

N-AcetylCysteine

Code: FE0301 – 60 vegetable capsules



N-AcetylCysteine (NAC) is an acetylated form of the amino acid cysteine. Cysteine is part of the biochemical pathway for synthesising glutathione, an important antioxidant. Our **N-AcetylCysteine** provides **600 mg** of NAC **per capsule**.

Ingredients: N-Acetyl-L-cysteine, bulking agent (microcrystalline cellulose), anti-caking agents (silicon dioxide and magnesium salts of fatty acids), vegetable capsule (glazing agent: hydroxypropylmethylcellulose, humectant: purified water).

Nutritional information:	1 caps (901 mg)
N-Acetyl-L-cysteine	600 mg

Size and format:
60 vegetable capsules

Recommended daily dose:
1 capsule daily with food.
Do not exceed the stated recommended daily dose.

Indications and uses:

- It provides antioxidant protection.
- It helps to relieve the symptoms of chronic bronchitis.
- It helps in the treatment of inflammation of the respiratory system.
- Helps liver detoxification and non-alcoholic fatty liver disease.
- Polycystic ovary syndrome (PCOS): it improves fertility, reduces insulin resistance, regulates hormone balance, reduces inflammation and improves fatty liver.
- It disrupts bacterial biofilms.

Cautions:

Do not administer to children under the age of 3; or if you are taking antibiotics or nitroglycerin. Consult a health-care practitioner prior to use if you are pregnant or breast-feeding; or if you have kidney stones.

DETAILS:

N-AcetylCysteine is similar to both L-cysteine (NAC is merely an acetylated form of L-cysteine) and the enzyme glutathione itself (it is the direct precursor of glutathione synthesis).

Supplementation with both L-cysteine and glutathione has been studied. Glutathione appears to be of limited therapeutic use because it is rapidly hydrolysed in the intestine, and the increase in systemic glutathione observed with oral glutathione supplementation is too small to be clinically relevant ⁽¹⁾.

NAC is a powerful antioxidant. Its use is also recommended as a possible treatment option for different disorders resulting from the generation of free radicals ⁽²⁾.

INGREDIENTS:

N-ACETYLCYSTEINE (NAC): an important precursor of glutathione. NAC provides important protection against toxins and free radicals, and is able to strengthen the immune system. NAC is an acetylated form of the amino acid cysteine, which is more efficiently absorbed ⁽³⁾.

Importantly, NAC is a precursor of glutathione, a powerful antioxidant used in conjugation reactions. Supplementation with NAC is the best way to increase glutathione reserves, apart from intravenous glutathione therapy, as oral glutathione is not well absorbed ⁽⁴⁾.

At the pulmonary level, it is commonly used as an antimucolytic and anti-inflammatory, helping in diseases such as chronic bronchitis, chronic obstructive pulmonary disease (COPD) ⁽⁵⁻⁸⁾.

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This amino acid provides detoxification in the liver and cells by neutralising certain toxins and by-products of metabolic and hormonal waste. Both alone or as part of glutathione, it neutralises free radicals very effectively. It also increases levels of lipoic acid, vitamin C and selenium, all of them antioxidants ⁽⁹⁻¹¹⁾.

NAC is used in hospital settings as an antidote for paracetamol overdose, which, if left untreated, causes acute liver failure. NAC "absorbs" paracetamol before it can cause widespread damage ⁽¹²⁾.

NAC helps women with Polycystic Ovary Syndrome (PCOS):

- It improves fertility by aiding ovulation and pregnancy ⁽¹³⁾.
- It improves insulin resistance by protecting insulin receptors in the pancreas ⁽¹⁴⁾. It has similar results as it improves insulin resistance better than metformin and without its side effects ⁽¹⁵⁾.
- It reduces androgen levels and regulates menstrual cycles ⁽¹⁶⁾.
- It reduces inflammation by reducing oxidative stress ⁽¹⁷⁾.
- It helps improve fatty liver in women with PCOS ⁽¹⁸⁾.

It has the ability to break down bacterial biofilm (biofilm disruptor). Its main mechanism of action is to reduce the production of extracellular polysaccharides, which disrupts biofilms and reduces bacterial adhesion to surfaces ⁽¹⁹⁻²²⁾. However, their antimicrobial activity against biofilms seems to depend on the bacterial strain ^(19, 21, 23). It is highly effective against certain gram-negative bacilli, such as *Klebsiella pneumoniae* ⁽²⁴⁾, and some gram-positive cocci ⁽²⁵⁾. Recently, NAC was found to be effective against *E. faecalis* biofilm ⁽²⁶⁾.

References:

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