



## Vitamin A:

### Why is Vitamin A Important?

Vitamin A, also known as retinol, is needed by the human body to maintain healthy cells and tissues. Vitamin A is a fat-soluble vitamin meaning it is stored in your fat cells and more easily absorbed when taken with fat containing foods. This also means that it is easier for your body to accumulate too much of this vitamin. Vitamin A is anti-inflammatory and has antioxidant properties to help protect cells.

### What Body Functions is Vitamin A Important For?

Cell Growth and Development: Vitamin A has the ability to slow the rate of the cell cycle. It also plays a role in embryonic and fetal development.

Vision: Vitamin A is important for your vision when it is dark. It is essential for producing the pigment rhodopsin which allows us to see when there isn't a lot of light. It also is important for maintaining a healthy cornea and conjunctiva.

Immune Function: Vitamin A is important for the immune system by supporting the function and growth of white blood cells in your body.

Reproduction: Vitamin A supports the health of reproductive organs, pregnancy, and sperm production.

Tissues and Skin: Vitamin A support endothelial cells which line your respiratory and digestive tracts.

### Different Types of Vitamin A:

Provitamin A: This form of vitamin A is found in plants. They are carotenoids that your body turns into vitamin A. The most common provitamin A carotenoid is beta-carotene which is converted into retinol for use in the body.

Preformed Vitamin A: This form of vitamin A is found in animals and is already formed vitamin A.

Retinyl Acetate: This form of vitamin A is found in dietary supplements. It is also found in skincare products that have “anti-aging” properties.

Retinyl Palmitate: This form of vitamin A is found in dietary supplements. It is also found in skincare products that have “anti-aging” properties. It can also be used as an acne treatment or antioxidant for your skin.

## Food Sources Vitamin A is in:

Animal Sources	mcg/serving
Beef Liver (3 ounces)	6,582
Ricotta Cheese (½ cup)	133
Hard Boiled Egg	75
Sockeye Salmon (3 ounces)	59
Canned Tuna (3 ounces)	20
Chicken Breast	10
Plant Sources	mcg/Serving
Sweet Potato	1,403
Spinach (½ cup)	573
Carrots (½ cup)	459
Cantaloup (½ cup)	135
Red Peppers (½ cup)	117
Mango	112
Broccoli (½ cup)	60
Baked Beans (1 cup)	13
Summer Squash (½ cup)	10
Pistachio Nuts (1 ounce)	4

## Signs and Causes of Vitamin A Deficiency:

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Vitamin A deficiency is very rare in the United States because most people consume enough vitamin A through the food that they eat. People with cystic fibrosis, pregnant, breastfeeding, have Crohn's disease, celiac disease, or ulcerative colitis are more likely to have a vitamin A deficiency due to increased demand or obstructed ability to absorb sufficient amounts from food.

The most common sign of vitamin A deficiency is xerophthalmia which just simply means you don't have the ability to see in low light conditions. Long term deficiency can cause a higher risk of infection and disease and can negatively impact your skin health.

## Signs and Causes of Vitamin A Toxicity:

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Vitamin A is a fat-soluble vitamin meaning it is stored in your fat cells and more easily absorbed when taken with fat containing foods. This also means that it is easier for your body to accumulate too much of this vitamin. If consumed in excess, it can damage the cell membranes integrity. This excess is known as hypervitaminosis A.

Signs and symptoms include nausea, vomiting, fatigue, dizziness, blurry vision, balance issues, liver damage, headache, hair loss, dry skin, and joint and bone pain.

## Supplementation of Vitamin A

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The need for vitamin A supplementation is rare; however, if you do not get enough just from your diet it is important to supplement to ensure you don't become deficient. This is important to support your immune system and vision.

**\*It is important to know that food sources of vitamin A should be your main source of vitamin A, and any vitamin A supplementation should supplement the vitamin A you are already consuming.**

## Daily Recommended Dose of Vitamin A:

Life Stage	Recommended Amount (mcg)
Birth to 6 months	400
7-12 months	500
1-3 years	300
4-8 years	400
9-13 years	600
Males 14-18 years	900
Females 14-18 years	700
Males 19+	900
Females 19+	700
Pregnant Teens	750
Pregnant Women	770
Breastfeeding Teens	1,200
Breastfeeding Women	1,300

## References

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