

People with viral hepatitis are increasingly investigating and using non-traditional treatments, especially herbal supplements, to help combat hepatitis-related liver disease.

Parents of children with viral hepatitis infections are no exception. E-mail message boards and online discussions reflect a lively interest in herbal supplements that may help protect children's livers and bolster their immune systems.

But to date, little research has been conducted on the safety and efficacy of herbal supplements in children and adults with viral hepatitis, nor in the healthy adult population in general. Sometimes, experts warn, these supplements can interfere with and lessen the effectiveness of conventional drugs prescribed by doctors.

Physicians and alternative medical practitioners agree it is important that patients and parents talk to physicians ahead of time when considering alternative herbal supplements and, more critically, when taking them.



Despite a clear lack of scientific evidence, the use of complementary and alternative medicine (often called CAM for short) by the American public is popular. At a 2005 Institute of Medicine public briefing on CAM, it was stated that more than one-third of American adults routinely use CAM, spending more than \$30 billion a year of their own money.

A 2002 survey of 989 adult liver clinic patients conducted by Dr. D.B. Strader and others found that 39 percent had used some form of "alternative therapy." Of those, 21 percent had used herbals or botanicals. However, the herbals and botanicals were used for reasons besides liver disease, such as depression. Thirteen percent of all survey participants used herbals or botanicals specifically for their liver disease, and they used only milk thistle (12 percent) or licorice root (1 percent).

Dr. Kathi Kemper, pediatrician and director of the Center for Holistic Pediatric Education and Research at Children's Hospital Boston and author of *The Holistic*

Pediatrician, cites a 1992 pediatric outpatient survey in Montreal that found 11 percent of children had been treated by one or more alternative practitioners.

A British survey cited by Dr. Kemper found 20.5 percent of 521 children had used one or more forms of alternative treatment. In *Herbs in Pediatric and Adolescent Medicine*, Drs. Kemper and Paula Gardiner report that nearly 75 percent of teens who used alternative medicine used herbal supplements

Dr. Kemper reported that only a few herbs have been tested for safety and effectiveness, and most were tested on rats or adults—not children. Because children’s bodies process substances differently, the safety or dosage of these herbs cannot be safely evaluated based on the few available studies. Dr. Kemper’s articles repeatedly emphasize the lack of data on children treated with most herbal supplements. While a few herbs are generally considered safe based on their long, historical use, there are no clinical studies demonstrating the safety or effectiveness of most herbal treatments in the pediatric population.

In her book, Dr. Kemper instructs parents to use extreme caution when considering herbal supplements for children. Herb concentrations and dosages are not regulated by any government agency in the United States.

One must also remember that an appropriate pediatric dosage might be considerably lower than a dosage advised on a supplement label.

Herbal remedies manufactured or packaged outside of the United States and Germany may contain ingredients that do not appear on the package’s label. Dr. Kemper recommends purchasing only herbs manufactured in countries such as the United States and Germany. Even then, she cautions, the concentration of active ingredients in herbal supplements can vary, no matter what the package says. One bottle may contain leaves of an herb while another contains its seeds.

If parents want to be sure their child is getting a particular plant component of a particular concentration and quality, it might be in their best interest to consult a naturopathic physician for guidance in this decision. While most MDs are not experts in herbal supplements, naturopathic physicians (NDs) have extensive and current knowledge. Naturopaths can direct parents toward, or prescribe, herbal supplements produced by companies adhering to the highest preparation standards. They will know exactly which plant constituents are contained in an extract or dry plant product, its potency and the recommended pediatric dosage. Also, the National Nutritional Food Association (NNFA) can provide this information.

Pesticides, toxins and other pharmaceuticals can be present in herbal supplements from unregulated manufacturers. Some packages can actually contain no active ingredient at all.

According to one report cited by Dr. Kemper, up to 30 percent of herbal remedies imported from China were found laced with pharmaceuticals such as phenacetin and steroids. Pesticides and organometallic contaminants have been found occasionally as well.

