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Opinion
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Why Glutathione?

Holly Fourchalk*

Department of Psychoneuroendocrinology, Simon Fraser University, Canada

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***Corresponding author:** Holly Fourchalk, Choices Unlimited for Health & Wellness Ltd, Canada

Opinion

Most physicians who practice Western Conventional Medicine, do not know what glutathione or GSH is. Many who practice REAL medicine, as opposed to synthetic medicine only know glutathione as a REDOX mechanism. But glutathione is far more important than that. Let's start with glutathione as the Master Anti-oxidant. As an anti-oxidant, it is made inside the cells. It is the only anti-oxidant that re-stabilizes itself, most simply become another free radical. It also re-stabilizes many other anti-oxidants as well, i.e., Vitamin C. Most anti-oxidants work on a given type of free radical in a given location, i.e., inside the cell; the cell membrane; or outside of the cell. Glutathione works everywhere. Most anti-oxidants work on a given type of free radical. Glutathione works on all of them. Thus, it re-stabilizes itself and others; works anywhere; and on any type of free radical - that's impressive!

The highest concentration of glutathione is found in the liver. Presumably because glutathione plays such a huge part in detoxification, not only at a cellular level but in the body's largest detox organ. Regardless of whether the liver is doing a Phase I/II or I/II/III or I/II/III/IV glutathione is usually the last part of the detox process. Glutathione is also required for regulation of Ca movement, i.e., gating of cardio cell function; and therefore, important for heart function. The respiratory system is also dependent on glutathione. The red blood cells require glutathione in order to both pick up/release both O2 & CO2

Glutathione is also involved in a healthy immune and inflammatory resolution. Immune cells, i.e., T cells, B cells, macrophages, TNF, NK, etc., all require glutathione to both develop and function. In addition, glutathione helps to regulate the ratios between Th1/Th2 so that auto-immune and other disorders do not develop. Both directly and indirectly, glutathione is involved in the regulation of many hormones. For instance, it eliminates excess estrogens from the liver.

Within the cells, we know that the mitochondria provide most of the cellular energy in the form of ATP. Glutathione is the only known compounds that protects the mitochondria. And of course, the mitochondria are required to provide the fuel to make the glutathione. Glutathione regulates the production of Nitric Oxide, (NO) which works in the cardiovascular system as a vasodilator, but also in the immune system; the neural system; and involved in hormonal regulation. Our DNA depend on glutathione to protect it from abnormal reproduction; correcting it when it is abnormal; or eliminating it cannot be corrected. Glutathione is also required in protein synthesis as well as in cellular amino acid transportation.

The telomeres, at the ends of the DNA strands are important for DNA replication. And while there are other anti-oxidants that protect the telomeres from free radicals, glutathione is the only know compound that provokes the creation of new telomeres. Thus, when it acts in REDOX or against as an anti-oxidant or in provoke new telomeres, it is a great anti-aging compound. Yet research is showing that we are making less glutathione, despite the fact that we need it more than ever, i.e., to help with detoxification both at a cellular level and in the liver. Historically, we lost glutathione to issues like age, genetic abnormalities, stress, poor sleeping habits, infections, injuries, poor diet, dehydration. However, in today's world we are also looking it due to issues like increased synthetic toxic compounds (in our foods, our pharmacy, our cleaning products, etc.); radiation, too much sun, sunscreen.

A good diet can provide the nutrients that the gut requires to send the nutrients to the liver and throughout the body so that all cells can make glutathione. However, problems with the GIT process can hinder these nutrients: insufficient salvia; insufficient hydrochloric acid; insufficient GIT enzymes; insufficient pre/probiotics; impaired GIT immune function; GIT inflammatory issues, etc. can all effect if and how nutrients are metabolized and sent to the liver and elsewhere, thus inhibiting the cell's capacity to synthesize glutathione. At a cellular level, if cells cannot transport amino acids; if the mitochondria are insufficient or working ineffectively; if the methylation cycles are not functioning; glutathione is not synthesized. One can easily identify the cascading effects of insufficient glutathione.

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