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Vitamin A is essential for many bodily functions, and is best obtained from a varied diet. Overuse in the form of supplements can cause harmful effects including liver problems.

Vitamin A is best obtained from a well-balanced diet. Obtaining the recommended Daily Value of vitamin A (DV: 5,000 IU) is essential for a variety of bodily functions, including vision, embryonic development, tissue integrity, and proper immune activation.

Many fruits and vegetables are rich in vitamin A precursors, such as [beta-carotene](#) and cryptoxanthin, which are converted into the active form retinol. Dairy products, eggs, and fish are among the foods containing vitamin A already preformed as retinol. Too much retinol can cause a variety of side effects.

Scientists are studying vitamin A byproducts that may be useful in cancer therapies, but these treatments are different from extra vitamin A taken in the form of supplements, the overuse of which can produce harmful effects including liver problems. Therefore, vitamin A is best obtained from a varied diet, which is known to have overall protective effects against many chronic diseases.

## What are the potential uses and benefits?

- To treat acne

Prescription forms of vitamin A have been shown to improve acne, but there is no proof that non-prescription forms can have the same effect.

- To prevent and treat cancer

A few large clinical trials show that vitamin A supplementation does not help prevent recurrence or prolong survival in patients with melanoma, head and neck cancer, or non-small cell lung cancer. It may also increase risk of prostate cancer. However, overall nutritional status and a diet rich in nutrients is important, and unlikely to produce unwanted side effects. For cancer patients especially, any perceived vitamin deficiencies should be discussed and managed with their oncology

healthcare professional.

- To treat Crohn's disease

Although vitamin A supplementation does not treat Crohn's disease, patients with this disorder can be malnourished.

Therefore, symptoms such as night vision problems that may indicate a deficiency should be reported to and treated by your doctor.

- To treat eye disorders

Clinical trials have not definitively supported this use, although symptoms such as night vision problems that may be related to a deficiency should be reported to and treated by your doctor.

- To stimulate the immune system

Vitamin A may enhance the immune responses to certain vaccines.

## What are the side effects?

Nausea and vomiting, headache, blurred vision, muscular weakness, elevated liver function tests, liver toxicity

Increase in allergies: In newborn girls who received supplements.

### Case Reports

Chronic liver toxicity or vitamin A toxicity: Usually occurs with higher amounts of Vitamin A, although several cases have occurred with lower doses and among those who drink alcohol regularly. It also occurred in the case of a young patient who switched to self-treating with vitamin A for acne.

## What else do I need to know?

Do Not Take if:

- You regularly consume alcoholic beverages: Taking supplemental vitamin A along with regular alcohol use, which should *also* be avoided, increases the risk for liver problems.
- You are pregnant: Doses of vitamin A 5000 IU or greater can cause birth defects.
- You take orlistat: This drug may reduce the absorption of vitamin A. Ask your doctor to see if you need to take a vitamin A supplement.
- You take retinoids (tretinoin, acitretin, bexarotene): Vitamin A may increase the adverse effects.
- You take warfarin (Coumadin®) or other blood thinners: Large doses of vitamin A may increase the risk of bleeding or bruising.

Special Point:

- Supplementation with doses greater than the recommended daily allowance may result in toxicity and patients may not realize that multivitamins commonly include vitamin A.
- Although rare in developed countries, vitamin A deficiency is the leading cause of preventable childhood blindness worldwide, usually from lack of proper food access from poor socioeconomic status.
- Certain restricted diets and conditions that lead to these restrictions, such as food allergies, mental disorders, or family dysfunction may also cause dietary inadequacies that lead to micronutrient deficiencies and complications.
- A few cases of vitamin A deficiency-related night blindness were reported several years after abdominal surgeries, which may cause a reduced ability to absorb nutrients. Patients experiencing vision problems should consult their healthcare

practitioner.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.

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