Some product labels claim compliance with guidelines established by organizations striving to maintain high standards in herbal marketing, such as the American Herbal Pharmacopoeia or the German Commission E, Dr. Kemper points out. Choosing supplements with standards such as these is recommended if individuals with hepatitis infections do purchase herbal supplements after talking to their doctors.

Under current United States law, herbs and dietary supplements can be marketed without government oversight or testing for effectiveness or safety. In Germany, herbs are regulated and prescribed like drugs. But in the United States, much more research is required before the U.S. Food and Drug Administration (FDA) ever considers licensing an herbal supplement as a sanctioned medical treatment.

Disclosing to Physicians Is Critical

One potential pitfall in the use of herbal supplements is that many patients or parents do not disclose herbal supplement use to their medical doctors.

Because of the lack of sound scientific and medical research on herbs and herbal interactions with conventional medical therapies, counteractions and even dangerous interactions are possible.

There are many books available to the public containing information regarding herbal supplement and drug interactions. Parents who use all available resources—alternative health professionals and alternative medical literature—will go a long way in ensuring for their child a safe, effective and complementary use of herbal medicine with conventional therapy.

Traditional practitioners and alternative experts agree that patients, and parents of children with hepatitis infections, should always disclose the use of herbal therapies to physicians. The National Center for Complementary and Alternative Medicine (NCCAM) at the National Institutes of Health recommends disclosure to health

providers regarding any herbal supplements, other dietary supplements, or medications (whether prescription or over-the-counter) that you are using or considering. This is important for the patient's safety. Even if the provider does not know about the actions or interactions of an herbal supplement or other CAM treatment, they can access the most current medical guidance. Additionally, the American Academy of Pediatrics has encouraged pediatricians to be open to discussions about alternative treatment and herbal supplements with patients and their parents to encourage full disclosure.

According to an article in the March 2001 issue of *Pediatrics*, pediatric use of herbal supplements is common among children with chronic illness or disabilities. In the article, the Academy recommends, "It is important to provide balanced advice about therapeutic options, to guard against bias, and to establish and maintain a trusting relationship with families."

The article makes the following recommendations to pediatricians:

- Seek information about alternative treatments...and be prepared to share it with families.
- Evaluate the scientific merits of specific therapeutic approaches.
- Identify risks or potentially harmful effects.
- Provide families with a range of treatment options.
- Educate families to evaluate information about all treatment approaches.
- Avoid dismissal of CAM in ways that communicate a lack of sensitivity or concern for the family's perspective.
- Recognize if you are feeling threatened by discussions of alternative treatment and guard against becoming defensive.
- If an alternative treatment approach is endorsed, offer to assist in monitoring and evaluating the response.
- Actively listen to the family and the child with chronic illness.

Another important element in the practice of complementary medicine is the context or environment in which it is used. Future studies must consider this overall approach to

understand and fully evaluate the usefulness of these therapies, wrote Dr. Leonard Seeff, senior scientist for hepatitis C research at the National Institutes of Health in the September 2001 issue of *Hepatology*.

“Chinese practitioners use herbs in the context of the Yin and the Yang, Ayurvedic practitioners in the context of the four Vedas, and Native Americans in the context of ceremony and prayer. Similarly, neighborhood herbalists in America typically recommend herbs in the context of personal advice and incantation. Thus, herbal therapies go beyond simply prescribing pills. Natural medicine stresses the psychosocial aspects of health as well as faith healing and the drug-placebo effect. Clearly, future clinical trials aimed at analyzing alternative forms of therapy must include these psychological and spiritual elements if they are to be anything more than pharmacological studies of a drug that happens to be derived from a plant,” Dr. Seeff wrote.

Herbs Commonly Used to Treat Hepatitis

Milk Thistle

Since the 16th century, Europeans have used milk thistle for its medicinal value. Today, researchers are investigating this plant to see if it is a potential ally in the fight against liver disease.

According to NCCAM, milk thistle originally comes from Europe where it has been used as a treatment for liver disease and jaundice since the 16th century. It is now found throughout Europe, Asia and North America. Its scientific name is *Silybum marianum*. The ingredient believed to be responsible for its medicinal qualities is called silymarin. Silymarin is found in the fruits of the milk thistle plant.

