

# 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. People refer to them by many names, including multis and multiples or simply vitamins. Each of the vitamins and minerals in MVMs have a unique role in the body. For more information about each one, see our individual vitamin and mineral [fact sheets](#).

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 benefit health.

### What kinds of MVM supplements are available?

Many types of MVMs are available in stores and online. Companies choose which vitamins and minerals—and how much—to include in their products. There isn't a standard MVM or a standard list of ingredients.

Among the most common MVMs are basic, once-daily products that contain all or most vitamins and minerals in amounts close to what is recommended.

Some MVMs contain higher-than-recommended amounts of some vitamins and minerals. These products may come in packs of two or more pills to take each day.

Manufacturers promote some MVMs for specific purposes, such as better athletic performance or energy, weight control, improved immunity, or eye health. These products often contain herbal and other ingredients (such as green tea, coenzyme Q10, probiotics, or glucosamine) in addition to vitamins and minerals.

The recommended amounts of nutrients vary by age and sex and are known as Recommended Dietary Allowances (RDAs) and Adequate Intakes (AIs). However, supplement labels use the Daily Value (DV) for each nutrient, which is often, but not always, similar to the RDA or AI for that nutrient. The %DV for each nutrient will show you how much (what percentage) a serving of the product contributes to reaching the DV.

### What are some effects of MVMs on health?

Here are some examples of what research has shown about taking MVMs to increase nutrient intakes, improve health, and reduce the risk of disease.

#### Increase nutrient intakes

Taking an MVM increases the amounts of nutrients you get each day. This can help you get recommended amounts of vitamins and minerals when you cannot or do not get enough of them from food alone. But taking an MVM can also raise the chances of getting too much of some nutrients, such as iron, vitamin A, zinc, niacin, and folic acid, especially if you take a product that contains more than the recommended amounts of some nutrients. For information about recommended amounts, see our individual vitamin and mineral [fact sheets](#).

Some people take an MVM as a form of dietary or nutritional insurance. Yet people who take MVMs often consume more vitamins and minerals from food and beverages than those who don't.

### **Health promotion and chronic disease prevention**

It is difficult to determine whether MVMs provide health benefits because studies often use different products, making it hard to compare their results. Also, many MVMs are available, and manufacturers can change their composition at will, so it's hard for researchers to study whether specific combinations of vitamins and minerals affect health. Also, people with healthier diets and lifestyles are more likely to take MVMs, making it hard to identify any benefits from the products alone.

Scientists have studied whether taking MVMs affects the risk of health problems and diseases such as cancer, heart disease, osteoporosis, lung disorders, psychiatric disorders, and the risk of death. Most studies have found that taking MVMs has little or no effect on these health outcomes.

### **Cancer**

Overall, it's unclear whether taking an MVM affects cancer risk.

One large study found that male physicians aged 50 and older who took a basic MVM for about 11 years had a slightly reduced risk of developing cancer—but not of dying of the disease—compared with those who took a placebo. In another large study in men and women ages 60–65 years and older, those who took a basic MVM for about 3.6 years did not have a lower risk of developing cancer, except for lung cancer. Other studies found conflicting evidence. For example, various studies have found that MVMs might increase, decrease, or not affect the risk of breast cancer in women. Some studies suggest MVMs might reduce the risk of colon cancer, but increase the risk of prostate cancer, lung cancer, and leukemia in men.

### **Cardiovascular disease (CVD)**

Overall, MVMs appear to have little or no effect on the risk of CVD.

Most studies in men and women comparing MVMs to a placebo have found that the MVMs do not reduce the risk of CVD, including heart attacks or strokes or resulting deaths. Most other studies of people who take MVMs on their own have found that these products do not protect against CVD either.

### **Cataracts and age-related macular degeneration (AMD)**

A specific combination of vitamins and minerals can slow down vision loss from AMD, an eye disease that can blur your central vision.

The Age-Related Eye Disease Study (AREDS) showed that people with AMD and/or cataracts who took a daily

supplement of high-dose vitamin C (500 mg), vitamin E (400 IU), beta-carotene (15 mg), zinc (80 mg), and copper (2 mg) for about 6 years had a lower chance of developing advanced AMD. They also had less vision loss than those who did not take the supplement. However, the supplements did not reduce the risk of getting AMD or the risk of cataracts. A later study showed that the supplement was equally effective without beta-carotene.

