

a series of fact sheets written
by experts in the field of liver
disease

CAM: Complementary and Alternative Medicine

Lucinda Porter, RN

THE NATIONAL CENTER FOR COMPLEMENTARY and Alternative Medicine (NCCAM) defines CAM as “a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine.” Medicinenet.com defines “conventional medicine” as “Medicine as practiced by holders of M.D. (medical doctor) or D.O. (doctor of osteopathy) degrees and by their allied health professionals, such as physical therapists, psychologists, and registered nurses.” Some other terms for conventional medicine are Western medicine, mainstream medicine, modern medicine, and allopathic medicine. Allopathic medicine focuses on treatment of diseases.

Complementary Medicine is used *with* conventional medicine. Alternative medicine is used *instead* of conventional medicine. Many forms of medicine have rich traditions and have been practiced for centuries. Aspects of other traditions are being integrated into conventional medicine making it harder to draw clear lines between what is conventional and what is not. Health insurance companies are seeing the value in some types of CAM. Reimbursement for chiropractics and acupuncture is common.

If you pursue CAM options, be informed and proceed safely. Ask your medical provider and/ or other acquaintances to recommend well-regarded CAM experts. Never take herbs or other supplements without first discussing this with your primary medical provider. Tell your CAM practitioner if you have hepatitis C or any other serious or potentially infectious diseases.

Acupuncture

This healing practice is from China and has been used for centuries. It is based on the belief that energy flows through the body and that disease occurs if energy is blocked or out of balance. Slender needles are inserted into anatomical points in order to stimulate energy. Acupuncture is one of many tools used by practitioners of Traditional Chinese and Oriental Medicine. Practitioners should use sterile, single-use needles. Many insurance companies cover treatment. Congress is considering Medicare coverage for acupuncture.

Ayurveda

An ancient system from India that focuses on healthy living. Based on the belief that humans consist of three life forces, health problems arise when these forces are out of balance. Ayurveda uses diet, herbs, yoga, meditation, and self-knowledge to prevent and treat disease.

Body Work and Massage

There are many types of massage. Some examples are:

- **Acupressure** – Applies pressure to the same anatomical points used in acupuncture.
- **Aromatherapy massage** – Combines various scents with massage, usually with scented oils.
- **Foot reflexology** – Applies pressure to points on the feet that correspond to parts of the body.
- **Shiatsu** – A Japanese technique that literally means “pressure with fingers.” Shiatsu is based on similar foundations used in acupuncture and acupressure.
- **Watsu** – A technique performed in water that uses shiatsu, acupressure, and gentle movement.

Chiropractics

This uses a whole body approach emphasizing body structure and spinal alignment. Problems occur when the spine is misaligned. Chiropractors manipulate the body and use other interventions to correct problems. Many insurance plans include chiropractic coverage.

Curanderos, Shamans, and Folk Medicine

Many ethnic groups have their own traditional healing arts. These are sometimes called shamans or medicine men and women. *Curanderos*, Spanish for “healers,” are common in Mexico, parts of Central America and the United States. Curanderos have been practicing for hundreds of years. Curanderos use many techniques, such as massage, plants and prayer. There are indigenous folk healers all over the world, some of whom have immigrated to the U.S. and have brought their traditions with them.

Herbal Medicine

This practice uses herbs and other botanicals for the treatment and prevention of various medical problems. Not regulated by the Food and Drug Administration, these substances are classified as “dietary supplements.” Herbal medicine is also used to help with the side effects of chemotherapy and other medical treatments.

Homeopathy

Homeopathy is based on the “laws of similars” and “let likes cure likes.” The belief is that balance is restored when minute amounts of substances are orally ingested. Higher doses of the same substance would cause rather than cure those symptoms. This system has been used for at least 200 years.

Naturopathic Medicine

While placing a strong emphasis on prevention, naturopaths are trained to use many types of therapies. Naturopaths use a multi-disciplinary approach from many of the healing arts. Treatment can include medicinal herbs, homeopathy, acupuncture, massage, and dietary supplements, to name a few.

Osteopathic Medicine

Osteopaths are medical doctors who have completed medical school, a residency, and licensing exams. They have the initials “D.O.” after their name rather than “M.D.” In most parts of the world, they can practice surgery, deliver babies, and prescribe medications. Although the practice encompasses the whole person, osteopathic doctors believe that diseases can be treated by focusing on dysfunctions in the musculoskeletal system. Osteopaths are specially trained in techniques for manipulating the body to restore health. This treatment is covered by most insurance plans.

Prayer and Faith Healing

This practice uses prayer and spiritual rituals in order to restore health and well-being. Many religions have a rich tradition of the use of prayer for healing.

Reiki

This Asian art focuses on healing a patient’s physical maladies by focusing on spiritual healing. In this practice, the reiki practitioner channels “universal life energy” to the patient. No pressure is applied to the body and sometimes there is no physical contact.

Therapeutic Touch (TT)

This is a modern approach using an old concept. TT was developed by a nurse and has attracted the attention of other nurses

and other practitioners. Humans are seen as having complex fields of energy which can disturb health if balance is disrupted. Light or no touch is used to sense energy imbalances and to restore harmony.

Traditional Chinese Medicine (TCM)

Simply stated, TCM views the body as having *qi* (pronounced chee), which is energy flowing throughout the body. Health problems develop when *qi* is blocked and disharmony occurs. Practitioners use many tools to restore energy flow. Examples of treatment include acupuncture, massage, and herbs. *Tai Qi* or *Tai Chi* and *Qigong* are two of the many “physical” practices that are offered in TCM. These Asian arts combine meditation and movement with the goal of restoring balance. Chinese medicine has gathered strong support in this country.

Yoga

There are over a hundred different types of yoga. In this country, Hatha yoga is one of the most familiar types. It uses physical movements, postures, and breathing to restore and maintain physical, mental, and spiritual health.

For more information see the following HCSP Factsheets:

- *Hepatitis C and CAM: Information and Finding a Practitioner*
- *Hepatitis C and CAM: Complementary and Alternative Medicine Resources*

For more information about hepatitis C, hepatitis B and HCV coinfections, please visit www.hcvadvocate.org.

• *hcsPFACTsheet* •
A publication of the Hepatitis C Support Project

<p>Executive Director Editor-in-Chief, HCSP Publications Alan Franciscus</p> <p>Design Paula Fener</p> <p>Production C.D. Mazoff, PhD</p> <p>Contact information: Hepatitis C Support Project PO Box 427037 San Francisco, CA 94142-7037 alanfranciscus@hcvadvocate.org</p>	<p>The information in this fact sheet is designed to help you understand and manage HCV and is not intended as medical advice. All persons with HCV should consult a medical practitioner for diagnosis and treatment of HCV.</p> <p>This information is provided by the Hepatitis C Support Project • a nonprofit organization for HCV education, support and advocacy • © 2005 Hepatitis C Support Project • Reprint permission is granted and encouraged with credit to the Hepatitis C Support Project.</p>
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HCV & CAM: Complementary and Alternative Medicine Resources

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- Alternative Health News Online
www.altmedicine.com
- Alternative Medicine Foundation
www.amfoundation.org
- Center for Science in the Public Interest
www.cspinet.org
- The Cochrane Collaboration (Independent and reliable review of medical evidence)
www.cochrane.org
- Complementary and Alternative Medicine
www.cam.org.nz
- Drugs.com
www.drugs.com
- HealthWeb
www.healthweb.org (Click on "alternative")
- Health World Online Alternative Medicine Center
www.healthy.net/clinic/therapy
- Hepatitis C Choices published by Hepatitis C Caring Ambassadors Program
www.hepcchallenge.org

- Hepatitis C Support Project (HCSP)
www.hcvadvocate.org
- Mayo Clinic
www.mayoclinic.com
- Memorial Sloan-Kettering Cancer Center
www.mskcc.org/mskcc/html/11570.cfm
- National Center for Complementary and Alternative Medicine (NCCAM)
nccam.nih.gov
- NCCAM Clearinghouse, P.O. Box 7923, Gaithersburg, MD 20898-7923; (888) 644-6226; TTY (for deaf and hard-of-hearing callers) (866) 464-3615
- NOAH: New York Online Access to Health
www.noah.health.org/en/alternative/index.html
- University of Pittsburgh
<http://www.hsps.pitt.edu/guides/chi/treatments/alternative>
- University of Texas M.D. Anderson Cancer Center
www.mdanderson.org/departments/cimer
- Weil, MD, Andrew
www.drweil.com

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HCV & CAM: *Dietary Supplements to Avoid*

Lucinda Porter, RN

“NATURAL” DOES NOT MEAN SAFE. The following contains some natural substances that are potentially harmful. This list is by no means exhaustive.

Supplements that are specifically associated with hepatotoxicity (liver poisoning) are designated with an “*”. Substances on this list are referred to in their oral form only.

Any herb containing pyrrolizidine alkaloids should be avoided by those with liver disease. It is important to use supplements from trustworthy sources. All sorts of contaminants have been found in Chinese herbs, such as arsenic, cadmium, lead, mercury (sometimes in the form of calomel or cinnabar) and thallium.

