

UF/IFAS EXTENSION MARION COUNTY



WHAT'S THE CONNECTION BETWEEN VITAMIN A AND BETA-CAROTENE?

WHAT IS VITAMIN A?

Vitamin A is a fat-soluble vitamin essential for normal vision, especially in the dark, as well as immune function, reproduction, and cell growth for proper development and maintenance of our skin and internal organs.

TWO FORMS OF DIETARY VITAMIN A

There are two forms of vitamin A: preformed vitamin A - retinol and provitamin A - carotenoids. Preformed vitamin A is found only in animal products. Foods with the highest amounts are liver from meat products such as beef and lamb as well as poultry. It is also in fish oils. Other dietary sources of preformed vitamin A include dairy products (fortified with vitamin A) and egg yolk.

The provitamin A carotenoids include alpha-carotene, beta-cryptoxanthin, and beta-carotene, which is the most important. Our bodies have the ability to convert these plant pigments into vitamin A. The main food sources of beta-carotene include dark green leafy vegetables, deep orange and yellow vegetables, tomatoes, and some fruits.



Vitamin A fortified foods are another source of dietary vitamin A. Foods commonly fortified with vitamin A in the United States include breakfast cereals, breads, milk, and some oils.

[Click here](#) for more information about Vitamin A.

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HOW MUCH VITAMIN A DO YOU NEED?

Since vitamin A is present in animal, plant, and fortified foods, it is easy for most Americans to consume adequate amounts of vitamin A for good health.

Daily Dietary Allowances (RDAs) for Vitamin A are expressed as **Retinol Activity Equivalents (RAEs)**.

Life Stage	Vitamin A RAEs (mcg/day)
Males and females:	
- 0 to 6 months	400
- 7 to 12 months	500
- 1 to 3 years	300
- 4 to 8 years	400
- 9 to 13 years	600
Males, ages 14 and older	900
Females, ages 14 and older	700
Pregnancy	770*
Lactating	1,300
mcg = micrograms	
* Pregnant women should not take preformed vitamin A supplements.	
Source: National Institutes of Health Office of Dietary Supplements – Vitamin A	

FOOD SOURCES OF VITAMIN A

Most Americans get vitamin A by consuming fruits and vegetables that contain carotenoids and from vitamin A fortified foods such as dairy and select grain products. Check food labels for details.

Food	Vitamin A (RAE)
Beef liver, 3 ounces	6,582
Sweet potato, cooked, 1 medium	1,400
Spinach, frozen, boiled, ½ cup	580
Carrot, raw, ½ cup	460
Pumpkin, cooked, ½ cup	305
Cantaloupe, cubed, 1 cup	270
Milk, low-fat, with vitamin A, 1 cup	140
Broccoli, cooked, 1 cup	120