Silymarin is made up of three parts: silybin, silidianin and silicristin. Silybin is the most active ingredient and is believed responsible for the benefits attributed to silymarin.

Currently, very few doctors are recommending milk thistle for children with chronic hepatitis infection. Some, including Dr. Maureen Jonas, a pediatric gastroenterologist at Children’s Hospital Boston, say they are still waiting for authoritative studies to prove its value and for better industry and government standards to regulate the composition of milk thistle supplements.

But many hepatitis patients young and old are taking this supplement as one more tool to fight chronic viral hepatitis. Government health authorities in Germany have

approved milk thistle as a complementary treatment for hepatitis.

The results of scientific studies to date do not definitively find that milk thistle is beneficial in treating hepatitis in humans, according to NCCAM. Studies in laboratory animals suggest that silymarin may have various benefits to the liver, such as promoting the growth of certain types of liver cells, having a protective effect upon liver cells, fighting a chemical process called oxidation that can damage cells, and inhibiting inflammation. However, in some cases, a consistent pattern of benefit was not seen, and these studies did not specifically examine the effects of silymarin on hepatitis.

NCCAM reports that although some studies on silymarin or milk thistle have focused on humans, these studies have generally been small and on liver diseases rather than on hepatitis C infection specifically. The results have been contradictory (with some positive and some negative). A review and a meta-analysis published in 2001 on silymarin in the treatment of liver diseases found it to be generally safe, but contained no firm conclusions with regard to its use to treat viral hepatitis. A 2002 systematic review on milk thistle for liver disease, conducted by Dr. B.P. Jacobs and others, as reported in *The American Journal of Medicine*, found "no reduction in mortality (frequency of death as an outcome), in improvements in histology (tissue studies) observed through liver biopsy, or in biochemical markers of liver function." Further, NCCAM advises that data was too limited to support recommending milk thistle for treatment of liver disease

For more information, contact the NCCAM Clearinghouse by telephone at 1-888-644-6226 or visit their web site at www.NCCAM.nih.gov.

The *Encyclopedia of Natural Medicine* found the most interesting effect of silybum components on the liver is their ability to stimulate protein synthesis. The result is an increase in the production of new liver cells to replace the damaged old ones.

Studies in animals have shown that silymarin may be an effective antioxidant, which means it fights a destructive chemical process in the body known as "oxidation" in which cells are harmed. Silymarin increases the amount of glutathione, a principal antioxidant in the liver, stomach and intestines. The antioxidant action of silymarin appears 10 times as great as that of vitamin E.

Researchers have also found silymarin blocks various types of toxins from entering and injuring liver cells. By binding to the receptor sites on the exterior of the liver cell membrane, it inhibits the action of circulating toxins.

The most dramatic example of this action is the protection silymarin provides against the toxic death cap mushroom (*Amanita phalloides*). Because of its capacity to reduce liver toxicity from this type of mushroom poisoning, an intravenous form of silymarin was developed for treatment of *Amanita phalloides* ingestion.

Animal studies indicate that milk thistle may also prevent inflammation of the liver, but carefully controlled studies that include liver histology are needed to confirm this effect.

A randomized controlled trial on adult hepatitis patients suggests that a specific component in silymarin may be beneficial in managing chronic viral hepatitis.

In this study, reported in the *International Journal of Clinical Pharmacology, Therapy, and Toxicology*, 10 patients with chronic viral hepatitis were assigned to the treatment group and 10 others were assigned to the placebo group. The treatment group received 240 milligrams of silybin, a component of silymarin, two times a day for one week.

The results of tests that measure how well the liver is functioning showed significant improvement in the treatment group, suggesting that silybin may help treat chronic viral hepatitis.

In animal studies, silymarin has been shown to promote four basic functions: liver cell growth, anti-oxidation, antihepatotoxic activity and inflammation inhibition.

Milk thistle appears to have very little toxicity, and few side effects. According to NCCAM, it can cause a laxative effect; less common effects include nausea, diarrhea, abdominal bloating, fullness, and pain. Milk thistle can produce allergic reactions, which tend to be more common among people who are allergic to plants in the same family (e.g., ragweed, chrysanthemum, marigold, and daisy). Safety in young children, pregnant or nursing women, and individuals with severe renal disease has not been formally established, according to *The Natural Pharmacist*.