Ackee (*Blighia sapida*)*
Aconite (*Aconitum carmichaeli* and *A. kusnezoffi*)
Aflatoxins*
Amanita Phalloides, also known as “death cap mushrooms”*
Androstenedione
Aristolochic acid, also known as “mu tong,” “guan fang ji” or “snakeroot”¹
Arnica (*Arnica montana*)*²
Barberry (*Berberis vulgaris*)
Belladonna (*Atropa belladonna*)
Bilberry (*Myrtilli folium*)
Birch oil (*Betula lenta*)*
Bitter Orange (*Citrus aurantium*)
Bittersweet (*Solanum dulcamara*). See “Nightshade”

Black Cohosh (*Cimicifuga racemosa*)*³
Black Root (*Symphytum officinale*)*⁴
Blessed Thistle (*Cnicus benedictus*)⁵
Bloodroot (*Sanguinaria canadensis*)⁶
Blue Cohosh (*Caulophyllum thalictroides*)
Blue-green Algae (*Spirulina*)*
Boldo (*Peumus boldo*)⁷
Borage (*Borago officianalis*)*
Boran, also known as “boric acid” and “borax”
Bryony (*Bryonia alba*)
Buckeye (*Aesculus hippocastanum*), also known as “horse chestnut”*
Bupleurum (*Bupleurum chinense*, *B. falcatum*, *B. scorzoneraefolium*)*⁸
Bush Tea (*Crotalaria*)*
Butterbur (*Petasites hybridus*)*
Calamus (*Acorus calamus*)
Cascara Sagrada (*Rhamnus purshianus*)*
Celandine (*Chelidonium majus*)*
Chaparral (*Larrea tridentata*)*
Chaso*⁹
Colloidal Silver
Coltsfoot (*Tussilago farfara*)*
Comfrey (*Symphytum officinale*, *S. asperum* and *S. uplandicum*)*
Creatine*
Delphinium (*Delphinium consolida*)
DHEA (Dehydroepiandrosterone, 5-androsten-3)*
Dogbane (*Apocynum cannabinum*)
Elder, Elderberry (*Sambucas nigra*)¹⁰
Ephedra (*Ephedra*)¹¹
Foxglove (*Digitalis purpurea*)
Germander (*Teucrium chamaedrys*)*
Ginkgo seeds and fruit pulp (*Ginkgo biloba*)¹²
Glue Thistle (*Atractylis glummifera*)*
Gotu kola (*Centella asiatica*)
Groundsel (*Senecio jacobea*, *S. vulgaris*, *S. spartoides*, etc.)*
Heliotrope (*Heliotropium*)
Hemlock (*Conium maculatum*)
Henbane (*Hyoscyamus niger*)
Hepatica (*Hepatica triloba*)
Herbal Ecstasy*
Holly (*Ilex paraguayensis*)*
Horse Chestnut (*Aesculus hippocastanum*)*
Horsetail (*Equisteum arvense*)
Hound's Tongue (*Cynoglossum officinale*)*

Indigo (*Indigofera tinctoria*, *I. oblongifolia*)¹³
 Iron*¹⁴
 Jimson Weed (*Datura stramonium*)
 Jin Bu Huan (*Lycopodium serratum*)*
 Kava (*Piper methysticum*), also known as “kava kava”**
 Khat (*Catha edulis*)
 Kombucha mushrooms and tea*
 Lepiota Helveola mushrooms*
 Life Root (*Senecio aureus*)*
 Lily of the Valley (*Convallaria majalis*)
 LipoKinetix*
 Lobelia (*Lobelia inflata*)*
 Madder root (*Rubia tinctorum*)*
 Ma Huang (*Ephedra*)
 Male Fern (*Filicis maris*)
 Magnolia (*Magnolia liliflora*)
 Mandrake, American (*Podophyllum pelatum*)
 Mandrake, European (*Mandragora officinarum*)
 Margosa Oil
 Marsh Tea (*Ledum palustre*)
 Mate (*Ilex paraguayensis*)*
 May Apple (*Podophyllum pelatum*)
 Mistletoe (*Phoradendron leucarpum*, *Viscum album*, *V. coloratum*)¹⁵
 Monkshood (*Aconiti tuber*)
 Mu Tong (*Clematis armandi*)
 Niacin, also known as “vitamin B-3,” “niacinamide,” “nicotinic acid”**¹⁶
 Nightshade (*Solanum nigrum*)
 Nutmeg (*Myristica fragrans*)¹⁷
 Nux Vomica (*Strychni semen*)¹⁸
 Oleander Leaf (*Oleandri folium*)
 Onshido*¹⁹
 Paraguay tea (*Ilex paraguayensis*)*
 Parsley Seed (*Petroselinum fructus*)²⁰
 PC-SPES²¹
 Pennyroyal (*Hedeoma pulegiodes*, *Mentha pulegium*)*
 Periwinkle (*Catharanthus roseus*)*
 Peppermint Oil (*Mentha piperita*)*
 Petasites leaf (*Petasitidis folium*)*
 Pleurisy root (*Asclepias tuberosa*)
 Poke Root/Pokeweed (*Phytolacca americana*)
 Pride of Madeira (*Echium fastuosum*)*
 Ragwort (*Senecio aureus*, *S. jacobaea*, *S. vulgaris*, etc.)*
 Rue (*Ruta graveolus*)*
 Sarsaparilla root (*Sarsaparillae radix*)
 Sassafras (*Sassafras albidum*)*

Scotch Broom (*Cytisus scoparius*)
 Senna (*Cassia Species* and *Senna alexandrina*)²²
 Shark Cartilage*
 Sho-saiko-to, also known as “Xiao Chai Hu Tang.”** – See “bupleurum”
 Skullcap (*Scutellaria lateriflora*)*
 Snakeroot (*Aristolochia serpentaria*)
 Spirulina, also known as blue-green algae*
 Stephania (*Stephania tetrandra*), also known as “han fang ji”
 Sweet Clover (*Melilotus officinalis*)
 Tansy (*Tanacetum vulgare*, *Chrysanthemum vulgare*)*
 Tansy Ragwort (*Senecio jacobea*)*
 Tiratricol, also known as “triiodothyroacetic acid” or “TRIAC”
 Turmeric (*Curcuma longa*)*²³
 Tu-san-chi (*Gynura segetum*)*
 Usnic acid (*Usnea Lichen*)*
 Uva Ursi (*Arctostaphylos uva-ursi*)*
 Valerian (*Valeriana officinalis*)*²⁴
 Vitamin A*²⁵
 White Chameleon (*Atractylis gummifera*)*
 Woodruff (*Asperula odorata*)
 Wormwood (*Artemisia absinthium*)
 Yerba Mate Tea (*Ilex paraguayensis*)*
 Yellow jessamine (*Gelsemium sempervirens*)
 Yohimbe (*Pausinystalia yohimbe*)*

¹See FDA website for a list of botanicals that contain this substance:

www.cfsan.fda.gov/%7Edms/ds-warn.html

²Diluted homeopathic and topical forms are generally safe.

³There have been at least 5 reports of severe hepatitis linked to black cohosh use. Two of these cases resulted in liver failure requiring transplant surgery. These cases involved the use of herbal blends mixed with other ingredients besides cohosh. Experts do not know if the problem was due solely to black cohosh or the combination of ingredients.

⁴There is at least one other herb called “black root.” The comfrey variety is toxic.

⁵Contains tannins and may be hepatotoxic if large amounts are used.

⁶Diluted homeopathic form is generally safe.

⁷Essential oil and leaf distillates are toxic.

⁸Bupleurum has been linked to at least one case of hepatotoxicity. When used with interferon, it has been associated with at least 74 cases of interstitial pneumonitis, with at least 16 of these resulting in death. However, these

reports are being called into question since bupleurum was combined with other ingredients when administered. Bupleurum is the main ingredient in Sho-saiko-to, also known as Xiao chai hu tang. Until these associations can be verified or refuted, it is recommended that HCV patients avoid concurrent use of interferon with this herb. Also recommended is to use this herb under strict supervision with a licensed practitioner.

⁹Herbal Weight Loss Aid

¹⁰Cooked elderberry as a food source is likely safe. Risk of cyanide poisoning from uncooked berries and the rest of the elder plant.

¹¹The Food and Drug Administration (FDA) has concluded that ephedrine alkaloids pose a serious risk.

¹²Fruit pulp and seeds can be toxic. The leaves have a good safety record when used as recommended.

¹³Some indigo may be safe and some species are toxic.

¹⁴Those with liver disease should avoid excess iron unless directed otherwise by their medical practitioner.

¹⁵Mistletoe is being researched in Europe as a treatment for HCV. Mistletoe is toxic and should not be used outside of a clinical research setting.

¹⁶There were multiple reports of hepatotoxicity when niacin was used in large doses or low-dose sustained-release form. The Recommended Daily Allowance (RDA) of niacin is not only safe, but also a necessary nutrient. The RDA is 13-18 mg for adults.

¹⁷Large amounts of nutmeg can cause hallucinations and psychosis. Eating as few as two whole nutmegs can cause death. Safe if used in small amounts as a spice.

¹⁸Risk of central nervous system poisoning from strychnine. Pre-existing liver disease increases toxicity risk.

¹⁹Herbal Weight Loss Aid

²⁰High doses of essential oil are associated with fatty liver, abortion and other risks.

²¹The FDA has recalled this botanical blend.

²²This strong laxative may deplete electrolytes and lead to cardiac arrhythmia.

²³Turmeric (curcumin) is probably safe for liver patients unless taken in large doses. Turmeric (curcumin) is being studied as a possible treatment for hepatitis, but until the evidence is in, avoid or use cautiously.

²⁴May be liver toxic, especially if taken long-term. Some doubts surround other claims of its hepatotoxic qualities, since all the reports used valerian in combination with other herbs. Until safety reports are verified or disputed, it is recommended that people with liver disease avoid valerian.

²⁵Those with liver disease should avoid vitamin A supplementation unless under medical supervision. If the RDA is not exceeded, probably safe for healthy people.

**Visit the HCV Advocate
Web Site:
www.hcvadvocate.org**

***Below are just some of the publications and services
you can find at www.hcvadvocate.org:***

- HCV Advocate Monthly Newsletter (English)
- HCV Advocate Quarterly (Spanish)
- Educational materials in English, Spanish, French, Vietnamese, Russian, Tagalog and Chinese
- Medical Writers' Circle
- Hepatitis Journal Review
- Weekly News Review
- Disability & Benefits Column
- Hepatitis B information
- HIV/HCV Coinfection information
- Support Group Listings for USA, Canada and Elsewhere
- Links to Clinical Trials
- Links to other Helpful Organisations
- Event Listings
- Fact Sheet series: (English, French and Spanish)
 - *Easy C Facts
 - *Basics
 - *HCSP Fact Sheets

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C.D. Mazoff, PhD

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HCV & CAM: Dietary Substances and the Food and Drug Administration (FDA)

Lucinda Porter, RN

The Food and Drug Administration (FDA) is the federal agency responsible for drug and food safety. Drugs undergo years of rigorous testing on animals and humans before the FDA allows them to be marketed. On the other hand, herbs and supplements are classified as dietary supplements. This means they are regulated by different standards, called the Dietary Supplement Health and Education Act of 1994 (DSHEA).

