

# NAC

## Clinical Applications

- Supports Glutathione Synthesis\*
- Supports Detoxification of Environmental Toxins and Pollutants\*
- Supports Antioxidant Activity in all Body Cells\*
- Supports Healthy Respiratory Function\*

*N-Acetyl-L-Cysteine (NAC) is a source of the conditionally essential amino acid L-cysteine and a precursor to the tripeptide glutathione. NAC and glutathione support antioxidant and detoxification activity in the body.\**

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## Discussion

**NAC (N-acetyl-cysteine)** NAC, a sulfur-containing derivative of the amino acid L-cysteine, supports antioxidant and detoxification mechanisms in the body. NAC supports antioxidant activity by neutralizing hydrogen peroxide, hypochlorous acid, and the highly reactive hydroxyl radical and also serves as a source of sulfhydryl groups. In addition, NAC enhances production of the tripeptide glutathione—a key component of both antioxidant and detoxification enzymes.\*<sup>[1]</sup>

NAC is recognized for its support of normal mucous production and may positively support respiratory function and eye health, especially when consumed over a prolonged period.<sup>[1-3]</sup> Research suggests that NAC may protect cell and tissue health by supporting normal metal status in the body.\*<sup>[1,4,5]</sup>

**Glutathione** While the absorption of oral glutathione may be limited,<sup>[6]</sup> supplementation with NAC may significantly increase circulating levels of glutathione in the body.<sup>[7,8]</sup> Once NAC promotes production of glutathione, glutathione is incorporated into crucial antioxidant enzymes (e.g., glutathione peroxidase and glutathione reductase) and detoxification enzymes (glutathione S-transferases). Through the activity of these enzymes, glutathione directly supports antioxidant activity, phase II detoxification, and the normal breakdown of metabolites, toxins, and other compounds in the body. Glutathione also participates in fatty acid synthesis and amino acid transport across the cell membrane.\*<sup>[1]</sup>

A variety of factors may determine glutathione requirements, including level of exposure to toxins, increased phase I detoxification activity, and overall need for antioxidant support. Maintaining glutathione levels may be important to maintaining the health of the respiratory, hepatic, and immune systems, as well as supporting antioxidant protection of lipids and proteins and supporting the normal response to inflammation.<sup>[7-13]</sup> Levels of endogenous antioxidants, including glutathione, may decrease with age.<sup>[14]</sup> It is important to maintain adequate levels of glutathione in the body to support overall health and well-being throughout the lifespan.\*

# NAC

**\*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.**

# Supplement Facts

Serving Size: 2 Capsules  
Servings Per Container: 60

	Amount Per Serving	%Daily Value
N-Acetyl-L-Cysteine	1.2 g	**

\*\* Daily Value not established.

**Other Ingredients:** HPMC (capsule), stearic acid, magnesium stearate, and silica.

## Directions

Take one to two capsules twice daily between meals, or as directed by your healthcare practitioner.

Consult your healthcare practitioner prior to use. Individuals taking medication should discuss potential interactions with their healthcare practitioner. Do not use if tamper seal is damaged.

## References

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## Does Not Contain

Wheat, gluten, corn, yeast, soy, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, or artificial preservatives.

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