

Shaklee®

product brief

Advanced Health



Liver DTX® Complex

Your Liver Fights Toxins — Keep it Healthy!

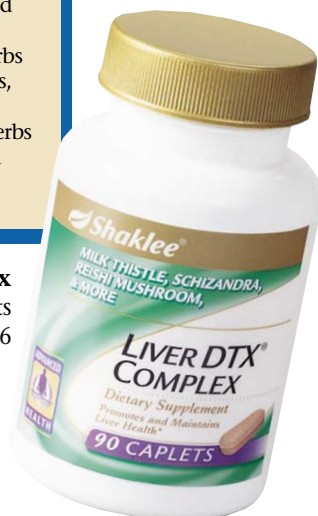
A unique internal organ, the liver plays many crucial roles in normal metabolism, including detoxification. Despite the amazing ability of the healthy liver to deal with a wide range of toxic substances, prolonged and frequent exposure may influence the level of stress on liver cells and function.

Liver DTX Complex provides nutritional support for healthy liver function with a unique formula of herbs with antioxidant- and bile flow-enhancing properties, which combine to protect and stimulate the body's normal ability to maintain healthy liver cells.*

Research indicates that the primary ingredient in Liver DTX Complex, milk thistle seed extract, supports the body's normal ability to make proteins that help regenerate liver cells.*

Liver DTX Complex is an excellent choice of a potent standardized extract of milk thistle seed (80% silymarin). It contains a uniquely Enhanced Proprietary Blend with extracts of *Schizandra* and reishi mushrooms, herbs with antioxidant properties, and extracts of dandelion, turmeric, and artichoke, herbs that help maintain normal bile flow.*

Liver DTX® Complex
90 caplets
#20616



Who Might Benefit from Liver DTX Complex?

- Active adults who want to support normal liver function over a lifetime of potential exposure to environmental and dietary toxins
- People whose lifestyle choices or occupations may increase their exposure to certain toxic substances
- People whose dietary choices may increase their exposure to certain toxic substances

Try These Other Great Shaklee Products

- Vita-Lea®
- Shaklee Fiber Plan®
- Sustained Release Vita-C®
- Vita-E Complex®
- Herb-Lax®
- BestWater® PerfectPitcher™

Supplement Facts

Serving Size: 3 Caplets

Servings Per Container: 30

Amount Per Serving	
Calories 5	
	% Daily Value
Total Carbohydrate 1 g	<1%**
Sodium 5 mg	<1%
Milk Thistle extract 300 mg (<i>Silybum marianum</i>) (seed)	†
DTX® Enhanced Proprietary Blend 900 mg	†
Schizandra extract (<i>Schizandra chinensis</i>) (fruit)	
Dandelion extract (<i>Taraxacum officinale</i>) (root and leaf)	
Reishi mushroom extract (<i>Ganoderma lucidum</i>) (cap and stalk)	
Turmeric extract (<i>Curcuma longa</i>) (rhizome)	
Artichoke extract (<i>Cynara scolymus</i>) (leaf)	

** Percent Daily Values are based on a 2,000 calorie diet.

† Daily values not established.

Other Ingredients: Maltodextrin, Cellulose, Acacia Gum, Croscarmellose Sodium, Silicon Dioxide.

*THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE.

Normal Function of the Liver

The largest internal organ in the body, the liver is also the only organ capable of regenerating itself. For example, a heart attack can create permanent damage to the heart muscle. By contrast, heavy alcohol consumption can damage the liver, but abstaining from alcohol gives the liver a chance to repair itself. You could think of the liver as a kind of industrial processing plant for the body, performing a wide range of critical functions for physical maintenance and repair.

Let's take a look at some of the different departmental functions of the amazing liver.

Warehouse and Shipping Depot for Nutrients.

When you eat, foods are broken down into component nutrients by the process of digestion, absorbed, and transported by the blood to the liver. The liver receives the nutrients and assigns some to the storage while others are "packaged" and shipped to parts of the body to fill their needs. As another kind of "shipping and receiving" function, the liver helps to regulate normal blood sugar levels in response to the action of hormones produced by the pancreas.

Protein Manufacturing Plant. The liver assembles amino acids into essential proteins needed for the immune system's antibodies, blood clotting, and many other bodily functions.

Waste Treatment Plant. When blood enters the liver, it carries not only nutrients, but also a wide range of other substances absorbed through our skin, through our lungs, and through our digestive systems. Any compound the body doesn't need for nutritional supplies is identified as "foreign" and targeted for "disassembly" and disposal. Specialized liver enzymes perform the function of changing the chemical structure of foreign compounds so they can be excreted.

Hazardous Waste Transport and Disposal. Once the liver has broken down toxic substances, they can be excreted by the kidneys in urine or transported to the intestines in bile, which is manufactured by the liver and stored in the gallbladder. When needed, bile is released into the intestines where it works along with dietary fiber to bind toxins and facilitate their elimination from the body as part of fecal waste.