Under this act, the manufacturer must ensure the safety of the dietary supplement. However, unlike a drug, supplement makers do not need to test their product or prove its safety prior to marketing. If the safety of a product comes into question, the FDA's powers are weak. Supplement manufacturers do not need FDA approval and do not need to register their product.

Manufacturers are prohibited from making disease claims about supplements, unless the product "qualifies to bear the claim." For example, a company that sells calcium supplements can say their product "may reduce the risk of osteoporosis."

Manufacturers are allowed to make general claims about supplements' "effects on a structure or function." A milk thistle manufacturer cannot claim that their product cures hepatitis C. It can state that milk thistle may provide liver support.

The FDA's involvement is primarily after marketing. The FDA may monitor product labeling, information, and safety. Adverse event reporting is voluntary. The FDA's ability to perform effectively is weak due to poor funding and understaffing.

In 1998, the National Center for Complementary and Alternative Medicine (NCCAM) became a new center of the National Institutes of Health (NIH). Responding to the need for more research about the safety and efficacy of herbs and supplements, NCCAM and the NIH Office of Dietary Supplements established the first Dietary Supplements Research Centers with an emphasis on botanicals.

What is a Dietary Supplement?

A dietary supplement is:

- Used to supplement the diet and contains at least one of the following: amino acids or enzymes; herbs or other botanicals; vitamins or minerals; and various other ingredients such as psyllium, fish oils, mushrooms or glandular products
- Intended to be ingested (taken orally)
- Not used solely as a food source
- Labeled as a dietary supplement

For example, garlic is a spice or a food. When garlic is put into a capsule, it becomes a dietary supplement.

Myths about Dietary Supplements

Here are some common misconceptions about dietary supplements:

- Supplements must be tested before they can be sold to the public.

(False)

- The FDA must approve supplements before they can be sold to the public.

(False)

- Manufacturers of supplements must have solid research to support and advertise safety claims.

(False)

- Supplement manufacturers are required to include warnings and other important safety information on their products' labels.

(False)

- Manufacturers must practice quality control methods on their supplements.

(False)

- Manufacturers must guarantee that their products are pure and free of contaminants.

(False)

- The amounts and concentrations of supplements are consistent and reliable.

(False)

- Adverse events occurring as possibly related to the use of a supplement must be reported to the FDA.

(False)

- If the word "natural" appears on a product's label, this means it is safe.

(False)

- Supplements' side effects are always mild.

(False)

- If a supplement is unsafe, it cannot be sold.

(False)

- A "recall" on a harmful product guarantees this supplement has been removed from the market.

(False)

References

- Summary of the Dietary Supplement Health and Safety Act of 1994
vm.cfsan.fda.gov/~dms/dietsupp.html
- National Institutes of Health Office of Dietary Supplements Health Information
http://ods.od.nih.gov/Health_Information/Health_Information.aspx

Other Factsheets in this Series:

- CAM: Overview
- Complementary and Alternative Medicine Resources
- Dietary Supplements to Avoid
- Herbal Dietary Supplements Glossary
- Herbs and Dietary Supplements: Making Safer and Wiser Choices.
- Herbs and Hepatitis C
- Information and Finding a Practitioner
- Internet Resources for Dietary Supplements.

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HCV & CAM: Herbal Dietary Supplements Glossary

Lucinda Porter, RN

Dietary supplements are very popular in the U.S., with herbal blends being the top-selling supplements in 2004. Being healthy includes making wise choices. This means knowing what goes into your body. If you take an herb or herbal blend, do you know what you are taking? The following offers information on some popular herbal supplements .

This information is not intended as medical advice or endorsement of the use of dietary supplements. Always talk to your medical provider before taking any herbs or supplements. All herbs, drugs, and other substances can cause allergies. Allergic reactions have been reported for nearly every herb, sometimes with life-threatening consequences. If you suspect you are having an allergic reaction, stop the substance and seek immediate medical advice. If you have trouble breathing or feel faint, call 911.

Black Cohosh (Cimicifuga racemosa)

This herb has been approved by Germany's Commission E for premenstrual complaints, painful periods, and management of menopause symptoms. Blue cohosh is not the same as black cohosh – do not substitute one for the other.

Attention for Liver Disease: There have been at least 5 reports of severe hepatitis linked to black cohosh use. Two of these cases resulted in liver failure requiring transplant surgery. These cases involved the use of

herbal blends mixed with other ingredients besides cohosh. Experts do not know if the problem was due solely to black cohosh or the combination of ingredients.

Safety Information: Gastric discomfort is the most common side effect. Safety is unknown for women with endometriosis, breast or uterine cancer. Those with history of stroke or thromboembolism should avoid black cohosh. Cardiovascular and neurological (seizures) adverse events were reported by a very small number of patients taking black cohosh, although the link between the two is not solidly established. Black cohosh should not be taken by women who are pregnant or breastfeeding. No safety information is available for children.

Interactions: Black cohosh may interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). Anyone with hormone-sensitive malignancies or those taking drugs, such as tamoxifen or HRT may want to avoid or use cautiously. May interact with hormones, NSAIDs, anti-androgenic, and anticoagulant drugs.

Lab Notes: May lower blood pressure.

Dosage: No established universal dose recommendations. The British Herbal Compendium recommends 40-200 mg of dried rhizome daily in divided doses. Take black cohosh with a full glass of water.

Chamomile (Matricaria recutita, Chamaemelum nobile)

Germany's Commission E approved the internal use of chamomile for "gastrointestinal spasms and inflammatory diseases of the gastrointestinal tract" and external use for "skin and mucous membrane inflammations including those of the oral cavity and gums." It is also approved for various respiratory problems and anal-genital inflammation. The Commission E did not approve it as a sedative or sleep aid as evidence to support these indications was weak.

Attention for Liver Disease: Chamomile may reduce clotting ability.

Safety Information: Rashes and allergic reactions are the most common side effects of chamomile. May increase bleeding risk. The safety for children, pregnant and nursing mothers is not established.

Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450*).

Use cautiously if taken with other sedating drugs.

Lab Notes: May interfere with coagulation labs, such as PT and INR.

Dosage: No established universal dose recommendations. Chamomile comes in many forms. Ingested or applied as a tea are the most popular forms of administration.

Chondroitin Sulfate

This supplement has been heavily researched and consistently showed improvement for osteoarthritis. It is often combined with glucosamine but can be taken alone. It can be derived from algae, cow trachea, shark, pig, chicken or beef cartilage. There is also a synthetic form. Although unlikely to be an issue, those concerned about “Mad Cow” disease should avoid chondroitin made from bovine sources.

Attention for Liver Disease: May reduce clotting ability.

Safety Information: Appears to be well tolerated. Stomach upset is the most common complaint. Men with risk of prostate cancer should avoid. May increase bleeding risk. The safety for children is not established. Pregnant and breastfeeding women should avoid.

Interactions: None reported.

Lab Notes: May interfere with coagulation labs, such as PT and INR.

Dosage: No established universal dose recommendations. One common dose recommendation is 400mg 3 times daily. Typical doses used in studies ranged from 200-400mg 2 to 3 times daily and 800-1200mg once daily. Be patient. Chondroitin may take over 3 months before there are noticeable benefits.

Cranberry (Vaccinium macrocarpon)

Research supports the efficacy of cranberry juice for prevention of urinary infections. Purportedly, cranberry juice has been used for a variety of kidney and urinary problems, particularly for urinary tract infections. However, the evidence is weak regarding these applications.

Attention for Liver Disease: None reported.

Safety Information: Most likely safe for everyone 2 years and older. Diarrhea and gastric distress are the most common complaints. High acid content may be a problem for those prone to acid reflux. Diabetic patients need to use sugar-free juice. Patients with oxalate

kidney stones should not exceed 1 L/day. The safety for infants, pregnant and nursing mothers is not established.

Interactions: None reported.

Lab Notes: None reported.

Dosage: 2 glasses (8 oz.) of cranberry juice cocktail (at least 25% cranberry juice), one glass in the morning and one in the evening. May use white cranberry juice cocktail. To avoid unnecessary sugar, use artificially sweetened juice. Sucrolose seems to be the safest artificial sweetener currently on the market.

Dandelion (Taraxacum officinale)

This common plant is used in Europe for hepato-biliary disorders, as an appetite stimulant, a diuretic and for dyspepsia. The evidence supporting its efficacy has not been proven.

Attention for Liver Disease: Avoid if you have bile duct obstruction. Dandelion may decrease clotting ability.

Safety Information: Dandelion should be avoided by those with bile duct obstruction or gallbladder conditions. Most common side effects include itching, rash, acid reflux and sun sensitivity. May lower blood glucose levels, reduce clotting ability, and act as a potassium-sparing diuretic. The safety for children, pregnant and nursing mothers is not established, but likely safe when used as food.

Interactions: Avoid dandelion if taking ciprofloxin (Cipro).

Lab Notes: May interfere with electrolyte, blood glucose and coagulation labs.

Dosage: No established universal dose recommendations. One source suggested 3 to 4 grams of powdered dandelion root taken 3 times daily.

Echinacea (Echinacea purpurea and other varieties)

This popular herb comes in many forms. E. Purpurea is believed to be the most potent. Germany's Commission E has approved echinacea orally as supportive therapy for colds, upper respiratory infections, urinary tract infections, and topically for poor wound healing. Echinacea leaves and roots are purported to have mild antiviral and antibacterial properties. Research has not proven any other effective uses for this herb.

Attention for Liver Disease: Increased risk of liver toxicity when used with other potentially hepatotoxic

substances/drugs.

Safety Information: Probably safe when used as recommended. Avoid if diabetic. Theoretically can interfere with immune function. Patients with HIV, cancer, TB, low white blood count or autoimmune diseases (MS, Lupus, etc.) should avoid or use cautiously.

Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). Avoid if taking immune suppression drugs, interferon, or Kava. The safety for children, pregnant and nursing mothers is not established.

Lab Notes: May lower white blood cell count.

Dosage: Germany's Commission E set the dose at 6 – 9 ml juice or equivalent. Do not use for more than 8 consecutive weeks.

