

Human Nutrition, 1787 Neil Avenue, Columbus, OH 43210

Vitamin E

This fact sheet is one in a series containing information to help you select foods that provide adequate daily amounts of vitamins, minerals, and dietary fiber. The Dietary Guidelines Advisory Committee just released the Dietary Guidelines for Americans 2005 that convey the following nine major messages concerning these topics:

- Adequate nutrients within calorie needs
- Weight management
- · Physical activity
- Food groups to encourage: fruits and vegetables, whole grains, and nonfat or low-fat milk and milk products.
- Fat
- · Carbohydrates
- Sodium and potassium
- Alcoholic beverages
- · Food safety

Why do we need vitamin E?

Vitamin E, a fat-soluble vitamin, is an antioxidant vitamin involved in the metabolism of all cells. It protects vitamin A and essential fatty acids from oxidation in the body cells and prevents breakdown of body tissues.

What is a good source of vitamin E?

A good food source of vitamin E contains a substantial amount of vitamin E in relation to its calorie content and contributes at least 10 percent of the U.S. Recommended Daily Allowance (RDA) for vitamin E in a selected serving size. The U.S. RDA for vitamin E is 15 milligrams alphatocopherol equivalents per day for both men and women ages 19 and older. Alpha-tocopherol is a form of vitamin E that is easily converted by the body to vitamin E. The U.S. RDA is changed for pregnant or lactating women—consult your healthcare provider.

Do we get enough vitamin E?

According to recent surveys of the U.S. Department of Agriculture (USDA), the intake of vitamin E by women

19–50 years of age averages less than 90 percent of the RDA. Americans consume roughly 7–9 milligrams compared to the recommended 15 milligrams. Generally Americans consume two-thirds of their vitamin E intake from salad oils, shortenings, and margarines. Eleven percent is from fruits and vegetables and the other 7 percent is from grains and grain products. The diagram below shows where vitamin E is located on the Food Guide Pyramid.

How can we get enough vitamin E?

Eating a variety of foods that contain vitamin E is the best way to get an adequate amount. Healthy individuals who eat a balanced diet rarely need supplements. The table in this fact sheet will help you select foods that are good sources of vitamin E. Since vitamin E is a fat-soluble vitamin, people on low-fat diets can have trouble getting enough of the vitamin. Therefore, dietary fat should be monitored and not reach below safe limits.

Where to find vitamin E in the Food Guide Pyramid.

Fats, Oils, Sweets—vegetable oils (corn, soy, cottonseed, safflower), salad dressing, margarine, almond oil, olive oil, palm oil, peanut oil, soybean oil, sunflower oil, wheat germ oil, mayonnaise

Milk, Yogurt, Cheese nothing

Vegetables—spinach, tomato juice, avocado, asparagus, sweet potato, tomato, turnip greens Meat, poultry, fish, dry beans, nuts, eggs—sunflower seeds, almonds, hazelnuts, peanut butter, pecans, peanuts, pistachio, walnuts

Fruit—apple, mango

Grains—fortified breakfast cereal, bread, pasta, rice

Good Sources of Vitamin E			
Food	Serving Size	Milligrams	% RDA
Egg, whole, fresh	1 large		5.8
Almond oil	1 tablespoon	5.3	35.3
Corn oil	1 tablespoon	1.9	12.6
Corn oil (Mazola)	1 tablespoon	3	5
Cottonseed oil	1 tablespoon	4.8	32
Olive oil	1 tablespoon	1.6	10.6
Palm oil	1 tablespoon	2.6	17.3
Peanut oil	1 tablespoon	1.6	10.6
Safflower oil	1 tablespoon	4.6	30.6
Soybean oil	1 tablespoon	1.5	10
Sunflower oil	1 tablespoon	6.1	40.6
Vegetable-oil spray	2.5 second spray	0.51	3.4
Wheat-germ oil	1 tablespoon	20.3	135.3
Tomato juice	6 fluid ounces	0.4	2.6
Apple with skin	1 medium	0.81	5.4
Mango, raw	1 medium	2.32	15.4
Macaroni pasta, enriched	1 cup	1.03	6.8
Spaghetti pasta, enriched	1 cup	1.03	6.8
Almonds, dried	1 ounce	6.72	44.8
Hazelnuts, dried	1 ounce	6.7	44.6
Peanut butter (Skippy)	1 tablespoon	3	5
Peanuts, dried			
Pistachio nuts, dried	1 ounce	1.46	9.7
Walnuts, English	1 ounce	0.73	4.8
Margarine (Mazola)	1 tablespoon	8	53.3
Margarine (Parkay, diet)	1 tablespoon	0.4	2.6
Mayonnaise (Hellmann's)	1 tablespoon	11	73.3
Miracle Whip (Kraft)			
Avocado, raw			
Asparagus, frozen	4 spears	1.15	7.6
Spinach, raw			
Sweet potato	1 medium	5.93	39.5
Tomato, red, raw	1 tomato	0.42	2.8
Turnip greens, raw			

How to prepare foods to retain vitamin E.

Vitamin E can be lost from foods during preparation, cooking, or storage. To retain vitamin E:

- 1. Use whole-grain flours.
- 2. Store foods in airtight containers and avoid exposing them to light.

What about fortified foods?

Most ready-to-eat cereals are fortified with vitamin E. Fortified ready-to-eat cereals usually contain at least 40% of the U.S. RDA for vitamin E.

What is a serving?

The serving sizes used in the table in this fact sheet are only estimates of the amounts of food you might eat. The amount of a nutrient in a serving depends on the weight of the serving. For example, 1/2 cup canned fruit contains more vitamin E than 1/2 cup of the same fruit served raw, because a serving of the canned fruit weighs more. Therefore, the canned fruit may appear on the list while the raw form does not. The raw fruit provides the nutrient—but just not enough in a 1/2-cup serving to be considered a good source.

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References

- Browne, M. B. 1993. *Label Facts for Healthful Eating*. Mazer Corporation, Dayton, OH.
- Duyff, Roberta. 2002. *American Dietetic Association: Complete Food and Nutrition Guide, 2nd ed.* John Wiley and Sons, Inc., Hoboken, NJ.
- Escott-Stump, Mahan. 2000. *Krause's Food, Nutrition, and Diet Therapy, 10th ed.* W. B. Sanders Company, Philadelphia, PA.
- Federation of American Societies for Experimental Biology, Life Sciences Research Office. Prepared for the Interagency Board for Nutrition Monitoring and Related Research. 1995. *Third Report on Nutrition Monitoring in the United States: Volumes 1 and 2*. U.S. Government Printing Office, Washington, DC.
- Subcommittee on the 10th Edition of the RDAs, Food and Nutrition Board, Commission on Life Sciences, National Research Council. 1994. *Recommended Dietary Allowances, 10th ed.* Academy Press, Washington, DC.
- U.S. Department of Agriculture, U.S. Department of Health and Human Services. *Your Health: Dietary Guidelines for Americans, 4th ed.* Home and Garden Bulletin No. 232. U.S. Government Printing Office, Washington DC.

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