



Food Sources: Vitamin A

Vitamin A is the term used to describe a group of fat-soluble compounds available in the diet in two forms: preformed vitamin A (retinol) and provitamin A carotenoids, such as beta-carotene. Preformed vitamin A is found in animal foods (organ meats, fish oils, dairy, fortified cereals), while provitamin A carotenoids are found primarily in orange, yellow, and green fruits and vegetables.

Vitamin A is essential for cell growth, immune function, and healthy vision. Deficiency is a major, preventable cause of blindness, as well as recurrent infections, low thyroid function, and skin disorders. Overconsumption of preformed vitamin A can be toxic, especially during pregnancy. However, excess intake of carotenoids from plant foods is not associated with toxic side effects.

Preformed vitamin A is more readily absorbed and used by the body, while carotenoids must be converted into retinol. To reflect differences in absorption, foods are measured as micrograms of retinol activity equivalents (mcg RAE).

The RDA for Vitamin A is as follows:

- Males ages 14+: 900 mcg RAE per day
- Females ages 14+: 700 mcg RAE per day
- Pregnancy: 770 mcg RAE per day
- Lactation: 1,300 mcg RAE per day

Food, standard serving size

Average Vitamin A Content (mcg RAE)

Plant Sources

- Pumpkin (canned), ½ cup – 953 mcg
- Spinach (frozen, cooked), ½ cup – 573 mcg
- Butternut squash (cooked), ½ cup – 572 mcg
- Sweet potato (baked), ½ medium – 548 mcg
- Carrot (raw), ½ cup – 509 mcg
- Collard greens (frozen, cooked), ½ cup – 489 mcg
- Turnip greens (frozen, cooked), ½ cup – 441 mcg
- Winter squash (cooked), ½ cup – 268 mcg

Animal Sources

- Organ meats (liver, giblets, etc.), 3 ounces – 1,490–9,126 mcg
- Cod liver oil, 1 teaspoon – 1,350 mcg
- Herring (pickled), 3 ounces – 219 mcg
- Oats (fortified, cooked), ½ cup – 152 mcg
- Whole milk, 1 cup – 112 mcg
- Egg (cooked), 1 large – 98 mcg
- Butter, 1 Tbsp – 97 mcg