

Morning  
Grogginess?  
Frequent  
Headaches?  
Migraines?  
PMS?



Skin Issues?  
Brain Fog?  
Irritability?  
Depression?  
Chronic  
Indigestion?

## Are You Hurt by the Many Health Problems Linked with Toxic Liver?

The liver isn't a very glamorous body part, but this brown, three-pound organ is one of the most overlooked body systems when it comes to overcoming chronic and degenerative diseases. With over 500 functions to perform, an overworked and under-nourished liver can become congested and sluggish, contributing to numerous common health problems.

Some of the more common liver-related symptoms include difficulty relaxing and getting to sleep at night, feeling groggy in the morning, brain fog, headaches (especially migraines), PMS, skin problems (such as dry skin, oily skin, acne, boils or rashes), nausea and morning sickness, constipation and general malaise. Common emotional symptoms include irritability, anxiety and depression.

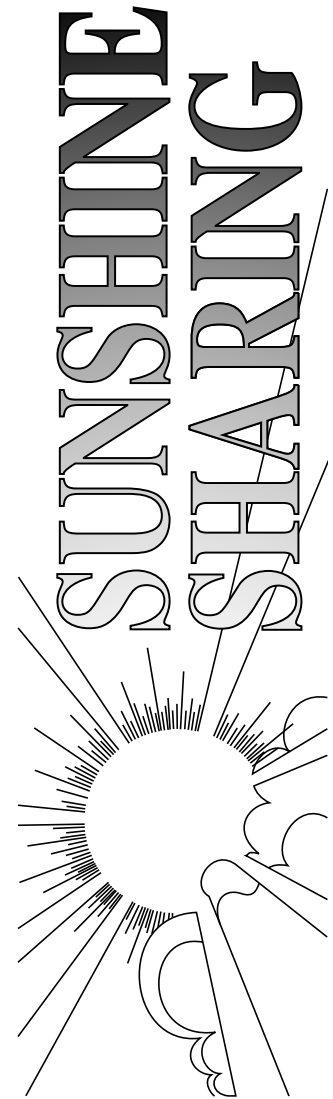
Since medical tests only reveal serious liver diseases, like fatty liver disease, hepatitis and cirrhosis of liver, these symptoms of moderate liver dysfunction aren't typically recognized as such in modern medicine. They are described very well in traditional systems of medicine such as traditional Chinese medicine (TCM). The short survey below is based on liver indications from TCM and other traditional systems of medicine. Use it to determine if your liver may need some support. If so, the information in this newsletter may help you feel better rather quickly.

### Does Your Liver Need Help?

If any of the following statements are generally true about you, put a check mark in front of the statement.

- I have difficulty relaxing in the evening and getting to sleep
- I feel groggy in the morning. I don't wake up feeling rested and refreshed.
- I get headaches frequently.
- I have skin problems (such as acne, age spots, dry skin or rashes)
- I have PMS problems (women). I have prostate problems (men).
- I sometimes feel pressure or discomfort under my right rib cage.
- I am easily angered, irritated or discouraged
- I have a lot of health problems and can't figure out what is wrong with me
- I often feel sluggish or lethargic
- I often have a difficult time concentrating (brain fog)
- My bowels move less than once a day
- I experience nausea, motion sickness or morning sickness

If you checked more than 3 statements, you may need to support your liver. If you checked 6 or more you should definitely do some things to help support your liver.



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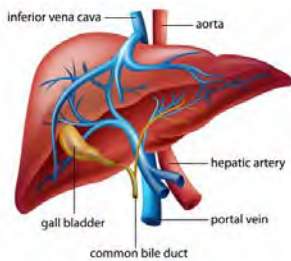
### Important Notice

The information in *Sunshine Sharing* is for educational purposes only and should not be used to diagnose and treat diseases. If you have a health problem, we recommend you consult a competent health practitioner before embarking on any course of treatment.

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# The Many Functions of the Liver

TCM teaches that the liver *harmonizes* the function of all other organs and systems and builds the blood. When a person has many vague health problems that make diagnosis difficult, TCM suggests working on the liver. The liver is also a major focus of therapy when a person has blood deficiency, which is characterized by fatigue, paleness and lethargy.

The Western medical doctor, Rudolph Ballentine wrote something similar in his book, *Diet and Nutrition*. He said that it is the liver patient, whom a “busy and baffled doctor” is most likely to call a hypochondriac. He then says that they have made a correct diagnosis without realizing it because the liver is located in an area of the body known anatomically as the *hypochondrium*.

When one understands the many functions of the liver, it's easy to see why moderate liver dysfunction will produce so many vague symptoms. It also becomes easy to see why taking care of the liver is important to overall health. So, let's examine some of the major functions of this vital organ.

## Digestion and Nutrient Storage

The liver plays an important role in digesting and utilizing nutrients. First, it produces bile, which is stored in the gallbladder and released as needed to emulsify fatty substances and make them water soluble, much like dish soap helps remove grease from dishes. This aids digestion of fats and the absorption of the fat soluble vitamins A, D, E and K.

