

SECONDBRAIN

GUT HEALTH. RESTORED

## Glutathione: the key to improve your health

**Glutathione (GSH) is a fascinating molecule manufactured within your cells to keep you ALIVE.**

Composed of three amino acid precursors, glutamate, cysteine, and glycine. Glutathione, as a master antioxidant, neutralizes excessive reactive oxygen species (ROS), which comprise free-radicals and non-free radicals. According to Jimmy Gutman MD, glutathione expert, "The list of ailments caused by oxidation and free radical formation grows longer every day."

Have you ever felt with non-ending feelings of gut dysfunction, fatigued, brain fog, or just with a lack of stamina that become your normal?

The reason why you may feel this way is that your glutathione levels might be sub-optimal.

**Today's hectic lifestyle, pollution, environmental toxins, poor diet, aging, medications, deplete glutathione levels.**

Without proper glutathione levels, your cells may get damaged from excessive production of free and non-free radicals. Your immune system may trigger an inflammation response trying to repair damaged cells or tissues. And your liver cannot detox your body from toxins efficiently. It is a domino effect that only lets you in less than an optimal health condition.

### What can we do to raise glutathione levels?

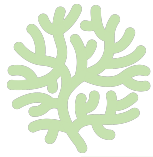
Recent research studies suggest that nutritional interventions, foods, appropriate supplements, and exercise may have significant effects on increasing glutathione levels, which may translate into improved health conditions (1)(2).

What this means is that we need to apply all three ways to reach the desired glutathione levels.

**1. Glutathione precursors and sulfur-rich food**, such as lean protein sources, brassica vegetables, polyphenol-rich fruits-vegetables, and omega-3 fatty acids that provide precursors and cofactors to help increase glutathione levels. This intervention is not enough, giving now-days challenging lifestyle and exposure to toxins.

**2. Suitable supplements that can help us complement foods to reach the desired levels. There are several options but, which supplement is the best?**

- Research on oral glutathione are mixed and inconclusive (3), In general, its bioavailability seems to be low; most is lost to the digestive process.



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- NAC (N-Acetyl-Cysteine) has proved adequate but raise GSH levels quickly and decline within hours.
- Bioactive whey proteins such as **Immunocal** contain high levels of non-denature protected cysteine, raise glutathione levels with no side effect

**3. Moderate exercise** raises your glutathione levels, increase your immune function, decrease muscle damage, and recovery time.

### Take away

It is clear that optimizing the dietary intake of glutathione precursors such as cysteine (**Immunocal**), cofactors such as B vitamin complex, and whole foods, is going to increase GLUTATHIONE levels. This a relatively simple, low-cost, and safe approach that could improve your health by obtaining the benefits of optimal glutathione levels.

### Benefits

- It can help reduce oxidative stress resulting from poor diet, pollution, environmental toxins, smoking, alcohol intake, or substance abuse and, in turn, improve chronic conditions.
- It can help the immune system fight infections and increase your quality of life, avoiding one health problem after another.
- It is a critical factor in optimizing phase I and II liver detoxification pathways, avoiding toxins circulating through the body.
- It can help increase your energy levels.
- In sports may increase strength and endurance and shift metabolism from fat production to muscular development.

**Good health has no price!**