

# Vitamin B6 Fact Sheet for Consumers



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## What is vitamin B6 and what does it do?

Vitamin B6 is a vitamin that is naturally present in many foods. The body needs vitamin B6 for more than 100 enzyme reactions involved in metabolism. Vitamin B6 is also involved in brain development during pregnancy and infancy as well as immune function.

## How much vitamin B6 do I need?

The amount of vitamin B6 you need depends on your age. Average daily recommended amounts are listed below in milligrams (mg).

Life Stage	Recommended Amount
Birth to 6 months	0.1 mg
Infants 7–12 months	0.3 mg
Children 1–3 years	0.5 mg
Children 4–8 years	0.6 mg
Children 9–13 years	1.0 mg
Teens 14–18 years (boys)	1.3 mg
Teens 14–18 years (girls)	1.2 mg
Adults 19–50 years	1.3 mg
Adults 51+ years (men)	1.7 mg
Adults 51+ years (women)	1.5 mg
Pregnant teens and women	1.9 mg
Breastfeeding teens and women	2.0 mg

## What foods provide vitamin B6?

Vitamin B6 is found naturally in many foods and is added to other foods. You can get recommended amounts of vitamin B6 by eating a variety of foods, including the following:

- Poultry, fish and organ meats, all rich in vitamin B6.
- Potatoes and other starchy vegetables, which are some of the major sources of vitamin B6 for Americans.
- Fruit (other than citrus), which are also among the major sources of vitamin B6 for Americans.

## What kinds of vitamin B6 dietary supplements are available?

Vitamin B6 is available in dietary supplements, usually in the form of pyridoxine. Most multivitamin-mineral supplements contain vitamin B6. Dietary supplements that contain only vitamin B6, or vitamin B6 with other B vitamins, are also available.

## Am I getting enough vitamin B6?

Most people in the United States get enough vitamin B6 from the foods they eat. However, certain groups of people are more likely than others to have trouble getting enough vitamin B6:

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- People whose kidneys do not work properly, including people who are on kidney dialysis and those who have had a kidney transplant.
- People with autoimmune disorders, which cause their immune system to mistakenly attack their own healthy tissues. For example, people with rheumatoid arthritis, celiac disease, Crohn's disease, ulcerative colitis, or inflammatory bowel disease sometimes have low vitamin B6 levels.
- People with alcohol dependence.

### What happens if I don't get enough vitamin B6?

Vitamin B6 deficiency is uncommon in the United States. People who don't get enough vitamin B6 can have a range of symptoms, including anemia, itchy rashes, scaly skin on the lips, cracks at the corners of the mouth, and a swollen tongue. Other symptoms of very low vitamin B6 levels include depression, confusion, and a weak immune system. Infants who do not get enough vitamin B6 can become irritable or develop extremely sensitive hearing or seizures.

### What are some effects of vitamin B6 on health?

Scientists are studying vitamin B6 to understand how it affects health. Here are some examples of what this research has shown.

#### Heart disease

Some scientists had thought that certain B vitamins (such as folic acid, vitamin B12, and vitamin B6) might reduce heart disease risk by lowering levels of homocysteine, an amino acid in the blood. Although vitamin B supplements do lower blood homocysteine, research shows that they do not actually reduce the risk or severity of heart disease or stroke.

#### Cancer

People with low levels of vitamin B6 in the blood might have a higher risk of certain kinds of cancer, such as colorectal cancer. But studies to date have not shown that vitamin B6 supplements can help prevent cancer or lower the chances of dying from this disease.

#### Cognitive Function

Some research indicates that elderly people who have higher blood levels of vitamin B6 have better memory. However, taking vitamin B6 supplements (alone or combined with vitamin B12 and/or folic acid) does not seem to improve cognitive function or mood in healthy people or in people with dementia.

#### Premenstrual Syndrome

Scientists aren't yet certain about the potential benefits of taking vitamin B6 for premenstrual syndrome (PMS). But some studies show that vitamin B6 supplements could reduce PMS symptoms, including moodiness, irritability, forgetfulness, bloating, and anxiety.

#### Nausea and Vomiting in Pregnancy

At least half of all women experience nausea, vomiting, or both in the first few months of pregnancy. Based on the results of several studies, the American Congress of Obstetricians and Gynecologists (ACOG) recommends taking vitamin B6 supplements under a doctor's care for nausea and vomiting during pregnancy.

#### Can vitamin B6 be harmful?

People almost never get too much vitamin B6 from food. But taking high levels of vitamin B6 from supplements for a year or longer can cause severe nerve damage, leading people to lose control of their bodily movements. The symptoms usually stop when they stop taking the supplements. Other symptoms of too much vitamin B6 include painful, unsightly skin patches, extreme sensitivity to sunlight, nausea, and heartburn.

The daily upper limits for vitamin B6 are listed below. These levels do not apply to people who are taking vitamin B6 for medical reasons under the care of a doctor.

Life Stage	Upper Limit
Birth to 12 months	Not established
Children 1–3 years	30 mg
Children 4–8 years	40 mg
Children 9–18 years	60 mg
Teens 14–18 years	80 mg
Adults	100 mg

#### Are there any interactions with vitamin B6 that I should know about?

Yes, vitamin B6 supplements can interact or interfere with medicines that you take. Here are several examples:

- Vitamin B6 supplements might interact with cycloserine (Seromycin<sup>®</sup>), an antibiotic used to treat tuberculosis, and worsen any seizures and nerve cell damage that the drug might cause.
- Taking certain epilepsy drugs could decrease vitamin B6 levels and reduce the drugs' ability to control seizures.
- Taking theophylline (Aquaphyllin<sup>®</sup>, Elixophyllin<sup>®</sup>, Theolair<sup>®</sup>, Truxophyllin<sup>®</sup>, and many others) for asthma or another lung disease can reduce vitamin B6 levels and cause seizures.

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Tell your doctor, pharmacist, and other health care providers about any dietary supplements and medicines you take. They can tell you if those dietary supplements might interact or interfere with your prescription or over-the-counter medicines or if the medicines might interfere with how your body absorbs, uses, or breaks down nutrients.

#### Vitamin B6 and healthful eating

People should get most of their nutrients from food, advises the federal government's *Dietary Guidelines for Americans*. Foods contain vitamins, minerals, dietary fiber and other substances that benefit health. In some cases, fortified foods and dietary supplements may provide nutrients that otherwise may be consumed in less-than-recommended amounts. For more information about building a healthy diet, refer to the *Dietary Guidelines for Americans* and the U.S. Department of Agriculture's MyPlate.

#### Where can I find out more about vitamin B6?

##### For more information on vitamin B6:

- Office of Dietary Supplements Health Professional Fact Sheet on vitamin B6
- Vitamin B6, MedlinePlus\*

##### For more information on food sources of vitamin B6:

- U.S. Department of Agriculture's (USDA's) National Nutrient Database
- Nutrient List for vitamin B6 (listed by food or by vitamin B6 content), USDA

##### For more advice on buying dietary supplements:

- Office of Dietary Supplements Frequently Asked Questions: Which brand(s) of dietary supplements should I purchase?

##### For information about building a healthy diet:

- MyPlate
- *Dietary Guidelines for Americans*

##### Disclaimer

This fact sheet by the Office of Dietary Supplements provides information that should not take the place of medical advice. We encourage you to talk to your health care providers (doctor, registered dietitian, pharmacist, etc.) about your interest in, questions about, or use of dietary supplements and what may be best for your overall health. Any mention in this publication of a specific brand name is not an endorsement of the product.



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