Fish Oil

The primary groups of essential fatty acids are omega-3s and omega-6s. Fish oils are high in omega-3s. Fish oils have attracted a great deal of interest and research. The evidence is strongly in favor of fish oil's ability to lower triglycerides and protect against the occurrence of sudden heart attack. Fish oils may help with many other conditions, such as rheumatoid arthritis, depression, cognition, inflammation, and protection from cyclosporine toxicity in organ transplant patients. Much more research will need to be conducted in order to support these and the many other claims about the value of fish oils. Research has found that fish oils may raise both LDL and HDL cholesterol, making it an impractical choice for high cholesterol patients. Research also suggests that fish oil does not prevent organ transplant rejection.

Attention for Liver Disease: May increase liver function levels and interfere with blood clotting. May raise vitamin A level.

Safety Information: Most common reports were a fishy aftertaste, rash, and gastrointestinal complaints: indigestion, acid reflux, burping, bloating, loose stools and diarrhea. Use cautiously if diagnosed with bi-polar disease, diabetes, low blood pressure, or have reduced blood-clotting ability. Use of over 3 grams daily of fish oil may interfere with blood clotting. Fish can be high in mercury and other contaminants. Safety of omega-3 fatty acids has not been established for infants, children, pregnant and breastfeeding women. However, these groups should avoid fish as a source of omega-3s because of the high risk of mercury ingestion.

Interactions: Long-term use may lower vitamin E levels. May raise vitamins A and D, both of which can be toxic in high amounts.

Lab Notes: May raise blood glucose levels, LDL/HDL cholesterol and increase blood-clotting times. May lower triglycerides and blood pressure.

Dosage: Fish oil has many kinds of omega-3 fatty acids. Dosages are not based on the amount of fish oil, but on the amounts of DHA and EPA in the fish oil. DHA and EPA are most abundant in cold-water fish, especially salmon. DHA and EPA are also found in nuts, seeds, soy, and in trace amounts in dark green leafy vegetables. Dose suggestions are based on what condition you want to treat. The American Heart Association recommends 200mg to 400mg daily of EPA and DHA with a strong warning to do this with professional guidance, especially because of the bleeding risk. The WHO recommends 300mg to 500mg of EPA and DHA. It is suggested to start with low amounts of fish oil, gradually increasing the dose. Fish oils should be taken with meals and a full glass of water.

Garlic (Allium sativum)

Garlic has a long history and may have many health benefits. There is quite a bit of garlic research, but to date the studies don't substantiate most of the claims. Garlic does seem to lower triglycerides and low-density lipoproteins (LDL). Germany's Commission E has approved the use of garlic for high blood lipids and prevention of age-related vascular changes.

Attention for Liver Disease: May decrease clotting ability.

Safety Information: Garlic is probably safe at recommended doses. Garlic may cause bad breath, body odor, gastric complaints and allergies. Garlic may increase bleeding risk. Avoid topical application and ingesting large amounts. A myocardial infarction was reported in a 23 year-old man who took excessive amounts of garlic. May be safe for children, pregnant or nursing mothers, but may alter the flavor of breast milk.

Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). May interact with fish oils, EPA, pycnogenol, NSAIDs, protease inhibitors, hypoglycemic, anti-hypertensive, thyroid, lipid-lowering, anticoagulant drugs.

Lab Notes: May cause abnormal insulin and thyroid levels, increase clotting times, and lower cholesterol and

blood pressure.

Dosage: Garlic is not standardized, so dose recommendation is not practical. The Commission E set the dose at 4g fresh garlic (or equivalent) per day. Fresh or odorless enteric-coated garlic are probably the best forms to use.

Ginger (Zingiber officinale)

Ginger is a good example of how a plant can be used as a food, spice or medicine. Ginger has a long history. The Commission E has approved it for digestive upset and motion sickness. There is no solid evidence supporting or opposing the use of ginger for nausea related to chemotherapy, surgery, or morning sickness.

Attention for Liver Disease: Theoretically could decrease clotting ability.

Safety Information: Should be avoided by those with gallstones, inflammatory bowel disease or bowel obstruction. Although there are no human studies to support this, ginger may interfere with normal clotting, may lower blood glucose levels, and may cause cardiac arrhythmias, especially if taken with high amounts of calcium. It has been reported to both increase and relieve stomach acid stimulation. Likely to be safe for pregnant and nursing women if used in moderate doses for no more than five consecutive days. Safety not established for children.

Interactions: Use cautiously with high doses of calcium. Lab Notes: May alter coagulation labs, such as PT and INR.

Dosage: When used as a food, the typical amount of ginger is 1 gram daily. There is no universal standardization of ginger. Recommended doses range from 1 to 4 grams daily of fresh or dried ginger. Should not be used at excessive doses or for more than five consecutive days if used for morning sickness.

Ginkgo Biloba (Ginkgo biloba)

This herb has been used for centuries and has been studied extensively. Ginkgo is purported to have anticoagulant properties. Germany's Commission E approved ginkgo for peripheral intermittent claudication (lameness), certain forms of organic brain syndromes, vertigo and tinnitus. Ginkgo is used for many other conditions, but there is not enough evidence to draw firm conclusions. Ginkgo fruit pulp and seeds are toxic.

Attention for Liver Disease: May decrease clotting ability.

Safety Information: Generally, ginkgo has a good safety record when used as recommended. Ginkgo fruit pulp and seeds are toxic. There have been more than 70 reports of toxicity, including seizures, loss of consciousness, and death. May increase bleeding risk. Use cautiously in patients with bleeding or blood clotting disorders, and/or decreased clotting ability, such as those taking NSAIDs or anticoagulants. Use cautiously if diabetic. May lower seizure threshold. Reports of dermatological, neurological, cardiovascular and gastrointestinal side effects. Theoretically may reduce male and female fertility. Unsafe for infants. No safety data for children. Not recommended for pregnant or nursing women.

Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). Ginkgo is known to interact with a very long list of drugs, herbs and supplements, such as many types of antidepressants, insulin, erectile dysfunction drugs and Yohimbe. May increase colchicine levels.

Lab Notes: May alter coagulation labs, such as PT and INR. May increase concentrations of insulin and C-peptides in the blood.

Dosage: 40 – 240 mg standardized dry extract in liquid or solid pharmaceutical grade taken orally in 2-3 divided doses. Only use standardized ginkgo.

Commission E used 50:1 standardized leaf extract (standardized to 24% to 25% ginkgo flavone glycosides and 6% terpine lactones). Never take high doses or extracts with ginkgolic acid.

Ginseng (many varieties)

This herb has been widely studied and has earned a prominent reputation in Chinese medicine. Purported to improve mental ability and fatigue along with many other uses. Some uses are supported by clinical data and earned the approval of a number of worldwide organizations, including the World Health Organization (WHO) and Germany's Commission E. Small studies show possible benefit for those with liver disease.

Attention for Liver Disease: May alter liver function tests. May decrease blood clotting.

Safety Information: Contraindicated for those with hypertension. Multiple side effects and warnings, including cardiac, bleeding, and manic symptoms. May

cause menstrual irregularities and breast tenderness. Not enough evidence to recommend safe use for children. Pregnant and nursing women and those with history of breast or uterine cancer should avoid ginseng.

Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). May interact with many drugs including warfarin, aspirin, ibuprofen, naproxen, MAO inhibitors, calcium channel blockers, digoxin, and opioids. Should not be used with other stimulants, including excessive caffeine.

Lab Notes: May alter blood pressure, blood glucose levels and liver function tests. May alter coagulation labs, such as PT and INR.

Dosage: The common “recommended dose” is 100 mg of standardized ginseng extract 1 to 2 times a day. Should not be taken continuously. If taken continuously for 2 weeks, discontinue for 2 weeks before restarting. Andrew Weil, MD suggests using American ginseng since the Asian variety is associated with insomnia, irritability, and increase blood pressure. He also states that “real ginseng” contains ginsenosides.

Glucosamine

This supplement has been well-researched and consistently shows improvement for osteoarthritis. It is often combined with chondroitin but can be taken alone. Made from corn or shellfish.

Attention for Liver Disease: None reported.

Safety Information: Avoid if allergic to shellfish or take corn version. Side effects include gastric discomfort, headache, itching, leg pain, edema, drowsiness, insomnia, sun sensitivity, and toughening of the nails. Increased blood pressure, heart rate and palpitations also reported. Use cautiously if there is history of asthma or diabetes. Cataracts were reported in animal studies, but not in humans. The safety for children is not established. Pregnant and breastfeeding women should avoid.

Interactions: May interact with diuretics, insulin and recombinant erythropoietin.

Lab Notes: May lower blood glucose levels and increase blood pressure.

Dosage: Universal dosages have not been established. Common dose recommendation is 500mg 3 times daily. Be patient. Chondroitin may take over 3 months before there are noticeable benefits.

Green Tea (Camellia sinensis)

Green tea has been used for centuries. It is a source of antioxidants. It also contains caffeine and tannins. It is purported to prevent cancer and to help many medical conditions, but there is no clear evidence to support or dispute this. Caffeine may help to relieve headaches and fatigue.

Attention for Liver Disease: Those with advanced liver disease should use decaffeinated green tea because of reduced ability to metabolize caffeine. May decrease clotting ability.

Safety Information: The majority of warnings are associated with green tea’s caffeine content. Caffeine acts as a stimulant and diuretic. The primary complaints were frequent urination, nervousness, insomnia, and gastric discomfort. Anyone needing to avoid or reduce caffeine should use decaffeinated green tea. This includes those with anxiety, high blood pressure, cardiac, kidney and hyperthyroid disease. May delay blood-clotting ability, especially if high amounts are used. May stimulate stomach acid production. Classified by the FDA as “generally regarded as safe.” Pregnant and breastfeeding women should avoid caffeine. High caffeine use during pregnancy is associated with risk of birth defects and SIDS. Caffeine can cause sleeplessness in infants. Safety in children is not established.

Interactions: Theoretically may interact with any cytochrome p-450 metabolized substances, but this has not been proven in humans (see *About Cytochrome P-450* below). May interact with MAO-inhibitors, codeine, stimulants and other herbs. Can reduce iron’s bioavailability, so do not drink green tea two hours before or 4 hours after taking iron supplementation.

Lab Notes: May increase blood-clotting times and blood glucose levels. May lower electrolyte levels.

Dosage: No established universal dose recommendations. One cup of average strength green tea has approximately 50 mg of caffeine.