Once foods are digested and absorbed, the blood from the intestines is transported to the liver for processing. This allows the liver to filter toxins and microbes that have made it past the intestinal membranes. It also allows the liver to process nutrients for utilization and to store excess vitamins, minerals and sugars to be released later when they are needed.

The liver can convert some amino acids into other amino acids that the body needs. For instance, it makes carnitine from lysine. Carnitine moves fats into the mitochondria where they are used to generate energy. It also uses amino acids to construct proteins like albumin, which maintains osmotic pressure in the blood stream.

## Cholesterol Regulation

Keeping cholesterol and triglycerides (blood fats) balanced is a primary function of the liver. The liver manufactures cholesterol when dietary cholesterol is insufficient for the body's needs. Cholesterol is an essential nutrient used to transport fatty acids and fat soluble vitamins through the watery medium of the blood stream. It is also used to make adrenal and reproductive hormones and cell membranes. The liver makes LDL cholesterol to transport triglycerides and fat soluble vitamins to the cells. HDL cholesterol is used to transport fatty toxins back to the liver for removal.

The liver also disposes of excess cholesterol by turning it into bile. More than 50% of the body's cholesterol is used for this purpose. Bile is also used as an avenue for the elimination of fat

soluble toxins. Many liver herbs act as cholagogues, which means they stimulate bile production, which helps lower cholesterol, eliminate toxins and improve fat digestion.



## Detoxification

The liver is the primary internal organ of detoxification. Liver enzymes process toxins for removal from the body in two stages. Phase one enzymes add or take away electrons from toxins to give them an electrical charge. Phase two enzymes attach the electrically charged toxins to organic compounds so they can be flushed from the body through the kidneys or intestines (via the gallbladder).

Using these enzyme systems, the body gets rid of chemicals as well as microbial toxins and metabolic by-products. The six phase two detoxification pathways protect us from toxins like pesticides, food additives, xenoestrogens and heavy metals. They eliminate the toxins created by microbes during an infection and excess neurotransmitters and hormones that are no longer needed. They also break down drugs, alcohol, caffeine and other active substances we ingest.

## Hormonal Regulation

The liver also plays a role in hormonal balance. It assists the thyroid gland by converting the thyroid hormone thyroxine (T4) into its more active form, triiodothyronine (T3). Inadequate conversion may lead to symptoms of low thyroid, even though thyroid hormone levels are normal.

It also helps to balance sex hormones by eliminating them when they are no longer needed. This is why PMS nearly always involves some degree of liver dysfunction and why liver herbs can help regulate a woman's monthly cycle.

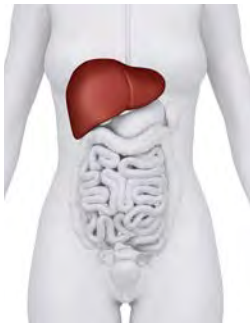
Under the influence of growth hormone from the pituitary, the liver acts as a gland itself. It produces the hormone IGF 1 (insulin like growth factor) which aids tissue healing and regeneration.

## Blood Sugar Balancing

The liver helps the pancreas regulate blood sugar levels via several mechanisms. The first of these is the creation of GTF (Glucose Tolerance Factor) from chromium and niacin. As mentioned earlier, the liver also stores extra sugar in the form of glycogen. When blood sugar levels are too low, the pancreas secretes glucagon, which stimulates the liver to convert glycogen back into sugar and release it in the blood. High insulin levels depress glucagon and the liver breaks down excess insulin, so hypoglycemia or low blood sugar is often liver-related.



When glucose is metabolized, lactic acid is produced. If lactic acid levels get too high—particularly in muscle tissues—the muscles become stiff and sore. In this case, the liver extracts lactic acid from the bloodstream and converts it to glycogen, thereby relieving muscle soreness.



# Supporting Your Overworked Liver

With so many tasks to perform, the liver needs a good supply of nutrients in order to function properly. Yet, in today's society most people consume diets loaded with refined and processed foods that lack the nutrients the liver needs to do its many jobs. This is made worse by the extra

burden placed on the liver in having to detoxify food additives, pesticide and herbicide residues and other chemicals to which people are regularly exposed. Add alcohol and drugs (prescription or recreational) into the mix and you have the perfect recipe for a toxic, burdened and overworked liver.

Here are three basic ways you can show your overworked liver a little love.

## Minimize Your Exposure to Toxins

Remember that chemicals you are exposed to are going to have to be detoxified, primarily by your liver. Your liver was designed to handle a certain amount of toxic substances for you, so you don't need to be paranoid about toxins, but you do want to lessen the burden on your liver as much as you can.

So, give your liver a break by avoiding excessive alcohol consumption. Avoid processed foods loaded with food additives. Eat organic produce to reduce exposure to pesticides and other agricultural chemicals. Select nontoxic personal care products and household cleaning supplies. The more chemicals you avoid, the less stress you put on your liver.

## Eat a Nutritionally Dense Diet



In order to perform its functions the liver needs vitamins, minerals, essential fatty acids, amino acids from protein and other phytochemicals found in whole, natural foods. So, if you consume a diet loaded with empty calorie foods like refined sugar, white flour and refined vegetable oils, your liver will not function as well as it should.

