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Athletes and Vegetarian Eating

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Athletes and vegetarian eating

Who is a healthy vegetarian?

- An athlete who follows a **well-balanced** plant-based eating style: covers a wide range from those who exclude only red meat to those who eliminate all animal foods (vegans)

- Motivation: desires to conserve natural resources, preserve animal life, gain health benefits or out of respect for cultural traditions or spiritual values
Athletes and vegetarian eating

Who is an unhealthy vegetarian?

- “Meat (and milk) eliminators” who make little or no effort to choose appropriate substitutes that make up the nutrients typically supplied by meat (and milk)

- Motivation: athletes who use a vegetarian diet to restrict foods, or avoid fat, needlessly
Athletes and vegetarian eating

The good news about a well-balanced plant-based eating style:

• High in carbohydrate = helps fuel aerobic exercise and carbohydrate is the only fuel that body can use to fuel anaerobic (intense) or “all-out” exercise

• No detrimental effects on athletic performance

• Good for long-term health: less risk of heart disease, diabetes and some cancers

• Can make it easier to reach and maintain a healthy weight

(Vegetarian diets: position of the American Dietetic Association and Dietitians of Canada: www.eatright.org)
Athletes and vegetarian eating

What does it take from the athlete to be a successful vegetarian?

1. Responsibility for his or her food choices
2. Focusing on the foods included on a regular basis, not on the foods avoided
3. More time and thought spent on pre-planning meals and snacks—especially when traveling or eating away from home
Athletes and vegetarian eating

Eating well the vegetarian way means getting enough:

1. Calories (fuel)
2. Lean quality protein
3. Key nutrients that athletes need: iron, zinc, calcium, vitamin B12

Athletes and vegetarian eating

Required daily calories = body’s total daily need for energy
= fuel for basic metabolism + fuel for activities of normal living +
fuel for training/purposeful exercise + fuel for growth

Too few calories consumed?
- the body is forced to use protein
  (from your diet or muscle mass) for fuel
- the body will “turn off” normal functions to conserve energy —e.g.,
  loss of menstrual cycles in female athletes

Can be challenging for some to get enough calories on a vegetarian diet:
- teens who are growing rapidly
- athletes with vigorous work-out schedules that interfere with eating (two-a-days or long practices)
- athletes with very high energy needs, like distance runners and age-group swimmers
Athletes and vegetarian eating

How do you – the athlete—get the job done?

1. Eat a variety of healthy foods every day: whole grains, legumes (dried beans), fruits, vegetables, nuts and soy foods

2. Work to include as many foods as possible –for example, dairy foods and eggs

3. Eat consistently throughout the day: 3 meals and 2-3 snacks
Athletes and vegetarian eating

4. Load up on **energy-dense** vegetarian foods, such as:
   - 100% fruit juice –cranberry, grape
   - dried fruit, like raisins & apricots
   - nuts & peanut butter
   - avocado, olives & salad dressing
   - low-fat cheese
   - soy milk –milk shakes, fruit smoothies

* you can also eat double portions of healthy foods that you like and you can eat more healthy snacks (contain two food groups)
Athletes and vegetarian eating

Healthy snacks (two food groups):
• Peanut butter sandwich (1/2 or whole) on whole wheat bread or a bagel
• Dried fruit and nuts or soy nuts
• Yogurt or milk (dairy or soy) and whole-grain cereal
• Low-fat milk shake or fruit smoothie (dairy or soy)
• Cheese (dairy or soy) and whole-grain crackers
• Piece of cheese pizza
• Cottage cheese and fruit
• Toaster waffle with peanut butter
• Instant oatmeal with fruit and low-fat milk (dairy or soy)
• Veggies and hummus
Athletes and vegetarian eating

Why do athletes need quality protein?
For muscle repair and recovery and a healthy immune system

In general, athletes who consume enough calories to maintain a healthy body weight also consume enough protein!

Athletes who may fall short of their protein needs:
• Vegans (consume no animal foods)
• “Meat (and milk) eliminators” – eat only starchy parts of meals
• Athletes who dislike soy foods and legumes (dried beans)
• Athletes trying to lose weight quickly or limiting their food intake for their sport
Athletes and vegetarian eating

To estimate protein needs:

.5 - .75 grams of protein per pound of body weight

145-pound teen athlete:

145 x .5 = 73 grams of protein
145 x .75 = 109 grams of protein

This athlete should eat between 73-109 grams of protein per day
# Athletes and vegetarian eating

<table>
<thead>
<tr>
<th>Serving size</th>
<th>grams of protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ounces (cooked) meat</td>
<td>20-25</td>
</tr>
<tr>
<td>(size of deck of cards)</td>
<td></td>
</tr>
<tr>
<td>1 egg</td>
<td>6</td>
</tr>
<tr>
<td>1 cup milk or yogurt</td>
<td>8</td>
</tr>
<tr>
<td>1 ounce cheese</td>
<td>7</td>
</tr>
<tr>
<td>½ cup cottage cheese</td>
<td>13</td>
</tr>
<tr>
<td>1 cup legumes/beans</td>
<td>12</td>
</tr>
<tr>
<td>1 cup lentils</td>
<td>18</td>
</tr>
<tr>
<td>3 ounces tofu (firm)</td>
<td>10</td>
</tr>
<tr>
<td>2 Tbsp peanut butter</td>
<td>8</td>
</tr>
<tr>
<td>1 ounce nuts/seeds</td>
<td>5</td>
</tr>
</tbody>
</table>
Athletes and vegetarian eating

How do you—the athlete—get the job done?

