13 Ways to Love Your Liver

Diana Peabody brings you back from the liver's edge

YOUR LIVER IS ONE OF YOUR MOST IMPORTANT ORGANS — you cannot live without it. The liver is like a processing plant for the body. Raw materials — such as nutrients, alcohol, herbs and drugs — are absorbed from the gut to the liver where they are processed, transformed, stored, detoxified and transported to the rest of the body. The liver works hard to keep your cells nourished, to process medications that fight HIV and other infections, and to detoxify hazardous substances. In order to keep working at its best, your liver needs to be well nourished and protected from damage.

People with HIV and AIDS (PHAs) sometimes have additional stress on the liver due to the toxicities of some antiretrovirals as well as hepatitis and/or substance use. One early warning sign of liver distress or damage is an elevated level of liver enzymes, which can be detected by blood tests. All PHAs, especially those on antiretrovirals, should have their liver enzyme levels monitored on a regular basis, since many people remain unaware of liver damage until it is quite advanced. Liver disease can lead to malnutrition, which can then accelerate liver damage.

Whether you're trying to protect a healthy liver or help your liver get better, the most important thing is to stay as well nourished as possible. The following tips can help you keep your liver in good working order:

1 **Try to avoid alcohol altogether if you have liver disease (hepatitis).** It is extremely toxic to the liver and evidence shows that boozing causes liver disease to progress faster. Alcohol can also worsen the side effects of antiretrovirals and increase the chance of developing liver damage. Try to cut out recreational drugs for the same reasons.

2 **Make sure that you are vaccinated against hepatitis A and B,** and avoid situations that place you at risk for getting hep C, such as sharing needles and nasal instruments like sniffers, straws and bills.

3 **Achieve and maintain a healthy body weight.** Being too thin or too fat is not good for the liver.

4 **Maintain generous stores of lean body mass (muscle tissue).** Both HIV and hepatitis can cause wasting of muscle tissue. In your health regimen include regular exercise that builds muscles (such as walking, running and weight training).

5 **Get enough protein.** Protein provides building blocks for new cells, tissue repair and the immune system. For people with HIV and/or hepatitis, the recommended daily intake is 1 to 1.5 grams per kg body weight (a 70 kg person requires 70-105 grams of protein per day). Try to get 2-3 servings of lower-fat meats (such as lean beef, fish or chicken) and alternatives (such as peanut butter and tofu), and 2-3 servings of lower-fat dairy products or soy milk each day. In very advanced liver disease, protein intake may be modified or restricted because of a condition called encephalopathy (brain fog). However, do not cut protein unless absolutely necessary, and never do it without your liver doctor's advice. Also consult with a dietitian.

6 **Get enough calories to spare protein.** If you do not get enough calories each day, protein will be diverted from its essential protein duties in order to make energy. Most people living with HIV and/or hepatitis require 30-40 calories per kg body weight (a 70 kg person needs 2,100-2,800 calories per day). You can check your calorie intake at *www.caloriescount.com*.

7 **Choose more whole grains, fruits and vegetables** (such as beets and artichokes) rather than processed foods, sugar and sweet drinks. Some HIV medications can cause insulin resistance, which makes it difficult to use nutrients properly, especially sugars. Eating less simple carbohydrates (sugars and starches) helps insulin work better, which keeps blood sugars in the ideal range and may prevent diabetes. Besides, these foods are much more nutritious for you.

8 **Eat a moderate amount of dietary fat and emphasize "good" fats** like those found in olive and canola oils, nuts and seeds rather than saturated fats like dairy fat and animal fats. Moderate means cutting back on high-fat, fried and greasy foods, but not restricting fat too much because it provides valuable calories.

9 **Take a multivitamin to prevent deficiencies.** Do not take high doses of vitamin A or carotenoids (beta carotene) if you have liver disease, as these can be toxic to the liver.

10 **Do not take iron supplements unless prescribed by your doctor to treat an iron deficiency.** If the liver is not working well, iron can build up and be toxic to the liver. High levels of iron also feed some bacteria that cause infections and may interfere with interferon treatments for hepatitis. If your liver is functioning well, a multivitamin containing iron is fine. If not, choose one without iron.

11 **Supply extra antioxidants to the body.** Antioxidants are compounds that protect the body from highly active molecules called free radicals. If levels of free radicals build up, they can damage tissues and accelerate the destruction of the liver in people with hepatitis. This process can cause the depletion of glutathione (GSH), a major antioxidant in the liver cells. Daily doses of vitamin C, vitamin E and selenium will provide basic antioxidant coverage. N-acetyl cysteine (NAC) and alpha-lipoic acid are also antioxidants that help make GSH and are thought to have a protective role in the liver. (See the sidebar for a list of daily doses of antioxidants.)

12 **S-adenosyl methionine (SAMe) is an amino acid supplement reported to have liver healing properties.** Studies of HIV negative patients with liver disease showed improved liver enzyme and bilirubin (a waste product) levels; less fatigue, jaundice and itching; as well as improved quality of life. The suggested dose is usually in the 800-1,600 mg range. However, there is little information about possible drug interactions with HIV medications, and test-tube studies show that SAMe promotes the growth of PCP (*Pneumocystis carinii* pneumonia). This supplement may emerge as an important therapy for the liver but little is known yet about its use in HIV disease. So if you are considering using SAMe, discuss this with a liver specialist (hepatologist).

13 **Herbal therapies, such as milk thistle (silymarin), have been widely used to treat the liver and other health problems.** Be aware that some herbs are toxic to the liver and some interact with antiretrovirals. Get informed about the benefits and risks of any therapies you are planning to try and consider your unique situation. You can look into drug interactions on your own with a great resource at *www.aidsmeds.com*. At this site, click on "Check Your Meds." It will allow you to enter all your medications + nutrients + herbs + various foods (like garlic or grapefruit, both known causes of certain interactions), and then give you information on all the possible known interactions between these things.

The bottom line? Your liver is affected by everything you ingest, so be mindful about what you eat, drink and take as medications or supplements. Remember to always discuss any supplement or exercise plans with your doctor. Do your best to emphasize the things that promote health and minimize those that cause damage. If your liver is already damaged and needs some extra TLC, you should get more personalized nutrition advice from an HIV-savvy dietitian. We don't want to cry a liver over you!

Diana Peabody, RD, is a clinical dietitian at the Oak Tree Clinic, which is a part of the Children's & Women's Health Centre of British Columbia.

Daily dosage of antioxidants considered safe with potential benefit for your liver:

- **vitamin E** – 400–800 IU
- **vitamin C** – 500–2,000 mg
- **selenium** – 100–200 mcg
- **NAC** – 500–2,000 mg (take with food to avoid gastrointestinal tract irritation)
- **alpha-lipoic acid** – 100–600 mg (preferably in an extended-release form; take on an empty stomach with fluids)

Note: **Vitamin C doses greater than 2,000 mg may cause iron overload in a damaged liver.**

For more info on these and other supplements for liver health, check out CATIE's Supplement Sheets on antioxidants, selenium, vitamin E, NAC, alpha-lipoic acid and milk thistle, available at www.catie.ca or by calling 1.800.263.1638.

Illustrations by Beverly Deutsch