

HEALTHOLOGY

BUILDING A HEALTHIER YOU



**TAKE CARE OF YOUR LIVER
SO IT CAN TAKE CARE OF YOU**

■ THE LIVER – KEEPING YOUR BODY CLEAN

The liver is our most important detoxifying organ. It is masterful at identifying toxins and neutralizing them so that they can be safely excreted from the body. Toxins include chemicals, food additives, alcohol, caffeine and medications. The liver is also responsible for detoxing our hormones and end-products of metabolism.

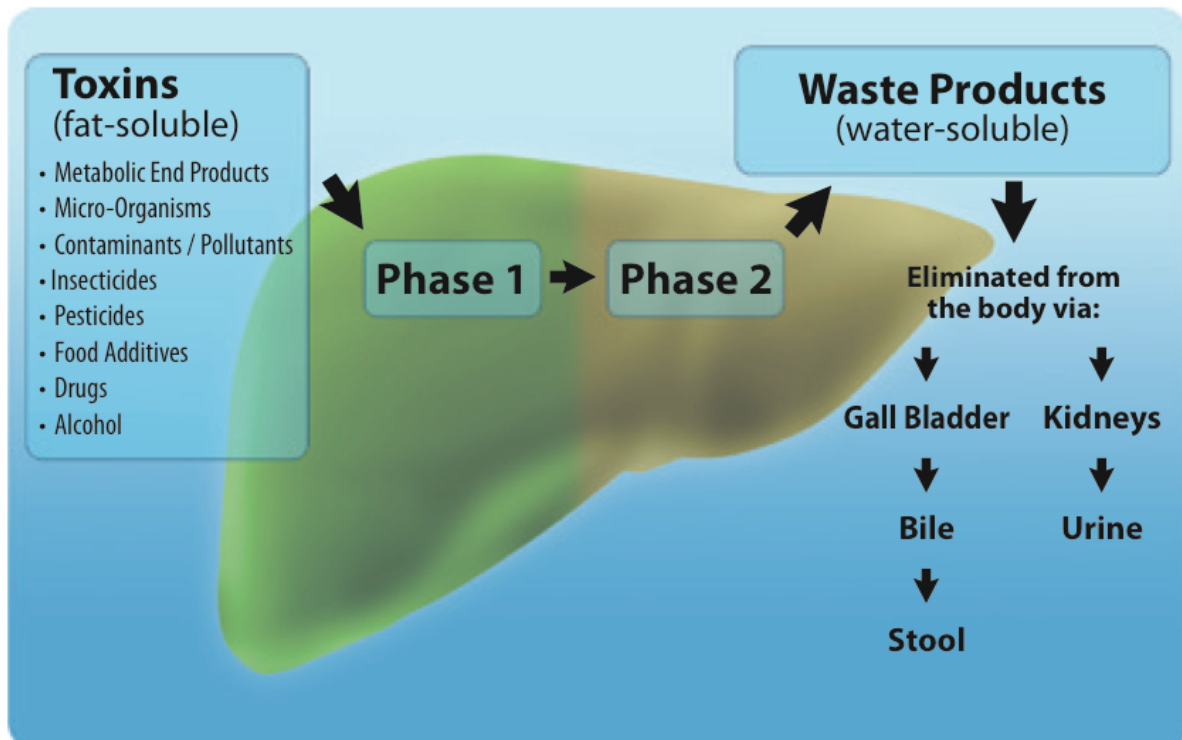
It also stores glucose for energy production and produces bile to help us break down and digest fatty foods.

There are two phases of liver detoxification, and each requires vitamins, proteins and minerals to work effectively.

In Phase 1, enzymes called Cytochromes add an oxygen molecule to the toxin, which prepares it to enter Phase 2¹. This is called oxidation, and it actually makes the toxin MORE harmful to the body. It's a "take one step back to take two steps forward" type of process.

In Phase 2, we deactivate the toxin through a process called conjugation¹. This neutralizes the toxin so that it can be excreted safely by the colon or bladder.

Figure 1 - Detoxification (Biotransformation) Pathways



YOUR LIVER'S HIGH TOXIC LOAD

In some people, one phase or both phases of liver detoxification are sluggish. This is especially damaging when Phase 1 is working more quickly than Phase 2 because we get a build-up of oxidized toxins that are harmful to the body. Sluggish liver detoxification can be caused by genetic deficiencies, nutrients missing from the diet, or a high toxic burden from alcohol, medication use, or exposures to toxins in the environment¹.

