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Relationship between Glutathione and the Immune System

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Description

Glutathione regulates the balance between innate immunity, or the infiltration of white blood cells at the site of infection to destroy bacteria, and inflammation, or the infiltration of white blood cells in the lungs, to cause organ failure. Glutathione helps strengthen your immune system in two important ways. First of all, it plays a central role in the proper functioning of T-cell lymphocytes (white blood cells), the frontline of the immune system, by increasing their number. Altered glutathione concentrations may play an important role in many autoimmune pathological conditions, which are mainly caused by determined and maintained by an inflammatory/immune response mediated by oxidative stress reactions. In addition to its role as a major antioxidant, glutathione is crucial for the normal functioning of the immune system. This powerful compound supports the cells that keep you healthy.

Glutathione maintains normal cytokine levels

Cytokines are communication proteins released by white blood cells to communicate information to other cells for an appropriate immune response. For example, cytokines activate B cells, which secrete antibodies.

Glutathione supports mast cells

Mast cells line the respiratory system, from the nasal passage through the throat to the lungs. Because these pathways are the primary means of entry into the body, mast cells are under constant attack. They need high levels of glutathione to perform.

Glutathione supports lymphocytes

Lymphocytes are a class of white blood cells. Three forms of T cells, a smaller type of lymphocyte, work together to defend your body against invaders. Helper T cells identify targets for destruction by killer T cells. After eliminating the threat, suppressor T cells suppress the immune system.

Glutathione is essential for T-cell growth. In recent studies, researchers have found that T cells can be activated but cannot reproduce. The scientists noted that GSH-deficient T cells did not increase in size. While T cells can technically function, glutathione deficiency severely impairs their performance, limiting their expansion in individual cell sizes and numbers. These researchers note that too high a concentration of free radicals inhibits T-cell growth and that glutathione keeps free radicals in check, "allowing T-cells to enter the cell cycle, metabolically reprogram, differentiate, and mount protective immune responses."

Glutathione prevents oxidative stress in immune cells

When T cells reproduce, they need more energy. This increased metabolic activity stimulates the production of free radicals. When the concentration of free radicals becomes too high, DNA is damaged and cells die. Glutathione controls these rising levels of free radicals to prevent T-cell death. Free radicals are critical components of the immune system necessary for the inflammatory part of the healing process. When present in uncontrolled amounts, free radicals overwhelm antioxidants, leading to oxidative stress that damages cells, including cells of the immune system

Be aware of circumstances that deplete glutathione, including:

- Smoking
- Alcohol
- Certain medications, especially those containing acetaminophen

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- Excess fat in the body
- Make sure you eat the nutrients you need to produce glutathione
- B vitamins
- Carnitine
- Alpha-lipoic acid
- Selenium
- Cysteine
- Glutamine
- Glycine
- A supplement with an absorbable form of glutathione

While ordinary oral forms of glutathione break down into amino acids in the digestive system, LypoSpheric Glutathione moves through the gut unharmed due to its protection in liposomes. These fatty spheres transport the glutathione to the bloodstream and the cells for absorption.