

# Detox Formula

**DETOXIFIES THE LIVER AND BODY\***



## Positioning Statement

Detox Formula is a proprietary blend of nutrients that helps support the normal detoxifying function of the liver.\*

## Concept

The liver is the body's detoxifying organ, and because of this any effective detoxification must target the liver. The liver detoxifies the body by modifying toxic metabolites and foreign chemicals; through this process they become less toxic and can be excreted via the gut by bile or via the kidneys as urine. There are two phases of detoxification. Phase I chemically modifies toxins. While some toxins can be directly neutralized during phase I, other toxins are converted to intermediate forms that make them easier for the phase II detoxification system to finally nullify them. Phase II renders them less toxic and improves their ability to be excreted out of the body.

Detox Formula is a proprietary blend of nutrients that help the liver by supporting both phases of liver detoxification for comprehensive protection from harmful toxins. The ingredients in Detox Formula also protect and maintain healthy liver cells, stimulate the normal growth of healthy liver cells, promote liver glutathione synthesis, and stimulate normal bile flow.\*

## Primary Benefits

- Detox Formula helps support the body's detoxification process, reducing the effects that potentially harmful toxins may have on the body\*
- Powerful blend of antioxidants protect and maintain healthy liver cells and assist the body's ability to stimulate normal growth of healthy liver cells\*
- Offers a special blend of ingredients that help promote the stimulation of normal bile flow, the liver's second line of defense against toxic chemicals\*

- Provides vitamin C and N-acetyl-L-cysteine as dietary precursors to glutathione, the liver's most important antioxidant for both phase I and II detoxification pathways\*
- Utilizes multiple mechanisms to support both phases of liver detoxification and healthy liver structure\*

## What Makes This Product Unique?

- Each of the nutrients in Detox Formula are scientifically validated and standardized
- Safe and effective
- Contains buffered vitamin C, which is more tolerable and causes less gastrointestinal discomfort
- Contains the patented calcium D-glucarate, endorsed by a prestigious research center in Colorado
- Provides multi-faceted support to liver function and detoxification\*

## Who Should Use This Product?

Detox Formula is intended for individuals who desire dietary support for normal liver function and detoxification. Individuals who could particularly benefit from normal liver detoxification include those who use or are exposed to chemicals, toxins, and other potentially harmful substances, along with people who live in a polluted environment.\*

## Did You Know?

- The liver is the largest organ of the body
- The liver filters over a liter of blood each minute
- The liver affects nearly every physiological process of the body and performs over 500 different chemical functions
- In an average adult, the liver weighs about three pounds and is roughly the size of a football

\*This statement has not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

# Detox Formula

## Frequently Asked Questions

### *Why is liver detoxification important?*

Our body defends itself from toxicity by detoxifying potentially harmful substances that are made in the body, that invade our environment, or that are found in our diet. Toxic metabolites and foreign chemicals can be produced endogenously as byproducts of normal metabolism (e.g. hormones), or can be ingested in pharmaceutical, industrial, and environmental chemicals, food additives, or cooking byproducts (i.e. nitrates, polycyclic aromatic hydrocarbons). Many of these substances must be detoxified by the liver in order to become inactive and excreted from the body.

### *How does Detox Formula work?*

Detox Formula is a proprietary blend of nutrients that help support the liver by supporting both phases of liver detoxification for comprehensive protection from potentially harmful toxins. The ingredients in Detox Formula also protect and maintain healthy liver cells, stimulate the normal growth of healthy liver cells, promote liver glutathione synthesis, and stimulate normal bile flow.\*

### *What is the role of D-glucarate in Detox Formula?*

Glucaric acid is a compound produced endogenously in humans and is found in highest concentrations in grapefruit, apples, oranges, and cruciferous vegetables. Calcium D-glucarate (a dietary source of glucaric acid) is able to bind to the enzyme beta glucuronidase, which can inhibit the elimination of toxins from the body. Pharmanex uses the patented form of calcium D-glucarate endorsed by a prestigious research center in Colorado.\*

### *What is the role of milk thistle extract in Detox Formula?*

Milk thistle naturally contains the antioxidant silymarin, which may enhance the activity of liver enzymes involved in phase I detoxification and boost liver antioxidant glutathione levels. In addition, milk thistle may also promote the stimulation of normal bile flow, the liver's second line of defense against toxic chemicals\*.

### *What is the role of vitamin C and N-acetyl-L-cysteine in Detox Formula?*

Vitamin C and N-acetyl-L-cysteine are involved in glutathione synthesis and have also been shown to boost liver glutathione levels for phase I enzyme activity and phase II glutathione conjugations\*.

## Key Scientific Studies

1. De Flora S, Cesarone CF, Balansky RM et al. Chemopreventive properties and mechanisms of N-acetylcysteine. The experimental background. *J Cell Biochem*, 1995; 58 Suppl. 22:33–41.

2. DiMario ER, Farni L, Okolicsanyi L, et al. The effects of silymarin on the liver function parameters of patients with alcohol-induced liver diseases: a double-blind study, in: de Ritis E, Csomos G, Braatz R, eds. *Der Toxisch-Metabolische Leberschaden* Hans. Lubeck: Verl-Kontor, 1981.
3. Dwivedi C, Heck WJ, Downie AA, et al. Effect of calcium glucuronate on beta-glucuronidase activity and glucuronate content of certain vegetables and fruits. *Biochem Med Metab Biol*, 1990; 43(2):83–92.
4. Kelly GS. Clinical applications of N-acetylcysteine. *Altern Med Rev*, 1998; 3:114–27.
5. Calcium-D-glucarate. *Altern Med Rev*, 2002; 7(4):336–9.

## Supplement Facts

Serving Size One Capsule

Amount Per Serving		%Daily Value*
Vitamin C	150 mg	250%
(as Calcium Ascorbate)		
N-Acetyl-L-Cysteine	125 mg	*
D-Glucarate†	125 mg	*
(as Calcium D-glucarate)		
Silymarin (as Milk Thistle [Silybum marianum L.] fruit extract, 30:1)	70 mg	*

\*Daily Value not established.

**Other Ingredients:** Gelatin, Calcium Carbonate, Stearic Acid, Silicon Dioxide.

## Directions for Use

Take one (1) capsule with liquid during your morning and evening meals.

## Warnings

Keep out of reach of children. If you are pregnant or lactating, or taking a prescription medication, consult a physician prior to use. Store in a cool, dry place.

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