

Triathlon Nutrition: Vegetarianism

The key players in a vegetarian triathlete's diet....

There are numerous myths associated with the consumption of a vegetarian diet. In particular, vegetarian triathletes are thought to be deficient in protein, iron, or other nutrients that can easily be obtained from meat. Allow me to be the first to dispel these types of folklores.

Vegetarian triathletes can obtain all of the necessary nutrients to adequately fuel the body for hours of training and racing. In fact, a vegetarian diet may be more appropriate for triathletes because of their necessity to consume a large percentage of calories from carbohydrates. A vegetarian diet has also been associated with numerous health benefits, including lower rates of ischemic heart disease, diabetes, hypertension, obesity and certain forms of cancer. Should we stop eating meat and head to the Italian market for pasta and vegetables? Perhaps, but let us first examine the key players in the vegetarian triathlete's diet.

"If you don't eat meat, how do you get your protein?"

This is the most frequent and unjustified question proposed to all vegetarians. The current recommendation for all endurance athletes is to increase protein consumption from 0.8-1.0 grams to about 1.2-1.7 grams of protein per kg of body weight per day. Although the protein intake of vegetarians is consistently below that of omnivores, both groups are well above the recommended dietary allowance (RDA) for protein, therefore the adequacy of protein intake is not concerning for most triathletes. So why are people proposing the above question? What most people do not realize is that a significant amount of protein is found in foods like cereals, breads, pastas, grains, legumes, nuts and dairy products (or substitutes). It is not essential to eat a 12-ounce steak to get protein. In fact, that 12-ounce steak is probably more than enough protein for two days.

Protein quality is also important!

Animal protein contains all of the essential amino acids in one complete package. Therefore, individuals who avoid all animal protein sources (i.e. vegans) may require more careful monitoring of their protein intake because many plant proteins are limiting in some amino acids. The simplest way to accomplish this is to eat a variety of foods at each meal, which should provide all of the essential amino acids and make the protein complete. In addition, vegetarian and vegan triathletes are encouraged to eat foods like quinoa (grain) and tofu, as both are complete vegetable proteins. However, triathletes who are following low-protein vegan diets should consult with a sports nutritionist to ensure adequate protein intake.

Here's where it gets interesting – carbohydrates

Experts recommend that triathletes consume about 8-10 grams of carbohydrate/kg of body weight or 60-70% of their calories from carbohydrates. Currently, American endurance athletes typically consume about 60% of their calories from carbohydrates, whereas the diet of the world's best endurance runners, notably the Kenyans, contains 75-80% of calories from carbohydrate and only includes a small amount of meat. It is likely that American endurance athletes are eating too much protein or fat and not enough carbohydrates. Although the Kenyan diet is not strictly vegetarian, it includes only a limited amount of meat, which ensures the optimal amount of carbohydrate and not an excess amount of protein. If the triathlete can follow a diet that is either completely vegetarian or contains a limited amount of meat, it could benefit him or her by supplying the appropriate amount of energy from carbohydrates. Perhaps those Kenyans are onto something.

Are vegetarians missing out on other nutrients found only in meat?

Possibly. There are several benefits to eating meat that are limiting when adhering to a vegetarian diet. Perhaps the most concerning of all nutrients for a vegetarian triathlete is iron. Iron is an essential micronutrient that facilitates oxygen transport in the blood, which is the limiting physiological factor for aerobic performance. Insufficient amounts of iron in the blood and tissue will severely impair performance. Iron is present in two different forms: heme iron from animal tissue and non-heme iron from plant sources. Unfortunately for vegetarians, non-heme iron is much less bioavailable than heme iron. Therefore, although vegetarians and omnivores consume nearly equal amounts of total iron, the vegetarians absorb much less of it. As such, the RDA for iron for vegetarian triathletes is 80% higher than for omnivorous triathletes. Vegetarians should strive to consume oat bran, spinach, beans, or other iron-fortified foods on a regular basis.

What about vitamin B12 deficiency in vegetarians?

Vitamin B12 is only reliably found in meat, dairy and eggs. There was speculation that some fermented soy products and seaweeds contain B12, but research has proven otherwise. Although Vitamin B12 does not directly improve work performance, a deficiency in this vitamin can lead to macrocytic anemia, which will then impair aerobic performance. Triathletes who exclude all animal products from their diet require supplementation or careful diet planning to ensure they are obtaining the vitamin from fortified foods. Lacto-ovo vegetarians are less likely to develop Vitamin B12 deficiency assuming they regularly consume dairy products or eggs.

What about all of the vitamins you get from a vegetarian diet?

A well-planned vegetarian diet can have a substantial positive impact on health. The amounts of vitamins and minerals found in whole grains, a variety of vegetables and fruits, fermented soy products and other non-meat sources are unmatched in any omnivorous diet. The abundance of natural sources of these nutrients in the diet ensures the body is receiving all of the building blocks it requires for energy metabolism and recovery from exercise in their original form and in physiological amounts. Furthermore, a diet rich in the antioxidants vitamin E, vitamin C and beta-carotene, as is the case with many vegetarian diets, can reduce exercise-induced oxidative stress, which will reduce the instances of muscle damage and soreness. Not surprisingly, antioxidant status is currently an area of significant interest in the scientific community.

Conclusion

Many people in our meat-based society will continue to perceive the vegetarian diet as inadequate. But what you, the informed vegetarian or omnivorous triathlete, will know is that a well-planned vegetarian diet can be complete in all essential nutrients and provide you with the energy you need to train and race at the top of your game. Perhaps the vegetarian diet is one that you might like to try because it provides all those carbohydrates that sustain you on those long Sunday morning runs and rides out on the road. Whatever your dietary preference, be cautious and meticulous with your diet planning, because ill-conceived food choices, by a vegetarian or omnivore, can counteract all of your training efforts on race day.

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