N-Acetyl Cystine
Enhances glutathione, liver detoxification and eye health

N-acetyl cysteine (NAC) is a form of cysteine, a sulfur-containing amino acid found in high protein foods. N-acetyl cysteine is a metabolite (a substance produced by metabolism) of cysteine.

N-acetyl cysteine is produced naturally in the body and is also obtained from the diet. It is a precursor to glutathione, which is the body's most important cellular antioxidant and detoxifier. Although purified glutathione is available as a supplement, its absorption is poor because it is broken down by the digestive process. Supplementing with NAC is considered to be a better method of boosting glutathione levels in the liver, eyes, lungs and other tissues.

Cysteine plays a role in the sulfation cycle in phase II detoxification, which happens in the liver. In this cycle, liver cells add a substance (such as cysteine, glycine or a sulfur molecule) to a toxic molecule. This renders the toxin harmless and allows it to be eliminated safely from the body. The toxin can come from micro-organisms, like bacteria, environmental toxins or naturally-occurring compounds in foods, or drugs.

Once N-acetyl cysteine is made in the body, it is rapidly metabolized to intracellular glutathione. Glutathione acts as a powerful antioxidant in cells that detoxifies chemicals into less harmful compounds. Glutathione is known to aid in the transport of nutrients to cell membranes and to lymphocytes and phagocytes, two major classes of white blood cells produced by the immune system. Taking vitamin C, another powerful antioxidant along with NAC helps recycle the glutathione so that it can continue acting as an antioxidant.

Here are some of the benefits of NAC

Mucous in the Lungs

NAC is commonly prescribed for those suffering from bronchitis, emphysema, pneumonia, tuberculosis and smoker's cough. It is a natural expectorant that helps thin mucus and loosen phlegm and bronchial secretions in the lungs. Double blind research has found that dosages of 1,200 mg. per day prevents influenza infection and reduces symptoms and the duration of existing influenza infections. It is currently being studied in the treatment of cystic fibrosis at the Lucile Packard Children’s Hospital Stanford University School of Medicine in California.

Heavy Metals and other Toxins

NAC detoxifies and removes heavy metals like lead, mercury and arsenic from the body. Because it also increases zinc secretion you may want to supplement zinc and other trace minerals as it increases the excretion of zinc and other essential minerals when taking NAC over an extended period.

NAC has been used in hospitals for treating patients with acetaminophen toxicity (found in Tylenol) and for treating other causes of liver failure and septic shock. It is often recommended as a liver support for those taking chemotherapy drugs and those suffering form alcohol poisoning. Taking NAC along with vitamins C and B1 will reduce the possibility of suffering from veisalgia, or a hangover, that unpleasant experience from overindulging in alcohol consumption.

Cancer and AIDS

In a double-blind placebo-controlled study of individuals with abnormal growth of polyps associated with the development of colon cancer, those receiving 800 mg daily for 12 weeks showed more normal cell growth than those in the placebo group. Since NAC has been shown to reduce the proliferation of certain cells lining the colon, it may reduce the risk of colon cancer in people with recurrent colon polyps.

N-acetyl cysteine is being investigated as a treatment for AIDS. Early human trials, including a double-blind study of 45 people, suggest that NAC may increase levels of CD4+ cells (a type of immune cell) in healthy people and slow CD4+ cell decline in people with HIV. Additional studies have shown that NAC prevents weight loss in patients with AIDS that is caused by the release of a chemical called tumor necrosis factor, or TNF. TNF stimulates oxidation that promotes the reproduction of the virus that leads to cell destruction. As a powerful antioxidant, NAC blocks the TNF chemical, inhibiting the growth of the virus. Since NAC is inexpensive and does not have the side effects of AZT, a drug used for HIV, it shows great promise for the treatment for HIV/AIDS worldwide.

Suggested Use

NSP's N-acetyl cystine is combined with turmeric, a highly regarded herb that stimulates the gall bladder to increase the flow bile into the intestines, aiding in the removal of fat-soluble toxins. Take 1 tablet twice daily with meals. Consult a medical professional before taking this product if you are currently undergoing any treatment for cancer.

Selected References

Herbal Drugs and Phytopharmaceuticals by Max Wichtl
PDR for Herbal Medicine published by Medical Economics Company