

# lecithin and choline

These closely

related nutrients with the scientific-sounding names are actually essential for every cell in your body. They're particularly important for the liver and nerves. No wonder so many nutritionists urge Americans to get more of them.

## COMMON USES

- Help in preventing gallstones.
- Strengthen the liver, making them useful in the treatment of hepatitis and cirrhosis.
- Aid the liver in ridding the body of toxins in patients undergoing chemotherapy for cancer.
- Diminish heartburn symptoms.
- May boost memory and enhance brain function.

## FORMS

- Capsule
- Tablet
- Softgel
- Powder
- Liquid

## CAUTION!

- **Reminder:** If you have a medical condition, talk to your doctor before taking supplements.

## What it is

Lecithin (pronounced LESS-a-thin) is a fatty substance found in many animal- and plant-based foods, including liver, eggs, soybeans, peanuts, and wheat germ. It is also often added to processed foods—including ice cream, chocolate, margarine, and salad dressings—to help blend, or emulsify, the fats with water. In addition, the body manufactures it.

Lecithin is considered an excellent source of the B vitamin choline, primarily in the form called phosphatidylcholine. Once in the body, the phosphatidylcholine breaks down into choline, so that when you take lecithin, or absorb lecithin from foods, your body gets choline. However, only 10% to 20% of the lecithin found in plants and other natural sources consists of phosphatidylcholine. You can buy lecithin supplements that contain higher concentrations of phosphatidylcholine, but they can be very expensive. For most situations, just taking plain lecithin, rather than the more costly phosphatidylcholine, works fine.

Though dietary lecithin is a primary source of choline, choline is also found in liver, soybeans, egg yolks, grape juice, peanuts, cabbage, cauliflower, and other foods. You can also buy choline supplements, and it is often included as an ingredient in B-complex vitamins or other combination formulas.

## What it does

Lecithin and choline are needed for a range of body functions. They help build cell membranes and facilitate the movement of fats and nutrients in and out of cells. They aid in reproduction and in fetal and infant development; they're essential to liver and gallbladder health; and they may help the heart. Choline is also a key component of the brain chemical acetylcholine, which plays a major role in memory and muscle control. As a result of these far-flung effects, lecithin and choline have been touted for almost everything—from curing cancer and AIDS to lowering cholesterol.



*Lecithin is good for the brain and liver, and helps you digest fats. Softgels are a popular form of lecithin supplement.*

And even though the evidence for some of these claims is weak, these nutrients should not be dismissed out of hand.

✳️ **MAJOR BENEFITS:** Lecithin and choline may be especially helpful in the treatment of gallbladder and liver diseases. Lecithin is a key component of bile, the fat-digesting substance, and low levels of this nutrient are known to precipitate gallstones. Taking supplements with lecithin or its purified extract, phosphatidylcholine, may treat or prevent this disorder. Lecithin may also be beneficial for the liver: The results of a 10-year study on baboons showed that it prevented severe liver scarring and cirrhosis caused by alcohol abuse; other studies have indicated that it helps liver problems associated with hepatitis.

Choline is often included in liver complex formulas along with other liver-strengthening supplements, such as the amino acid methionine, the B vitamin inositol, and the herbs milk thistle and dandelion. These preparations, often called lipotropic combinations or factors, can protect against the buildup of fats within the liver, improve the flow of fats and cholesterol through the liver and gallbladder, and help the liver rid the body of dangerous toxins. They may be especially helpful for liver or gallbladder diseases, such as hepatitis, cirrhosis, or gallstones, as well as for conditions that benefit from good liver function, such as endometriosis (the leading cause of female infertility) or side effects from chemotherapy. Choline, along with the B vitamins pantothenic acid and thiamin, may also help treat heartburn.

✳️ **ADDITIONAL BENEFITS:** These two nerve-building nutrients may be useful for improving memory in those with Alzheimer's disease, preventing neural tube birth defects (spina bifida), boosting performance in endurance sports, and treating twitches and tics (tardive dyskinesia) caused by antipsychotic drugs. They have also been proposed as possible remedies against high cholesterol and even cancer. However, more studies are needed to define their role in these and other diseases.

## How to take it

🔗 **DOSAGE:** Lecithin is usually given in a dosage of two 1,200 mg capsules twice a day. It can also be taken in a granular form: 1 teaspoon contains 19 grains, or 1,200 mg of lecithin. Choline can be obtained from lecithin, although phosphatidylcholine (500 mg three times a day) or plain choline (500 mg three times a day) may be a better source. Choline can also be taken as part of a lipotropic combination product. Lecithin and choline have no RDAs, although recently, the scientific group that sets nutritional standards established what's called an Adequate Intake for choline: 550 mg for men and 425 mg for women.

🔗 **GUIDELINES FOR USE:** Lecithin and choline should be taken with meals to enhance absorption. Granular lecithin has a nutty taste and can be sprinkled over foods or mixed into drinks.

## Possible side effects

In high doses, lecithin and choline may cause sweating, nausea, vomiting, bloating, and diarrhea. Taking very high dosages of choline (10 grams a day) may produce a fishy body odor or a heart rhythm disorder.

## FACTS & Tips

- Lecithin supplements vary widely in the amount of their active ingredient, phosphatidylcholine: It can range anywhere from 10% to 98%. In most cases, a higher concentration of phosphatidylcholine (and its extra cost) is not necessary.
- Choline is so important for infant development that all FDA-approved infant formulas must contain this nutrient.

## LATEST FINDINGS

- Lack of choline shows up very quickly. Healthy adult men who were put on a strict 30-day choline-deficient diet displayed elevated liver enzymes, a clear indicator of liver problems. Supplementing their diet with lecithin restored their livers to their normal functioning.
- It's a long way from rats to people, but a new study suggests a memory-enhancing effect for choline. Rats fed extra choline produced offspring that performed much better in memory and learning skills than those whose mothers were on a normal diet. Conversely, offspring of the rats deprived of choline did poorly on memory tests.

## Did You Know?

Lecithin and choline have no RDAs, but deficiencies are rare. Most Americans get enough of these nutrients in their daily diet—about 6 grams of lecithin and up to 1 gram of choline.