“As a medical professional, I have no ability to recommend milk thistle since I have no way to be sure there is milk thistle in any given capsule, and if so, exactly how much there is, regardless of what the label may say,” commented Dr. Jonas. “There are no standards or controls on this type of product, so how can I recommend a dose?”

“Milk thistle is undergoing some trials but there are no such studies I can use to determine either the usefulness of milk thistle or an appropriate pediatric dose,” she explained. “This is not to say I think that herbal or alternative treatments may not be useful—I simply cannot make that determination without the appropriate studies.”

Physicians practicing conventional medicine often do not have the time to know the current herbal medicine literature. This is the reason that it is essential to contact a naturopath when using herbal remedies and an MD when using a pharmaceutical.

Dr. Philip Rosenthal, professor of pediatrics and surgery, medical director of the Pediatric Liver Transplant Program and director of Pediatric Hepatology at the University of California at San Francisco, echoed Jonas' concerns.

"I know lots of my patients [take it], but there are no current studies to demonstrate its effectiveness without causing harm," he noted. "I usually tell my patients that since there is no control from lot to lot or bottle to bottle of milk thistle, one bottle may have leaves, another plant stems, another plant roots, another young plants, another old plants. Thus, without quality control, why take a chance of causing harm?"

Consumers should also be aware that liquid milk thistle (tincture) contains grain alcohol, which can harm or stress the liver.

Several studies that focused on adults showed milk thistle had an effect on drug levels in the body by changing the activity of enzymes in the liver. This can cause higher levels of certain drugs in the body, and lower levels of other drugs. These findings emphasize how important it is to keep medical practitioners informed of herbal supplement usage.

According to an article in *Drug Metabolism and Disposition 2000*, researchers found, "patients and health care professionals must be encouraged to discuss the use of herbs and be educated about the potential interactions between herbs and drugs."

Here are drugs the article reported silymarin could impact. Levels of these medications and others may increase or be enhanced if taken by people who are also taking milk thistle:

- Methadone
- Heart drugs: Tambocor (flecainide), Rythmol (propafenone)
- Antibiotics: Erythromycin, rifampin
- Anti-seizure drugs: Carbamazepine (Tegretol)
- Antidepressants: St. John's Wort, Zyban/Wellbutrin (bupropion), Paxil (paroxetine), Prozac (fluoxetine), Luvox (fluvoxetine), Serzone (nefazodone), Zoloft (sertraline), Effexor (venlafaxine)

- Antihistamines: Hismanal (astemizole), Seldane (terfenadine)
- Antifungals: Itraconazole (sporanox), Ketoconazole (nizoral)
- Gastrointestinal motility agents: Propulsid (cisapride)
- Ergot drugs: Ergonovine, Ergomar (ergotamine)
- Anti-psychotics: Clozaril (clozapine), Orap (pimozide)
- Sedatives/sleeping pills: Ambien (zolpidem), Halcion (triazolam), Versed (midazolam)
- Lipid-lowering drugs (statins): Lescol (fluvastatin), Mevacor (lovastatin), Pravachol (pravastatin), Zocor (simvastatin), Baycol (cerivastatin)
- Transplant drugs: cyclosporine (Neoral, Sandimmune), ProGraf (tacrolimus)

Milk thistle also has the potential to lower levels of the following drugs:

- Anti-parasite drugs: Mepron (atovaquone)
- Sedatives/sleeping pills: Ativan (lorazepam)
- Hormones: Estrogen

Licorice Root

One herb used by some patients with hepatitis C virus infections is an extract of the licorice root, glycyrrhizin, which has been used for centuries to treat various ailments including liver inflammation. It is available in the United States in powder and pill forms.

A summary of the research findings, according to NCCAM, indicates:

- Laboratory studies of glycyrrhizin in cell cultures suggest that it may have antiviral properties.
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- In a review of several randomized controlled trials, researchers reported that glycyrrhizin has a potential for reducing long-term complications in chronic

hepatitis C in those patients who may not respond to interferon. Several of the trials reviewed indicated improvements in liver tissue damaged by hepatitis. Some also showed improvements in how well the liver performed after treatment.

