

Boron Fact Sheet for Consumers



Apples are a good source of boron.

What is boron and what does it do?

Boron is a mineral in many foods. Scientists aren't certain what role, if any, boron has in the body, so they don't consider boron to be an essential nutrient.

How much boron do I need?

Experts haven't set a recommended amount of boron.

What foods provide vitamin E?

Many foods, especially from plants, contain boron. These foods include the following:

- Fruits and fruit juices, such as raisins, peaches, and prune and grape juices.
- Avocados and potatoes
- Legumes, such as peanuts, beans, and green peas
- Coffee, milk, cider, wine, and beer

What kinds of boron dietary supplements are available?

Boron is present in dietary supplements in a variety of forms. These forms include boron aspartate, boron citrate, boron gluconate, boron glycinate, and calcium fructoborate. Scientists don't know if one form of boron is better than others.

How much boron do people get?

Most adults in the United States get about 1 milligram (mg) of boron a day from food. People who eat more plant foods tend to get more boron than people who eat less plant foods.

What happens if I don't get enough boron?

Scientists aren't sure if low intakes of boron cause any harm. A few studies suggest that people who consume low amounts of boron might have more trouble staying mentally alert and focused. Getting low amounts of boron might also lower bone strength.

What are some effects of boron on health?

Scientists are studying boron to understand whether it affects health. Here are some examples of what this research has shown.

Osteoarthritis and bone health

Some studies have tried to find out if boron reduces osteoarthritis symptoms, perhaps by lowering inflammation. Other studies have tried to find out if boron helps keep bones healthy. More research is needed to understand the effects of boron on these conditions.

Cancer

Researchers are studying whether boron could help lower the risk of cancer. More studies are needed to learn whether it has any effect.

Can boron be harmful?

Boron in foods and beverages isn't harmful. But boron can cause harm if a person accidentally swallows cleaning products or pesticides that contain certain forms of boron, such as borax (sodium borate) or boric acid.

The symptoms of too much boron include nausea, vomiting, diarrhea, rashes, headaches, and convulsions. Very high amounts of boron can cause death.

The daily upper limits for boron are listed below in milligrams (mg).

Ages	Upper Limit
Birth to 6 months	Not established
Birth to 7-12 months	Not established
Children 1–3 years	3 mg
Children 4–8 years	6 mg
Children 9–13 years	11 mg
Children 14–18 years	17 mg
Adults	20 mg
Pregnant and breastfeeding teens	17 mg
Pregnant and breastfeeding adults	20 mg

Are there any interactions with boron that I should know about?

Boron is not known to interact or interfere with any medicines or dietary supplements.

Tell your doctor, pharmacist, and other healthcare providers about any dietary supplements and prescription or over-the-counter medicines you take. They can tell you if these dietary supplements might interact with your medicines. They can also explain whether these medicines might interfere with how your body absorbs or uses boron or other nutrients.

Healthful eating

People should get most of their nutrients from food and beverages, according to 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 people otherwise might consume in less-than-recommended amounts. For more information about building a healthy diet, see the *Dietary Guidelines for Americans* and the U.S. Department of Agriculture's MyPlate.

Where can I find out more about boron?

For more information on boron and food sources of boron:

- Office of Dietary Supplements Health Professional Fact Sheet on Boron

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:

- Choose 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 product or service, or recommendation from an organization or professional society, does not represent an endorsement by ODS of that product, service, or expert advice.



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