In Traditional Chinese Medicine (TCM), eye health is linked with liver health. One possible explanation for this is because these two organs use the most antioxidants. In fact, many eye diseases (such as glaucoma, cataracts and retinopathy) are due to oxidative damage to the eyes. The liver requires large amounts of antioxidants to protect it in its detoxification processes. So, a diet high in brightly colored fruits and vegetables is very helpful for liver health.

Three categories of foods that seem particularly helpful for the liver are sour berries, leafy green vegetables and cruciferous vegetables. In TCM the taste of sour is said to tonify the liver (possibly due to the high amounts of vitamin C and other antioxidants in sour berries). **Thai-Go** contains many antioxidant herbs traditionally used to support liver health and is a good general supplement for protecting the liver.

Green vegetables are also loaded with nutrients that seem to help the liver do its job better, such as magnesium and folate. Cruciferous vegetables contain substances which aid liver detoxification, especially for excess hormones and xenoestrogens. **Nature's Harvest** protein powder and **GreenZone** both supply powdered vegetables that can be helpful for supporting liver health.

## Use Supplements to Support Liver Health

In addition to reducing exposure to toxins and eating more nutritionally dense foods, there are a variety of supplements that can aid liver health. Here are a few options to consider.



### Milk Thistle Combination

Milk thistle is the most well known hepatoprotective herb. Others include schizandra and blessed thistle. These herbs protect the liver from being damaged by the harmful chemicals it is trying to eliminate. Milk Thistle Combination combines milk thistle with other herbs and nutrients that aid liver detoxification like dandelion, vitamin C and N-acetyl-cysteine. It is a great formula for anyone who works around chemicals of any kind (painters, auto mechanics, hairdressers, factory workers, carpet cleaners and so forth).

### Liver Balance

Liver Balance is a TCM formula for constricted liver qi (energy). It helps to clear a congested liver, aiding digestion and liver detoxification. It is one of the best liver formulas for people who tend to be irritable and get angry easily. It can be very helpful for people who experience digestive upset, stuffiness under the right rib cage, morning grogginess and frequent headaches. It is an important part of the **Tiao He Cleanse**, which is a great cleanse for both the liver and the colon.

### Hepatic System Pack

The Hepatic System Pack combines Milk Thistle and Liver Balance with fiber in the form of Psyllium Hulls. It is a great pack for both protecting the liver and enhancing liver detoxification. It can be helpful for all symptoms of a congested, burdened liver as well as helping to reduce cholesterol levels and balance blood sugar.

### Blood Stimulator

In TCM, the liver is said to build the blood. One can see the truth of this when one realizes that the liver produces many blood

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## Additional Help and Information

For more information about liver health contact the person who gave you this newsletter. You can also consult the following resources:

*The Comprehensive Guide to Nature's Sunshine Products* by Steven Horne and Kimberly Balas

*Natural Therapy for Your Liver* by Christopher Hobbs

*Milk Thistle: The Liver Herb* by Christopher Hobbs

*Coming Clean* by Steven Horne



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## Learn to Love Your Liver

We're not talking about eating liver; we're talking about taking care of the internal organ that performs over 500 vital functions to keep you healthy. If you just don't feel well, experiencing fatigue, grogginess, headaches, irritability or lethargy, the problem could be a congested, overburdened liver. Unfortunately, moderate liver dysfunction won't show up on your doctor's lab tests and many people who "don't have anything wrong with them" medically, but just don't feel good, need to support the health of this vital organ of life. You can read more about it in this issue of *Sunshine Sharing*.

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### Continued from page 3

components and stores nutrients to be released into the blood as needed. Blood deficiency results in fatigue, paleness and lethargy. Blood Stimulator is particularly helpful for women during child-bearing years, who lose blood with each menstrual cycle.

#### Detox Basics

This pack contains herbs and nutrients that help to both protect the liver and aid its detoxification processes. Like Milk Thistle Combination it's a great pack for anyone who is exposed to chemicals to take daily, but is also great as a daily detoxification program for anyone who tends towards a congested liver.

#### All Cell Detox

All Cell Detox is a general cleansing formula that aids not only the liver, but the colon and kidneys as well. It is one of the

best all around cleansing formulas for anyone who wants to help detoxify their body.

#### Other Supplements

There are many other herbal formulas and nutritional supplements that may be helpful for the liver. These include **LIV-J**, **Liver Cleanse Formula** and **BP-X**, as well as the single herbs **Milk Thistle** and **Blessed Thistle**.

Specific nutrients can also aid specific liver functions and detoxification pathways. For example, **N-acetyl-cysteine**, a component of Milk Thistle Combination and Detox Basics aids glutathione production, which helps eliminate heavy metals. **SAME** promotes methylation, another liver detoxification pathway. **Indole-3-Carbinol** aids the sulfation detoxification pathway. Talk to the person who gave you this newsletter to learn more about these and other supplements that help with liver health.