Challenges to Liver Function

There is a wide range of foreign compounds the liver may be called upon to detoxify, including:

Benzopyrenes — tobacco smoke or smoke from grilling foods

Acetone — nail polish remover, paints, varnishes, thinners

Heterocyclic amines — lighter fluid, hydrocarbon solvents, barbecued or broiled meats

Nitrosamines — processed foods

Polycyclic hydrocarbons — car exhaust, fumes from burning fossil fuels

Insecticides, herbicides, and fertilizers

Ammonia — and other household chemicals

Alcoholic beverages

Some over-the-counter and prescription drugs — antiulcer, analgesic, antiinflammatory, anticonvulsant, antihyperlipidemic

When the structure of these compounds is changed in the liver, free radicals are released. Free radicals then attack the cell membranes of liver cells. If their attack is successful, the integrity of the cell is impaired leading to cell damage and even cell death.

Despite the liver's amazing ability to regenerate itself, if too many liver cells are destroyed or damaged by free radical-induced oxidation, the liver's ability to perform important functions may be decreased.

Bile, One of the Body's Essential Workers

Bile is manufactured by the liver and stored in the gallbladder. It is necessary for fat digestion and the absorption of fat-soluble nutrients. In fact, eating fats stimulates the release of bile from the gallbladder to perform these crucial functions.

Bile is an emulsifier, which acts like a detergent to break down fats. Just like dishwashing detergent breaks up greasy foods on a plate so you can rinse them away, bile breaks up the fat from foods you eat into smaller bits. This increases the surface area on which digestive enzymes can work to further break down fats for absorption.

Bile also serves as a vehicle for transporting toxins from the liver to the gastrointestinal tract for elimination from your body.

And a special commendation for fiber: Bile doesn't perform the whole job of detoxification by itself. Dietary fiber is an essential "coworker," because it binds toxins transported in bile and helps carry them quickly out to the body before they can damage healthy cells in the gastrointestinal tract.

Optimizing Liver Function

Antioxidant Protection. Research continues to identify nutrients that protect various cells and tissues in the body against the oxidation damage caused by free radicals. By supplying the body with herbal compounds that have antioxidant properties, the liver's natural ability to regenerate itself after exposure to damaging oxidation reactions can be supported.

Enhancing Bile Flow. The longer toxic substances and their oxidative by-products are present in the liver and the gastrointestinal tract, the more damage they can do. By providing the body with compounds that help maintain normal bile flow, the body's natural ability to eliminate toxins from the body can be supported.

What Is Liver DTX Complex?

The primary ingredient in Liver DTX Complex is **milk thistle** seed extract. Native to the Mediterranean, but found throughout the world, it has been used traditionally in Europe for 2,000 years. The standardized extract of milk thistle seed in Liver DTX Complex is 80% silymarin, a mixture of several compounds with antioxidant properties.*

Schizandra chinensis is a plant native to China, where it has been used for over 2,000 years and is listed in the Chinese Pharmacopoeia. *Schizandra chinensis* seed extract contains lignans that have antioxidant properties.* *Schizandra* has also been associated with the stimulation of protein synthesis, increasing the amount of detoxifying enzymes in the liver, and inhibiting the binding of toxins to cell membranes.*

Reishi mushroom, a Japanese plant, is known in China as *ling zhi*. Traditional use dates back more than 4,000 years. Reishi mushroom extract is known for its antioxidant properties.*

Turmeric is a member of the ginger family and is a familiar component of curry spice mixtures. It contains the volatile oil turmerone and curcuminoids.

Dandelion, meaning "lion's tooth" in Middle French, has been traditionally used in Europe since the 10th century and contains a bitter-tasting compound called taraxacin. Dandelion and a compound in **Artichoke** called cynarin stimulate the flow of bile.*

How Does Liver DTX Complex Work?

The unique combination of botanical ingredients in Liver DTX Complex support the health and function of the liver in two ways. The extracts of milk thistle seed, *Schizandra chinensis* seed, and reishi mushroom have antioxidant properties, offer protection to liver cells, and are believed to stimulate protein synthesis for liver cell repair and regeneration.* Dandelion, turmeric, and artichoke extracts help maintain normal bile flow, supporting one of the vehicles (bile) needed for excreting toxic compounds from the body.*

Choose Shaklee for Safety, Quality, and Science

- Combines time-tested herbal ingredients with advanced Shaklee science and technology
- Conducts 130,000 individual analytical and microbiological tests annually, assuring you of the integrity of our herbal products
- Performs more than 250 proprietary tests, beyond the industry norms. Test methods developed by Shaklee scientists have become industry standards
- Processes 1.4 million pounds of raw herbal ingredients a year, meticulously tested for quality, potency, and stability
- Offers you the benefit of over 4,730,000 man-hours of experience in our sophisticated Norman, Oklahoma, manufacturing facility alone

*THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE.

If for any reason a Shaklee product is not satisfactory, return it to your Shaklee Independent Distributor or Shaklee Corporation for exchange or a full refund.



For more information, visit www.shaklee.com.

©2003 Shaklee Corporation
Distributed by: Shaklee U.S. Inc., Pleasanton, CA 94588 02-1045 (Rev. 2/03)