N-Acetyl Cysteine

The Moss Nutrition Professional Line

CLINICAL STRENGTH ANTIOXIDANT SUPPORT

• High potency 700 mg capsules.*
• Key precursor to antioxidant glutathione.*
• Multiple actions including support for healthy lungs & liver.*
• Promotes Phase 2 liver detoxification and immune health.*

N-Acetyl Cysteine (NAC) is a derivative of L-cysteine, the conditionally essential amino acid required for the synthesis of glutathione. NAC is able to easily cross cell membranes and exhibits anti-inflammatory properties. It functions as a mucolytic agent and a potent, protective antioxidant in liver, lungs, and multiple body systems. NAC also may help to support healthy immune system function, especially during cold and flu season.

NAC is biologically important as an absorbable source of cysteine and, hence, precursor to glutathione, the body’s most powerful and prevalent naturally-occurring antioxidant. Because it can cross cell membranes, NAC is capable of replenishing intracellular glutathione levels within liver cells, brain cells, endothelial cells and more, to help mitigate oxidative damage to cells and surrounding tissues. For example, NAC has been applied in sports medicine to protect tissues from the damaging effects of exercise-induced oxidative stress, and to help support rapid, post-workout recovery.

As a detoxifying agent within the liver, NAC may help to optimize Phase II detoxification by directly promoting the synthesis of glutathione. Glutathione is required for the conjugation of toxins such as organophosphate and carbamate pesticides, a necessary step in their elimination. Following exposure to toxic metals such as lead and methylmercury N-acetylcysteine has been shown to help protect DNA from oxidative stress and damage. In medicine, NAC has been given both orally and intravenously to treat acute acetaminophen poisoning, and is widely considered essential for this application. When administered in a medical setting within 8 hours after acute acetaminophen ingestion, NAC has been shown to be nearly 100% hepatoprotective.

In addition to supporting healthy liver function, N-acetylcysteine has been studied for its beneficial effect on lung and bronchial function. Research suggests it may be used to help address chronic, acute and lingering pulmonary conditions. NAC has been in use since the 1960s as a mucolytic agent to help thin mucus, reduce the viscosity of expectorated phlegm, reduce cough severity and improve ease of expectoration. Placebo-controlled trials in patients with chronic pulmonary disorders have found NAC to be helpful both in speeding recovery and decreasing the rate of exacerbation.

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when given in divided doses totalling between 600 and 1,200 milligrams per day. Beyond its direct mucolytic effects, NAC is also thought to influence mucin expression by acting on oxidative stress and inflammation.

In an Italian randomized trial of 262 older male and female adults, subjects were assigned to take either placebo or 600 mg N-acetylcysteine, twice daily, for 6 months throughout the winter. Compared to subjects taking the placebo, those taking NAC experienced significantly fewer influenza-like episodes over the course of the study. In those who did develop symptoms, severity of both local and systemic symptoms and length of time confined to bed was sharply and significantly reduced in the NAC group. In addition, cell-mediated immunity was improved in the NAC group, and no adverse effects were reported. This study and others like it suggest a strong preventive benefit to taking one or two capsules of **N-Acetyl Cysteine** throughout cold and flu season.

Further uses for N-acetylcysteine supplements may include helping to support gastrointestinal health. NAC has been researched for its ability to decrease *H. pylori* overgrowth and biofilm formation, and to stimulate intestinal motility. In addition to the eradication of *H. pylori*, NAC has been shown to directly inhibit the growth of other pathogenic gram-negative and gram-positive bacteria.

NAC also may help to support healthy behavior and mood—both via its action as a precursor to the antioxidant glutathione, and by helping to modulate glutamatergic, dopaminergic, neurotropic and inflammatory pathways. The compound has been shown in both animal and human studies to help significantly improve symptoms of stress, compulsivity, addiction, depression and anxiety without causing unwanted side effects. Such research suggests great potential for the usefulness of **N-Acetyl Cysteine** as a safe and effective adjunctive treatment option.

**REFERENCES**


*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.*