

## Education

### Dietary Supplements

What are dietary supplements?

A dietary supplement is any product taken by mouth that contains 1 or more ingredients used to add nutrients to the diet. They are available in pills, tablets, capsules, liquids, and powders. Ingredients may include:

- vitamins
- minerals
- amino acids
- botanicals (herbs)
- probiotics
- enzymes.

Use of dietary supplements in the US is widespread. The dietary supplement business is a multi-billion dollar industry, one that is prone to false advertising and misleading claims.

Although the US Food and Drug Administration (FDA) does not regulate whether a supplement can be put on the market, it does require that certain rules are followed when specific health claims are made. Be especially wary of products that have general claims as a treatment or cure for disease, or a way to keep you from getting sick or to help you live longer. It is important to be an informed consumer when choosing supplements. Always discuss what you are taking or plan to take with your health care provider.

What about vitamins and minerals?

We need vitamins and minerals to stay healthy. They are found naturally in food. However, the busier we are, the less likely it is that we will eat balanced meals on a regular basis. Eating on the run often limits how much nutritious food we eat, such as whole grains, fruits, vegetables and dairy products. Taking a daily multivitamin and mineral supplement may be a sensible addition to a diet that may not always provide all the nutrition you need. Dietary supplementation should be viewed just as that--an addition to your diet, not a substitution for a healthy diet.

Older adults or people diagnosed with a chronic illness may have increased nutritional needs. They may need to take supplements, regardless of the food they are eating. For example, older adults who do not get out in the sun may not have enough vitamin D. They also may have low levels of vitamins B6, folic acid, and B12. Studies show that fewer than 10% of men and women over 50 get enough calcium through diet alone. Certain medicines and the natural effects of aging may also keep the body from absorbing certain nutrients.

If you decide to take vitamins and minerals, follow these guidelines:

- Check with your health care provider, pharmacist, or dietitian first, especially if you take prescription medicine or are being treated for a health problem.
- Choose a supplement that provides no more than 100% of the daily value for the vitamins and minerals to avoid a dosage that is too high. Don't take very large "mega-doses." Having too much of some supplements, especially as you get older, can actually be poisonous.
- Store brands or generic brands are as effective as brand names. Many different formulas are available. Ask your pharmacist, dietitian, or health care provider what is best for you. Be sure the product label shows approval by the US Pharmacopoeia (USP).

What about amino acids?

Amino acids are substances that form proteins. Some amino acids are made by the body, and others are obtained from the food we eat. Several are sold as supplements, such as lysine, tryptophan, arginine, carnitine, and homocysteine. Do not take amino acids unless recommended by your health care provider. They can have unpleasant or dangerous effects: Lysine can change the way antibiotics work. Tryptophan may cause nausea, dizziness, drowsiness, headache, or dry mouth. Arginine can affect the way heart medicines, painkillers, and blood pressure medicines work. And high levels of homocysteine have been

linked to increased risk of coronary artery disease and stroke.

What about herbal supplements?

Herbal supplements are made from plants. As more Americans use herbals for their possible health benefits, many health professionals are taking time to become educated about them. If your health care provider cannot answer your questions, ask a pharmacist or dietitian. Many resources are available to help your provider decide if an herbal would be beneficial and safe for you. Ginkgo biloba, ginseng, echinacea, and black cohosh are examples of herbal supplements. Herbal supplements are advertised as "all natural," but:

- "Natural" does not always mean safe. Some herbs can cause serious side effects such as high blood pressure, diarrhea, heart attack, or stroke.
- When you use any herb for a health problem, you are using that supplement as a drug. Because they have an effect on your body, herbs can interfere with medicines you may already be taking. For example, St. John's wort can reduce the anticoagulant effect of the blood-thinning drug warfarin.

What are probiotics?

Probiotic is a term used to describe the beneficial bacteria that normally are present in certain parts of the body, such as the intestinal tract. These organisms help digestion and help protect against the overgrowth of harmful bacteria.

Antibiotic therapy, especially if long-term, can kill these good bacteria and may cause overgrowth of bad bacteria, leading to diarrhea or vaginal yeast infection. Probiotic supplements contain concentrated doses of the good bacteria. *Lactobacillus acidophilus* and *Saccharomyces boulardii* are two common probiotics that are used to prevent or decrease bacterial overgrowth. They can be bought without a prescription. However, probiotics do not help everyone who has problems with an overgrowth of harmful bacteria. Tell your health care provider if you plan to try a probiotic.

What about supplemental enzymes?

Enzymes are proteins produced by the body. They perform many important functions. Digestive enzymes are necessary for us to break down and use the food we eat. Digestive enzymes may be prescribed if you cannot make enough of these enzymes on your own. They can also be bought without a prescription.

Lactase supplements are an example of a digestive enzyme. Lactase helps people who have lactose intolerance, which means they have trouble digesting milk products. There is no evidence that digestive enzymes are needed by the general population. If you have digestive problems, ask your health care provider if a digestive enzyme supplement would help you.

What about hormones?

Hormones are not really considered to be dietary supplements, but products such as DHEA and progesterone cream can be purchased without a prescription and may be found in the supplements section of a grocery or drug store. Hormones or steroids that increase the level of hormones in the body can be dangerous and should be taken only under your health care provider's supervision. Do not take them if you have a history of cancer, endometriosis, uterine fibroids, thyroid problems, or depression unless they have been prescribed by your health care provider.

What's best for me?

The FDA oversees only certain labeling laws for dietary supplements. It can remove a supplement from the market only after it has been found to be unsafe. Supplements are not inspected or regulated the way that prescription medicines are. If you are thinking about using supplements, remember:

- Dietary supplements are not standardized. They may have different strengths and effects. Some may be contaminated. Be careful about which products you use.
- Do not self-diagnose any health condition. Talk to your health care provider, pharmacist, or dietitian before you buy something to try to treat yourself. Just because something worked for someone else does not mean it will work for you.
- Use only the supplement your provider or dietitian recommends. Do not buy combinations that have ingredients you do not want or need.
- If your provider does not suggest a dietary supplement, but you decide to use one anyway, tell your provider. Then he or she can keep an eye on your health and adjust your other medicines if needed.

For more information contact:

National Institute of Health, Office of Dietary Supplements Web site:

[http://www.ods.od.nih.gov/Health\\_Information/Information\\_About\\_Individual\\_Dietary\\_Supplements.aspx](http://www.ods.od.nih.gov/Health_Information/Information_About_Individual_Dietary_Supplements.aspx)

Center for Food Safety and Applied Nutrition, Food and Drug Administration Phone: 888-SAFEFOOD (888-723-3366) Web site: <http://www.cfsan.fda.gov>

Food and Nutrition Information Center, Department of Agriculture Phone: 301-504-5719 Web site:  
<http://www.nal.usda.gov/fnic>

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