NAC (N-Acetyl-L-Cysteine), Natural Decongestant

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N-Acetyl-L-Cysteine (NAC) was first produced 30 years ago. NAC is used in the treatment of bronchitis, cystic fibrosis, asthma, pneumonia, otitis media, chronic sinusitis, and the common cold. The common therapeutic functions of NAC have reduced the suffering in many bronchitis and sinus sufferers.

Mead Johnson patented NAC in 1965 for use in aerosol form for the treatment of excess mucus. The primary use for NAC is as a mucus reducing agent. Mucus strands are linked together by double-sulfur bonds and by breaking these bonds, NAC "waters down" the strands, thereby reducing the viscosity and congestion associated with excess mucus. NAC is a specialized form of the amino acid cysteine that modulates the production of, and is a precursor to glutathione. In turn, glutathione helps protect the body against natural and man-made oxidants. Glutathione is also an antitoxin and a neurotransmitter.

NAC can elevate the body stores of glutathione, cysteine, or perhaps other constituents of the body's antioxidant defenses. It is well-tolerated, well absorbed, resists enzymatic breakdown, and has been proven to raise internal GSH and cysteine levels when taken orally. NAC is more stable than L-cysteine, which has a tendency to break down spontaneously.

NAC is a premier antioxidant, antitoxin and immune support substance. It is a non-toxic derivative of the dietary amino acid L-cysteine, and is a dietary precursor to reduced glutathione (GSH). GSH, cysteine, and NAC all are sulfhydryl substances. All provide the body with antioxidant properties which is extremely important to homeostasis and normal metabolism. The sulfhydryl substances perform crucial roles in the natural antioxidant defenses of the body's cells, tissues, and organs. NAC is more readily available to the tissues over the other two physiological antioxidants and cysteine.

Adequate sulfhydryls are essential to neutralize toxins, such as heavy metals (mercury, cadmium, and lead), and cigarette smoke. The body has a sophisticated system of enzymes that detoxifies foreign chemicals, including various drugs or other chemicals which we are exposed. Such chemicals are called xenobiotics. The metabolism of the aromatic hydrocarbons (dry cleaning solvents, some pesticides and herbicides, CFC, PCB's, dioxins), the benzopyrenes and other barbecued food constituents that are potentially dangerous, and even cholesterol, estrogen, and other water-insoluble circulating hormones, all involve the liver enzyme detoxifying system called Cytochrome P-450 System. These enzymes require -SH substances (glutathione, cysteine) as major, essential cofactors. The sulfhydryl substances also help to neutralize and provide effective antidotes against oxidant xenobiotics. GSH levels in the various organs usually declines with age, making supplementation necessary.

Reduced glutathione has long been recognized to play an essential role in immunity function. This is done via its antioxidant / reducing power. The other major class of circulating immune cells, the phagocytes or white blood cells (macrophages, monocytes, neutrophils), have the job of killing viruses, bacteria, and fungi, rely on adequate GSH status to carry out these functions.

**NAC As A Dietary Supplement**

NAC helps to naturally lower mucus viscosity, so that the lungs may be cleared more
easily. For decongestive purposes, use one (500 mg) capsule twice daily. NAC can be safely used in both children and adults.

NAC is currently the dietary supplement of choice for supporting the body's stores of glutathione, cysteine, and other sulfhydryl antioxidant resources. Reduced glutathione is an integral component of the body's antioxidant defenses, and in many ways is involved in maintaining certain life functions. However, oral supplementation with glutathione appears not to be the best means for building or replenishing the body's glutathione levels, since the glutathione ingested is largely broken down by intestinal enzymes and comparatively little is absorbed intact. NAC, on the other hand, appears to be an excellent dietary starting substance for building up reduced glutathione.

As a precursor to reduced glutathione, NAC is also an excellent biochemical resource for assisting in the detoxification of chemical substances foreign to the body. Sulfhydryls are also important to detoxify heavy metals such as mercury, cadmium, and lead. Mercury has the capability to enter the circulation from dental amalgam fillings. Mercury toxicity has been linked to a number of conditions of ill health. Under optimal physiological conditions, mercury is cleared from the body as a complex with -SH (glutathione or cysteine). Dietary supplementation with NAC offers added buffering capacity preventing mercury from entering the circulation from dental amalgams or lead or cadmium from environment sources.

- Be sure that the NAC you use is pure pharmaceutical grade.
- NAC is safe for children and teens and no adverse side effects.
- If you have sinus or allergy drainage during the day do not hesitate to take an extra NAC for relief.

*This article is not intended to give medical advice or replace the services of a physician. It is for educational purposes only.*