Most of us are bombarded with more toxins than we realize. Think about how many toxins your liver deals with solely from your morning routine: you wake up, have a shower and put soap, shampoo, shaving cream, toothpaste, deodorant, face wash and moisturizer on your body. Each one of these products absorbs through the skin and has to be detoxed. Then you drink a coffee (caffeine) and have a bowl of cereal (food additives), adding even more work to the liver's busy morning.

Your liver is already overwhelmed before you have even left the house!

When the liver isn't able to keep up with our detox demands, we may experience fatigue, headaches, poor memory, acne, hormonal imbalances, nausea and/or abdominal pain caused by a build-up of toxins in the body². Prolonged strain on the liver can lead to liver damage, which reduces liver function and perpetuates the cycle of toxicity in the body.



■ LIV-GREAT – DAILY SUPPORT FOR A HEALTHY LIVER

LIV-GREAT provides the liver with daily support by boosting its detox capacity and helping to protect it from damage. It contains nutrients and herbs to support both Phase 1 and Phase 2 of liver detoxification, and it promotes the production of bile to improve the elimination of toxins. It also contains powerful antioxidants to protect and heal the liver from damage. Here's how it works.

Milk Thistle Seed (*Silybum marianum*) 20:1 Extract 50% Silymarin (100mg Silymarin, QCE 4g), 200mg

- Protects the liver from damage by preventing toxins from binding to liver tissue³.
- Boosts Phase 1 detoxification, resulting in improved liver markers on lab testing³.
- Antioxidant that heals and protects the liver from damage caused by oxidation³.

N-Acetyl-L-Cysteine, 200mg

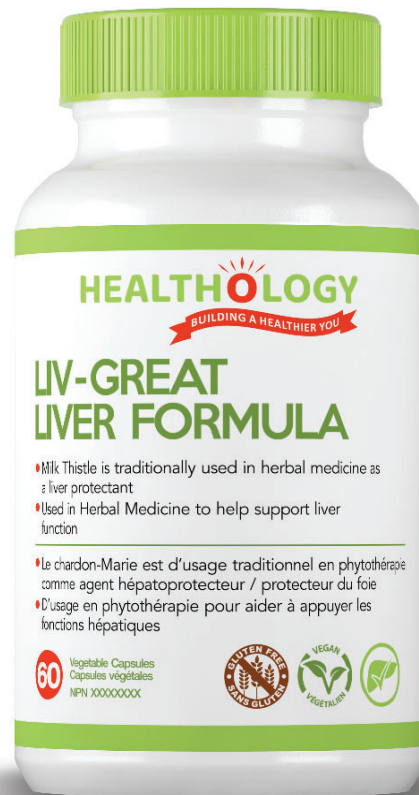
- Increases levels of glutathione in the liver, which is one of the most important factors in Phase 2 detoxification⁴.
- Significantly improves the function of liver resulting in improved liver enzyme parameters on lab testing⁴.
- Antioxidant that heals and protects the liver from damage caused by oxidation⁵.

DL-Alpha Lipoic Acid, 100mg

- Enhances liver function through boosting Phase 2 detoxification⁶.
- Antioxidant that heals and protects the liver from damage caused by oxidation⁶.
- DL is an easily absorbed and biologically active form of the nutrient.

Garlic Bulb (*Allium sativum*) 4:1 Extract (QCE 200mg), 50mg

- Source of sulphur required for Phase 2 detoxification.
- Reduces fat accumulation in liver cells to support a healthy structure of the liver, thereby improving liver function⁷.
- Improves cholesterol and helps to balance blood sugar levels⁸.



**Artichoke Leaf (*Cynara scolymus*) 4:1
Extract (QCE 200mg), 50mg**

- Protects liver cells from damage through its antioxidant activity⁹.
- Improves liver function by boosting liver enzyme activity and improving detoxification pathways⁹.

**Dandelion Root (*Taraxacum officinale*) 4:1
Extract (QCE 200mg), 50mg**

- Increases the flow of bile from the liver, which promotes the elimination of toxins and lowers cholesterol¹⁰.
- Anti-inflammatory and antioxidant to heal the liver and protect it from damage^{10,11}.

