

get the facts

CAM and Hepatitis C: A Focus on Herbal Supplements

Hepatitis C, a liver disease caused by a virus, is usually chronic (long-lasting), with symptoms ranging from mild (or even none) to severe. Conventional medical treatments are available for hepatitis C; however, some people also try complementary and alternative medicine (CAM) therapies, especially herbal supplements. This fact sheet provides basic information on hepatitis C, summarizes scientific research on the effectiveness and safety of selected supplements, and suggests sources for additional information.

Key Points

- No CAM treatment has yet been proven effective for treating hepatitis C or its complications.
- It is important **not** to replace conventional medical therapy for hepatitis C with an unproven CAM therapy.
- Tell your health care providers about any complementary and alternative practices you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

About Hepatitis C

Hepatitis C, a communicable (contagious) disease of the liver, is caused by the hepatitis C virus (HCV). The term “hepatitis” means inflammation of the liver; HCV is one of several viruses in the hepatitis family. If the liver becomes inflamed, it cannot function properly and remove harmful material from the blood or convert food into energy.

Hepatitis C is transmitted primarily through contact with infected blood. It is not spread through sneezing, coughing, food or water, or casual contact. There is no vaccine for hepatitis C; the only way to prevent it is to avoid exposure.

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People who are newly infected have what is called acute hepatitis C. Most people with acute hepatitis C develop chronic hepatitis C, which can injure the liver over time. Many people with hepatitis C show no symptoms for many years; others experience mild or more serious symptoms.

People with more serious hepatitis C may need medication—interferon, alone or combined with ribavirin. However, not everyone with hepatitis C responds to drug therapy, and the drugs have side effects that can be difficult to tolerate.

Use of Herbal Supplements for Hepatitis C

A number of herbal products claim to be beneficial for the liver, and hepatitis C patients who do not respond to conventional drug therapy, cannot tolerate its side effects, or simply want to support their body's fight against the disease may try these products. For example, a survey of 1,145 participants in the HALT-C (Hepatitis C Antiviral Long-Term Treatment Against Cirrhosis) trial, a study supported by the National Institutes of Health (NIH), found that 23 percent were using herbal products at the time of enrollment. Although participants reported using many different herbal products, silymarin (milk thistle) was by far the most common.

What the Science Says

A review of the scientific evidence on CAM and hepatitis C found the following:

- No CAM treatment has been scientifically proven to successfully treat hepatitis C.
- A 2003 analysis of results from 13 clinical trials testing the effects of various medicinal herbs on hepatitis C concluded that there is not enough evidence to support using herbs to treat the disease.
- Two other reviews that covered a variety of CAM modalities for hepatitis C concluded that conventional therapies are the only scientifically proven treatments for the disease.
- In a 2002 NIH consensus statement on the management of hepatitis C, a panel of medical and scientific experts concluded that “alternative and nontraditional medicines” should be studied. Participants in a 2001 NIH research workshop on the benefits and risks of CAM therapies for chronic liver disease recommended research support for related laboratory and clinical studies.

The following section summarizes what is known about the safety and effectiveness of milk thistle and some of the other CAM products that people with hepatitis C use.

Milk thistle (scientific name *Silybum marianum*) is a plant from the aster family. Silymarin, the active extract of milk thistle, is believed to be responsible for the herb's medicinal qualities. Milk thistle has been used in Europe as a treatment for liver disease and jaundice since the 16th century. In the United States, silymarin is the most popular CAM product taken by people with liver disease.

Laboratory studies suggest that milk thistle may benefit the liver by protecting and promoting the growth of liver cells, fighting oxidation (a chemical process that can damage cells), and inhibiting inflammation. Study results from small clinical trials on milk thistle for liver diseases have been mixed; however, most of these studies have not been rigorously designed, or they have looked at various types of liver diseases—not just hepatitis C.

High-quality, well-designed clinical trials have not proven that milk thistle or silymarin is beneficial for treating hepatitis C. The HALT-C study mentioned above found that silymarin use by hepatitis C patients was associated with fewer and milder symptoms of liver disease and somewhat better quality of life, but there was no change in virus activity or liver inflammation. The researchers emphasize that this was a retrospective study, not a controlled clinical trial. More research on milk thistle for hepatitis C is needed before a recommendation can be made.

Milk thistle is generally well tolerated and has shown few side effects in clinical trials involving patients with liver disease. It may cause a laxative effect, nausea, diarrhea, abdominal bloating, fullness, and pain, and it can produce allergic reactions (especially among people who are allergic to plants in the same family, such as ragweed, chrysanthemum, marigold, and daisy).

