In the previous issue, we dismissed some common myths and misconceptions regarding vegetarian diets for athletes. In this final part, we will look at what foods vegetarian athletes need to eat to meet certain vitamin and mineral requirements.

Depending on how restrictive the diet is (see Table 1), the more important it becomes to choose the right foods, rather than just omit the foods one does not wish to eat (1). The following section discusses sources of some nutrients important to vegetarian athletes.

### Vegetarian Food Sources

#### Calcium

**Vegan Sources:** Orange, peanuts, great northern beans, tofu, molasses, rhubarb, turnip greens, kale, chicory greens broccoli, and green beans.

**Non-Vegan Sources:** Cheese, milk, yogurt, oysters, salmon, and sardines.

*Note: Foods such as: spinach, chard, beet greens, and sorrel contain calcium, but also have oxalic acid, which binds to calcium and makes it unusable.*

Also, many juices are now calcium fortified, making calcium intake less complicated for vegans. In addition, if you take a calcium supplement, split

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**Table 1. Types of Vegetarians**

<table>
<thead>
<tr>
<th><strong>Vegan</strong></th>
<th>Avoids all foods of animal origin.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lacto-ovo-vegetarian</strong></td>
<td>Eats dairy and eggs, but no animal flesh.</td>
</tr>
<tr>
<td><strong>Lacto-vegetarian</strong></td>
<td>Eats dairy, but no eggs or animal flesh.</td>
</tr>
<tr>
<td><strong>Ovo-vegetarian</strong></td>
<td>Eats eggs, but no dairy or animal flesh.</td>
</tr>
<tr>
<td><strong>Pesco-vegetarian</strong></td>
<td>Eats eggs, dairy and fish, but no animal flesh.</td>
</tr>
</tbody>
</table>

**Flexitarians** — a newly described term which include the groups to the right

- **Vegetarian:** Those who say they are vegetarian, or “almost vegetarian,” but eat some meat, poultry, or fish.
- **Vegetarian-inclined:** Replace meat with meat alternatives for at least some meals, usually maintain a vegetarian diet, or eat four or more meatless meals per week.
- **Health-conscious:** Strive for a balanced eating plan or eat two to three meatless meals per week.
the dose in 2 or 3 smaller doses per day. Large doses are not absorbed as efficiently as small doses.

**Iron**
- Non-heme iron is found in plants and eight percent of what we eat is absorbed, if eaten with a good source of vitamin C (citrus fruits, tomato products, and red pepper). In addition, using iron pans can boost the iron content of foods.

Sources: Wheat germ, peanut butter, tofu, lentils, chickpeas, kidney beans, pinto beans, spinach, kale, broccoli, green peas, whole wheat bread.

- Heme iron is found in animal food and has an absorption efficiency of about 23%.

Sources: Fish

*Note: Coffee, tea, herb tea, soy protein, bran, high fiber foods, egg yolks, phytate, and calcium supplements impair iron absorption. You will get less iron if you consume any of these from 15 minutes before to an hour after you eat a food containing iron.

**Zinc**
Sources: Wheat germ, peanut butter, tofu, lentils, chickpeas, kidney beans, pinto beans, potato, spinach, kale, broccoli, green peas, whole wheat bread, and yogurt.

* Note: Phytates—found in most whole grains and some fruits and vegetables inhibit zinc absorption.

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**Riboflavin (vitamin B-2)**
Vegan Sources: Broccoli, asparagus, tofu, almonds, yeast, and soy milk.

Non vegan sources: Milk and cheese.

**B-12 (cobalamin)**
Vegan Sources: Naturally found in animal products only, but also in fortified soy milk, cereals, imitation meats (check labels), supplements, and some is also made by our intestinal bacteria.

Non-Vegan Sources: Milk and cheese.

**Vitamin D**
Vegan Sources: Exposure to sun—the body synthesizes it, or in a supplement.

Non-Vegan Sources: Milk, margarine, and eggs.

**Omega 3-s**
Sources: flaxseed, canola oil, nuts, wheat germ, salmon, sardines, herring, halibut, and tuna.

**Conclusion**
Although some concerns have been raised about the nutrient status of vegetarian athletes, a varied and well-planned vegetarian diet is compatible with any successful athletic endeavor(2). The key word to remember with food intake is variety. Including a wide range of fruits, vegetables, whole-grain breads and cereals, legumes, nuts, and seeds in the diet will result in optimal performance.

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**References**

**About the Author**
Debra Wein, MS, RD, LDN, NSCA-CPT is a faculty member at the University of Massachusetts Boston and adjunct lecturer at Simmons College. Debra is the President and Co-founder of The Sensible Nutrition Connection (SNaC – www.sensiblenutrition.com), a consulting firm established in 1994 that provides nutrition services to individuals, universities, corporate wellness programs and nonprofit groups. ▲