- A 1997 study and a 2002 review suggest that long-term administration of glycyrrhizin might prevent liver cancer in patients with chronic hepatitis C.
- The use of glycyrrhizin as a complementary therapy (i.e., used in addition to conventional interferon therapy) has been studied, but no significant benefit has been found.
- Recent clinical trials have shown that taking glycyrrhizin lowers the levels of liver enzymes (increased levels of certain liver enzymes indicate liver damage or inflammation). However, taking the herb did not reduce the amount of HCV in patients' blood, a critical indicator of the long-term progress of the infection.
- In Japan, a product called SNMC (Stronger Neominophagen C) that contains glycyrrhizin and other ingredients has been used to treat acute and chronic hepatitis. In animal studies, licorice root appears to:
 - Have anti-oxidant properties
 - Reduce ALT levels (a liver enzyme that is released into the bloodstream when liver cells are damaged)
 - Impede fibrosis or liver scarring

However, more research and randomized clinical trials are needed to fully assess the safety and benefits of licorice root, doctors say. A basic requirement for that goal, however, is the development of a purified and reliable form of the product.

According to NCCAM, taking licorice over a prolonged period of time can lead to potentially serious side effects, including high blood pressure, salt and water retention, swelling, depletion of potassium, headache, and/or sluggishness. Glycyrrhizin can worsen ascites, the accumulation of fluid in the abdominal cavity, a condition that can be caused by cirrhosis. The herb also can interact with certain drugs, such as diuretics, digitalis, antiarrhythmic agents, and corticosteroids.

As with other herbs, the safety and efficacy of licorice root in children has not been established.

Other Herbs That May Help People with Liver Disease

Several other herbs and herbal combinations have shown at least limited success in the treatment of liver disease in adults. Much more research and extensive testing are needed before these herbs become part of licensed medicinal use. These are some of the most promising herbs for liver health, according to Dr. Seeff's report in *Hepatology*:

- **Plantago Asiatic Seed:** The active component of the plantago Asiatic seed is aucubin. It inhibits hepatitis B virus replication in vitro and in animals. In a human trial cited by Dr. Seeff, it decreased hepatitis B DNA levels.
- **Herbal Medicine 861 (HM861):** HM861 is a combination of 10 herbs shown to decrease fibrosis or liver scarring. In three trials with the Chinese herbal mixture, 73 percent of adult patients with hepatitis B virus (HBV) infection experienced ALT (liver enzyme) declines to normal ranges. Liver biopsies of these patients showed reductions in scarring, although all the patients remained positive for the hepatitis B surface antigen (HBsAg).
- **TJ-9:** TJ-9, or Sho-saiko-to, is an herb used in Japan to treat HBV infection. In a long-term (five-year) study of HBsAg positive patients given conventional drugs, with TJ-9, the development of liver cancer was significantly lower in those taking this herb.
- **TJ-108:** TJ-108, or Ninjin-yomei-to, is an herbal mixture that may have antiviral properties that are beneficial in fighting hepatitis C virus (HCV) infections. It contains *Schisandrae fructus*, the active component of which is Gomisin A. In one very small study in 2000, Dr. J.C. Cyong and others compared TJ-108 with two other Kampo herbal formulas for effects in 37 patients who had chronic hepatitis C and had been treated before with interferon. The findings were that TJ-108 may have antiviral properties, which the authors attributed to schisandra fruit and its lignan gomisin A. These findings need to be interpreted with caution because of the study's small size and because use of an herbal formula, not schisandra alone, was evaluated; herbal formulas contain many ingredients that could cause a variety of effects. TJ-108 is being evaluated in Japan as a complement to Western treatments.
- *Phyllanthus amarus* is promising substance for chronic HBV infections. The extract of the plant inhibits the viral polymerase and decreases HBV DNA levels. The exact mechanism is not fully understood and studies are underway.

