NAC 800mg
N-Acetyl-L-Cysteine
Antioxidant and Cellular Health Support

Dietary Supplement 60 Capsules



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Acetyl-L-Cysteine

Antioxidant and Cellular Health Support



Take 1 tablet, once to twice daily, or as directed by your healthcare provider. **Serving Size 60 capsules**

Ingredients:

N-Acetyl-L-Cysteine (NAC) 800mg

Clinical Applications:

- Supports decreasing irritability in the brain
- Supports healthy neurotransmission
- Promotes reduction in obsessional thinking
- Promotes reduction in hair pulling behaviors
- Supports healthy brain inflammation balance
- Improves glutathione and antioxidant balance

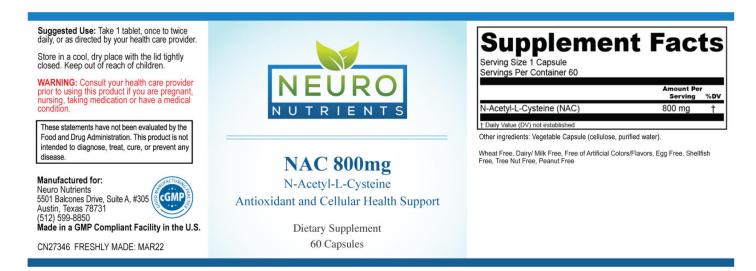
- Supports healthy cellular detoxification
- Supports healthy respiratory function
- Promotes healthy liver function (especially with Tylenol use)



Description:

N-Acetyl-L-Cysteine (NAC) is one of the most effective and versatile supplements on the market today. Clinicians in functional and integrative medicine, in addition to those treating mental health disorders, often use NAC as one of their primary supportive tools for their patients. NAC is a powerful antioxidant well known for its potent ability for detoxification, respiratory function, and cellular health. In the brain NAC can support clearance of over stimulating neurotransmitters that lead to irritability, anxiety, and obsessional thinking.





Formula Ingredient And Peer Reviewed Supportive References:

N-Acetyl-L-Cysteine (NAC)

N-Acetyl-L-Cysteine (NAC) is a derivative of the amino acid L-cysteine and boosts antioxidant function in the brain and body in many versatile ways (12). One of the most notable effects of NAC is its ability to raise the super antioxidant, glutathione, in the body. Taking oral glutathione has its limitations for being absorbed within the body, however taking oral NAC has been shown to significantly increase circulating glutathione levels, protecting the body and brain from oxidative stressors (13).

Some of the most compelling research for NAC is its role in supporting pulmonary and neuropsychiatric health (4,6). NAC can help thin mucus secretions, increase mucosal airway clearance, and reduce the pathology when infected with respiratory illnesses such as influenza (2,3).

In the brain, NAC has been shown to improve neurotransmitter balance and improve inflammation. NAC was given to children with developmental delay which resulted in a significant improvement in irritability scores (5,8). NAC has demonstrated its ability to clear glutamate in the brain, an excitatory neurotransmitter that can lead to agitation, irritability, insomnia, and hair pulling disorders (7,9). Obsessive compulsive and other related disorders have mixed, but promising ongoing research, to hep decrease the severity of these conditions (10,11). In our clinical experience, using NAC for OCD related conditions, autism, anxiety, and generalized irritability has shown significant clinical improvements.

NAC is the gold standard allopathic treatment for treating a patient with liver toxicity from overuse of Tylenol, and it is available via prescription only in inhalation and IV forms (1).



- 1. Brok, J., Buckley, N., and Gluud, C. Interventions for paracetamol (acetaminophen) overdose. Cochrane Database. Syst.Rev. 2006; (2):CD003328.
- 2. Chalumeau M, Duijvestijn YC. Acetylcysteine and carbocysteine for acute upper and lower respiratory tract infections in paediatric patients without chronic broncho-pulmonary disease. Cochrane Database Syst Rev. 2013 May 31;5:CD003124. doi: 10.1002/14651858.CD003124.pub4.
- 3. De Flora S, Grassi C, Carati L. Attenuation of influenza-like symptomatology and improvement of cell-mediated immunity with longterm N-acetylcysteine treatment. Eur Respir J. 1997 Jul;10(7):1535-41. doi: 10.1183/09031936.97.10071535. PMID: 9230243.
- 4. Dean, O., Giorlando, F., & Berk, M. (2011). N-acetylcysteine in psychiatry: current therapeutic evidence and potential mechanisms of action. Journal of psychiatry & neuroscience: JPN, 36(2), 78–86. https://doi.org/10.1503/jpn.100057
- 5. Ghanizadeh A, Moghimi-Sarani E. A randomized double blind placebo controlled clinical trial of N-acetylcysteine added to risperidone for treating autistic disorders. BMC Psychiatry 2013;13:196.
- 6. Grandjean EM, Berthet P, Ruffmann R, Leuenberger P. Efficacy of oral long-term N-acetylcysteine in chronic bronchopulmonary disease: a metaanalysis of published double-blind, placebocontrolled clinical trials. Clin Ther. 2000 Feb 22(2):209-21. [PMID: 10743980].
- 7. Grant JE, Odlaug BL, Won Kim S. N-Acetylcysteine, a Glutamate Modulator, in the Treatment of Trichotillomania: A Double-blind, PlaceboControlled Study. Arch Gen Psychiatry. 2009;66(7):756–763. doi:10.1001/archgenpsychiatry.2009.60
- 8. Hardan AY, Fung LK, Libove RA, et al. A randomized controlled pilot trial of oral N-acetylcysteine in children with autism. Biol Psychiatry 2012;71(11):956-61.
- 9. McQueen, G., Lally, J., Collier, T., Zelaya, F., Lythgoe, D. J., Barker, G. J., Stone, J. M., McGuire, P., MacCabe, J. H., & Egerton, A. (2018). Effects of N-acetylcysteine on brain glutamate levels and resting perfusion in schizophrenia. Psychopharmacology, 235(10), 3045–3054. https://doi.org/10.1007/s00213-018-4997-2
- 10. Ng F, Berk M, Dean O, Bush Al. Oxidative stress in psychiatric disorders: evidence base and therapeutic implications. Int J Neuropsychopharmacol. 2008 Sep;11(6):851-76. doi: 10.1017/ S1461145707008401. Epub 2008 Jan 21.



- 11. Oliver, G., Dean, O., Camfield, D., Blair-West, S., Ng, C., Berk, M., & Sarris, J. (2015). N-acetyl cysteine in the treatment of obsessive compulsive and related disorders: a systematic review. Clinical psychopharmacology and neuroscience: the official scientific journal of the Korean College of Neuropsychopharmacology, 13(1), 12–24. https://doi.org/10.9758/cpn.2015.13.1.12
- 12. White AC, Thannickal VJ, Fanburg BL. Glutathione deficiency in human disease. J Nutr Biochem. 1994;5:218-26. http://www.sciencedirect.com/science/article/pii/0955286394900396 Updated January 27, 2003. Accessed February 27, 2012.
- 13. Witschi A, et al. The systemic availability of oral glutathione. Eur J Clin Pharmacol. 1992;43:667-9. [PMID: 1362956].