

**“FULL INFORMATION”
FOR EACH FDA STUDY
HEALTH CLAIM**

Calcium and Osteoporosis

Calcium is an essential mineral needed by the body to build strong bones and to keep them strong throughout your life. Calcium is also needed for other purposes, such as muscle contraction.

Almost all calcium (99 percent) is stored in the bones. The remaining one percent circulates in the body. If the body does not get enough calcium from the food you eat to keep the right amount circulating in the blood, your body will take calcium from the bones. Hundreds of scientific studies show that over time, the loss of calcium from bones can lead to the bone disease “osteoporosis”, sometimes called “brittle bones,” which can lead to thinner bones and greater risk of bone fractures.

Everybody needs calcium to build and keep strong bones and for normal body functioning. But some people are at greater risk of getting osteoporosis as they get older. The risk is higher for women than men, especially women who have smaller bones. To reduce the risk of osteoporosis, you have to eat enough calcium during childhood and young adulthood, when bone mass is formed. As an adult, the calcium you eat helps you to keep the bone mass you developed when you were growing.

Foods that are good sources of calcium include dairy products, such as milk, yogurt and cheese and dark green leafy vegetables, such as kale and turnip greens. There are also some foods that add calcium, such as calcium-fortified orange juice and grapefruit juice.

Based on many years of scientific study, nutrition experts have learned how much calcium people need to eat every day to build strong bones and maintain their bone mass as they get older. The amount you need to eat depends on things like your age. For example:

Children 9 to 18 years old	1,300 milligrams (mg)
Adults 19 to 50 years old	1,000 milligrams (mg)
Adults over 50	1,200 milligrams (mg)

Although it is possible to eat too much calcium (more than 2,500 milligrams every day), studies have shown that most Americans do not eat the recommended amount of calcium they need each day.

Omega--3 Fatty Acids and Heart Disease

Omega-3 fatty acids are a naturally occurring type of fat found in many foods. Some research suggests that eating foods that contain omega-3 fatty acids may reduce the risk of coronary heart disease and the risk of death from a sudden heart attack.

Intervention studies with people who already have heart disease or related health problems showed that consumption of omega-3 fatty acids reduced the risk of future heart attacks. These studies looked at people who already had health problems so it is not known whether the same benefits would occur for the general population of healthy adults.

A less rigorous type of study looks at the types of foods people say they eat, for people who have and do not have health problems such as heart disease. Some studies like this found that people who ate more fish reduced their risk of heart disease compared to those who ate less fish. But it is hard to say whether this is because of the omega-3 fatty acids found in some kinds of fish or from the known benefits of eating a diet high in fish.

There are several ways omega-3 fatty acids may reduce the risk of heart disease. It may decrease blood clotting, regulate heart beat rhythm, or improve the functioning of blood vessel cells. At this point scientists are not sure because the benefit seems to be separate from the well-known effects different types of fats in the diet have on raising or lowering LDL (bad) cholesterol.

There are two main types of omega-3 fatty acids. One type is found in fish and the other type is found in certain plant foods. Foods that contain omega-3 fatty acids include:

- Fish, especially fatty fish like salmon, tuna
- Flaxseed oil
- Canola oil
- Soybean oil
- Nuts, especially walnuts

It is also not known how much omega-3 fatty acids a person would need to eat on a regular basis in order to have heart health benefits. In some studies, one or two servings of fish per week, or a tablespoon per day of certain salad oils were associated with reduced risk of coronary heart disease or heart attacks. The American Heart Association recommends eating two servings of fish a week. They also recommend using oils such as flaxseed, canola, and soybean and eating nuts such as walnuts.

Selenium and Cancer

Selenium is an essential mineral that helps the immune system and thyroid gland function properly. Recent research suggests another benefit of selenium. In higher amounts than what is needed for everyday health, selenium may help to reduce the risk of certain types of cancer.

Scientists have conducted about 30 studies to look at the relationship between selenium intake and cancer reduction in humans. The clearest evidence comes from “intervention” studies, where people take either a selenium dietary supplement or a “placebo” (sugar pill). People in the study do not know if they are taking the “real” supplement or the sugar pill.

Only one of these studies was in the United States. The American study looked at the effect of selenium supplements on skin cancer. Although the study did not find selenium supplements reduced the risk of skin cancer, an unexpected finding was that selenium supplements might reduce the risk of some other types of cancer such as prostate, lung, and colorectal cancers. Two studies in China also found selenium supplements reduced cancer risk. The Chinese studies were done in areas where people had little selenium in their diets.

Another type of study looks at the foods people eat in their everyday lives and compares the foods eaten by people with and without cancer. These studies have not been able to prove that people who eat more foods that contain selenium have lower risks for getting cancer.

Selenium is found in soil. Plants absorb the selenium. The major source of selenium in the diet comes from plants such as vegetables and nuts. When animals eat these plants it becomes available through meat and poultry, eggs, and foods made with grains such as bread and pasta.

Scientific studies show the amount of selenium necessary for healthy functioning. The typical American diet provides enough selenium to meet the daily recommended amount for good health. It is too soon to tell how much selenium might be needed to reduce the risk of cancer. Some studies found that higher levels of selenium taken as a dietary supplement may help protect against cancer. Scientists have also found that too much selenium can cause health problems, but this type of problem is most likely if a person gets too much selenium from dietary supplements. It would be unlikely to eat too much selenium from foods.

Lycopene and Cancer

Lycopene is an antioxidant vitamin that gives foods their red color. Animal and cell culture studies suggest antioxidants such as lycopene may slow or even prevent the development of cancer by protecting cells from damage caused by “free radicals.” Over the long term, free radicals may cause cells to grow out of control and eventually cause life-threatening tumors.

In recent years, the antioxidant lycopene has received a lot of research attention. Several studies suggest consumption of foods rich in lycopene may reduce the risk of prostate cancer in men. For example, in a Harvard University study of over 47,000 men, those who ate 10 or more servings a week of tomato products had a reduced risk of prostate cancer. These findings are consistent with other studies reporting lower rates of prostate cancer in southern Mediterranean countries where tomato products are a frequent part of the daily diet.

Whether lycopene alone causes the reduced cancer risk is uncertain. Some research suggests foods that contain lycopene are more helpful than lycopene by itself, for example in a dietary supplement pill. Foods that contain lycopene also contain other nutrients, including other antioxidant vitamins. It may be the combination of nutrients found in vegetables and fruits that help reduce cancer, rather than any single nutrient such as lycopene. It is well-established that diets high in fruits and vegetables are associated with lower risk of cancers.

Research on lycopene in foods and supplements has not established an amount of lycopene needed to provide specific benefits—there is no “recommended daily amount” for lycopene.

Foods that contain lycopene can be identified by their red or pink color. The most common sources of lycopene in the American diet are tomato products, including processed tomatoes (tomato paste, tomato sauce), ketchup, spaghetti sauce, tomato juice, and fresh tomatoes. Red and pink fruits that contain lycopene include watermelon, pink and red grapefruit and guavas.

Research shows that lycopene in foods is more available to the body when it has been heated and when it is consumed in combination with foods or ingredients that contain fat—for example in the form of spaghetti sauce or pizza sauce.