Impact of Other Herbal Supplements on Children with Viral Hepatitis

Parents may use—or wonder about—common herbal supplements that are advertised as preventing colds and performing other preventive or medical functions. Here is a glimpse at some common herbs and how they may impact children with viral hepatitis.

Echinacea

Three species of echinacea have been used therapeutically: *E. purpurea*, *E. pallida* and *E. angustifolia*. Echinacea is believed to be an immune booster and Europeans and Americans have used it since the 1930s as therapy for colds, flu and infection.

American Plains Indians used this plant medicinally more than any other plant.

Echinacea is considered generally safe among herbal practitioners, although no well-documented scientific studies have been performed in children who took echinacea for colds, ear infections or any of the common conditions for which it is widely used. Echinacea's efficacy in treating these conditions in children remains unproven.

Echinacea should not be used in progressive systemic and auto-immune disorders such as tuberculosis, connective tissue disorders, and diseases such as lupus. According to the German Commission E, echinacea's use in AIDS patients is controversial.

The FDA Special Nutritionals Adverse Events Monitoring System (SN/AEMS) has several reports of toxic hepatitis in people taking echinacea. It reports one child suffered lead poisoning after taking a supplement of echinacea, due to contamination of the product.

NCCAM reports that an NCCAM-funded clinical trial of echinacea for the prevention and treatment of the common cold in adults found that none of three different preparations of the root of *Echinacea angustifolia* at 900 mg per day had significant effects on whether volunteers became infected with a cold virus, or on the severity or duration of symptoms among those who developed colds.

The study, reported in 2005 in the *New England Journal of Medicine*, included 437 healthy adult volunteers who were assigned at random to receive one of the echinacea preparations or a placebo. (There are critics of this study who believe that the dosage of echinacea used was too low.)

The trial was designed to test if echinacea would help prevent or treat cold symptoms, because this is how echinacea is often used. *Echinacea angustifolia* was chosen as it is

one of the species endorsed by the World Health Organization for treating the common cold. Earlier, smaller studies had found that the three preparations used benefited adults with the common cold, and these preparations represent some of the different ways that echinacea is available and used for colds.

NCCAM contends that research on botanicals, including echinacea, presents a number of challenges in terms of determining the product's active elements, standardizing the product, and deciding on an appropriate dosage. Challenges to echinacea research include:

- Determining whether the roots, leaves, flowers, seeds, or stems are the most effective parts of the plant
- Investigating the differences between echinacea species
- Determining the proper dose

Feverfew (*Tanacetum parthenicum*)

Feverfew may be effective in treating some headaches in adults, especially migraines. No studies have been conducted to assess its safety or effectiveness in children. Side effects include rebound headache (when treatment ends), oral ulcers and gastric disturbances. Feverfew may interact with anticoagulants and aspirin. Studies also indicate feverfew may be an effective treatment for fever. It should not be given to pregnant or nursing women or children under the age of 2.

Ginger (*Zingiber officinale*)

Ginger is used worldwide as a spice, condiment and herbal remedy. The Chinese have used ginger for at least 2,500 years to combat nausea and other ailments. The Greeks wrapped ginger in bread and ate it after meals to aid digestion.

Given its long history of use as a food, it is generally considered safe, except for a rare allergic reaction resulting in contact dermatitis.

In a small pilot study of adult chemotherapy patients, ginger was found to help reduce chemotherapy-related nausea, according to Dr. Kemper.

Studies on ginger's effect on motion sickness in 1,741 tourists traveling by sea showed ginger to be as effective as prescription and non-prescription medications in preventing sea sickness.

Studies have also been conducted indicating the use of ginger as an anti-inflammatory and antithrombotic (blood thinning) agent.

There have been no reports of toxicity or adverse events with ginger use. No known drug interactions with ginger have been reported. Safety during childhood has not been established.

Ginseng

According to Dr. W. Abebe in a 2002 article in *Journal of Clinical Pharmacy and Therapeutics*, the herb ginseng is usually used with the belief that it will boost the immune system and increase stamina; such properties are thought to be more useful for the elderly and those recovering from illness.

There have been no studies in humans indicating that ginseng helps people with viral hepatitis. However, Dr. M Zuin and others found that ginseng may be helpful for elderly people with liver conditions similar to hepatitis, as reported in the *Journal of International Medical Research* in 1987.

