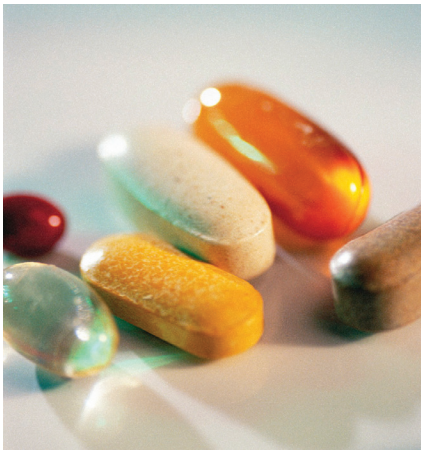
National Institutes of Health
Office of Dietary Supplements

Multivitamin/mineral Supplements
Fact Sheet for Consumers



More than one-third of Americans take MVMs.

What are multivitamin/mineral (MVM) dietary supplements?

Multivitamin/mineral (MVM) supplements contain a combination of vitamins and minerals, and sometimes other ingredients as well. They go by many names, including *multis* and *multiples* or simply *vitamins*. The vitamins and minerals in MVMs have unique roles in the body. For more information about each one, see our dietary supplement fact sheets.

What kinds of MVM supplements are available?

There are many types of MVMs in the marketplace. Manufacturers choose which vitamins, minerals, and other ingredients, as well as their amounts, to include in their products.

Among the most common MVMs are basic, once-daily products containing all or most vitamins and minerals, with the majority in amounts that are close to recommended amounts. Higher-potency MVMs often come in packs of two or more pills to take each day. Manufacturers promote other MVMs for special purposes, such as better performance or energy, weight control, or improved immunity. These products usually contain herbal and other ingredients (such as echinacea and glucosamine) in addition to vitamins and minerals.

The recommended amounts of nutrients people should get vary by age and gender and are known as Recommended Dietary Allowances (RDAs) and Adequate Intakes (AIs). One value for each nutrient, known as the Daily Value (DV), is selected for the labels of dietary supplements and foods. A DV is often, but not always, similar to one's RDA or AI for that nutrient. The label provides the %DV so that you can see how much (what percentage) a serving of the product contributes to reaching the DV.

Who takes MVM supplements?

Research has shown that more than one-third of Americans take MVMs. About one in four young children takes an MVM, but adolescents are least likely to take them. Use increases with age during adulthood so that by age 71 years, more than 40% take an MVM.

Women; the elderly; people with more education, more income, healthier diets and lifestyles, and lower body weights; and people in the western United States use MVMs most often. Smokers and members of certain ethnic and racial groups (such as African Americans, Hispanics, and Native Americans) are less likely to take a daily MVM.

What are some effects of MVMs on health?

People take MVMs for many reasons. Here are some examples of what research has shown about using them to increase nutrient intakes, promote health, and reduce the risk of disease.

Increase nutrient intakes

Taking an MVM increases nutrient intakes and helps people get the recommended amounts of vitamins and minerals when they cannot or do not meet these needs from food alone. But taking an MVM can also raise the chances of getting too much of some nutrients, like iron, vitamin A, zinc, niacin, and folic acid, especially when a person uses more than a basic, once-daily product.

Some people take an MVM as a form of dietary or nutritional "insurance." Ironically, people who take MVMs tend to consume more vitamins and minerals from food than those who don't. Also, the people least likely to get enough nutrients from diet alone who might benefit from MVMs are the least likely to take them.

Health promotion and chronic disease prevention

For people with certain health problems, specific MVMs might be helpful. For example, a study showed that a particular high-dose formula of several vitamins and minerals slowed vision loss in some people with age-related macular degeneration. Although a few studies show that MVMs might reduce the overall risk of cancer in certain men, most research shows that healthy people who take an MVM do not have a lower chance of getting cancer, heart disease, or diabetes. Based on current research, it's not possible to recommend for or against the use of MVMs to stay healthier longer.

One reason we know so little about whether MVMs have health benefits is that studies often use different products, making it hard to compare their results to find patterns. Many MVMs are available, and manufacturers can change their composition at will. It is therefore difficult for researchers to study whether a specific combination of vitamins and minerals affects health. Also, people with healthier diets and lifestyles are more likely to take dietary supplements, making it hard to identify any benefits from the MVMs.

Should I take an MVM?