Licorice Root (Glycyrrhiza glabra and G. uralensis)

Glycyrrhizin is the primary active substance in licorice root. This root has been used for centuries in many parts of the world. Approved by Germany’s Commission E for upper respiratory congestion, gastric and duodenal ulcers. Not approved for any use by WHO. An NCCAM

review of randomized, controlled studies reports possible benefits for improvement of liver tissue for hepatitis patients and may reduce HCV complications for non-responders to interferon treatment. Thought to prevent liver cancer in those with HCV, although this has not been proven. Glycyrrhizin may lower liver enzymes but does not seem to lower HCV viral loads. Licorice root may prevent ulcers related to aspirin or NSAID use. Purported to stimulate the adrenal glands, but the evidence is insufficient.

Attention for Liver Disease: In spite of the NCCAM review, those with liver disease should avoid or use cautiously until safety and efficacy have been well established. Should be avoided by anyone with cirrhosis or cholestatic liver disorders. May worsen ascites. May lower liver enzymes.

Safety Information: Likely safe when used in moderate amounts. Prolonged or excessive use can lead to potentially serious side effects including, potassium depletion, high blood pressure, lethargy, hypertensive encephalopathy, sodium and water retention and swelling. Should be avoided by anyone with kidney disease, diabetes, and hormone-sensitive cancer. Other potential side effects include nausea, vomiting, headache, and decreased libido in men. Should be avoided by pregnant and nursing women. Safety in children is not established.

Interactions: May interact with diuretics, digitalis, antiarrhythmics, corticosteroids, heart and blood pressure medications, MAO inhibitors, antidiabetes drugs, anti-rejection agents, hormones, birth-control pills and anti-cancer drugs such as tamoxifen.

Lab Notes: May decrease liver enzymes, potassium and testosterone levels. May increase sodium levels and blood pressure. May alter blood glucose levels.

Dosage: No universally established dosages. Licorice root should not be used for more than 4 to 6 weeks. Prolonged use increases risk of serious side effects. Some sources recommend use of deglycyrrhizinated (DGL), since glycyrrhizic acid may be responsible for most of the side effects. However, some argue that this reduces overall effectiveness. Germany's Commission E dosage uses DGL.

Milk Thistle (Silybum marianum)

A great deal of research has been conducted using this herb for a variety of liver diseases. There has been very

little done specifically targeting HCV. Currently there is no solid evidence for or against the use of milk thistle for liver disease. It has been approved by Germany's Commission E for liver inflammatory diseases and cirrhosis. It is important to note that the Commission E denied approval for "maintaining health, for stimulation and functional disorders of liver." Three ingredients in milk thistle are of scientific interest because of their potential therapeutic value and capacity to protect the liver. These ingredients are silibinin, silychristin, and silydianin, collectively known as silymarin.

Attention for Liver Disease: May lower liver function tests.

Safety Information: If used as recommended, milk thistle is generally safe. Reported side effects are mild laxative, gastric complaints, itching and lowered blood sugar levels. Safety has not been established for children, pregnant or nursing mothers.

Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). Silymarin has the potential to interact with *many* drugs, herbs and dietary supplements. A few are hormones, methadone, antibiotics, anti-seizure, antidepressants, antipsychotics, antihistamines, organ transplant-rejection, cardiac, lipid-lowering drugs and sleeping pills.

Lab Notes: May alter liver function tests and blood sugar levels.

Dosage: Commission E set doses at 200-400 mg total daily dose of 70 to 80% standardized silymarin. This herb should be taken in divided doses, 2-3 times a day.

Peppermint (Mentha piperita)

This flowering plant has been used for centuries. It is used in gum, toothpaste, mouthwash, and tea. Research supports its effectiveness to relieve indigestion and irritable bowel syndrome. *Note: Read the safety information as there is a significant difference between peppermint leaf and oil.*

Attention for Liver Disease: Avoid peppermint oil if you have liver damage or bile duct obstruction. Use peppermint tea in moderate amounts and with caution.

Safety Information: As a tea, it is likely safe when used in moderate amounts.

Peppermint oil can be deadly at high doses. Should be avoided by anyone with G6PD deficiency, gall bladder disease or bile duct obstruction. Side effects include

skin, eye, and digestive tract irritation, mouth sores, burning of the mouth and anus, headache, dizziness, slow heart rate, and muscle tremor. Seizures and brain damage were reported in animal studies. Avoid using peppermint around the face, especially with infants and children. Infants, children, pregnant and breastfeeding women should avoid.

Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). Do not use peppermint if taking cyclosporine, felodipine (Plendil®) or simvastatin (Zocor®). Do not use topical peppermint oil and topical 5FU (Efudix©).

Lab Notes: None reported.

Dosage: No established universal dosages. As a tea, some sources suggest 2 to 3 cups daily; leaf form – 2 grams, 2 to 3 times daily. Peppermint oil – adults should never exceed 1 gram per kilogram of body weight.

Saw Palmetto (Serenoa repens)

In the U.S., this berry was listed as an official drug in the beginning of the 20th century. Saw palmetto has been studied extensively and evidence points strongly to its effectiveness for prostate problems, particularly for the relief of symptoms from benign prostatic hypertrophy (BPH).

Attention for Liver Disease: May alter liver function test results.

Safety Information: Saw Palmetto may increase bleeding risk. Not recommended for patients with hypertension. Most common side effects are gastric problems. There have been reports of insomnia, fatigue, respiratory, neurological, cardiovascular, psychiatric, and genito-urinary problems. These occurred in small numbers and were usually mild. There was a single report of cerebral hemorrhage, but not enough evidence to be certain that saw palmetto was the cause. Pregnant and nursing women should avoid. No conclusive safety information is available for children.

Interactions: May interact with hormones, NSAIDs, anti-androgenic, and anticoagulant drugs.

Lab Notes: May alter liver function test results. If taking blood thinners, such as warfarin, may interfere with coagulation results.

Dosage: Saw Palmetto comes in many forms. Most sources recommend 160 mg twice daily of standardized saw palmetto (80-90% sterols and fatty acids or lipidosterolic extract). 320 mg once daily is sometimes recommended, but both dosing strategies seem equally

effective. Be patient – symptom relief may not occur for several months.

Soy (Glycine max)

Soybeans have been used as a dietary staple for over 5000 years. Soy is purported to help many conditions, such as high cholesterol and symptom relief from hepatitis, menopause and a host of other maladies. Research supports soy's effectiveness for lowering LDL cholesterol for people with LDLs greater than 160. Soy may be effective for other conditions, but research has not drawn any strong conclusions for or against the use of soy. Germany's Commission E has approved soy phospholipids for use in hepatitis patients.

Attention for Liver Disease: Soy phytoestrogens occasionally appear on lists of supplements that people with liver disease should not take. No evidence was found to support this.

Safety Information: Soy has a good safety record. Gastrointestinal complaints, such as bloating and flatulence are the most common. Soy may lower thyroid levels, especially in infants. Safety has not been established for children, pregnant or nursing mothers. Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). There is still controversy about the phytoestrogen properties in soy. For this reason, soy is not recommended for anyone with hormone-sensitive malignancies or those taking drugs, such as tamoxifen, to prevent disease recurrence. Soy may interfere with warfarin, ginseng, calcium, and phosphate.

Lab Notes: Theoretically, may interfere with thyroid tests in children. If taking blood thinners, such as warfarin, may interfere with coagulation results.

Dosage: There is a great deal of variability in sources of soy and dose ranges between studies. The Japanese consume roughly 7 to 10 grams of soy in their daily diet. Isoflavones are key, whether you use soy in your diet or as a supplement. Recommended ranges of isoflavones seem to be approximately 30-50 mg daily. The Commission E used 1.5–2.7 g phospholipids from soybean with 73–79% (3-sn-phosphatidyl) choline in a single daily dose. To lower cholesterol, the Center for Science in the Public Interest suggests 25 grams of soy protein daily.

St. John's Wort (Hypericum perforatum)

This herb has been studied extensively. It is approved by Germany's Commission E for mild depression. Commission E has classified St. John's wort as an MAO inhibitor. No other purported uses for St. John's wort have been proven. Note: Depression is a serious illness. Seek professional advice before using this or any herbal substance.

Attention for Liver Disease: May alter liver function tests. There have been case reports of organ transplant rejection in those using St John's wort with cyclosporine. Safety Information: Fatigue and gastric distress are the most common complaints. May cause sun sensitivity, especially at high doses. Bipolar patients should avoid. Safety has not been established for children, pregnant or nursing mothers.

Interactions: May interact with any cytochrome p-450 metabolized substances (see *About Cytochrome P-450* below). The Fda has a specific warning about using St. John's wort and indinavir, antiretrovirals, and other drugs. Do not take St. John's wort if you are taking antidepressants, protease inhibitors, NRTI's, or immunosuppressive medications. There have been case reports of organ transplant rejection by those taking cyclosporine.

Lab Interactions: May alter liver function test results.

Dosage: Germany's Commission E recommends 300 mg three times daily of hypercin 0.3% extract or 2-5% hyperforin. Do not use for more than 3 months.

Valerian (Valeriana officinalis)

The Commission E and WHO approved the use of valerian for restlessness and sleeping disorders. There is disagreement about the strength of this evidence.

Attention for Liver Disease: May be liver toxic, especially if taken long-term. Some doubts surround other claims of its hepatotoxic qualities, since all the reports used valerian in combination with other herbs. Until safety reports can be verified or disputed, it is recommended that people with liver disease avoid valerian.

Safety Information: May cause daytime sleepiness. Use cautiously when driving or operating machinery. May cause headaches, constipation, gastric complaints, nervousness, blurred vision, insomnia, lightheadedness, tightness in the chest, restlessness and slowing or irregular heartbeat. Symptoms of withdrawal may occur

if stopping after long-term use of valerian. Safety has not been established for children, pregnant or nursing mothers.

Interactions: May interact with muscle relaxants, sleep, anxiety, pain, antiseizure, antidepressant, or other drugs or supplements that cause drowsiness.

Lab Notes: None reported.

Dosage: No established universal dose recommendations. For insomnia, a reputable source suggests 600 mg 1 hour before bedtime. Valerian may need to be taken on a regular basis for at least 4 weeks before results are evident.

