designs for health®

AMINO-D-TOX™

HELPS TO SUPPORT LIVER FUNCTION

90 VEGETARIAN CAPSULES | NPN80050235 | AMT090-CN

Amino-D-Tox™ is a synergistic formulation designed to safely prepare the liver for phase II detoxification. All of us live in an ever-increasing toxic environment. This body burden from environmental toxicants, including pesticides, herbicides, chemical solvents, xenobiotics, and industrial chemicals of all types come to us through our food, water, air supply, and via transgenerational inheritance by alteration of the epigenome.[10] Internal toxins from our own metabolism add to this burden, as do toxins from our intestinal tract, particularly when imbalances in intestinal microbial ecology exist.

This increased toxic load puts a tremendous burden on the liver to detoxify and render harmless these chemicals, which have the potential to produce excessive oxidative stress in the body, leading over time to chronic disease. The end result: fatigue, lethargy, headaches, multiple chemical sensitivities (MCS), skin disorders, chronic fatigue, neuromuscular problems and more.

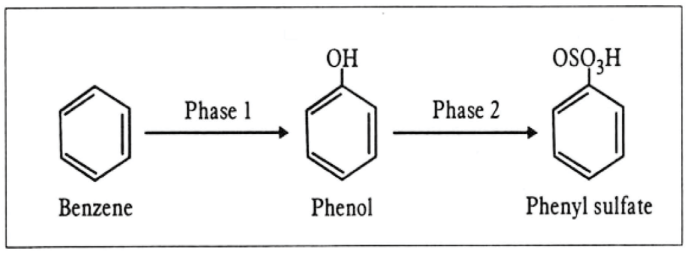
Amino-D-Tox™ was designed to biochemically upregulate phase II detoxification. It is free of herbals, minerals and B vitamins which would also upregulate phase I detoxification.

Amino-D-Tox™ supports phase 2 detoxification so that the important physiological function of detoxification/biotransformation can occur more optimally. This is particularly relevant for patients with chemical sensitivity, who should consider Amino-D-Tox™ to help upregulate these pathways before implementing a more comprehensive detoxification protocol.

Phase 2 detoxification requires amino acids, sulfur (sulfur containing amino acids) and glutathione. Methionine, cysteine, and taurine are the three most common sulfur-containing amino acids. MSM provides sulfur as does glutathione (made up of 3 joining amino acids).

NAC is the most stable nutritional supplement form of the amino acid L-cysteine

NAC has been shown in research to help protect the liver from damaging effects of alcohol and protect the liver from acetaminophen poisoning. Alcohol combined with acetaminophen is synergistically more toxic. Again, supplementation of NAC (N-acetyl L-cysteine) may help prevent this toxicity by preventing acetaldehyde build-up. NAC may prevent death of liver cells from acetaminophen poisoning by raising glutathione levels and preventing severe oxidative damage.[6,15]



NAC is effective in the detoxification of heavy metals, free radicals, and other xenobiotics in the body.[2,5,8,9] A common source of heavy metal toxicity is mercury from amalgam fillings in the teeth. Although the Environmental Protection Agency (EPA) declared in 1989 that dental amalgams are a hazardous substance under the Superfund law, many people still have amalgams in their mouths. L-Cysteine has a high affinity for mercury[1] and can aid in the removal of mercury leached from mercury-based tooth filings. Methionine has been shown to protect mitochondria and liver cells from methylmercury damage.

NAC can also be used to bind to copper, lead and cadmium.[2] Lead and cadmium are particularly toxic to the human body, and even though lead is no longer used in plumbing or paints, and cadmium in toys or paints, there are still many sources of these two heavy metals available that can lead to human toxification. This direct involvement in heavy metal detoxification is a very useful property of this amino acid.

Calcium-D-Glucarate is a potent beta-glucuronidase inhibitor. Elevated b-glucuronidase activity is associated with an increased risk for various cancers, particularly hormone-dependent cancers such as breast and prostate cancer. When Calcium-D-Glucarate is metabolized through the glucuronic acid pathway, one of the end-products is D-glucaro-l,4-lactone. D-glucaro-l,4-lactone increases detoxification of carcinogens and tumor promoters by inhibiting b-glucuronidase and preventing the hydrolysis of their glucuronides.[11,14] These oxidized pollutants can be more toxic and harmful than the original substance. The phase II conjugating pathways must be prepared to deal with phase I metabolites before these pathways are stimulated. For enhancing the liver's ability to detoxify chemicals, this product should be used before any other powdered or encapsulated detoxification formula until all conjugating pathways are working optimally.[7]

PRODUCT HIGHLIGHTS:

- Encapsulated formula for support of liver function
- Perfect for those who may need added cleansing support in addition to VegeCleanse™
- Ideal for patients who prefer not to use functional powders
- Convenient for travel and for taking to work for mid-day dosing
- Supports phase 2 without upregulating phase 1 for imbalanced or pathological detoxifiers

Medicinal Ingredients (per capsule):

Glycine	83.3 mg
L-Glutamine	83.3 mg
MSM (Methylsulfonylmethane)	66.7 mg
N-acetyl-L-cysteine	41.7 mg
Taurine	41.7 mg
Alpha-Ketoglutaric acid	33.3 mg
Calcium D-glucarate	33.3 mg
L-Glutathione	33.3 mg
L-Methionine	33.3 mg
L-ornithine	33.3 mg

Non-Medicinal Ingredients: Hypromellose, microcrystalline cellulose, magnesium stearate (vegetable source). **Recommended Dose:** Adults: Take 6 capsules per day with meals, or as directed by your health care practitioner. Avoid taking at bed time.

REFERENCES

For a list of references cited in this document, please visit: https://catalog.designsforhealth.com/assets/itemresources/Amino_D_Tox_References.pdf