There are two “true” ginsengs, *Panax quinquefolius* and *Panax ginseng* and one “false” ginseng, *Elutherococcus senticosus*.

General adverse (negative) effects of ginseng can include insomnia, headache, nosebleed, nervousness, and vomiting, advises NCCAM. Prolonged use of caffeine and a high dose of ginseng may be associated with hypertension, which is of particular concern for people with cardiovascular disease or diabetes. In addition, people with diabetes who use insulin should be aware that ginseng has demonstrated hypoglycemic effects (lowering of the blood sugar). Ginseng has been shown in laboratory studies to inhibit grouping of platelets in the blood, increasing bleeding risk. Because of this, using ginseng along with NSAIDs (non-steroidal anti-inflammatory drugs), such as aspirin or ibuprofen, should be discussed with your health care provider.

To date, no studies on the safety or efficacy of ginseng in children have been completed.

St. John’s Wort (*Hypericum perforatum*)

St. John’s wort interacts with a variety of medications and it is recommended that anyone thinking of using it first confer with their physician.

Some patients with hepatitis take St. John’s wort to treat depression caused by

interferon. Randomized, controlled, double-blind trials show a significant effectiveness of St. John's wort in treating mild to moderate depression, according to an article in *Pediatrics in Review* by Dr. Kemper. Side effects such as sedation, dizziness and confusion have been reported.

Although most studies have been done in adults, one study of over 100 children under the age of 12 found St. John's wort to be a safe and effective way of treating mild to moderate symptoms of depression in children. However, more studies need to be done before pronouncing this herb safe for children. It's unknown if the risks outweigh the benefits.

Organ transplant patients should exercise caution with this herb. One report, in *Progress in Transplantation*, suggests St. John's wort can somehow suppress absorption of cyclosporine, a drug taken to reduce organ rejection in transplant patients.

Patients who took St. John's wort with cyclosporine had a resulting cyclosporine level that was too low to be useful. When St. John's wort consumption stopped, the cyclosporine levels increased back to baseline levels needed. This demonstrates the importance of disclosing all herbal supplement use to physicians.

Herbs People with Viral Hepatitis Should Avoid

While some herbs may be helpful for people with hepatitis, there are some that can exacerbate or worsen liver disease:

- Pyrrolizidine alkaloids, including Crotonaria, Gordolobo herbal tea, Heliotropium, Maté (Paraguay) tea, *Senecio aureus* and *Symphytum officinale* (Comfrey)
- Chaparral leaf
- Germander
- Pennyroyal (squawmint oil)
- Jin Bu Huan
- Some traditional Chinese herbs
- Kava (rhizome of pepper plant)

- Kombucha mushroom (tea)
- Valerian root and skullcap
- Mistletoe
- Margosa oil

Ground Rules for Investigating Herbal Supplements

The following recommendations are from *Complementary and Alternative Medicine: Questions to Consider* by Dr. Daniel Eskinazi, Ph.D., and Deborah Daly, M.S., for the Carol Ann Schwartz Cancer Initiative and Columbia University. They are helpful guidelines for anyone considering alternative treatments for themselves or their children.

- Understand your motivations in seeking alternative treatments and herbal supplements. If you understand your goals, you can more easily find the type of treatment you want.
- Become informed about the options. Thoroughly research the type of herbal or alternative therapy you would like to use.
- Know upfront how much it will cost. Will insurance pay for it, or will you have to pay for it out-of-pocket?
- Assess carefully if it will really work. Testimonials can be powerful, but look into the claims made by the manufacturer, especially if they sound too good to be true. Contact consumer organizations, support groups and individuals who have used the therapy or supplement.
- Be careful when mixing therapies. Traditional drug and herbal remedies need to be used with extreme caution. Make sure all your doctors and health practitioners know what you are taking and what you are doing.
- Tell your physician what you are doing and taking. It is always a good idea to tell your doctor what you're doing, and report your progress. If your doctor discourages you from a particular therapy, find out why. Seek out additional opinions, and above all, stay informed.

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