Other supplements are also being studied for hepatitis C. For example:

- **Ginseng** has shown some beneficial effects on the liver in laboratory studies but has not yet shown effects in people.
- **Thymus extract** and **colloidal silver** are sometimes marketed for the treatment of hepatitis C, but there is currently no research to support their use for this purpose. Colloidal silver products can cause serious side effects (for more information, see the NCCAM fact sheet *Colloidal Silver Products* at nccam.nih.gov/health/silver/).
- People with chronic liver disease sometimes use **licorice root** or its extract **glycyrrhizin**. Some studies, reported from outside the United States, have looked at glycyrrhizin administered intravenously for hepatitis C. Preliminary evidence from these studies suggests that glycyrrhizin may have beneficial effects against hepatitis C. However, additional research is needed before reaching any conclusions.
- Preliminary studies conducted primarily outside the United States have examined the potential of the following herbal products for treating chronic hepatitis C: **lactoferrin**, **TJ-108** (a mixture of herbs used in Japanese Kampo medicine), **schisandra**, and **oxymatrine** (an extract from the sophora root). More research is needed before the safety and effectiveness of these products can be fully evaluated.

If You Have Hepatitis C and Are Thinking About Using an Herbal Supplement

- Do not replace proven conventional treatments for hepatitis C with CAM treatments that are unproven.
- Be aware that some herbal products may damage the liver. For example, the herbs kava and comfrey have been linked to serious liver damage.
- Also be aware that the label on a supplement bottle may not accurately reflect what is inside. For example, some tests of dietary supplements have found that the contents did not match the dosage on the label, and some herbal supplements have been found to be contaminated.
- Tell your health care providers about any complementary and alternative practices you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care. If you are pregnant or nursing a child, or if you are considering giving a child a dietary supplement, it is especially important to consult your health care provider. Supplements can act like drugs, and many have not been tested in pregnant women, nursing mothers, or children. For tips about talking with your health care providers about CAM, see NCCAM's Time to Talk campaign at nccam.nih.gov/timetotalk/.

NCCAM-Funded Research

NCCAM-supported research includes projects studying the effectiveness of:

- Silymarin for preventing and reversing complications of chronic hepatitis C
- Silymarin for the treatment of chronic hepatitis C in people who did not respond to conventional antiviral therapy, and in people with nonalcoholic steatohepatitis (a type of fatty liver disease)
- Commonly used herbal remedies for the treatment of hepatitis C in methadone-maintained patients
- Arginine (an amino acid) in reducing liver injury in individuals with alcohol-related hepatitis.

Also, NCCAM has supported studies that test the safety and tolerability of different dosages of silymarin in people with hepatitis C.

Finding a Clinical Trial on Hepatitis C

To find a clinical trial, visit the NCCAM Web site for a list of all NCCAM-funded clinical trials, or contact the NCCAM Clearinghouse. You can also search ClinicalTrials.gov, a database of thousands of clinical studies being sponsored by NIH, other Federal agencies, and the pharmaceutical industry. See "For More Information" below for these and other resources.

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For More Information

NCCAM Clearinghouse

The NCCAM Clearinghouse provides information on CAM and NCCAM, including publications and searches of Federal databases of scientific and medical literature. The Clearinghouse does not provide medical advice, treatment recommendations, or referrals to practitioners.

Toll-free in the U.S.: 1-888-644-6226

TTY (for deaf and hard-of-hearing callers): 1-866-464-3615

Web site: nccam.nih.gov

E-mail: info@nccam.nih.gov

National Digestive Diseases Information Clearinghouse

A service of the National Institute of Diabetes and Digestive and Kidney Diseases, NIH, the clearinghouse responds to inquiries, offers publications, and makes referrals. For a list of publications on hepatitis, go to digestive.niddk.nih.gov/ddiseases/pubs/hepatitis.

Toll-free in the U.S.: 1-800-891-5389

Web site: www.digestive.niddk.nih.gov

National Institute of Allergy and Infectious Diseases (NIAID)

NIAID conducts and supports basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases.

Web site: www.niaid.nih.gov

Centers for Disease Control and Prevention (CDC)

The CDC is one of the 13 major operating components of the Department of Health and Human Services, which is the principal agency in the Federal Government for protecting the health and safety of all Americans and for providing essential human services.

Web site: www.cdc.gov

ClinicalTrials.gov

ClinicalTrials.gov is a database of information on federally and privately supported clinical trials (research studies in people) for a wide range of diseases and conditions. It is sponsored by the National Institutes of Health and the U.S. Food and Drug Administration.

Web site: www.clinicaltrials.gov

PubMed®

A service of the National Library of Medicine (NLM), PubMed contains publication information and (in most cases) brief summaries of articles from scientific and medical journals. CAM on PubMed, developed jointly by NCCAM and NLM, is a subset of the PubMed system and focuses on the topic of CAM.

Web site: www.ncbi.nlm.nih.gov/sites/entrez

CAM on PubMed: nccam.nih.gov/research/camonpubmed/

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