### **Pregnancy and birth outcomes**

Prenatal MVM supplements can help a pregnant person get enough nutrients, especially key nutrients such as folic acid and iron. Pregnant people who are at risk of malnutrition might be less likely to have a baby that is premature or has a low birth weight or small size if they take an MVM during pregnancy. But for pregnant people who already get enough of all nutrients, MVMs might not make any difference.

### **Other outcomes**

Several studies have examined the link between MVM use and conditions such as osteoporosis, lung diseases, psychiatric disorders, and even risk of death. Most found that MVMs have no effect on these health outcomes.

### **Should I take an MVM?**

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. Healthcare providers might also recommend MVMs to patients with certain medical problems.

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

- If you might become pregnant, getting 400 mcg/day of folic acid from fortified foods and/or dietary supplements lowers your baby's risk of birth defects of the brain and spine.
- If you are pregnant, a daily prenatal MVM can help ensure you get enough folic acid, iron, iodine, and vitamin D during pregnancy. Your doctor might also recommend separate supplements of iodine and choline, which are often missing or in too small amounts in prenatal MVMs.
- If you are pregnant and eat a vegetarian or vegan diet, your doctor might suggest other nutrients including vitamin B12 and the omega-3 fatty acids EPA and DHA.
- Breastfed babies might also need a vitamin B12 supplement if their nursing parent is low in B12 or eats a vegan diet.
- Breastfed and partially breastfed infants should receive vitamin D supplements of 10 mcg (400 IU)/day, as should non-breastfed infants and toddlers who drink less than 1 quart per day of vitamin D-fortified formula or milk.

- If you are older than 50, get recommended amounts of vitamin B12 from fortified foods and/or dietary supplements because your body might not absorb enough of the B12 that is naturally found in food.

#### Can MVMs be harmful?

Taking a basic MVM is unlikely to harm your 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 limits. (For more information on upper limits, see our individual vitamin and mineral [fact sheets](#).)

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 lung cancer.

If you get too much vitamin A during pregnancy, your baby may have an increased risk of birth defects. This risk does not apply to beta-carotene (the form of vitamin A in plant foods, such as carrots, and some dietary supplements).

#### Do MVMs interact with medications or other dietary supplements?

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

#### Which kind of MVM should I choose?

Talk to your healthcare provider about whether you should take an MVM and, if so, which one is best for you. Basic MVMs provide many vitamins and minerals close to the recommended amounts. However, the amounts of calcium and magnesium in these MVMs are usually low.

Also, you might consider choosing an MVM designed for your age, sex, and other factors (such as pregnancy). These MVMs may contain a combination of vitamins and minerals better suited to your needs. For example, prenatal MVMs often provide vitamin A as beta-carotene. Most children's MVMs provide nutrients in smaller amounts that are right for them. MVMs for seniors usually provide more calcium and vitamins D and B12 and less iron than MVMs for younger adults.

#### MVMs and healthful eating

People should get most of their nutrients from food and beverages, according to the federal government's *Dietary Guidelines for Americans*. Foods contain vitamins, minerals, dietary fiber, and other components that benefit health. In some cases, fortified foods and dietary supplements are useful when it is not possible to meet needs for one or more nutrients (e.g., during specific life stages such as pregnancy). For more information about building a healthy dietary pattern, see 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](#)
- Office of Dietary Supplements [Dietary Supplement Label Database \(DSLDB\)](#)

##### For information on recommended intakes of vitamins and minerals:

- Office of Dietary Supplements [Vitamin and Mineral Supplement Fact Sheets](#)
- [Nutrient recommendations: Dietary Reference Intakes \(DRI\)](#)
- Online [DRI tool](#)
- [Daily Value \(DV\) tables](#)

##### For more advice on choosing dietary supplements:

- Office of Dietary Supplements [Frequently Asked Questions: Which brand\(s\) of dietary supplements should I purchase?](#)

##### For information about building a healthy dietary pattern:

- [MyPlate](#)
- [Dietary Guidelines for Americans](#)

#### Disclaimer

This fact sheet by the National Institutes of Health (NIH) Office of Dietary Supplements (ODS) 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 product or service, or recommendation from an organization or professional society, does not represent an endorsement by ODS of that product, service, or expert advice.



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