1. Eat enough calories (and carbohydrate-rich foods) to fuel your activity and maintain a healthy body weight.

3. Eat a wide variety of protein-rich plant foods throughout the day – include soy foods and legumes (dried beans) daily!

4. Don’t eat your grains plain!: spread peanut butter on your bagel, eat cheese with crackers, pour baked beans over noodles, add shrimp or tuna to sauce and pour over rice or baked potato
Athletes and vegetarian eating

Why do athletes need iron?

Necessary for oxygen transfer:
   hemoglobin in blood, myoglobin in muscles

Iron deficiency decreases athletic and academic performance and decreases immune function

Signs of an iron deficiency:
   fatigue—especially during exercise, short attention span, feeling irritable, having difficulty concentrating, feeling cold
Athletes and vegetarian eating

<table>
<thead>
<tr>
<th>Heme iron</th>
<th>Non-heme iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>Found in all meat, poultry and fish * Much more easily absorbed by the body</td>
<td>Found mainly in plant foods</td>
</tr>
<tr>
<td>Highest amounts: lean red meat, pork, dark poultry, tuna</td>
<td>• Iron-fortified breakfast cereals</td>
</tr>
<tr>
<td>• Baked beans with pork and tomato sauce</td>
<td>• Blackstrap molasses</td>
</tr>
<tr>
<td>• Bean and beef chili/burrito</td>
<td>• Legumes (kidney, black, refried, beans, etc.)/lentils</td>
</tr>
<tr>
<td>• Lasagna made with meat</td>
<td>• Baked potato with skin</td>
</tr>
<tr>
<td>• Tuna salad sandwich</td>
<td>• Tofu</td>
</tr>
<tr>
<td>• Hamburger</td>
<td>Tip: eat foods high in Vitamin C (at the same meal) to help the body absorb</td>
</tr>
<tr>
<td>• Lentil and ham soup</td>
<td>more non-heme iron – have orange juice to help your body absorb more non-</td>
</tr>
<tr>
<td></td>
<td>heme iron from a bowl of cereal</td>
</tr>
</tbody>
</table>
Athletes and vegetarian eating

Daily iron needs:
14-18 yr-old males: 11 milligrams
14-18 yr-old females: 15 milligrams

• Monitor your iron status with blood work (at least 1-2x/year) before supplementing with iron (beyond amounts in typical multi-vitamin)

• Be aware: risk of hematochromosis (iron overload)

• Female athletes at greatest risk for low-iron stores (ferritin) and iron-deficiency anemia!
Athletes and vegetarian eating

Why do athletes need zinc?

- Crucial to the metabolism of carbohydrate, protein and fat
- Promotes normal growth and sexual maturity
- Necessary for healthy appetite (ability to taste)
Athletes and vegetarian eating

Daily needs (milligrams):
14-18 yr-old males: 11 mgs
14-18 yr-old female: 9 mgs

Foods rich in zinc:
Lean red meat, turkey and fish
Peanuts
Legumes: baked beans, black beans, garbanzo beans, etc.
Dried fruit
Oatmeal
Athletes and vegetarian eating

Why do athletes need calcium?

- Help muscles to contract, nerves to conduct messages and blood to clot properly
- To build healthy strong bones and teeth

Daily calcium needs for boys & girls ages 9-18 years:  
= 1300 mg/day
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Best Bets (300 mgs per serving)
1 cup (8 oz) milk or yogurt
1 ½ ounces of cheese
2 cups cottage cheese
5 ounces of firm tofu (made with calcium sulfate)
1 cup fortified soymilk or orange juice
3 cups of cooked broccoli
1 ½ cups of baked beans
4 oz of canned salmon (with bones)
Athletes and vegetarian eating

Why do athletes need vitamin B12?

- Normal red blood cells
- Healthy nervous system
- Normal functioning of enzymes throughout the body
Athletes and vegetarian eating

Facts about Vitamin B12

- A little bit (2.4 micrograms/day) makes a big difference in the body!

- Without enough vitamin B12, body can’t use folate (another B vitamin) to manufacture blood cells, causing pernicious anemia

- Found almost exclusively in animal foods and products (meat, milk, cheese, eggs)

- Vegans need a reliable daily source: vitamin B12-fortified soy milk, cereal or meat replacements, or a supplement
Athletes and vegetarian eating

Red flags of unbalanced vegetarian eating:

1. Dislikes or won’t eat soy foods, legumes, and /or eggs (especially if dairy foods also eliminated)

2. Eats only starchy parts of meals

3. Avoids healthy fats: nuts, seeds, avocado, olives, salad dressing

4. Female vegetarian athletes who don’t menstruate by age 16 or who lose their menses for 3 consecutive months

5. Doesn’t maintain a healthy weight or fails to grow and develop on normal growth curve
Athletes and vegetarian eating

The bottom line:

1. Vegetarian diets can be healthy and support athletic performances if well-balanced!

2. Athlete must be willing to assume personal responsibility for meeting their energy and nutrient needs.

3. Focus is on getting enough energy (calories) and nutrients that athletes need, including quality protein, iron, calcium and zinc (and vitamin B12 for vegans).

The bottom line: Successful vegetarian athletes focus on the foods they eat, not on the foods they don’t eat!
Athletes and vegetarian eating

Resources for vegetarian athletes and their parents:

1. Work with a qualified sports dietitian: www.scandpg.org – Find a SCAN RD! (map of USA, click on your state)

2. The Vegetarian Resource Group: www.vrg.org

References


- National Academy of Sciences: www.nap.edu
- Vegetarian diets: position of the American Dietetic Association and Dietitians of Canada: [www.eatright.org](http://www.eatright.org).