MVMs cannot take the place of eating a variety of foods that are important to a healthy diet. Foods provide more than vitamins and minerals. They also have fiber and other ingredients that may have positive health effects. But people who don't get enough vitamins and minerals from food alone, are on low-calorie diets, have a poor appetite, or avoid certain foods (such as strict vegetarians and vegans) might consider taking an MVM. Health care providers might also recommend MVMs to patients with certain medical problems.

Some people might benefit from taking certain nutrients found in MVMs. For example:

- Women who might become pregnant should get 400 mcg/day of folic acid from fortified foods and/or dietary supplements to reduce the risk of birth defects of the brain and spine in their newborn babies.
- Pregnant women should take an iron supplement as recommended by their health care provider. A prenatal MVM is likely to provide iron.
- Breastfed and partially breastfed infants should receive vitamin D supplements of 400 IU/day, as should non-breastfed infants who drink less than about 1 quart per day of vitamin D-fortified formula or milk.
- In postmenopausal women, calcium and vitamin D supplements may increase bone strength and reduce the risk of fractures.
- People over age 50 should get recommended amounts of vitamin B12 from fortified foods and/or dietary supplements because they might not absorb enough of the B12 that is naturally found in food.

Can MVMs be harmful?

Taking a basic MVM is unlikely to pose any risks to health. But if you consume fortified foods and drinks (such as cereals or beverages with added vitamins and minerals) or take other dietary supplements, make sure that the MVM you take doesn't cause your intake of any vitamin or mineral to go above the upper levels. (Use the U.S. Department of Agriculture Online DRI tool to learn the upper level of each nutrient.)

Pay particular attention to the amounts of vitamin A, beta-carotene (which the body can convert to vitamin A), and iron in the MVM.

- Women who get too much vitamin A during pregnancy can increase the risk of birth defects in their babies. This risk does not apply to beta-carotene, however. Smokers, and perhaps former smokers, should avoid MVMs with large amounts of beta-carotene and vitamin A because these ingredients might increase the risk of developing lung cancer.
- Adult men and postmenopausal women should avoid taking MVMs that contain 18 mg or more of iron unless their doctor has told them that they have iron deficiency or inadequacy. When the body takes in much more iron that it can eliminate, the iron can collect in body tissues and organs, such as the liver and heart, and damage them. Iron supplements are a leading cause of poisoning in children under age 6, so keep any products containing iron (such as children's chewable MVMs or adults' iron supplements) out of children's reach.

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

MVMs with recommended intake levels of nutrients don't usually interact with medications, with one important exception. If you take medicine to reduce blood clotting, such as warfarin (Coumadin® and other brand names), talk to your health care provider before taking any MVM or dietary supplement with vitamin K. Vitamin K lowers the drug's effectiveness and doctors base the medicine dose partly on the amount of vitamin K you usually consume in foods and supplements.

Which kind of MVM should I choose?

Talk to a health care provider to help you figure out whether you should take an MVM and, if so, which one is best for you. Consider basic MVMs whose amounts of most or all vitamins and minerals do not go above the DVs. These MVMs usually have low amounts of calcium and magnesium, so some people might need to take one or both minerals separately. Make sure that the product does not have too much vitamin A and iron.

Also consider choosing an MVM designed for your age, sex, and other factors (like pregnancy). MVMs for men often contain little or no iron, for example. MVMs for seniors usually provide more calcium and vitamins D and B12 and less iron than MVMs for younger adults. Prenatal MVMs for pregnant women often provide vitamin A as beta-carotene.

MVMs and healthful eating

People should get most of their nutrients from food, advises 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 otherwise may be consumed in less-than-recommended amounts. For more information about building a healthy diet, refer to the *Dietary Guidelines for Americans* and the U.S. Department of Agriculture's MyPlate.

Where can I find out more about MVMs?

For general information on MVMs:

- Office of Dietary Supplements Health Professional Fact Sheet on Multivitamin/mineral Supplements.

For information on recommended intakes of vitamins and minerals:

- Office of Dietary Supplements Vitamin and Mineral Supplement Fact Sheets
- Food and Nutrition Board nutrient recommendations: Dietary Reference Intakes (DRI)
- U.S. Department of Agriculture (USDA) Online DRI tool
- U.S. Food and Drug Administration (FDA) Daily Value (DV) tables

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:

- 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 healthcare 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 brand name is not an endorsement of the product.

National Institutes of Health

For more information on this and other supplements, please visit our Web site at: http://ods.od.nih.gov or e-mail us at: ods@nih.gov

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