About Cytochrome P-450 (CYP-450)

CYP-450 refers to a group of enzymes that play an important role in drug metabolism. Enzymes are substances your body makes and metabolism refers to the conversion of chemicals into something your body can use. Certain diseases, particularly a poorly functioning liver, can interfere with drug metabolism that relies on CYP-450. This means that you could get too little or too much of any of the drugs that interact with each other.

Drugs and substances that are metabolized by the same enzymes can compete with one another for metabolism. This means drugs could be toxic rather than therapeutic. It is also possible that what substance or drug you are taking will not work. There are hundreds of drugs and dietary substances that can interact with any cytochrome p-450 metabolized substances.

Just because a substance has the potential to interact with another substance does not mean that you should not take it or that something bad will happen. It means the potential is there and you should talk about this with your medical provider. Your pharmacist is another resource to consult. There might be safer ways to take certain combinations of substances, such as taking one in the morning and another at night.

Here is a partial list of some drugs, foods, and dietary supplements that use CYP-450 for metabolism:

- NSAIDs, anesthesia, pain medications, protease inhibitors, non-nucleoside analogues, hormones, methadone, antibiotics, antifungals, antihistamines, anticonvulsants, antidepressants, antipsychotics,

antianxiety, sedatives, sleeping medications, lipid-lowering agents (statins), transplant anti-rejection drugs, anti-parasite drugs, diabetic, cardiac, gastrointestinal drugs, chemotherapy agents, drugs containing ergot, methadone and Viagra

- Broccoli, brussel sprouts, cabbage, caffeine, cannabinoids (marijuana), cauliflower, charbroiled meats, garlic, grapefruit juice, green tea, star fruit and tobacco.
- Black cohosh, bloodroot, cat's claw, chamomile, chaparral, chasteberry, echinacea, ginkgo, ginseng, goldenseal, hops, milk thistle, oregano, peppermint, red clover, schisandra, soy, St. John's wort, wild cherry, and yucca.

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www.iherb.com/health.html
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www.mskcc.org/aboutherbs
- **National Institutes of Health National Center for Complementary and Alternative Medicine**
<http://nccam.nih.gov>
- **Natural Standard**
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Executive Director
Editor-in-Chief, HCSP Publications
Alan Franciscus

Design
Paula Fener

Production
C.D. Mazoff, PhD

Contact information:
Hepatitis C Support Project
PO Box 427037
San Francisco, CA 94142-7037

alanfranciscus@hcvadvocate.org

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a series of fact sheets written
by experts in the field of liver
disease

HCV & CAM: Herbs and Dietary Supplements: Making Safer and Wiser Choices

Lucinda Porter, RN

In May 2004, the National Institutes of Health National Center for Complementary and Alternative Medicine (NCCAM) conducted a large survey about the use of complementary and alternative medicine (CAM) in the U.S. The results revealed that 62% of adults in this country use CAM. Prayer and “natural products” were the most frequently reported practices. When prayer and natural products were removed from the survey, that number dropped to 36%.

Women were more likely to use CAM than men were. The higher the education the more likely CAM was practiced. People used CAM for many reasons. The use of CAM along with conventional medical treatment was the most common approach. Some thought, “it would be interesting to try.” CAM was chosen when conventional medical treatment did not work. Other reasons commonly given included cost, availability, less side effects, the attraction to “natural” versus

manufactured, cultural practice, and recommendation by others.

According to NCCAM, no CAM treatment has been proven safe and effective for treating HCV. In order for a treatment to be effective, according to the common definition, the treatment should bring about “the complete and sustained elimination of HCV virus.” However, there are other reasons to consider CAM. One reason is to manage symptoms and side effects. Another goal is to reduce inflammation. Some people also need to feel they are doing something rather than nothing.

The following groups of people should avoid the use of herbs unless otherwise ordered by their medical provider:

- Pregnant and nursing women
- Infants
- Organ transplant recipients
- Those with decompensated liver cirrhosis
- Anyone with a serious medical condition
- Those scheduled to have a medical or dental procedure that may have a bleeding risk or involve anesthesia

Note: There is virtually no safety information about HCV treatment and the use of supplements.

More clinical research needs to be conducted in this area. However, with or without science, herbs and other supplements have been around for centuries and people are unlikely to avoid them just because of insufficient scientific evidence. If you are interested in supplements, here is some information on how to make safer and wiser choices:

- Regardless of the choices you make, see your medical provider on a regular basis.
- Discuss herb and supplement use with your provider. Identify all the herbs and supplements you take, even if you think your provider might disapprove. Drugs and supplements can interact with each other as well as with other health conditions, so it is

important to have the whole picture.

- Tell your provider if you have recently stopped taking a supplement since this may alter your lab results.
- Some herbs prolong bleeding times or interfere with anesthetics. Stop all herb use at least 2 weeks prior to any medical or dental procedure. Tell your medical provider, surgeon, and anesthesiologist about any herbs you are using, particularly if the procedure occurs before you have sufficient time to observe this “wash-out” period.
- Assess your overall health. If you smoke, drink alcohol, and have other unhealthy habits, do not expect herbs to offset the potential damage these habits can cause. Adopting healthy habits will provide far more benefit than any herb can possibly give.
- Supplements are not a substitute for medical treatment.
- Apply the same commonsense approach and standards to herbs as you would to any drug. If you are reluctant to take any prescription or over-the-counter drug, be just as reluctant to take an herb.
- Before you take an herb or supplement, find out if it is compatible with other drugs or supplements you are taking. Verify that the supplement is not contraindicated for any other condition you may have.
- Take extra precautions if you have a history of allergies. Botanical products can cause allergic reactions.
- Try to take herbs one at a time and not in a blended formulation. Combination herb products often provide insufficient quantities to be effective. Taking herbs one at a time will help you determine effectiveness and will be helpful if you have a negative reaction.
- Be informed and be sure your information is current.
- Supplements are not a substitute for good nutrition.
- Assess your total diet. A supplement may not be necessary if you eat foods that provide that supplement. Avoid overdosing yourself.
- Follow the label’s dosage recommendations. More is not better.
- Know your source. Herbs may be contaminated.

Before ingesting anything, ask yourself what you know about what you are about to take.

- Choose herbs and supplements that are standardized.¹
- Herbs vary in quality. Independent testing has revealed contamination and poor quality formulations. Buy products that submit to voluntary self-regulation.²
- Natural does not equal healthy or safe. Strychnine and snake venom are natural but not healthy.
- Keep supplements out of children’s reach.
- Do not be swayed by bargain prices. Herbs are not all equal.
- Check the expiration date on the container.
- Store supplements away from sun, heat, extreme cold, or moisture.
- Take supplements with a full glass of water, unless directed otherwise.
- Unless directed otherwise, do not break, chew, or crush supplements, especially long-acting ones.
- Know if your supplement should be taken with food or without.
- Do not rely on the health food store staff for health care information. Although they may be helpful, remember that salespeople are usually not licensed to practice medicine. Do not treat your condition on the advice of a salesperson.
- Be skeptical. Claims made by the product manufacturer or seller may vastly differ from independent evidence-based research.
- Do not be swayed by personal testimonies. Although individuals may benefit from botanical use, the notion that “one size fits all” does not apply in medicine.
- Do not be influenced by the latest supplement to make headlines. Dietary supplements can be compared to cars. When new models are introduced, sometimes it takes time before problems develop. A product that really has value will be around for a while.
- Herbs and supplements should not be given to children or taken by pregnant or nursing women without a physician’s approval. Older adults and those with various health conditions should exercise extra caution before taking non-prescribed supplements.

Herbs should never be used by people with decompensated cirrhosis.

- Some botanical products are sold in alcohol-based tinctures. Those taking disulfirman (Antabuse) or metronidazole (Flagyl) should avoid these formulations. Recovering alcoholics may also want to select non-alcohol-based formulations.
- Report any suspected adverse reactions to an herb or supplement to the FDA's monitoring program, Medwatch. Call 800-322-1088 or www.fda.gov/medwatch.

¹Standardization indicates how much of the active ingredients are in an herbal product. This enables the consumer to know what "dose" to use.

²Supplements that meet any standards shows the manufacturers put extra effort into their product. There are many insignias, designations and "seals of approval." Some are: The United States Pharmacopoeia (USP), NF, NSF, and ConsumerLab.com (CL). Standards have also been set by Germany's Commission E, the British Herbal Compendium, the World Health Organization, the American Herbal Pharmacopoeia the American Herbal Products Association and others. Products that followed GMP - "good manufacturing practices" suggests more effort went into manufacturing. (In Canada, the GMP means "good manufacturing process.")

**Visit the HCV Advocate
Web Site:
www.hcvadvocate.org**

Below are just some of the publications and services you can find at www.hcvadvocate.org:

- HCV Advocate Monthly Newsletter (English)
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- Weekly News Review
- Disability & Benefits Column
- Hepatitis B information
- HIV/HCV Coinfection information
- Support Group Listings for USA, Canada and Elsewhere
- Links to Clinical Trials
- Links to other Helpful Organisations
- Event Listings
- Fact Sheet series: (English, French and Spanish)
 - *Easy C Facts
 - *Basics
 - *HCSP Fact Sheets

• *hcsPFACTsheet* •

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**Executive Director
Editor-in-Chief, HCSP Publications**

Alan Franciscus

Design

Paula Fener

Production

C.D. Mazoff, PhD

Contact information:

Hepatitis C Support Project
PO Box 427037
San Francisco, CA 94142-7037

alanfranciscus@hcvadvocate.org

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a series of fact sheets written
by experts in the field of liver
disease

Herbs & Hepatitis C

2nd Edition

Lucinda K. Porter, RN

A Word from the Author

Interest in herbs and supplements seems to be on the rise. When I first wrote this article, it was difficult to find reliable sources of information about herbs. As more information became available, it became clear it was time to update "Herbs and Hepatitis C." This article is not meant to be the final stop on the information highway. I hope the reader will use this as a tool towards gaining more insight and knowledge about the world of herbs. Of course, this information is not meant to be used for medical care. Always talk to your primary healthcare provider before using herbs.

