



# Glutathione

## Overview

L-Glutathione, or simply glutathione, is a powerful antioxidant comprised of amino acids cysteine, glycine, and glutamic acid. Glutathione has many functions. It is vital to mitochondrial function and necessary to produce DNA. Its ability to cross the blood-brain barrier means it plays an important role in removing toxins, such as mercury, from the brain and other cells. It is key in supporting immune function, metabolism, forming sperm cells, tissue building and repair, and helping with certain enzyme functions. As a powerful antioxidant, it may help fight the effects of free radicals, which cause oxidative stress, damage healthy cells, and contribute to aging and certain degenerative illnesses. Unlike most antioxidants, glutathione can be made in the human liver. Glutathione can be found in every cell of the human body. It is also found in many foods, including spinach and avocados, but is poorly absorbed by the body when consumed orally. Supplements that can support glutathione production include curcumin, N-acetylcysteine, selenium, silymarin, vitamin C, and Vitamin E. Glutathione levels in the body naturally decline as we age, but can also be reduced by factors like stress, malnutrition, and environmental toxins

## Other Uses

Glutathione is a powerful antioxidant and is beneficial for many disease states as well as helping people live a healthier life. It may improve immune response, help to metabolize toxins and activate enzymes, aid the liver in metabolizing alcohol, reduce the amount of fat stored in the belly, help to reduce oxidative stress, and improve complexion.

## Dosage, Concentration, Route of Administration

Dosage: Seek advice from a licensed physician, medical director, or other healthcare provider

Concentration: 200mg/ml

Route of Administration: IV/IM

## Storage

Store under controlled refrigeration. Protect from light.