

N-Acetylcysteine

One of the ways that stress causes depression is by injuring brain cells through *oxidation*. Oxidation also contributes to heart disease, dementia and aging. N-Acetylcysteine (NAC) is a natural antioxidant that protects against this damage. It prevents aging of the skin, cancer, and improves the health of the lungs, liver and kidneys. Its mental benefits include:

Compulsive problems: NAC helps trichotillomania (compulsive hair pulling), compulsive skin picking and self cutting. It may help obsessive-compulsive disorder.

Depression: It is particularly helpful in reducing low-grade, chronic depression. NAC's antidepressant effects often build up slowly (e.g. over 6 months), which makes it hard to tell if it's working. However, the benefits usually go away quickly (within a week) if it is stopped. NAC also helps depressive symptoms due to schizophrenia (also called negative symptoms). It is not clear if it helps other kinds of depression.

Addictions: Marijuana, alcohol, nicotine, and gambling.

Memory: The studies in this area are small, but it appears to be helpful in age-related cognitive decline and Alzheimer's disease.

Other: Irritability due to autism spectrum disorders. Post-traumatic stress disorder.

Health: Protects kidneys. Anti-aging and anti-cancer effects.

N-Acetylcysteine is well tolerated and not associated with major medical risks. The tablets may have an egg-like smell.

How to take it

The usual dose for NAC is 2,000mg daily. You can split the dose up or take it all at once. If you can only find 600mg tablets, try 3-4 per day (e.g. take 3 one day and four the next day). The dose can go as high as 3,000mg daily (that level was used for nicotine cessation).

If taking NAC just to protect the kidneys, 1,000mg daily is sufficient.

Avoid products that come as a liquid vial (these are meant to be inhaled and are used for lung disease).

It is also available in prescription form (called Cerefolin), but this option is often more expensive and not covered by insurance. Cerefolin tablets have 600mg of NAC but also contain B12. If you take 3 Cerefolin tablets it's possible your B12 levels will go too high.

Quick links to recommended products at www.moodtreatmentcenter.com/products

Where to purchase it

We keep updated links to the best products at www.moodtreatment.com/products (under Vitamins & Herbs).

Best Choice: NOW 1,000mg passed tests for purity and safety by *Clinical Labs*.

Other brands that passed this test include: Doctor's Best, Life Extension, Nutricost.

It is available in the store at: VitaminShoppe, Whole Foods, GNC

Other online options include: iherb.com, vitacost.com, drugstore.com, amazon.com

Cerefolin-NAC

This is a prescription formulation of N-Acetylcysteine. It also contains Vitamin B12 (called Methylcobalamin) and a high-intensity version of the vitamin Folate called L-methylfolate (or Deplin). These other two vitamins have also been found to improve depression, memory and brain health.

The amount of N-Acetylcysteine in this product is less than that used in the studies (600mg vs. 1800-2000mg per day) so it is best to take 3 tablets per day. The Deplin in the compound has also been found to be more effective for depression at the higher dose, which you will get by taking it 3x/day. The manufacturer recommends that, in order absorb the deplin, you should take it 3x/day instead of all at once.

There may be savings programs (discount card) if your insurance covers the vitamin at www.cerefolinnac.com or you can call 800-433-3153 – that number is for a discount pharmacy (RxDirect) which can usually get the product for you at no more than \$58/month. There is more information about this product at www.pamlab.com/Products,Cerefolin Show this web link to your pharmacist if they have trouble ordering it. Each tablet contains:

2mg Methylcobalamin (B12)
5.6mg L-methylfolate (Deplin)
600mg N-acetylcysteine

—Chris Aiken, M.D., updated 2/23/2021