

## What is a Dietary Supplement?

It is estimated that as many as 25 percent of Americans use dietary supplements daily. Body builders and those trying to lose weight or boost their energy purchase dietary supplements to help attain their physical goals.

Dietary supplements can include the following ingredients: vitamins, minerals, herbs or other botanicals, amino acids, hormones, as well as combinations of these ingredients. These products are ingested as capsules or powders, not as they ordinarily occur in conventional foods as part of a normal diet.

Many of the ingredients found in these supplements have known physical or neuropsychiatric effects that may be hazardous in certain work environments. While some supplements may have health benefits, others can actually be harmful.

## Types of Dietary Supplements

### Vitamins and Minerals

These are the most common supplements and may be beneficial for some individuals at high risk for nutrient deficiency. The Food and Nutrition Board of the Institute of Medicine releases reports that summarize Dietary Reference Intakes (DRIs) for various vitamins and minerals to indicate estimated average requirements, recommended dietary allowances, adequate intakes, and tolerable upper intake levels.

When selecting a vitamin or mineral supplement:

- Check the label and opt for a multivitamin-mineral combination that does not exceed 100% of the Percent Daily Value (DV).
- Look for the “USP” notation on the label. This indicates that the product meets specific standards of quality, purity and potency established by the U.S. Pharmacopoeia.

### Herbal Preparations

Dietary supplements and herbal remedies are being sold and used as “natural” alternatives to prescription medications. These preparations are made of plant parts or oils. There are **no standards** for quality, potency, safety or efficacy of herbal products. Identical products may differ markedly between manufacturers or batches. **Many prescription drugs are derived from the same plants used in herbal preparations. Therefore, some herbal preparations have the same potential side effects as manufactured drugs.**

Unlike drugs, dietary supplements are not required to undergo rigorous scientific studies to determine their effectiveness, safety or appropriate dosages. Since the Food and Drug Administration (FDA) does not regulate quality control measures for herbal supplements, the consumer must rely on the integrity of the manufacturer.

### Steroids and Glandulars

The term “steroid” refers to a large group of important bioactive substances (to include hormones) manufactured by the body. Steroids may be synthesized artificially or extracted from the glands of animals. Potency may vary widely. Steroid supplements are unnecessary for a healthy person, and pose significant risks of debilitating illness or death.

### Amino Acids

Amino acids are the building blocks of proteins and are ordinarily found in food or manufactured by the body. From a nutritional standpoint, most people do not require more amino acids than they eat in a healthy diet. Certain individuals on special diets may benefit from supplements. Synthetic preparations are generally considered safe, although excessive use is considered unwise.

## Specific Supplements to Avoid

Because these products are sold as dietary supplements, there is no external quality control oversight, i.e. there is no guarantee the pill in the bottle is what is on the label. If you do decide to use a supplement, be sure to read product labels closely. Pay special attention to the following ingredients:

### Vitamins and Minerals

Vitamin and mineral supplements should not be taken in doses above the established Tolerable Upper Intake Levels (UL). This is the maximum level of a nutrient that can be consumed without adverse health effects. See Dietary Reference Intakes published by Institute of Medicine for ULs or consult the web resources listed on the back of this brochure.

### Herbal Preparations

Several herbal preparations present real danger to on-the-job safety, alertness or physical well-being. These are a few of the herbs known to be potentially dangerous. Do not use any substance containing these herbs without careful consultation with your health care provider.

*Cardiovascular Effects:* These may cause an irregular heartbeat or precipitate a heart attack.\*

Broom, Ephedra, Chinese Ephedra, Epitonin, Ma huang, Indian snakeroot, Lily of the valley, Pheasant’s eye, Purple foxglove, Squill, Stophanthus, White squill, Yellow foxglove

**\*The substances listed above are commonly found in products labeled as “Metabolic Enhancers”, and may cause sensitivity to heat and other severe reactions, including death, even in young, healthy persons.**

*Hallucinogens:* These may cause hallucinations or disorientation.

California poppy, European mandrake, Kava-kava, Magic mushrooms, Nutmeg (in doses greater than a tablespoon), Periwinkle, Thorn apple, Yohimbe bark

*Sedatives:* These may cause drowsiness, slow reaction time, or disorientation.

Celandine, Deadly nightshade, Hemlock, Henbane, Hops, Indian snakeroot, Jimson weed, Jinbu buan, Opium poppy, Passion flower, Scopolia, Skullcap, Valerian, Wild lettuce, Wolfsbane

### **Supplement-Drug Interactions**

The ingredients in many dietary supplements can interact with prescription medication and may make the action of the medication stronger or weaker. Always inform your health care provider if you are using dietary supplements. **Anyone having chronic medical conditions should never take a dietary supplement without first speaking with his or her physician.**

### **Guidelines for Using Supplements**

- Discuss your desire to use a supplement with your health care provider. DO NOT start using a supplement until you have done so.
- Discontinue the supplement if you feel worse after taking it or if you develop new symptoms.
- If you experience an adverse effect or illness that you think is related to supplement use, immediately contact your health care provider.
- Purchase supplements from the most reliable producers. Established manufacturers and major companies are more likely to produce a quality product. Terms such as “natural” do not assure safety.
- Beware of sensational claims. Remember the adage “If it sounds too good to be true, it probably is.”

### **For further information**

Before selecting a supplement, do your own research on available supplements and the conditions for which they may be effective. Be sure the information is provided by experts with credentials in medicine or pharmacognosy. The sources below may be helpful.

Office of Dietary Supplements  
National Institutes of Health  
Building 31, Room 1B25  
Bethesda, MD 20892-2086  
Phone: (301) 435-2920  
FAX: (301) 480-1845  
<http://dietary-supplements.info.nih.gov/>

American Dietetic Association  
216 W. Jackson Blvd.  
Chicago, IL 60606-6995  
Phone: (312) 899-0040  
1-800-366-1655 (recorded msg)  
<http://www.eatright.org>

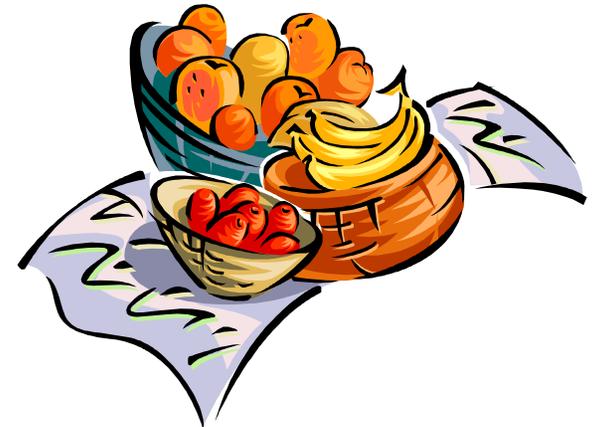
United States Air Force  
USAFSAM/AF  
2602 West Gate Rd.  
Brooks AFB, TX 78235  
Phone: (210) 536-2845  
FAX: (210) 536-1779  
<http://www.brooks.af.mil/web/af/altmed/HOMEF/RAME.htm>

U.S. Food & Drug Administration  
Center for Food Safety & Applied Nutrition  
200 C Street SW  
Washington, DC 20204 USA  
<http://vm.cfsan.fda.gov/~dms/ds-ephed.html>



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# **Facts About Dietary Supplements**



*This brochure is provided for information only; applicable regulatory guidance supersedes information contained herein. This information is not intended to take the place of advice from your health care provider.*