

Vitamin E for Everyone

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We are exposed to harmful chemicals in our environment each day that can cause free radicals. These could be from cigarette smoke, pollution, or even too much sun. Our body processes can even create free radicals. This matters because free radicals can cause damage to our cells. There are several nutrients found in abundance in foods that can help minimize free radicals in our body. One of those nutrients is vitamin E.

What is Vitamin E?

Vitamin E is a fat-soluble vitamin. This means that fat must be present in food and drinks for our body to absorb it. Vitamins do not give our body energy. Instead, vitamins support many important bodily functions. Vitamin E is also called tocopherol, and it can be found in many forms. Alpha-tocopherol is the form found most often in food and supplements that is easiest for the body to use. Gamma-tocopherol is also found in some foods, but it is not as easy for the body to use this form of vitamin E.

Benefits of Vitamin E

When free radicals are high throughout the body, they increase our risk for certain diseases, such as heart disease, cancers, and other chronic conditions. Vitamin E is important for protecting against these free radicals and is important in other ways, too:

- Protecting our body's immune system to fight off bacteria and viruses
- Maintaining nerve cell function

- Helping to prevent blood clots
- Protecting the lining of blood vessels from damage

Some may suggest that using vitamin E on the skin can reduce the appearance of scars and sun damage, support wound healing, reduce stretch marks, or be used for other cosmetic purposes. However, more research is needed to understand if there are benefits and, if so, how much and what form of vitamin E is beneficial.

Recommendations

For most people older than 14, the Recommended Dietary Allowance (RDA) for vitamin E is 15 milligrams (mg) per day. Breastfeeding women need slightly more at 19 milligrams per day. People can get these amounts from food. For example, a handful of almonds and sunflower seeds provides 14.2 milligrams of vitamin E, which is almost 100% of most people's daily needs.

Sources of Vitamin E in the Diet

The Dietary Guidelines suggest people should meet their nutritional needs with food first. Vitamin E is in almonds, almond milk, sunflower seeds, peanuts, and plant-based oils, like canola and olive oils. Vitamin E is also in other foods made with these items, like salad dressings. Most vitamin E in the American diet is from soybean and vegetable oils. Whole grains and certain vegetables also have vitamin E. If an item has vitamin E added to it, it will be listed on the Nutrition Facts label. It is commonly listed as alpha tocopherol on food packaging and supplement labels.

See Table 1 below for some foods that serve as a source of vitamin E in the diet.

Tips to Increase Vitamin E Intake

- Make a homemade trail mix of dry roasted peanuts, almonds, sunflower seeds, and dried fruit.
- Enjoy a spinach salad with tomatoes, sunflower seeds, your favorite protein, and a salad dressing made with sunflower oil or safflower oil.
- Enjoy yogurt and fruit for breakfast topped with almonds, sunflower seeds, and granola.
- Add peanut butter to your toast, oatmeal, yogurt, or smoothie.
- Use almond milk to make your smoothie or oatmeal or add it to your coffee at breakfast.
- Roast or sauté foods with vegetable oils. High heat, like temperatures used in frying, destroys vitamin E found in vegetable oils.
- Store vegetable oils away from light as it can also destroy vitamin E. If an oil is in a clear bottle, store it in a cabinet, cupboard, or pantry in the dark.
- Look for packaged foods with vitamin E listed on the Nutrition Facts label. It will most likely be listed as alpha tocopherol in the ingredients list. Keep in mind some foods that have vitamin E, like fresh fruits and vegetables, do not have a Nutrition Facts label.

Vitamin E Levels

Vitamin E intake among Americans is low, with more than two-thirds of adults not meeting the recommended amounts.

Table 1. Food Sources of Vitamin E.

Food	Milligrams (mg) per serving	Percent DV*
Wheat germ oil, 1 tablespoon	20.3	135%
Sunflower seeds, dry roasted, 1 ounce	7.4	49%
Almonds, dry roasted, 1 ounce	6.8	45%
Sunflower oil, 1 tablespoon	5.6	37%
Safflower oil, 1 tablespoon	4.6	31%
Hazelnuts, dry roasted, 1 ounce	4.3	29%
Peanut butter, 2 tablespoons	2.9	19%
Peanuts, dry roasted, 1 ounce	2.2	15%
Spinach, boiled, ½ cup	1.9	13%
Broccoli, chopped, boiled, ½ cup	1.2	8%
Soybean oil, 1 tablespoon	1.1	7%
Kiwifruit, 1 medium	1.1	7%
Mango, sliced, ½ cup	0.7	5%
Tomato, raw, 1 medium	0.7	5%
Spinach, raw, 1 cup	0.6	4%

Abbreviations: DV, daily value

*Percent DV based on 15 milligrams

Source: National Institutes of Health, Office of Dietary Supplements

While intake of vitamin E is low, a deficiency is rare in people without health concerns. Symptoms of deficiency include muscle weakness, vision problems, a weakened immune system, and loss of body movement control. Since vitamin E is a fat-soluble vitamin, small amounts can be stored in body fat, muscle, and the liver.

A supplement is an option to ensure you meet recommendations for vitamin E. This is especially true if you are currently following a low-fat diet or have a condition that affects the digestive tract, such as Crohn's disease, that may impact fat absorption. Look for alpha tocopherol as the form of vitamin E in all supplements. If you are concerned about a vitamin E deficiency, talk with your health-care provider about the need for a supplement.

Because the body can store fat-soluble vitamins, there is a risk of toxicity or having too much in the body. The established upper limit, or maximum daily amount, for vitamin E in healthy adults is 1,000 milligrams. Experts have not found negative effects of too much vitamin E from food. However, high amounts of vitamin E from dietary supplements could have negative effects. There are no known concerns using multivitamin supplements or prenatal vitamins that contain vitamin E. However, be mindful when taking vitamin E-only supplements that provide higher amounts. Too much vitamin E could interfere with the functions of vitamin K to manage blood clotting and result in excessive bleeding and bruising from injuries. In addition, vitamin E from supplements may interact with prescription medications. Always discuss with your health-care provider before adding a dietary supplement to your daily routine.

Summary

Vitamin E can help protect us from free radicals that may contribute to chronic health conditions like heart disease and cancer. It plays an important role in our immune system and blood clotting capabilities. Most Americans do not get enough vitamin E from food choices but may not develop symptoms to signal low levels, so working with a health-care provider is vital to ensure optimal health. Overall, we can aim to get more vitamin E from foods that serve as natural and fortified sources or discuss with health-care providers the use of a multivitamin or vitamin E supplement to meet individual needs.

References

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