Glutathione

By Bryon Verhaeghe

A complex story with a simple statement: “every cell in our body contains glutathione and when levels are low we become sick”. Glutathione, pronounced ‘glute-a-thigh-own’ (abbreviated GSH), is not well known and underestimated by many. It is made from three amino acids by plants and animals and every cell in our body has it for protection. One measure of a cell’s health and function can be based on the level of GSH, making it the most important molecule in our body.

Why is it so important? Cells are constantly being made and replaced. This daily production of a new cell requires GSH and is important in making red and white blood cells. GSH then becomes a key element for the immune system to function properly, particularly for the lymphatic system and lymphoid cells. GSH is also used up in the body when a cell finishes its’ life span and dies. There can be a release of toxins, that the body cleans up by using GSH and the white blood cells of the lymphatic system.

Many stress factors in our environment can shorten the life span of cells and tissues. This can increased the rate of aging exponentially if GSH levels are low in the body. Just to name a few some environmental factors include: 1) damage from UV rays that harms our eye sight. The lens, cornea and retina heavily rely on glutathione for protection. 2) Toxins such as air pollution, molds, fungi, sugar, and bacteria that are ingested with food or gain entry though other means are then carried into the blood. The liver has the highest reserves of GSH to deal with these surges of foreign substances.

Besides aiding in the immune system another important function of a cell is to make hormones in the pituitary, thyroid, thymus, liver, ovaries, and testis with the help of glutathione. To get day time energy and a restful night’s sleep we rely on the kidneys using glutathione to produce adrenalin and cortisol.
In general when GSH levels are low we have more health issues that you might realize. Some interesting findings related to GSH levels have been listed here...

Cavities: 8 young men with cavities were compared to 10 without. The GSH levels were significantly lower in the group with cavities. (PMID18982196)
Lungs: Low levels of GSH are linked to a long list of respiratory diseases, including: Chronic Obstructive Pulmonary Disease (COPD), Acute Respiratory Distress Syndrome (ARDS) which is now also known as Severe Acute Respiratory Syndrome (SARS), neonatal lung damage and asthma.2
Parkinson’s disease: New evidence suggests that GSH depletion may itself play an active role in the disease development. (PMID19542204)

Stomach: In older people low levels of GSH allow a higher incidence of stomach ulcers from H.Pylori bacteria. In Crohn's disease of the bowel they also find low GSH levels.

→Reduce Winkles with Glutathione

Metal storage: Wilson's disease occurs where there are excess copper levels that occur with low levels of Glutathione. GSH also aids in removing heavy metals from cells and tissues.

Diabetes: Diabetic's have low levels of GSH in both red and white blood cells.

Heart Attack: 1) Doctors are beginning to zero in on a new set of heart attack risk factors. One is the C-Reactive Protein (CRP) and the other is levels of Glutathione. 2) 21 acute myocardial infarction patients aged between 39 and 70 were age and sex matched to healthy controls. At days 1, 3, 5, and 7 GSH levels averaged 11.5% lower than the healthy controls. (PMID8676544)

Skin: Depressed GSH levels were observed in patients with psoriasis, eczema, atopic dermatitis, vasculitis, mycosis fungoides and dermatitis herpetiformis. (PMID6179360)

Aging: Glutathione deficiency contributes to oxidative stress, which plays a key role in aging. PMID14988435.

Blood transfusions: Fresh blood has high levels of glutathione but when stored for long periods of time the levels drop. Receiving a blood transfusion helps the blood count but glutathione levels are not improved. (PMID623427)

Oral supplementation: Mice were given a drug to stop GSH production in the body to create low levels in all tissues. Oral supplementation restored levels even while the drug was continued. This proves that it is absorbed from digestion. (PMID1913980)

Dietary glutathione: Dietary GSH can be absorbed intact and results in a substantial increase in blood plasma GSH. This indicates that oral supplementation may be useful to enhance tissue availability of GSH. (PMID2221062)

Liver glutathione: Oral intake of glutathione is a safe and efficient form of administration to replete liver levels. (PMID2605158)

