N-Acetyl-L-Cysteine
A Valuable Glutathione Precursor

DESCRIPTION
N-Acetyl-L-Cysteine vegetarian capsules, provided by Douglas Laboratories®, contain 500 mg pure N-Acetyl-L-Cysteine. N-Acetyl-L-Cysteine is a biologically active precursor for the amino acid cysteine which, in turn, is a precursor for glutathione, a tripeptide with antioxidant properties.

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, once formed, 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 diseases.

N-Acetyl-L-Cysteine is a precursor for the sulfur amino acid cysteine, and cysteine is used by the body to synthesize glutathione. Glutathione is a naturally occurring tripeptide which is a major component of two anti-free radical enzymes - glutathione peroxidase and glutathione reductase. As such, glutathione offers one mechanism for scavenging toxic free radicals and inhibiting peroxidation thereby slowing down free-radical catalyzed chain reactions. Glutathione per se 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.

In contrast to glutathione, N-Acetyl-L-Cysteine is efficiently transported into the cell where it is readily converted to cysteine for glutathione synthesis. Thus, supplementation with N-Acetyl-L-Cysteine can raise intracellular glutathione levels.

Providing supplemental cysteine to elevate intracellular glutathione levels is generally not advised due to cysteine's inherent toxicity. N-Acetyl-L-Cysteine is virtually non-toxic and well absorbed, which is why supplementation with N-Acetyl-L-Cysteine is recognized as a safe, highly effective method of increasing intracellular glutathione stores.

Aside from providing cysteine as a glutathione precursor, N-Acetyl-L-Cysteine also appears to have antioxidant properties as such, and is a valuable sulfur donor for various metabolic needs.

INDICATIONS
N-Acetyl-L-Cysteine vegetarian capsules may be a useful nutritional adjunct for individuals who wish to increase their intake of cysteine-derived antioxidants.

FORMULA (#200062)
Each Vegetarian Capsule contains:
N-Acetyl-L-Cysteine 500mg

SUGGESTED USE
As a dietary supplement, adults take 1 capsule daily or as directed by your healthcare professional.

SIDE EFFECTS
No adverse side effects have been reported.

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

REFERENCES

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Smilkstein MJ, Knapp GL, Kulig KW, and Rumack BH: Efficacy of oral N-acetylcysteine in the treatment of acetaminophen overdose. N Engl J Med 1988; 319:1557-1562.

For more information on N-Acetyl-L-Cysteine visit 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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You trust Douglas Laboratories.
Your patients trust you.