

**De-Mer-Tox™**  
**Heavy Metal Detoxification Support**

**DESCRIPTION**

De-Mer-Tox™ capsules, provided by Douglas Laboratories®, contain several vitamins and other dietary constituents that support heavy metal detoxification and may protect against the toxic results of amalgam filling removal.

**FUNCTIONS**

“Silver” amalgam tooth fillings are known to continuously release highly neurotoxic mercury vapor into the mouth where it is then absorbed into the brain. This mercury release is greatly accentuated during the extensive grinding required for the replacement of old amalgam fillings. There is some evidence that adverse metabolic and behavioral effects may be associated with this mercury exposure from dental amalgam fillings. Although symptoms of chronic, low level mercury exposure may be relatively non-descript, severe signs of toxicity may appear later in life. Research has shown that chronic inhalation of low levels of mercury vapor can inhibit polymerization of the brain protein tubulin which is essential for the formation and maintenance of neuron microtubular structure. Mercury can also disassemble these neuronal microtubules. Mercury, a sulfhydryl-reactive metal, can affect a wide variety of metabolic processes. It is not only a pro-oxidant, but also inhibits antioxidant enzymes and depletes intracellular glutathione.

L-glutathione (reduced), a naturally occurring tripeptide of L-cysteine, L-glutamate, and L-glycine, is the essential cosubstrate for two major antioxidant enzymes in the body, glutathione peroxidase and glutathione reductase. N-acetyl-L-cysteine is a precursor for the sulfur amino acid cysteine, used in the synthesis of glutathione. Dietary sulfur may play an important role in mercury detoxification as studies have shown an inverse relationship between non-protein sulfhydryl levels and mercury organ content. Thus, an increased body level of non-protein sulfhydryls may avoid mercury accumulation and its deleterious effects. Consequently, it may be most beneficial to provide the improved nutritional detoxification support of De-Mer-Tox™ capsules during the removal of amalgam fillings or for support of high mercury serum levels.

**INDICATIONS**

De-Mer-Tox™ capsules may be a useful dietary supplement for individuals who wish improve their nutritional detoxification systems for mercury and other heavy metals.

**FORMULA (#80317)**

Two Capsules Contain:

L-Glutathione (reduced) .....	50 mg
N-Acetyl-L-Cysteine .....	500 mg
Dietary Sulfur (MSM) .....	500 mg
Seleno-Methionine .....	100 mcg
Biotin.....	200 mcg
Thiamin.....	25 mg
Riboflavin.....	10 mg
Garlic .....	250 mg
Parsley.....	100 mg

**SUGGESTED USE**

Adults take 2 capsules daily or as directed by a healthcare professional.

**SIDE EFFECTS**

No adverse effects have been reported.

## De-Mer-Tox™ Heavy Metal Detoxification Support

### STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

### REFERENCES

- Quig, D. Cysteine metabolism and metal toxicity. *Altern Med Rev* 1998;3:262-70.
- Echeverria, D, Aposhian, HV, Woods, JS, Heyer, NJ, Aposhian, MM, Bittner, AC, Jr., Mahurin, RK, Cianciola, M. Neurobehavioral effects from exposure to dental amalgam Hg(o): new distinctions between recent exposure and Hg body burden. *Faseb J* 1998;12:971-80.
- Yoneda, S, Suzuki, KT. Detoxification of mercury by selenium by binding of equimolar Hg-Se complex to a specific plasma protein. *Toxicol Appl Pharmacol* 1997;143:274-80.
- Pendergrass, JC, Haley, BE, Vimy, MJ, Winfield, SA, Lorscheider, FL. Mercury vapor inhalation inhibits binding of GTP to tubulin in rat brain: similarity to a molecular lesion in Alzheimer diseased brain. *Neurotoxicology* 1997;18:315-24.
- Sandborgh-Englund, G, Nygren, AT, Ekstrand, J, Elinder, CG. No evidence of renal toxicity from amalgam fillings [see comments]. *Am J Physiol* 1996;271:R941-5.
- Marchi, A, Piana, G. [Amalgam and the toxicological risks of mercury. A review of the argument]. *Minerva Stomatol* 1995;44:311-8.
- Ziff, MF. Documented clinical side-effects to dental amalgam. *Adv Dent Res* 1992;6:131-4.
- Willershausen-Zonnchen, B, Zimmermann, M, Defregger, A, Schramel, P, Hamm, G. [Mercury concentration in the mouth mucosa of patients with amalgam fillings]. *Dtsch Med Wochenschr* 1992;117:1743-7.
- Girardi, G, Elias, MM. Effectiveness of N-acetylcysteine in protecting against mercuric chloride-induced nephrotoxicity. *Toxicology* 1991;67:155-64.
- Taskinen, H, Kinnunen, E, Riihimaki, V. A possible case of mercury-related toxicity resulting from the grinding of old amalgam restorations. *Scand J Work Environ Health* 1989;15:302-4.

**For more information on De-Mer-Tox™ visit [douglaslabs.com](http://douglaslabs.com)**

† 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.

Manufactured by  
Douglas Laboratories  
600 Boyce Road  
Pittsburgh, PA 15205  
800-245-4440  
[douglaslabs.com](http://douglaslabs.com)



**You trust Douglas Laboratories.  
Your patients trust you.**