

Do You Need a Dietary Supplement?

Julie Garden-Robinson, Ph.D., R.D., L.R.D.
Professor and Food and Nutrition Specialist
Kayla Bahtiraj, Student Dietitian (former)

More than half of all Americans take a daily supplement, and Americans spend billions of dollars on these vitamins, minerals, fiber, herbal products and other items. Including one in your daily schedule may be commonplace.

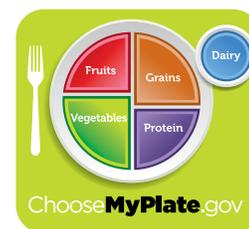
While dietary supplements may help those at nutritional risk get the extra nutrients they need, supplements may not be necessary for everyone. Ask yourself the following questions to see if you are at nutritional risk:

- Are you an older adult?
- Are you a woman who is pregnant, breast feeding or may soon become pregnant?
- Are you a strict vegetarian?
- Are you unable to eat a “balanced diet” due to illness?
- Do you smoke cigarettes?
- Do you often have more than two alcoholic drinks in a day?

If you answered yes to any of these questions, you may benefit from taking certain supplements. In addition, some children may need dietary supplements. Talk to your doctor or registered dietitian for more information.

Eat Smart

Supplements can help you get vitamins and minerals that food normally provides, but they cannot make up for poor eating habits. Supplements also cannot give you everything you need from food. Follow the U.S. Department of Agriculture’s dietary guidelines, which focus on building a



healthful plate and being physically active, to help you maintain a healthier lifestyle without having to take a supplement.

Try these tips:

- Make half your plate fruits and vegetables.
- Switch to skim or 1% milk.
- Make at least half your grains whole grains.
- Vary your protein food choices.

NDSU EXTENSION SERVICE

North Dakota State University, Fargo, North Dakota

Reviewed November 2017

Choosing a Supplement

When choosing a dietary supplement, always talk to your doctor or dietitian before taking it. Some supplements can interfere with prescription or over-the-counter medications. Choose a supplement that follows the Good Manufacturing Practices (GMPs) set by the Food and Drug Administration (FDA).

Choose a supplement that provides no more than 100 percent of the U.S. RDA or 100 percent of the Daily Value (DV%) for vitamins A, C, D, E, folic acid, thiamin, riboflavin, niacin, B12 and at least 11 minerals. Remember that you also are getting vitamins and minerals from the foods you eat. These nutrients are being added to many products such as cereals and beverages. Be aware that you may be getting more of these nutrients than you realize.

Always read the label carefully before buying a supplement. Look for:

- **Directions for use:** Take the supplement in the recommended dosage. Do not take a second dose when you have missed a meal.
- **Ingredients:** Check for added fillers, especially if you have allergies.
- **Expiration date:** Vitamins can lose their potency through time.
- **Childproof cap:** Prevent accidental overdoses by curious children.*
- **Label claims:** Read label claims carefully because they are easy to misread.
- **Name of the manufacturer:** Choose a known manufacturer with a good reputation.
- **Certification seal of approval:** Look for supplements with USP, NF or CL on the label. These abbreviations indicate that the manufacturer of the product chose to be evaluated by these companies for quality standards of identity, purity, strength and composition of their product.

*Some people may have difficulty opening containers and have no children in their home. Caps that are more easily opened are available.



Best Time to Take a Supplement

Supplements should be taken at certain times for *best* absorption. However, absorption only drops 5 to 10 percent if you take them at other times. Try these tips to help you improve absorption:

- Take multivitamins with a meal because the fat-soluble vitamins A, D, E and K require some fat to be absorbed. Also, drink plenty of water to help vitamins dissolve.
- Take calcium supplements in doses of 500 milligrams with meals. Don't take calcium supplements at the same time as a supplement with iron because the two minerals can interfere with each other, resulting in less absorption.
- Take fiber supplements several hours before taking any nutritional supplement because fiber can bind to minerals and could make them unavailable for the body to use.

Did You Know?

Supplement labels may list the percent of vitamin A from beta carotene. The supplement may contain beta carotene but not vitamin A. However, the body converts beta carotene to vitamin A.

Be Supplement Savvy

When choosing a supplement, be sure to watch out for false statements claiming that the supplement is a quick and effective cure-all, can treat or cure diseases, is totally safe or has no side effects. Statements that sound too good to be true usually are.

Be wary of following the latest headlines. Remember that reliable health advice usually is based on a body of research rather than a single study. Be cautious of results that claim quick fixes that depart from previous research and scientific beliefs.

