high protein diet, and supplementing protein powder, one can reach protein intake three to four times above their actual nutritional need. Any excess will not contribute to more muscle, but rather to metabolic toxicity.

How does the body process such excess? Next to alcohol and fat, protein is the most complex and demanding macronutrient to metabolize. Because it is high in nitrogen which break down into nitrogenous waste by-products (such as urea, uric acid and ammonia , along with alpha-keto acid), that the liver and the kidneys take the brunt of filtering and detoxifying such compounds. Since modern-day livers already tend to be overburdened, more is not necessarily better. A sluggish liver, or liver congestion, is just below the medical diagnostic radar of more serious liver disease. For example, a liver can be severely under-functioning, contributing to a host of apparently unrelated health conditions, but the person may still show “normal” liver enzyme levels in the blood. Normal doesn’t mean optimal or even healthy, just an absence of diagnosable disease.

Athletes and body builders are some of the most vulnerable to protein toxicity. I have seen in my nutrition practice more than a few of them develop edema, eating disorders, kidney and liver damage, and toxic ketosis, usually after more than six months on a mega-protein diet. If need be, a few months on such a regime to bring down dangerously high cardiac risk factors or to stabilize non-responsive glucose levels, may be okay. But please be sure to drink lots of water and eat plenty of greens to minimize the toxic impact during such a limited dietary drug-like therapy.

One big mistake people make when estimating their protein intake is to count only animal foods. All plants contain protein, averaging 5 grams per serving. The equivalent protein content of the recommended nine servings of produce is over 30 grams, which is the same as a chicken breast. For further details see my article *Protein Content of Vegetables* on my website below.

When it comes to protein, or any nutrient, unless you’ve had a professional nutrition evaluation to precisely design your actual needs, moderation is the key.
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