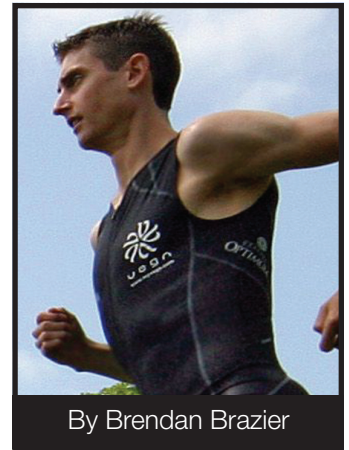


Protein: quality, not quantity, rules



It was once thought that only animal protein was complete and superior to plant-based options. Complete protein is composed of all 10 essential amino acids. By definition, essential amino acids cannot be made by the body; they must be obtained through dietary sources.

Fortunately, there are several complete plant protein sources. However, to obtain all 10 amino acids, in high quantities, it's advantageous to consume several complementary sources of protein on a regular basis. For example, hemp (yes, hemp), yellow pea and brown rice protein offer a superior amino acid profile that rivals any in the animal kingdom.

Additionally, one of the big advantages of properly balanced whole food, plant-based protein over animal protein is its slightly neutral pH. In contrast, highly processed foods are acid-forming and animal-based foods are even moreso. Whey protein isolate (from dairy), for example, is highly acid-forming. Whey, straight from the cow, would be neutral, or perhaps slightly alkaline, but once the protein gets isolated and pasteurized, these two steps lower its pH, making it considerably more acidic. Meat (pork in particular) is also highly acid-forming.

Acid-forming foods include all those that are cooked at a high temperature or are very processed. Among the most acid forming are meat, coffee, pasteurized milk and cheese, prescription drugs, margarine, artificial sweeteners, soft drinks, roasted nuts and all refined, flour-based foods—which include most commercial breakfast cereals, white pasta, white bread and conventional baked goods.

As a rule, the more that has been done to a food, the more acid-forming it will be; the less that has been done to alter its original state, the more alkaline-forming it will be.

It's advantageous to maintain a neutral pH. Eating too many acid-forming foods will promote inflammation, reduce immune function and cause highly alkaline calcium to be pulled from the bones to keep the blood in its neutral state of 7.35. This of course leads to lower bone density and, in many cases, osteoporosis.

The most alkaline-forming foods are those with chlorophyll, the green pigment in many plants. Hemp is an excellent example in that it contains complete protein, yet the fact that it is not isolated and that it contains chlorophyll helps maintain a more alkaline pH.

Dark types of lettuce boast up to 40 percent protein and spinach weights in at about 45 percent. Since leafy greens are light, of course, this doesn't add up to astonishingly high numbers in terms of grams of protein. The body can't use protein as is—it must convert it to amino acids first. However, since protein in leafy greens is already in amino acid form, the kind usable by the body, it doesn't have to be converted; therefore it saves our metabolism energy.

In my book *Thrive: The Vegan Nutrition Guide Optimal Performance in Sports and Life*, I classify foods with this quality as “one-step nutrition” foods. They offer a significant advantage. Since the step of converting protein to amino acids is eliminated, the body will conserve energy through the assimilation process. Because of this energy savings, you will have a greater amount. If you don't “spend” it, you still have it: “energy through conservation as opposed to consumption.”

If a large enough salad is eaten, taking into consideration its “one-step nutrition” quality and, therefore, its ability to provide more energy than foods that don't assimilate as efficiently, a substantial amount of usable protein will be ingested.

“Pseudo grain” is the term given to what is technically a seed, yet commonly referred to as a grain. Examples include: amaranth, buckwheat, quinoa and wild rice. Since they are all, in fact, seeds their nutritional profile reflects that. They are gluten-free and higher in protein than grains. They can also be easily sprouted. And with greater than 20 percent protein in amino acid form and superior digestibility, pseudo grains are a sound protein source. Adding half a cup of sprouted buckwheat to a large salad will certainly yield a high-quality protein meal. [H2O](#)

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