

N-Acetyl Cysteine is one of the key ingredients in MaxGXL. A single dose of MaxGXL (3 capsules) contains 375 mg. For those taking 3 capsules 2 x per day, that's 750 mg per day.

## **N-Acetyl-Cysteine Overview**

N-Acetylcysteine is derived from the sulfur-containing amino acid, cysteine. It is produced naturally in the body and is also obtained from the diet. Along with glutamic acid and glycine NAC is a precursor to glutathione, which is the body's most important cellular antioxidant.

Proponents of NAC find that NAC is an immune enhancer; prevents and treats cancer; detoxifies heavy metals; treats smoker's cough and bronchitis; prevents heart disease; slows progression of HIV; relieves hangover symptoms; reduces exercise fatigue. It is used as a supplement for bronchitis, HIV infection, cystic fibrosis, cancer chemotherapy support, acetaminophen poisoning, heavy metal poisoning, and septic shock.

Theoretically NACs proposed benefits in human health are thought to originate from being rapidly metabolized to intracellular glutathione. NAC is thought to be a better source of glutathione because glutathione itself because very little is absorbed by mouth. A second benefit of NAC is to cleave disulfide bonds by converting them to two sulfhydryl groups. When this action occurs in the lungs there is breakup of mucoproteins in lung mucus, reducing their chain lengths and thinning the mucus, improving conditions such as smoker's cough and bronchitis.

There is scientific confirmation that NAC supplementation does increase levels of glutathione in the liver, in plasma, and in the bronchioles of the lungs. Also, lack of glutathione contributes to adult respiratory distress syndrome, idiopathic pulmonary fibrosis, and acquired immunodeficiency syndrome (AIDS).

**Dosage:** Typical dosage recommendations are in the range of 250-1500 mg of NAC daily for the majority of therapeutic benefits.

**Safety:** NAC is considered safe for consumption in its therapeutic dosage ranges.

### **Research Overview**

N-Acetylcysteine research shows the following:

1. Is an antidote for acetaminophen poisoning
2. Prevents liver damage
3. Is a free radical scavenger
4. Is an antioxidant in methanol intoxication
5. Is effective in chemoprevention
6. Reduces endothelial dysfunction
7. Prevents cartilage erosion
8. Prolongs transplants
9. Slows tumor development in lungs
10. May prevent colorectal cancer
11. May reduce carcinogenic effect of tobacco smoke
12. Decreases ulcerative colitis
13. May inhibit esophageal tumors
14. Inhibits cancer progression in general
15. Limits susceptibility to HIV infection
16. Reduces heavy metal toxicity
17. Reduces ischemia reperfusion injury
18. Improves insulin circulating levels
19. Prevents cataracts in diabetics
20. Decreases incidence of multiorgan dysfunction syndrome
21. Reduces alcohol induced liver cirrhosis
22. Is an antiinflammatory
23. Protects the lungs in adult respiratory distress syndrome
24. Improves immune response