The use of herbs for medicinal purposes has a long and interesting history. The origins of some modern

medications are actually plants, such as aspirin from white willow bark, digitalis from foxglove, morphine from poppies and warfarin (Coumadin) from sweet clover. Many cultures use indigenous plants for healing purposes. The use of herbs, however, is controversial in contemporary western medicine due to the lack of evidence-based research to support safety and efficacy. Couple this with the potential harm these substances can inflict and it is easy to see why physicians are reluctant to endorse herb use. Some patients are interested in alternative methods to use with or instead of the treatment their physicians have prescribed. This is particularly true for patients living with chronic hepatitis C virus (HCV). Although huge progress has been made in the HCV treatment arena, current antiviral therapy has many side effects and is not always effective. Add these elements to the symptoms some people experience from HCV and it is no wonder that herbs seem attractive.

Although herbs and other supplements may seem appealing, a number of herbs can cause harm. Some herbs are known to have potentially carcinogenic properties and to cause neurological damage. There are herbs that can be particularly harmful to the liver and can cause damage and death. It is because of the potential for hepatotoxicity (poisoning of the liver) that HCV patients are advised to avoid herbs or to use them cautiously.

The Food and Drug Administration (FDA) is the federal agency responsible for drug and food safety. Drugs undergo years of rigorous testing on animals and humans before the FDA allows them to be marketed. Herbs and supplements, on the other hand, are considered to be dietary supplements. This means that they are regulated by different standards, called the Dietary Supplement Health and Education Act of 1994 (DSHEA). Under this act, it is the manufacturer that ensures the safety of the dietary supplement. In general, the supplement manufacturers do not need FDA approval and do not need to register their product. They are required, however, to label the supplement in a truthful manner.

The point at which the FDA may become involved with herbs is after marketing. The FDA may monitor product labeling, information, and safety. Adverse event reporting is voluntary. Whether the FDA should regulate supplements is a hotly debated issue. The FDA has been criticized both for regulating and under regulating dietary supplements. For a variety of reasons, the FDA's involvement with herb use has been

minimal. To date, the notable exception to this is the sale of dietary supplements containing ephedrine alkaloids. Ephedra, also called Ma Huang, is one of the plants that are a source of ephedrine alkaloids. Its use has been associated with an increase in blood pressure, a condition which will increase the risk of heart attack, stroke, and death.

There is very little independent research involving the use of herbs. The gold standard randomized, controlled, double blind placebo controlled studies are few in the area of botanical remedies, let alone the use of herbs and HCV. In 1991, the U.S. Congress established the Office of Alternative Medicine (OAM) within the National Institutes of Health (NIH). In 1998 the National Center for Complementary and Alternative Medicine (NCCAM) became a new center of the NIH. Responding to the need for more research about the safety and efficacy of herbs and supplements, NCCAM and the NIH Office of Dietary Supplements established the first Dietary Supplements Research Centers with an emphasis on botanicals. The specific subject of herbs and viral hepatitis was included in the Complementary and Alternative Medicine in Chronic Liver Disease conference in 1999 and a few clinical trials are being conducted in this area. Unfortunately funding is limited and evidence-based data about herbs and HCV is largely unavailable.

The insufficiency of independent research does not mean that there is no value in herbs. Herbs have made a significant contribution to medicine. Herbal practice has been around for centuries and has produced some sound observations. Indigenous practitioners relied on botanicals for medicine. In these modern times it is common for people to self-treat mild sunburns with aloe vera, mild stomach aches with ginger, or mild colds with peppermint or chamomile tea. Generally these are assumed to be safe alternatives. However, the use of herbs for treatment of more serious conditions such as HCV is more complicated and raises a number of questions. For example, when choosing an herb, which part of plant is used, when is it harvested, and how is it processed? Botanicals are not made in a lab setting. This means that the consistency of the product is at risk. Is the herbal product safe, which brands are the best, and what is the recommended dose?

To answer these questions, start with the label. Herbs can vary in strength and purity, so it may be wise to take a standardized and certified form. Certification and standardization is voluntary. The goal of the United States Pharmacopeia (USP) is to set industry standards for drugs and dietary supplements in the U.S. The label of a supplement that displays the USP seal is worth considering. A product that is certified by NSF International (formerly the National Sanitation Foundation) is another indicator that the manufacturer complies with particular standards. A seal of approval from ConsumerLab.com (CL) also carries some distinction. Another standard is that of the world's leading authority on herbs, the German Commission E. This agency is the German equivalent of the Food and Drug Administration (FDA). The American Herbal Pharmacopoeia is also developing standardization guidelines for the American marketplace. ConsumerLab.com has provided a much-needed service by testing popular supplements. This company has discovered that many products do not contain the levels of key ingredients that are on the products' labels. A product that passes their inspection may carry the triangular label with the ConsumerLab.com quality of approval. The use of this service does have a fee associated with it. Companies that belong to the American Herbal Products Association and submit to this organization's code of ethics are another good choice.

Suggested Guidelines for Herbal Use

- Assess your overall health. If you smoke, drink alcohol, and have other unhealthy habits, do not expect herbs to offset the potential damage these habits can cause. Adopting healthy habits will provide far more benefit than any herb can possibly give.
- Discuss herb and supplement use with your healthcare provider. Identify all the herbs and supplements you take, even if you think your doctor might disapprove. Drugs and supplements can interact with each other as well as with other health conditions.
- Apply the same commonsense approach and standards to herbs as you would to any drug. If you are reluctant to take any prescription or over-the counter drug, be equally as reluctant to take an herb.
- Be informed and be sure your information is current.

- Before you take an herb or supplement, find out if it is compatible with other drugs or supplements you are taking. Verify that the supplement is not contraindicated for any other condition you may have (see “*A Warning about Milk Thistle and Drug Interactions*” below).
- Take extra precautions if you have a history of allergies. Botanical products can cause allergic reactions.
- Follow the label's dosage recommendations. ***More is not better.***
- Know your source. Herbs may be contaminated. Before ingesting anything, ask yourself what you know about what you are about to take.
- Choose herbs and supplements that are standardized.
- Buy products that submit to voluntary self-regulation.
- Natural does not equal healthy or safe. Snake venom is natural but not healthy.
- Do not be swayed by bargain prices. Herbs are not all equal.
- Check the expiration date on the container.
- Do not rely on the health food store staff for health care information. Although they may be helpful, remember that salespeople are usually not licensed to practice medicine. Do not treat your condition on the advice of a salesperson.
- Be skeptical. Claims made by the product manufacturer or seller may vastly differ from independent evidence-based research.
- Do not be swayed by personal testimonies. Although individuals may benefit from botanical use, the notion that "one size fits all" does not apply in medicine.
- Do not be influenced by the latest supplement to make headlines. Dietary supplements can be compared to cars. When new models are introduced, sometimes it takes time before problems develop. A product that really has value will be around for awhile.
- Herbs and supplements should not be given to children or taken by pregnant or nursing women without a physician's approval. Older adults and those with various health conditions should also exercise extra caution before taking non-prescribed supplements. Herbs should *never* be used with decompensated cirrhosis.

- Some herbs prolong bleeding times or interfere with anesthetics. Stop all herb use at least a week prior to any surgery or procedure that uses anesthesia. Tell your attending physician and anesthesiologist about any herbs you are using, particularly if the procedure occurs before you have sufficient time to observe this "wash-out" period.
- Report any suspected adverse reactions to an herb or supplement to the FDA's monitoring program, Medwatch. Call 800-322-1088 or www.fda.gov/medwatch.

Some Herbs Associated with Liver Toxicity

This list is primarily liver specific and by no means exhaustive. The substances on this list are referred to in their oral form only.

- Blue-green Algae
- Borage (*Borago officinalis*)
- Bupleurum
- Chaparral (*Larrea tridentata*)
- Comfrey (*Symphytum officinale* and *S. uplandicum*)
- Dong Quai (*Angelica polymorpha*)
- Germander (*Teucrium chamaedrys*)
- Jin Bu Huan (*Lycopodium serratum*)
- Kava
- Mistletoe (*Phoradendron leucarpum* and *viscum album*)
- Pennyroyal (*Mentha pulegium*)
- Sassafras (*Sassafras albidum*)
- Shark Cartilage
- Skullcap (*Scutellaria lateriflora*) Valerian

Ephedra

Although not specifically associated with liver toxicity, products containing ephedrine alkaloids (ephedra) should be avoided. Reports of heart attacks, strokes, seizures, psychosis, and death have been linked to the use of ephedrine alkaloids. The FDA has banned the sale of dietary supplements containing ephedrine alkaloids, including ephedra and Ma Huang.

Milk Thistle

Milk thistle, *Silybum marianum*, is the most commonly used herb for liver problems. A frequently asked question regarding chronic hepatitis C viral (HCV) infection concerns the use of this herb. If you are considering taking a milk thistle product, talk to your doctor and find out if it is compatible with other drugs or supplements you are taking. Verify that the supplement is not contraindicated for any other condition you may have (see "A Warning about Milk Thistle and Drug Interactions" below). Do not use milk thistle if you have decompensated cirrhosis.

Medical consultants for the Consumers Union recommended the following in the April 2001 issue of *Consumer Reports On Health*:

- Patients should not use milk thistle to replace a conventional treatment for viral hepatitis;
- Patients should not take milk thistle while on a conventional treatment for viral hepatitis;
- Milk thistle is probably safe and no one should be discouraged from taking it if there are no other options;
- Choose a brand that contains silibin and phosphatidyl choline, which may be better absorbed.

There is insufficient research to establish a suggested daily dose of milk thistle. Typical dosages are in the range of 140-420 mg in divided doses, 2-3 times a day of 70-80% silymarin. See the section "*Suggested Guidelines for Herbal Use*" (above) for more information on choosing milk thistle along with other herbal products.

A Warning About Milk Thistle and Drug Interactions

Raman Venkataramanan and colleagues¹ at the University of Pittsburg reported observations about silymarin, a compound found in milk thistle. In short, this report raised concerns that silymarin may impair the metabolism of certain drugs when taken together. Further, the potential exists for increased toxicity of co-administered drugs in the presence of silymarin.

The medications levels of the following **may** increase if taken by people who are also using milk thistle. The source for this list is the Community AIDS Treatment Information Exchange (CATIE) and is not meant to be complete.