Selenium (Selenomethionine), 100mcg

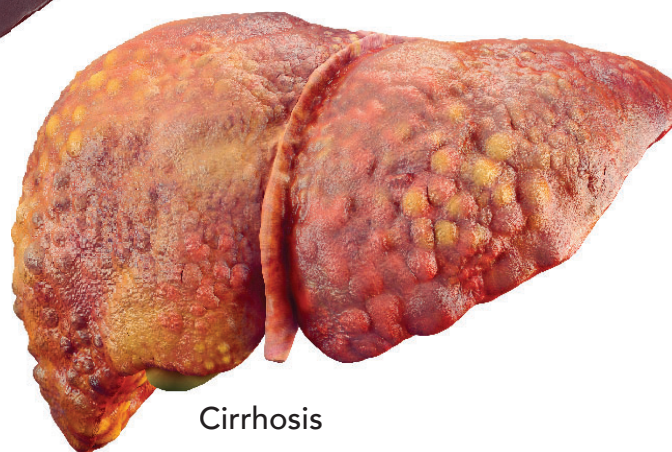
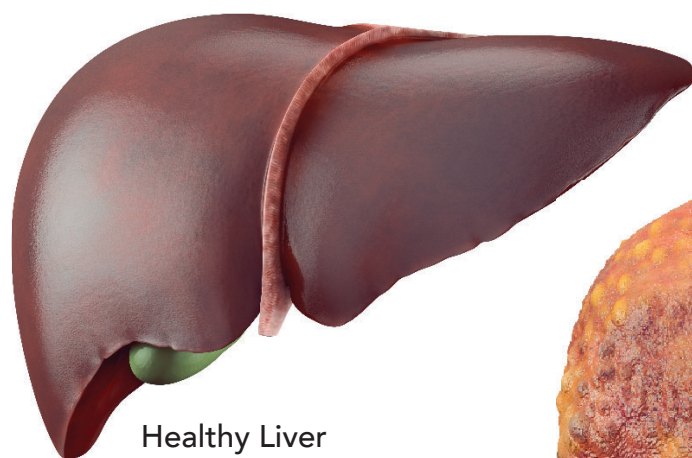
- Supports Phase 2 detoxification by increasing the activity of our most important detoxifier, glutathione¹².

**Curcumin (*Curcuma longa* – rhizome),
100mg**

- Boosts Phase 2 detoxification through increasing liver enzyme function and glutathione activity¹³.
- Anti-inflammatory and antioxidant to heal the liver and protect it from damage¹⁴.

**Phyllanthus amarus – whole plant, 8:1
Extract (QCE 600mg), 75mg**

- Assists with proliferation of liver cells, helping it to heal from damage¹⁵.
- Anti-inflammatory and antioxidant activity that heals and protect the liver from damage¹⁶.



DR. HILARY'S LIFESTYLE TIPS TO SUPPORT THE LIVER



Drink More Water

After the liver neutralizes toxins they are eliminated from the body through the bowels and bladder. Even minor dehydration will limit your body's ability to get rid of toxins. Aim

to drink at least 2 litres of water daily, and more if you're active or in a warm climate.

Support Elimination

When we're constipated, toxins can be reabsorbed from the bowel, adding to the toxic burden in the body. We should have at least one fully evacuated bowel movement daily. Increasing fibre in the diet, drinking plenty of water, and being active are great first steps to support bowel health.

Healthy Nutrition

The liver requires vitamins, minerals, proteins and other nutrients that we get from food to function optimally. Foods also contain antioxidants that heal damage caused by Phase 1 oxidation. Top liver supportive foods include:

- Cruciferous veggies: brussels sprouts, broccoli, cabbage, cauliflower, kale
- Foods containing sulphur: eggs, garlic, onions
- Protein-rich foods: meat, fish, beans, chickpeas
- Mineral-rich foods: nuts, seeds, dark leafy greens, beans
- Antioxidants: berries, beets, spinach, artichoke, dark chocolate

Limit Caffeine and Alcohol

Caffeine and alcohol are detoxified by the liver and add to its workload.

Use Natural Products

Transition to natural and scent-free cleaning products and personal care products. This can be a gradual change over time, as you run out of items try to replace them with more natural products. Top chemicals to avoid are phthalates, synthetic fragrances, and parabens.

LIV-GREAT – YOUR LIVER'S BEST FRIEND

The liver is the body's most important detoxifier. It is continually working to neutralize toxins so they can be safely eliminated from the body. The overall burden of toxicity on the body may be higher than we think, due to chemicals in our products, food additives, alcohol and medication use. If the liver can't keep up, we experience symptoms of fatigue, acne, hormonal imbalance, and brain fog, and it can eventually lead to liver damage.

LIV-GREAT improves liver function by supporting both Phase 1 and 2 detoxification pathways. It provides anti-inflammatory and antioxidant support to heal and protect the liver from damage caused by toxins and promotes regeneration of healthy liver cells.

LIV-GREAT helps your liver keep up with the daily demands of neutralizing toxins. A healthy liver means lower toxicity in the body and improved overall health.

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