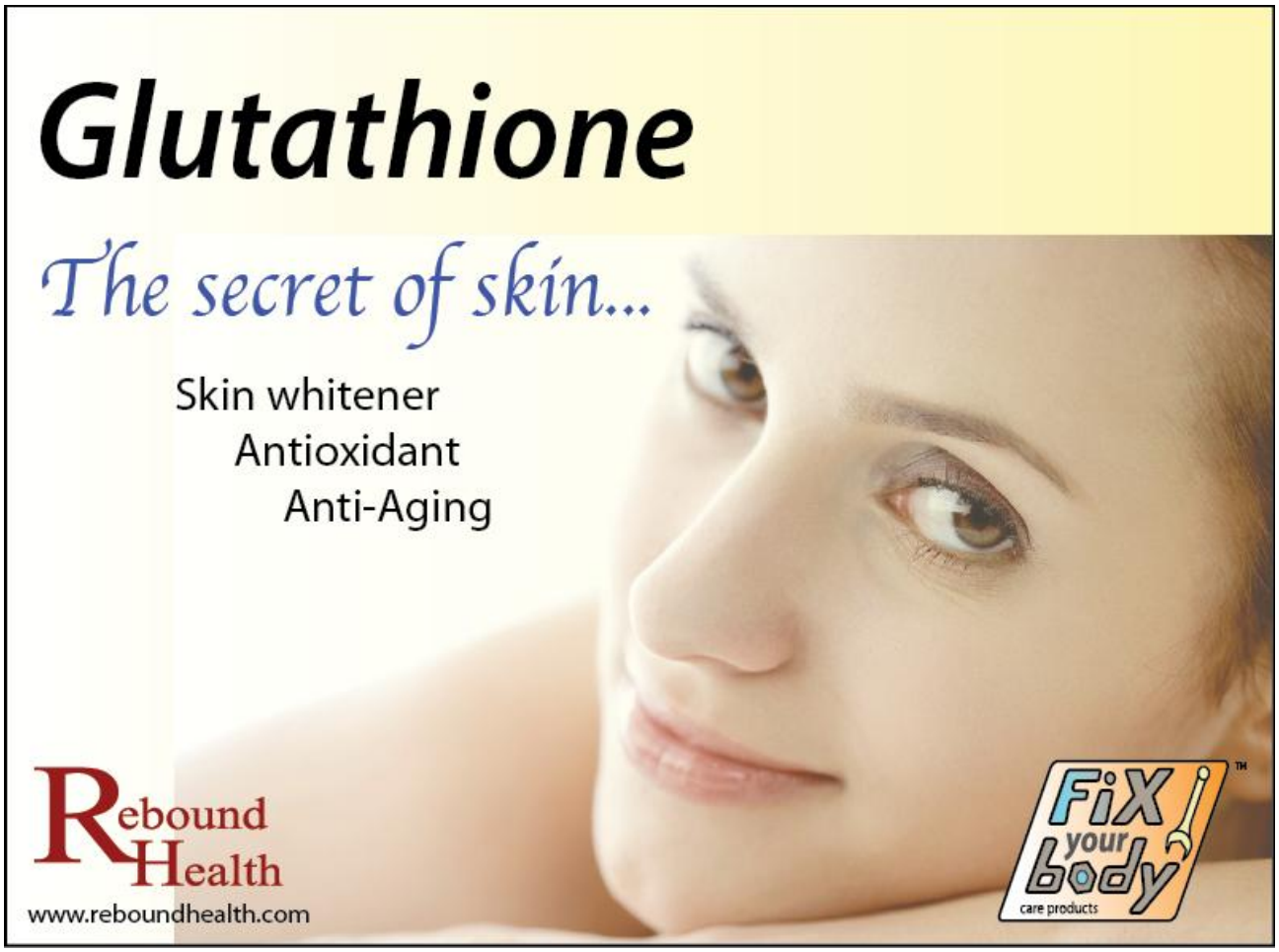
Foods with Glutathione:
Asparagus, avocados & eggs

Virus: Patients with Influenza A (H5N1) or "bird flu" have a better rate of survival and a reduced rate of major complications when taking glutathione. (PMID16624496)

Low levels occur: In vegetarian diets, malnutrition and alcohol abuse. (PMID6179360)

As Glutathione is such an important element in our body it is used up rapidly and must be constantly replaced though proper diet and supplementation. Other important sulphur based molecules in the body are alpha lipoic acid, methyl-sulfonyl-methane (MSM) and taurine. We at Rebound Health are always looking for ways to achieve optimal health. You are welcome to schedule a free diet consultation to learn about eating well. More information please visit our web site www.reboundhealth.com or phone us in Hong Kong at (852) 2544-4055.

Reference: Search PMID no. at www.ncbi.nlm.nih.gov/PubMed and nd Glutathione -BV article on reboundhealth.com .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