

## **GSH 250™**

**Specially formulated to potentiate antioxidant protection**

### **DESCRIPTION**

GSH 250™, capsules, provided by Douglas Laboratories®, contain meaningful amounts of antioxidant nutrients including glutathione in its reduced active form, N-acetyl-L-cysteine, a biologically active precursor to intracellular glutathione, alpha-lipoic acid, and selenium.

### **FUNCTIONS**

Body cells and tissues are threatened continuously by damage caused by toxic free radicals and reactive oxygen species (e.g., peroxides) which are produced during normal oxygen metabolism, by other chemical reactions, and by toxic agents in the environment. Free radicals are capable of disrupting metabolic activity and cell structure. When this occurs, additional free radicals are produced which, in turn, can result in more extensive damage to cells and tissues. The uncontrolled production of free radicals is thought to be a major contributing factor to many degenerative processes seen during aging.

Glutathione is a naturally-occurring tripeptide of L-cysteine, L-glutamate and L-glycine. Glutathione is the essential cosubstrate for two major antioxidant enzymes in the body; glutathione peroxidase and glutathione reductase. As such, glutathione offers one mechanism for scavenging toxic free radicals. Glutathione is well absorbed in the intestine, and enters the blood and other extracellular compartments where it exerts much of its beneficial antioxidant effects. However, it can not effectively enter the cell.

N-Acetylcysteine (NAC) is a precursor for the sulfur amino acid cysteine, and cysteine is used by the body to synthesize glutathione. In contrast to glutathione, NAC is efficiently transported into the cell where it is readily converted to L-cysteine for glutathione synthesis. NAC is well absorbed, and unlike L cysteine, is virtually non-toxic. NAC is recognized as a safe, highly effective means of increasing intracellular glutathione stores. Aside from providing cysteine as a glutathione precursor, NAC also appears to have antioxidant properties by itself, and is a valuable sulfur donor for various metabolic needs.

Alpha-lipoic acid is unique among biological antioxidants, because it is soluble in both water and lipids. This allows it to neutralize free radicals just about everywhere in the body, inside and outside the cells. Due to its unique sulfur-containing structure, alpha-lipoic acid can scavenge several types of free radicals, such as the highly reactive hydroxyl, and singlet oxygen free radicals. It is also capable of suppressing the generation of free radicals in the first place, since alpha-lipoic acid chelates transition metals, such as iron and copper. Because alpha-lipoic acid is involved in so many different antioxidant functions in virtually all body tissues, it has been called the universal antioxidant. Besides being a universal free radical scavenger, alpha-lipoic acid can also recharge other antioxidant systems throughout the body. It can extend the activity of vitamins C and E. and can also regenerate glutathione.

Selenium is a cofactor to about 10 selenoproteins in the body; the most important of these appears to be glutathione peroxidase (GPX). GPX uses glutathione to reduce hydrogen peroxide and thus protect cells and plasma against free radical injury. GPX activity depends on an adequate supply of dietary selenium.

### **INDICATIONS**

GSH 250™ capsules may be a useful nutritional adjunct for individuals who wish to increase their intake of glutathione, cysteine-derived antioxidants, as well as other antioxidant nutrients.

**GSH 250™****Specially formulated to potentiate antioxidant protection****FORMULA (#80691)**

3 Capsules Contain:

Glutathione .....	250mg
N-acetyl-L-cysteine.....	250mg
Alpha-lipoic acid .....	200mg
Parsley.....	150mg
Spinach.....	50mg
Riboflavin.....	25mg
Glycine.....	5mg
Glutamine .....	5mg
Cysteine.....	5mg
Selenium.....	25mcg

**SUGGESTED USE**

Adults take 3 capsules daily or as directed by physician.

**SIDE EFFECTS**

No adverse side effects have been reported.

**STORAGE**

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

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**For more information on GSH 250™ 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.

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