Don't assume that if a supplement doesn't help you, it won't hurt you. Very high doses of some vitamins and minerals can cause serious health problems. Also, be aware that the terms "natural" or "organic" don't always mean they are safe or better. Natural herbal supplements such as comfrey and kava can cause serious harm to the liver.

Be an informed customer. Look up the research on the safety and effectiveness of a dietary supplement before using it. The National Center for Complementary and Alternative Medicine, National Institutes of Health's Office of Dietary Supplements and FDA have free publications and information on their websites.

The FDA also has a rapid public notification system (RSS feed) that you can sign up for to keep up to date on the latest recalls and supplement information.

Fact

Ridges or white marks on your fingernails do not suggest a vitamin deficiency. Instead, they often are caused by a slight injury to the nail.



Test Your Knowledge

1. Which of the following may need a supplement?
a. Child c. Older adult
b. Everyone d. a and c
2. **True or False:** Taking a supplement can make up for a dinner of chocolate bars and pop last night.
3. **True or False:** Look for a supplement that provides no more than 100 percent of the U.S. RDA or %DV.

Answers: 1. d; 2. False; 3. True

More Does Not Always Mean Better

More does not always mean better for dietary supplements. Every vitamin, mineral and herb has its own toxicity level. Be sure to talk to your doctor, dietitian or pharmacist to make sure you aren't getting too much. The following are some of the risks associated with oversupplementation for several nutrients and herbs.



Nutrient	Some Risks Associated with Oversupplementation	Found in These Foods*
Calcium	Can cause constipation; increased risk of urinary stone formation in some people	Dairy products, broccoli, dark leafy greens
Folic acid	Can mask vitamin B12 deficiency	Spinach, citrus fruits, beans, fortified foods
Iron	Accidental overdoses have caused poisoning in children	Meats, beans, spinach, raisins, whole-wheat bread
Niacin	Can cause liver damage and upset the gastrointestinal system; flushing (redness) of skin	Fish such as salmon or tuna, sunflower seeds, peanuts
Selenium	Can cause nausea, vomiting, loss of hair and nails, and lesions on the skin and nervous system	Brazil nuts, tuna, turkey, eggs, enriched foods
Vitamin A	Can cause birth defects, severe liver damage and diarrhea in high doses	Cheese, eggs, sweet potatoes, carrots, spinach, cantaloupe, apricots, peas
Vitamin D	In very high doses, can result in anorexia, weight loss, polyuria, heart arrhythmias, and damage to the heart, blood vessels and kidneys	Egg yolks; fortified foods such as milk, yogurt and cereals
Vitamin C	Can cause diarrhea, nausea, cramps	Citrus fruits, tomatoes, potatoes, red and green peppers, kiwi, broccoli, strawberries
Zinc	Can impair immune response and reduce copper absorption	Oysters, red meat, poultry, beans, nuts, whole grains, dairy products

*The health risks associated with oversupplementation usually are not associated with foods. Read Nutrition Facts labels to learn more.

Herb/Botanical	Some Risks Associated With Oversupplementation
Brewer's yeast	Can cause nausea and diarrhea
Chaparral	Can cause toxic hepatitis
Comfrey	Is associated with liver disease
Germanium	Has resulted in irreversible kidney damage as well as death
Ginseng	Can cause changes in blood pressure, sleep loss, anxiety
Food gums (guar, etc.)	Can cause intestinal blockages, diarrhea and bloating
Jin bu huan	Has depressed the central nervous system in children and has caused deaths
Ma huang	Can cause high blood pressure, nerve damage and muscle injury
Yohimbe	Can result in kidney failure, seizures and death

For more information on this and other topics, see

NDSU Extension Service: www.ndsu.edu/eatsmart

Office of Dietary Supplements-National Institutes of Health: <http://ods.od.nih.gov/>

MyPlate, U.S. Department of Agriculture nutrition recommendations: www.ChooseMyPlate.gov

All photos are from Microsoft Office.

The NDSU Extension Service does not endorse commercial products or companies even though reference may be made to tradenames, trademarks or service names. NDSU encourages you to use and share this content, but please do so under the conditions of our Creative Commons license. You may copy, distribute, transmit and adapt this work as long as you give full attribution, don't use the work for commercial purposes and share your resulting work similarly. For more information, visit www.ag.ndsu.edu/agcomm/creative-commons.

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. North Dakota State University does not discriminate on the basis of age, color, disability, gender expression/identity, genetic information, marital status, national origin, public assistance status, race, religion, sex, sexual orientation, or status as a U.S. veteran. Direct inquiries to the Vice President for Equity, Diversity and Global Outreach, 205 Old Main, (701) 231-7708. This publication will be made available in alternative formats for people with disabilities upon request, (701) 231-7881.