



# SILYMARIN (Milk Thistle)

## WHAT IS SILYMARIN?

Silymarin refers to the extract from the seeds of the plant *Silybum marianum*, also called "milk thistle." It has been used for over 2,000 years. During the Middle Ages, the seed of the milk thistle was commonly used to treat liver diseases.

The active ingredients of milk thistle are chemicals called flavonoids. The flavonoids in milk thistle are silybin, silydianin, and silychristin. Together, they are called silymarin.

## WHAT ARE THE BENEFITS OF SILYMARIN?

Silymarin protects the liver by acting as an antioxidant and by promoting the growth of new liver cells. Silymarin also helps with the digestion of fats. It appears to help keep harmful substances out of liver cells.

Milk thistle can help prevent or reverse liver damage caused by alcohol, recreational drugs, pesticides, some poisons, or hepatitis.

Silymarin has been used (especially in Europe) to treat hepatitis, liver damage due to alcoholism, and poisoning by certain types of mushrooms.

There is no evidence that silymarin acts directly against HIV.

## WHY DO PEOPLE WITH HIV USE SILYMARIN?

Some medicines used to fight HIV can damage the liver. People who have had hepatitis are more likely to have liver problems when they take

antiretroviral drugs (ARVs). Milk thistle might help prevent liver damage.

Several ARVs can cause stomach problems, and silymarin can help treat indigestion.

## HOW IS SILYMARIN USED?

Silymarin is an extract of the seeds of the milk thistle plant. A standardized extract should be 80% silymarin (the active ingredient). One study showed that the shelf life of silymarin is only about three months.

The usual dosage of milk thistle extract is between 300 milligrams (mg) and 600 mg daily. Milk thistle does not dissolve easily in water, so milk thistle tea is not recommended.

## WHAT ARE THE SIDE EFFECTS?

There are no clearly documented serious side effects of milk thistle. Even very high doses do not seem to have any negative effects. However, some people get an upset stomach, diarrhea, bloating, or more gas when they start using silymarin. If this happens, cut back on your dosage and then increase it slowly.

A few people have allergic reactions to milk thistle. This is more common for people who have an allergy to another plant in the same family, like ragweed.

## HOW DOES IT INTERACT WITH OTHER THERAPIES?

There are no documented interactions of milk thistle with antiretroviral therapy (ART). One

study showed no effect of milk thistle on blood levels of the protease inhibitor indinavir in HIV-negative subjects. **Be sure your health care provider knows if you are using milk thistle.**

## HOW DO WE KNOW IT WORKS?

Milk thistle has been used for over 2,000 years, so a lot has been written about its health effects. There have been over 300 scientific studies of silymarin that document:

- Antioxidant effects
- Treatment of cirrhosis of the liver caused by alcoholism
- Treatment of chronic hepatitis
- Treatment of poisoning due to eating wild mushrooms
- Helping the liver repair itself

Most of the scientific studies of silymarin were published in Europe.

## THE BOTTOM LINE

Silymarin is an extract of the seeds of the milk thistle plant. It has been used for over 2,000 years to treat liver problems. No serious side effects or dangerous interactions have been noted.

For people with HIV, especially if they have had hepatitis, silymarin might help protect the liver from damage caused by ARVs. It might also reduce stomach upset caused by medications.

Be sure your health care provider knows if you are using milk thistle.

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