



Julie Garden-Robinson
Food and Nutrition Specialist

about **Dietary Supplements**

Q **If I Choose to Take a Supplement, What Should I Look For?**

A Most healthy people who eat a balanced and varied diet based on recommendations of the Food Guide Pyramid do not need nutritional supplements. Many experts agree, however, that one-a-day type multivitamin/mineral supplements are an inexpensive form of nutritional insurance. The best reference on the amount of vitamins and minerals to take is the U.S. Recommended Dietary Allowances (RDAs) which are generally the highest of the RDAs for the various age and sex categories for a particular nutrient. Percent Daily Values (% DV), which are shown on many food labels, will replace the U.S. RDAs now shown on supplement labels.

If you choose to take vitamin C supplements, for instance, remember that megadoses are not utilized by the body. High doses can cause diarrhea or urinary tract problems. Recent research shows that vitamin C in excess of 200 mg is excreted by the body.¹ The current RDA is 60 mg.

Vitamins and other supplements labeled “natural” also have not been proven to be superior to manmade vitamins, but they generally carry higher price tags. Follow these tips if you choose to take a supplement:

- Choose a supplement that provides 100% of the U.S. RDA for vitamins A, C, D, E and the B complex vitamins (including folic acid, B₁, B₂, B₃ and B₁₂) and at least 11 minerals.
- Choose a product that is sealed with a childproof cap.
- Choose a product with an expiration date because vitamins can lose potency over time.
- Store supplements in a cool, dry environment. A warm, humid environment such as a bathroom can accelerate the loss of potency of a vitamin supplement.

Q Who Really Needs Liquid Supplements?

A TV and print ads promise that liquid supplements will add “life to your years.” People targeted by the ads are getting younger every day. As a result of clever marketing, the sales for Ensure® grew by 60 percent in 1996. The sales for Sustacal® grew by 65 percent.

Who really needs a liquid supplement? Some hospitalized patients with increased energy and/or protein needs due to malnutrition, cancer and other diseases and who are unable to take in adequate calories and protein from table food are true candidates for liquid supplements.

Liquid supplements are under government scrutiny. The Federal Trade Commission recently alleged that Ensure® falsely represented the vitamin and mineral content of a serving as comparable to that of a standard multivitamin/mineral supplement. A typical supplement provides 100% of the recommended daily intake of vitamins and minerals, whereas Ensure® provides no more than 50% of the recommended daily intake.²

Liquid supplements do provide calories, vitamins and minerals, but the same effect can be achieved with a milkshake or instant breakfast drink made with milk and a one-a-day type multivitamin/mineral tablet. The flavor might be better, too. Those who do replace meals with liquid supplements may be falling low in fiber intake. For people who want fast nutrition, a piece of fruit and a bagel on the go could provide a tastier, fiber-rich and usually less expensive alternative.

Q Does a Higher Price Tag Mean a Better Supplement?

A A higher price tag doesn't necessarily mean a better supplement. The best-selling brands of vitamin and mineral supplements are also manufactured under discount labels that sell for half the price of name brands.³

Q When is the Best Time to Take a Supplement?

A For *best* absorption, supplements should be taken at certain times; however, even if you take supplements at the “wrong” time, absorption only drops by 5 to 10 percent. Follow these tips to optimize absorption:⁴

- 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 mg or less with breakfast and at bedtime. Don't take calcium supplements at the same time as a multivitamin with iron or with an iron-only supplement because the two minerals can interfere with each other, resulting in less absorption.
- If you choose to take fiber supplements, wait several hours before taking any nutritional supplement because fiber can bind minerals and make them unavailable for the body to use.

Q Why Will Iron Supplements Carry a Warning Label?

A Accidental overdose with iron supplements is a leading cause of poisoning deaths in children under age 6. More than 110,000 children have ingested too much iron since 1986, resulting in 35 deaths. According to a 1997 FDA ruling, products containing 30 mg of iron or more per unit must be packaged as individual doses (“blister packs”) to limit the number of pills or capsules a small child could readily consume.

To prevent accidental poisonings with iron supplements and other medications, people caring for children should keep the following in mind:⁵

- Always close the container of any medication, secure the child-resistant packaging and put it in a place where children cannot reach it.
- Be careful where you set your purse if it contains supplements or medications of any kind.
- Keep iron-containing tablets out of reach – and out of sight – of children.
- Do not keep supplements or medications on a countertop or bedside table.
- Avoid taking supplements or medications in front of children or referring to them as candy.

Q What are the Risks Associated with Oversupplementation?

A When it comes to minerals, vitamins and herbal products, more doesn't mean better. Toxic doses vary. For instance, vitamin E is a popular supplement, and while high doses are not necessarily toxic, they can interfere with vitamin K and its role in blood clotting. High doses of vitamin A (10,000 IU/day) can cause birth defects.⁶ Herbal products are the least regulated of any supplement product, and often it is difficult to know what dose you are taking.

