



## **Food Alternatives to Dietary Supplement Use**

Dietary supplement use is believed to be greater in individuals with a debilitating injury and illness than the general population due to the perceived belief that supplements help address needs specific to injuries or illnesses. Forty percent of individuals with a debilitating injury or illness, who use dietary supplements, adhere to the label recommendations designed for individuals without a debilitating injury or illness.<sup>1</sup> The recommendations advertised on dietary supplement labels may not consider specific types of injuries or illnesses or the energy requirements for specific injuries or illnesses; therefore, may not reflect accurate information for individuals with a debilitating injury or illness. Cancer patients and individuals with a spinal cord injury may use supplements to boost the immune system and promote healing; however, supplements have the potential to interfere with the effectiveness of treatment, therapies, and medication.

Eating whole foods provides the body with vital vitamins, minerals, energy, and health promoting chemicals such as antioxidants. A healthy mix of fruits, vegetables, whole grains, lean meats, and low-fat dairy products is a sufficient way to meet the recommended daily allowances for vitamins and minerals. Dietary supplements are an insufficient substitute for a well-balanced diet. Food contains a mixture of nutrients that interact to produce health benefits (such as vitamin D and calcium). Many nutrients do not provide benefits independently; they work in unison with other nutrients to provide health benefits. Achieving a proper balance of vitamins and minerals is achieved by consuming a well-balanced diet.

Supplement	Function	Example of Food Sources
<b>Antioxidant</b>	Promotes health benefits such as decreasing the risk of developing cancer and chronic disease	<b>Vegetable:</b> Artichokes, kale, sweet potato, carrots <b>Fruit:</b> Avocado, papaya, berries (black, blue, raspberries, cranberries), cherries, pears <b>Herbs:</b> Cloves, cinnamon, turmeric, ginger, oregano
<b>Vitamin A</b>	Helps maintain vision, immune function, and reproductive health	<b>Vegetable:</b> Spinach, carrots, sweet potato <b>Fruit:</b> Mango, cantaloupe, peach, watermelon <b>Meat/Fish:</b> Beef liver, chicken liver <b>Grain:</b> Bran, oatmeal
<b>Vitamin D</b>	Helps the body absorb calcium for healthy teeth and bones	<b>Meat/Fish:</b> Salmon, sardines, herring, mackerel <b>Oil:</b> Cod liver oil <b>Dairy:</b> Non-fat or skim, 1%, 2% milk



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<b>Vitamin E</b>	Helps the body produce red blood cells	<b>Vegetable:</b> Spinach, broccoli <b>Nuts/Seeds:</b> Sunflower seeds, almonds, hazelnuts <b>Oil:</b> Wheat germ oil, corn oil, sunflower oil
<b>Vitamin K</b>	Promotes blood clotting and bone health	<b>Vegetable:</b> Leafy green lettuce, spinach, cabbage, broccoli, kale, Swiss chard <b>Fruit:</b> Strawberries <b>Meat/Fish:</b> Beef liver, chicken liver
<b>Thiamin (B1)</b>	Helps the body change carbohydrates into energy	<b>Meat/Fish:</b> Lean cuts of pork and turkey, salmon <b>Grain:</b> Whole wheat (bread, pasta), ready to eat fortified whole grain cereal, hominy, oatmeal <b>Beans:</b> Black, navy
<b>Riboflavin (B2)</b>	Important to the production of red blood cells	<b>Meat/Fish:</b> Beef liver, lean cuts of lamb <b>Grain:</b> Bran, oatmeal, ready to eat fortified whole grain cereal <b>Dairy:</b> Non-fat/low-fat yogurt
<b>Niacin (B3)</b>	Helps the body maintain healthy skin and nerves	<b>Meat/Fish:</b> Lean cuts of poultry, beef, pork, salmon, halibut, tuna (canned) <b>Grain:</b> Ready to eat fortified whole grain cereal, barley, oatmeal
<b>B6</b>	Helps maintain brain function	<b>Vegetable:</b> Potato <b>Meat/Fish:</b> Lean cuts of poultry, beef liver, halibut <b>Grain:</b> Brown rice
<b>Pantothenic Acid (B5)</b>	Important for the metabolism of food and the production of hormones	<b>Vegetable:</b> Broccoli, kale, cabbage, sweet potato <b>Fruit:</b> Avocado <b>Meat/Fish:</b> Lean cuts of poultry <b>Grain:</b> Ready to eat fortified whole grain cereal
<b>Cobalamine (B12)</b>	Helps produce red blood cells and maintains the central nervous system	<b>Meat/Fish:</b> Beef liver salmon, lean cuts of poultry, beef, pork <b>Grain:</b> Ready to eat fortified whole grain cereal <b>Dairy:</b> Non-fat/low-fat yogurt, cottage cheese, Swiss cheese
<b>Folate (B9)</b>	Necessary for the production of DNA and works with vitamin B12 to produce red blood cells	<b>Meat/Fish:</b> Chicken liver <b>Vegetable:</b> Spinach, asparagus, collards, mustard greens <b>Fruit:</b> Oranges, tomato <b>Grain:</b> Whole grain (bread/pasta), ready to eat fortified whole grain cereal <b>Beans:</b> Black eyed peas, black, pinto



Supplement	Function	Example of Food Sources
<b>Vitamin C</b>	Helps the body to absorb the mineral iron and important to wound healing and immune function	<b>Vegetable:</b> Cabbage, broccoli <b>Fruit:</b> Citrus fruit such as oranges, lemons, and tangerines, strawberries, pineapple, blueberries, tomatoes
<b>Calcium</b>	Important to bone structure, nerve function, and muscle contractions	<b>Vegetable:</b> Spinach, kale <b>Meat/Fish:</b> Sardines, salmon <b>Dairy:</b> Non-fat or low-fat yogurt, milk (skim, 1%, 2%), cheese (Swiss, cheddar, colby, mozzarella), tofu
<b>Iron</b>	Helps red blood cells carry oxygen throughout the body and helps muscles store and use oxygen	<b>Fruit:</b> Raisins <b>Grains:</b> Ready to eat fortified whole grain cereal, oatmeal <b>Dairy:</b> Tofu <b>Nuts/Seeds:</b> Cashews, pistachios <b>Beans:</b> Soybeans, lima, chickpeas, kidney
<b>Zinc</b>	Important to the function of the immune system, wound healing, and the breakdown of carbohydrates	<b>Meat/Fish:</b> Oysters, lean cuts of poultry and beef <b>Grain:</b> Ready to eat fortified whole grain cereal
<b><i>For information regarding the nutritional needs for specific types of injury or illness, please consult with your health care provider.</i></b>		

## Resources

For more information on dietary supplement use and nutrition please consider the following resources:

- [Human Performance Resource Center, Operation Supplement Safety \(OPSS\)](#)
- [National Institutes of Health, Office of Dietary Supplements-Dietary Supplement Factsheets](#)
- [National Institutes of Health, National Center for Complementary and Alternative Medicine](#)

## References

1. Tsitsimpikou, C., Jamurtos, A., Fitch, K. et al. Medication use by athletes during the Athens 2004 paralympic games. British Journal of Medicine. 2009; 43 (13): 1062-1066