

Food Sources That Boost Glutathione Naturally

Glutathione, the body's master antioxidant and detoxifier, is one of the 14 "Superfoods" listed in SuperFoods Rx : Fourteen Foods That Will Change Your Life, co-authored by Dr Steven Pratt.

Glutathione levels cannot be increased to a clinically beneficial extent by orally ingesting a single dose of glutathione. (1) This is because glutathione is manufactured inside the cell, from its precursor amino acids, glycine, glutamate and cystine.

Hence food sources or supplements that increase glutathione must either provide the precursors of glutathione, or enhance its production by some other means.

The manufacture of glutathione in cells is limited by the levels of its sulphur-containing precursor amino acid, cysteine.

Cysteine - as a free amino acid - is potentially toxic and is spontaneously catabolized or destroyed in the gastrointestinal tract and blood plasma. However, when it is present as a cysteine-cysteine dipeptide, called cystine, it is more stable than cysteine.

Consuming foods rich in sulphur-containing amino acids can help boost glutathione levels. Here are some food sources and dietary supplements that help boost glutathione levels naturally.

1. N-Acetyl-Cysteine (NAC)

It is derived from the amino acid L-Cysteine, and acts as a precursor of glutathione. NAC is quickly metabolized into glutathione once it enters the body. It has been proven in numerous scientific studies and clinical trials, to boost intracellular production of glutathione, and is approved by the FDA for treatment of acetaminophen overdose. Because of glutathione's mucolytic action, NAC (brand name Mucomyst) is commonly used in the treatment of lung diseases like cystic fibrosis, bronchitis and asthma.

2. Milk Thistle, Silymarin

Milk thistle is a powerful antioxidant and supports the liver by preventing the depletion of glutathione. Silymarin is the active compound of milk thistle. It is a natural liver detoxifier and protects the liver from many industrial toxins such as carbon tetrachloride, and more common agents like alcohol.

3. Alpha Lipoic Acid

Made naturally in body cells as a by-product of energy release, ALA increases the levels of intra-cellular glutathione, and is a natural antioxidant with free radical scavenging abilities. It

has the ability to regenerate oxidized antioxidants like Vitamin C and E and helps to make them more potent. ALA is also known for its ability to enhance glucose uptake and may help prevent the cellular damage accompanying the complications of diabetes. It also has a protective effect in the brain.

4. Natural Foods That Boost Glutathione Levels

Asparagus is a leading source of glutathione. Foods like broccoli (2), avocado and spinach are also known to boost glutathione levels. Raw eggs, garlic and fresh unprocessed meats contain high levels of sulphur-containing amino acids and help to maintain optimal glutathione levels.

5. Undenatured Whey Protein Isolate

Whey protein contains proteins like alpha-lactalbumin which is rich in sulphur-containing amino acids. Heating or pasteurization destroys the delicate disulphide bonds that give these proteins their bioactivity. Undenatured whey protein is a non-heated product that preserves bioactive amino acids like cystine. It has been shown in numerous scientific studies and clinical trials to optimize glutathione levels.

6. Curcumin (Turmeric)

Treatment of brain cells called astrocytes, with the Indian curry spice, curcumin (turmeric) has been found to increase expression of the glutathione S-transferase and protect neurons exposed to oxidant stress. (3)

7. Balloon Flower Root

Changkil saponins (CKS) isolated from the roots of the Chinese herbal medicine, Platycodon grandiflorum A. DC (Campanulaceae), commonly called Balloon Flower Root or Jie Geng, have been found to increase intracellular glutathione (GSH) content and significantly reduce oxidative injury to liver cells, minimise cell death and lipid peroxidation. (4)

8. Selenium

Selenium is a co-factor for the enzyme glutathione peroxidase. Selenium supplements have become popular because some studies suggest they may play a role in decreasing the risk of certain cancers, and in how the immune system and the thyroid gland function. However, too much selenium can cause some toxic effects including gastrointestinal upset, brittle nails, hair loss and mild nerve damage.

Disclaimer: The information here is not provided by medical professionals and is not intended as a substitute for medical advice. Nutritional supplements, while usually benign, can produce adverse reactions in some people. As with prescribed drugs, long-term effects from supplements are often unknown. Pregnant women and children should not take supplements except after consultation with their healthcare provider. Never exceed the recommended dosage on the

container. If you observe adverse effects stop taking the supplement immediately and contact your healthcare provider.

References:

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3. Can Curry Protect Against Alzheimer's? American Physiological Society (APS) Press release; 16-Apr-2004
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This article was first published in the July 2004 issue of [The Glutathione Report](#), a newsletter featuring regular updates on the health benefits of glutathione. Get a Free report on [Glutathione in Health and Disease](#)

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