A health professional such as a physician, registered dietitian or pharmacist can provide more information on supplements. The following list shows some risks associated with high doses of supplements.⁷

Nutrient	Some Risks Associated with Oversupplementation
Calcium	can cause constipation; increased risk of urinary stone formation in some people
Folic acid	can mask vitamin B ₁₂ deficiency
Iron	accidental overdoses have caused poisoning in children
Niacin	can cause liver damage and upset the gastrointestinal system
Selenium	can cause nausea, vomiting, loss of hair and nails and lesions on the skin and nervous system
Vitamin A	can cause birth defects, severe liver damage and diarrhea in high doses
Vitamin B ₆	can result in nerve disorders and muscle weakness with prolonged use
Vitamin C	can cause diarrhea and urinary tract abnormalities
Vitamin D	can cause irreversible kidney, heart and blood vessel damage
Zinc	can impair immune response and reduce copper absorption

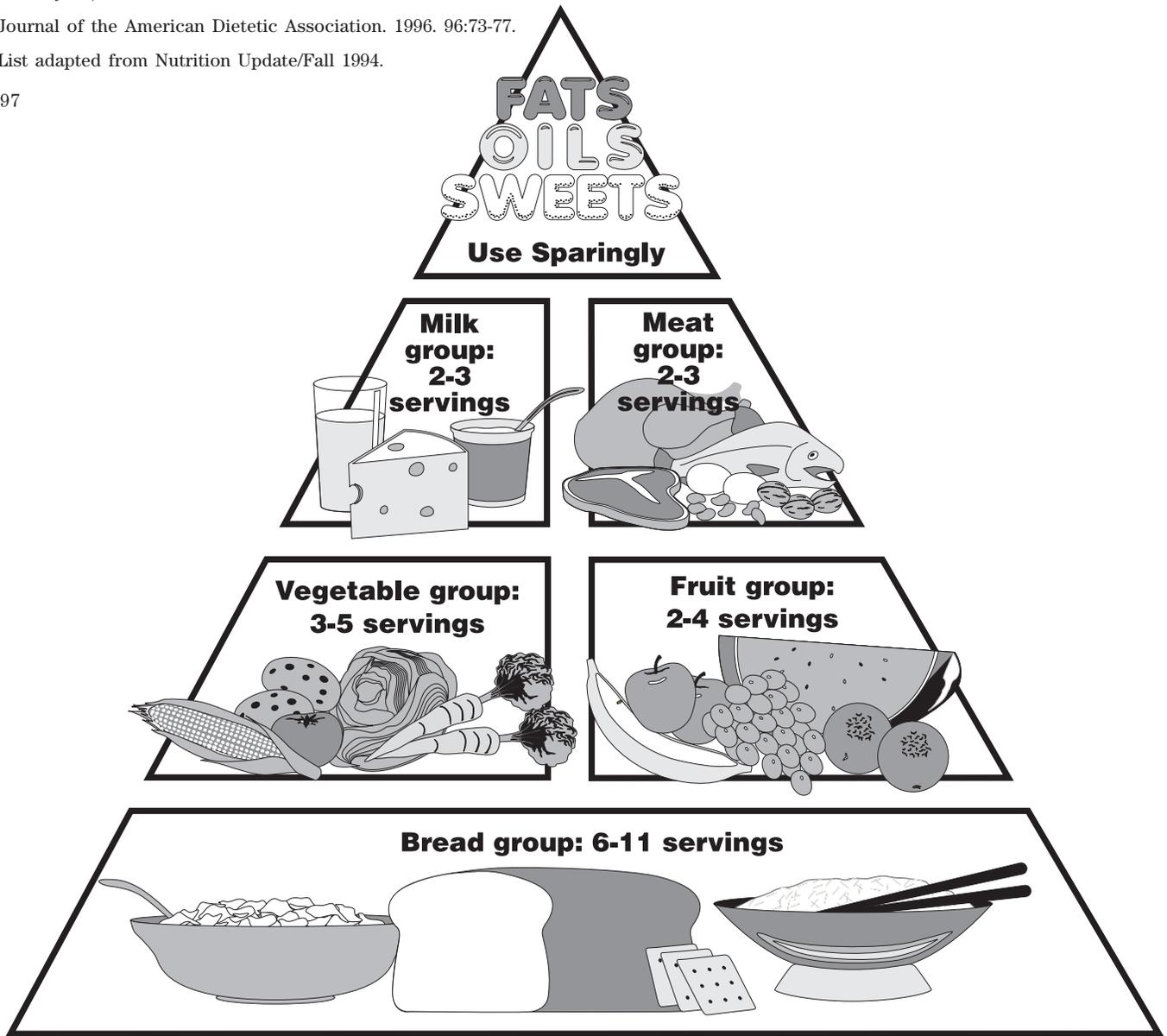
Herb/Botanical	Some Risks Associated with Oversupplementation
brewer's yeast	can cause nausea and diarrhea
chaparral	can cause toxic hepatitis
comfrey	is associated with liver disease
germanium	has resulted in irreversible kidney damage as well as death
ginseng	can cause changes in blood pressure, sleep loss, anxiety
gums	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, see "Dietary Supplements," North Central Regional Extension Publication No. 582, by Susan Nitzke, University of Wisconsin-Madison and UW-Extension, available from the NDSU Extension Service.

References

- ¹ Tufts University Diet & Nutrition Letter, October 1996.
- ² Tufts University Diet & Nutrition Letter, March 1997.
- ³ Money Magazine, September 1995.
- ⁴ Environmental Nutrition, February 1997.
- ⁵ FDA Consumer, March 1996, and FDA Information Release, January 15, 1997.
- ⁶ Journal of the American Dietetic Association. 1996. 96:73-77.
- ⁷ List adapted from Nutrition Update/Fall 1994.

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Eat a Variety of Foods Every Day



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