

Vegetarian Eating for Athletes

Athlete Scenario

I have been a vegetarian for over two years because I believe that not eating meat has many advantages. However, my new coach is concerned that I am not getting enough protein and iron. Aware of his concerns, I wonder whether I am getting adequate nutrients. How can I remain a vegetarian while satisfying my nutrient needs and enhancing my performance?

Strategies for Athletes following Vegetarian Eating Style:

- Meet daily needs for protein and essential amino acids by eating a variety of plant-based protein sources.
- Include plant-based iron-rich foods in meals and snacks to facilitate oxygen transport in the body and promote optimal respiratory function during exercise.
- Consume foods high in vitamin C with iron-rich foods to boost iron absorption.
- Select foods high in calcium and vitamin D to build strong bones and reduce risk of stress fractures.
- If you are vegan (avoids all animal products), choose vitamin B₁₂-fortified foods or take a vitamin B₁₂ supplement daily.

Performance Foods for Vegetarian Athletes:

- Plant-based protein foods: legumes, tofu, texturized vegetable and soy protein, quinoa, nuts and seeds
- Plant-based iron-rich foods: legumes, nuts, seeds, whole and enriched grains, dark green leafy vegetables, dried fruit
- Calcium-rich foods: dairy products, dark green leafy vegetables, fortified tofu, fortified soy milk and fruit juices, legumes, nuts
- Vitamin B₁₂ sources: dairy products, eggs, nutritional yeast, fortified foods (soy milk, cereal, meat analogues)

Written by SCAN registered dietitians (RDs). The key to optimal meal planning for athletes is individualization. For personalized nutrition plans contact a SCAN sports dietitian or Board Certified Specialist in Sports Dietetics (CSSD) by accessing "Find a SCAN Dietitian" at www.scandpg.org; 800.249.2875.



Tips to Take With You

1. Consuming a variety of plant-based foods will help vegetarian athletes meet their carbohydrate, protein, vitamin and mineral needs.
2. Choose a wide array of plant-based foods that contain protein.
3. Vegetarian athletes may be at increased risk for iron depletion and iron deficiency. Routine assessment of iron status is recommended for most athletes.

Contact SCAN

Web site: www.scandpg.org

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Vegetarian diets can meet all the recommendations for nutrients daily. The key is to consume a variety of foods and the right amount of foods to meet your calorie needs. Follow MyPyramid recommendations for your age, sex, and activity level to get the right amount and variety of foods needed for nutrient adequacy. Vegetarians may need to focus on certain nutrients including protein, iron, calcium, zinc, and vitamin B12.

NUTRIENTS TO FOCUS ON FOR VEGETARIANS

Nutrient	Function & More	Sources
Protein	Essential for growth and maintenance Eat a variety of plant-based foods	Beans, nuts, nut butters, peas, soy products (tofu, tempeh, veggie burgers) Milk products and eggs are options for lacto-ovo vegetarians
Iron	A primary carrier of oxygen in the blood	Iron-fortified breakfast cereals, spinach, kidney beans, black-eyed peas, lentils, turnip greens, molasses, whole wheat breads, peas, and some dried fruits (dried apricots, prunes, raisins)
Calcium	Building bones and teeth Maintenance of bone strength	Fortified breakfast cereals, soy products (tofu, soy-based beverages), calcium-fortified orange juice, and some dark green leafy vegetables (collard greens, turnip greens, bok choy, mustard greens)
Zinc	Necessary for many biochemical reactions Helps the immune system function properly	Variety of beans (white beans, kidney beans, chickpeas), zinc-fortified breakfast cereals, wheat germ, and pumpkin seeds Milk products for lacto vegetarians
Vitamin B12	Necessary for cell division and growth Strengthens the immune system	Milk products, eggs, B12-fortified foods (breakfast cereals, soy-based beverages, veggie burgers, and nutritional yeast)

Vegans who do not have *fortified* foods and ovo-vegetarians who do not have *fortified* milk substitutes should consume the following daily:

3-5 teaspoons vegetable oil (for calories and essential fatty acid)

1 Tablespoon black strap molasses (for iron and calcium)

1 Tablespoon brewer's nutritional yeast for B-vitamins, especially riboflavin and B12

TIPS FOR VEGETARIANS

- Build meals around protein sources that are naturally low in fat, such as beans, lentils, and rice. Don't overload meals with high-fat cheese to replace the meat.
- Calcium-fortified soy-based beverages can provide calcium in amounts similar to milk. They are usually low in fat and do not contain cholesterol.
- Many foods that typically contain meat or poultry can be made vegetarian. This can increase vegetable intake and cut saturated fat and cholesterol intake. Consider:
 - pasta primavera or pasta with marinara or pesto sauce
 - veggie pizza
 - vegetable lasagna
 - tofu-vegetable stir-fry
 - vegetable lo mein
 - vegetable kabobs
 - bean burritos or tacos
- A variety of vegetarian products look (and may taste) like their non-vegetarian counterparts, but are usually lower in saturated fat and contain no cholesterol.
 - Rather than hamburgers, try veggie burgers. A variety of kinds are available, made with soy beans, vegetables, and/or rice.
 - Add vegetarian meat substitutes to soups and stews to boost protein without adding saturated fat or cholesterol. These include tempeh (cultured soy beans with a chewy texture), tofu, or wheat gluten (seitan).
 - For barbeques, try veggie or garden burgers, soy hot dogs, marinated tofu or tempeh, and veggie kabobs.
 - Make bean burgers, lentil burgers, or pita halves with falafel (spicy ground chick pea patties).
 - Some restaurants offer soy options (texturized vegetable protein) as a substitute for meat, and soy cheese as a substitute for regular cheese.
- Most restaurants can accommodate vegetarian modifications to menu items by substituting meatless sauces, omitting meat from stir-fry dishes, and adding vegetables or pasta in place of meat. These substitutions are more likely to be available at restaurants that make food to order.
- Many Asian and Indian restaurants offer a varied selection of vegetarian dishes.

MEAL PLANNING

Breakfast: oatmeal with fresh/dried fruit and nuts; granola topped with nuts and yogurt; wheat bagel, toast, or English muffin with peanut butter; soy sausage; banana pancakes

Lunch: vegetarian soups or stews (bean, lentil, and chili) with wheat bread; leafy greens salad with a variety of vegetables and topped with nuts, seeds, or beans; hummus and vegetable wrap

Dinner: textured vegetable protein (TVP) in chili; veggie pizza with soy cheese; vegetable lasagna with ricotta cheese; bean and brown rice burritos or tacos; soy or vegetable burgers on whole wheat buns; vegetable and tofu stir-fry; baked beans with soy-based hot dogs

Snack: rice cakes with peanut butter; bean and corn salsa with Melba toast; fruit salad; trail mix; popcorn with dried cranberries and almond; tofu and fruit smoothies; coffee or chai tea with soy milk

For more information or to schedule an Individual Nutrition Consultation, contact the National Institute for Fitness and Sport at 317-274-3432 or see us online at www.nifs.org.