

Glutathione Supplementation

1. Glutathione supplementation can be problematic due to poor absorption. Liposomal glutathione and acetyl-glutathione are compounded in a way that makes the glutathione much more efficiently absorbed --- and absorbed without breaking it down into its three constituent amino acids.
2. We rarely supplement with glutathione because it can upset immune balance so severely. It inhibits Th2 lymphocytic function and can over-activate Th1 immune reactivity. That immune system effect can be beneficial in early to mid stage cancers, and that is really the only time we supplement with glutathione. It is also occasionally useful in patients with Th2-mediated allergies.
3. Glutathione is not even a treatment for, let alone a cure for macular degeneration. Glutathione can be very helpful in macular degeneration as long as there is no reductive stress --- as long as the patient does not test Anaerobic.

The metabolic effects of glutathione are:

- It is anti-Dysaerobic (pushes a person Anaerobic).
- It pushes a person from Th2 lymphocytic inflammatory cytokine dominance to Th1 lymphocytic inflammatory cytokine dominance.

So --- you would never use glutathione for someone who tests Anaerobic. You would never use glutathione for someone with a pathology generally associated with excess of Th1 inflammatory cytokines --- such as most of the autoimmune diseases. Furthermore, since glutathione so powerfully causes reductive stress, it can actually exacerbate cardiovascular disease. Never give glutathione to a pregnant woman, since a Th2 shift is essential so that her immune system does not attack the fetus.

4. Many patients with hepatitis C are stuck in a state of excess Th2 immune reactivity. These patients definitely benefit from glutathione supplementation to increase the strength of the Th1 immune response.

On the other hand, many chronic viral conditions are associated with an Anaerobic Imbalance and glutathione can be problematic.

5. Eosinophilic infiltration diseases are often associated with either an Anaerobic Imbalance or a Parasympathetic Imbalance. To the extent the patient is Anaerobic, glutathione can make the pathology worse. --- But --- in cases where the eosinophilic infiltration is associated with systemic Th2 immune activation in the absence of an Anaerobic Imbalance, the

glutathione can be helpful. Particularly in patients who are not Anaerobic, but in whom the eosinophilic infiltration (whether eosinophilic fungal rhinosinusitis, or eosinophilic bronchitis, or eosinophilic esophagitis, or eosinophilic gastroenteritis) is triggered by mold/yeast exposure, the glutathione can be beneficial.

6. We cannot provide any hard data on the superiority of acetyl over liposomal glutathione or vice versa.