- *protease inhibitors*
- *non-nucleoside analogues*
- *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 (fluoxetine) Serzone (nefazodone), Zoloft (sertraline), Effexor (venlafaxine)
- *antihistamines* - Hismanal (astemizole), Seldane (terfenadine)
- *antifungals* - itraconazole (Sporanox), Ketoconazole (Nizoral)
- *gastrointestinal motility agents* - Prepulsid (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) and 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

HCV Treatment and Herbs

There is virtually no research on the safety of herbs and supplements co-administered with peginterferon/ribavirin therapy. Because of this, it is common for patients to abstain from milk thistle and herb use while undergoing antiviral therapy. Even commonly used botanicals need to be used

with caution. Some herbs and supplements can hinder the ability of the blood to clot. For instance, ginger is widely used to relieve nausea. However, patients with gallstones should talk to their health care provider prior to using ginger. Additionally, ginger has an anticlotting action and should not be taken if you have reduced blood clotting ability. Interferon therapy and/or cirrhosis can also interfere with blood clotting, so there may be an increased risk if some herbs are used simultaneously under these conditions. Other commonly used herbs, such as chamomile and St. John's Wort carry a warning of potential drug interactions. The rule of thumb is to be informed and talk to your healthcare provider prior to using any botanical product.

Warning: *Bupleurum* is a popular herb used in a variety of Traditional Chinese and Japanese Medicine Mixtures for liver conditions. At least 16 deaths have been reported in Japan for HCV patients being treated simultaneously with alpha interferon and Xiao Chai Hu Tang (Minor Bupleurum).

Final Words

Herbs have been part of the healing arts for centuries. Clearly more information and research needs to be conducted in this area in order to better understand and incorporate the use of botanical products into current health practices. In the meantime, make informed decisions regarding your health. Your future depends on it.

¹ Venkataramanan R, Ramachandran V, Komoroski BJ, et al. Milk thistle, a herbal supplement, decreases the activity of CYP3A4 and uridine diphosphoglucuronosyl transferase in human hepatocyte cultures. *Drug Metabolism and Disposition* 2000;28(11):1270-1273.

Resources:

- *The American Pharmaceutical Association Practical Guide to Natural Medicines* by Andrea Peirce.
- *The ABC Clinical Guide to Herbs* edited by Mark Blumenthal, et al at the American Botanical Council.
- *ConsumerLab.com's Guide to Buying Vitamins & Supplements: What's Really in the Bottle* by Tod Cooperman, M.D., William Obermeyer, Ph.D., Denise Webb, R.D., Ph.D.
- *The Green Pharmacy* by James A. Duke.
- *Herbs of Choice* by James E. Robbers and Varro E. Tyler

PDR for Herbal Medicines published by the Medical Economics Company.

- *Tyler's Honest Herbal: A Sensible Guide to the Use of Herbs and Related Remedies* by Stephen Foster and Varro E. Tyler, Ph.D.
- American Botanical Council - 512-926-4900
www.herbalgram.org
- American Herbal Products Association - www.ahpa.org
- ConsumerLab.com - www.consumerlab.com
- FDA Dietary Supplement website - vm.cfsan.fda.gov/~dms/supplmnt.html
- HerbMed - www.herbmed.org
- Memorial Sloan-Kettering Cancer Center - www.mskcc.org/aboutherbs
- National Center for Complementary and Alternative Medicine - 888-644-6226 http://nccam.nih.gov
- National Institutes of Health Clinical Trial Information - www.clinicaltrials.gov
- National Sanitation Foundation - http://www.nsf.org
- NSF International - www.nsf.org
- The United States Pharmacopeia - 800-822-8772
www.usp.org
- UC Berkeley Wellness Letter - www.wellnessletter.com
- United States Pharmacopeia - www.usp.org

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**Executive Director
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Alan Franciscus

Design
Paula Fener

Production
C.D. Mazoff, PhD

Contact information:
Hepatitis C Support Project
PO Box 427037
San Francisco, CA 94142-7037
alanfranciscus@hcvadvocate.org

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HCV & CAM: CAM Information and Finding a Practitioner

Lucinda Porter, RN

The best way to find a CAM practitioner is by asking friends or your medical provider for recommendations. For more information or to locate a practitioner in your area:¹

American Academy of Medical Acupuncture

www.medicalacupuncture.org – 4929 Wilshire Boulevard, Suite 428, Los Angeles, California 90010; (323) 937-5514

American Academy of Osteopathy

www.academyofosteopathy.org – 3500 DePauw Blvd., Suite 1080, Indianapolis, Indiana 46268; (317) 879-188

The American Association of Naturopathic Physicians

www.naturopathic.org – 3201 New Mexico Avenue, NW Suite 350, Washington, DC 20016; (866) 538-2267

American College of Traditional Chinese Medicine

www.actcm.org – (415) 282-9603 (call for addresses of clinics or where to mail correspondence)

American Massage Therapy Association

www.amtamassage.org – 500 Davis Street, Suite 900, Evanston, IL 60201-4695; (877) 905-2700

American Osteopathic Association

www.osteopathic.org – 142 E. Ontario St., Chicago, IL 60611; (800) 621-1773

American Yoga Association

www.americanyogaassociation.org

The Ayurvedic Institute

www.ayurveda.com – 11311 Menaul N.E., Albuquerque, NM 87112; (505) 291-9698

Everyday Ayurveda

www.everydayayurveda.org

The International Center for Reiki Training

www.reiki.org – 21421 Hilltop Street, Unit #28, Southfield, Michigan 48034; (800) 332-8112

International Chiropractors Association

www.chiropractic.org – 1110 N. Glebe Road, Suite 1000, Arlington, VA 22201; (800) 423-4690

The National Center for Homeopathy

www.homeopathic.org – 801 N. Fairfax St., #306, Alexandria, VA 22314; (877) 624-0613

National Certification Board for Therapeutic Massage and Bodywork

www.ncbtmb.com – 8201 Greensboro Drive, Suite 300, McLean, VA 22102; (800) 296-0664

National Certification Commission for Acupuncture and Oriental Medicine

www.nccaom.org

¹ These resources are not an endorsement by the author or HCSP

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HCV & CAM: Internet Resources for Dietary Supplements

Lucinda Porter, RN

**SOME OF THESE WEBSITES HAVE ADVERTISING.
THIS LIST IS NOT MEDICAL ADVICE OR ENDORSE-
MENT OF ANY PARTICULAR PRODUCT.**

American Botanical Council – www.herbalgram.org

This international, non-profit organization has botanical information for members and non-members.

Center for Science in the Public Interest: Nutrition Action Health Letter – <http://cspinet.org>

CSPI is a non-profit organization that has probably done more for nutrition and food safety than any other group in the U.S. Its subscription publication, the Nutrition Action Healthletter is outstanding.

ConsumerLab.com – www.consumerlab.com

Consumer Labs conducts testing on herbs and supplements. Although it charges an annual membership fee, there is some free information. If you are serious about supplements, this site is worth considering.

Consumer Reports – www.consumerreports.org

Consumer Reports charges a subscription fee, but has some good free information. If you prefer not to subscribe, you can read the magazine at your public library.

The Cochrane Collaboration – www.cochrane.org/index1.htm

This international non-profit group is dedicated to independent verification of research relating to healthcare. Another link to their information: – www.informedhealthonline.org/item.aspx

Drugs.com: Drug Information Online – www.drugs.com

This website has an extensive encyclopedia of drugs and supplements. You can use this website to check the interactions between all your medications and dietary supplements.

Food and Drug Administration (FDA) Warnings and Dietary Supplements – <http://www.cfsan.fda.gov/%7Edms/ds-warn.html>

This lists the FDA's dietary supplement warnings.

Healthtouch Online – www.healthtouch.com

This resource covers a wide variety of health issues, including supplements.

HerbMed – www.herbmed.org

This website, provided by the Alternative Medicine Foundation, offers a database of herb information.

iherb – www.iherb.com/health.html

This website claims that it is “positively the single most informative page about nutritional supplements.” Although not every link is necessarily worth going to, free access to The Natural Pharmacist and The Commission E is a real plus. It offers an extensive encyclopedia of drugs and supplement information. You can check interactions between all your medications and dietary supplements. For the price (free), it is hard to beat.

Memorial Sloan-Kettering Cancer Center – www.mskcc.org/aboutherbs

This website offers a great deal of information about the supplements it lists. It is easy to use.

Natural Standard – www.naturalstandard.com

This website charges a membership fee and if you are serious about supplements, it is worth considering. It applies “grading systems” to current research, which is a convenient way to evaluate evidence about supplements. Natural Standard provides extensive supplement monographs, including some published in collaboration with Harvard Medical School. Their evaluation of complementary and alternative medicine modalities is very thorough.

National Institutes of Health National Center for Complementary and Alternative Medicine NCCAM

– <http://nccam.nih.gov>

Although poorly funded and just entering its adolescence, NCCAM shows an earnest attempt to address the public's interest in CAM.

National Institutes of Health Office of Dietary

Supplements Health Information – http://ods.od.nih.gov/Health_Information/Health_Information.aspx

The quality and amount of information found on this website is worth the visit.

National Institutes of Health Office of Dietary Supplements Bibliographic Information – http://ods.od.nih.gov/Health_Information/IBIDS.aspx

An offshoot of the previously mentioned website, this is a good database of abstracts and citations.

NSF international – www.nsf.org

This organization is dedicated to food and supplement safety. Supplements certified by NSF have submitted to and met voluntary standards.

Prevention Magazine – www.prevention.com

This newsstand magazine is small enough to put in your glove compartment, purse or large pocket for those appointment-waiting times. The website has good free information and tools.

United States Department of Agriculture (USDA)

– www.nutrition.gov

This USDA website gives information about current nutrition information.

United States Food and Drug Administration (FDA)

– www.fda.gov

This agency is responsible for food and drug safety in the U.S.

United States Pharmacopeia – www.usp.org/USPVerified

This organization is dedicated to quality assurance of drugs and supplements. Supplements with USP approval have submitted to and met voluntary standards.

University of Texas MD Anderson Cancer Center

– www.mdanderson.org/departments/CIMER

A good site for general information about alternative and complementary medicine.

Weil, Andrew – www.drweil.com/u/Home/index.html

Dr. Weil has done much to advance information about complementary and alternative medicine. His website has a good deal of advertising and his inclusion on this list is not an endorsement of his products.

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