

Essential Glutathione: The Mother of All Antioxidants

By Dr. Mark Hyman

IT'S THE MOST IMPORTANT MOLECULE you need to stay healthy and prevent disease — yet you've probably never heard of it. It's the secret to prevent aging, cancer, heart disease, dementia and more, and necessary to treat everything from autism to Alzheimer's disease. There are more than 89,000 medical articles about it — but your doctor doesn't know how address the epidemic deficiency of this critical life-giving molecule ...

What is it? I'm talking about the mother of all antioxidants, the master detoxifier and maestro of the immune system: GLUTATHIONE (pronounced "gloota-thigh-own").

The good news is that your body produces its own glutathione. The bad news is that poor diet, pollution, toxins, medications, stress, trauma, aging, infections and radiation all deplete your glutathione.

This leaves you susceptible to unrestrained cell disintegration from oxidative stress, free radicals, infections and cancer. And your liver gets overloaded and damaged, making it unable to do its job of detoxification.

In treating chronically ill patients with Functional Medicine for more than 10 years, I have discovered that glutathione deficiency is found in nearly all very ill patients. These include people with chronic fatigue syndrome, heart disease, cancer, chronic infections, autoimmune disease, diabetes, autism, Alzheimer's disease, Parkinson's disease, arthritis, asthma, kidney problems, liver disease and more.

At first I thought that this was just a coincidental finding, but over the years I have come to realize that our ability to produce and maintain a high level of glutathione is critical to recovery from nearly all chronic illness — and to preventing disease and maintaining optimal health and performance. The authors of those 76,000 medical articles on glutathione I mentioned earlier have found the same thing!

So in today's blog I want to explain what glutathione is, why it's important and give you 9 tips that will help you optimize your glutathione levels, improve your detoxification system and protect help yourself from chronic illness.

What is Glutathione?

Glutathione is a very simple molecule that is produced naturally all the time in your body. It is a combination of three simple building blocks of protein or amino acids — cysteine, glycine and glutamine.

The secret of its power is the sulfur (SH) chemical groups it contains. Sulfur is a sticky, smelly molecule. It acts like fly paper and all the bad things in the body stick onto it, including free radicals and toxins like mercury and other heavy metals.

Normally glutathione is recycled in the body — except when the toxic load becomes too great. And that explains why we are in such trouble ...

In my practice, I test the genes involved in glutathione metabolism. These are the genes involved in producing enzymes that allow the body to create and recycle glutathione in the body. These genes have many names, such as GSTM1, GSTP1 and more.

Nearly all my very sick patients are missing this function. The one-third of our population that suffers from chronic disease is missing this essential gene. That includes me.

These genes impaired in some people for a variety of important reasons. We humans evolved in a time before the 80,000 toxic industrial chemicals found in our environment today were introduced into our world, before electromagnetic radiation was everywhere and before we polluted our skies, lakes, rivers, oceans and teeth with mercury and lead.

That is why most people survived with the basic version of the genetic detoxification software encoded in our DNA, which is mediocre at ridding the body of toxins. At the time humans evolved we just didn't need more. Who knew we would be poisoning ourselves and eating a processed, nutrient-depleted diet thousands of years later?

Because most of us didn't require additional detoxification software, almost half of the population now has a limited capacity to get rid of toxins. These people are missing GSTM1 function — one of the most important genes needed in the process of creating and recycling glutathione in the body.

Nearly all my very sick patients are missing this function. The one-third of our population that suffers from chronic disease is missing this essential gene. That includes me. Twenty years ago I became mercury poisoned and suffered from chronic fatigue syndrome due to this very problem. My GSTM1 function was inadequate and I didn't produce enough glutathione as a result. Eventually, my body broke down and I became extremely ill ...

This is the same problem I see in so many of my patients. They are missing this critical gene and they descend into disease as a result. Let me explain how this happens ...

The Importance of Glutathione in Protecting Against Chronic Illness

Glutathione is critical for one simple reason: It recycles antioxidants. You see, dealing with free radicals is like handing off a hot potato. They get passed around from vitamin C to vitamin E to lipoic acid and then finally to glutathione which cools off the free radicals and recycles other

antioxidants. After this happens, the body can “reduce” or regenerate another protective glutathione molecule and we are back in business.

However, problems occur when we are overwhelmed with too much oxidative stress or too many toxins. Then the glutathione becomes depleted and we can no longer protect ourselves against free radicals, infections, or cancer and we can't get rid of toxins. This leads to further sickness and soon we are in the downward spiral of chronic illness.

But that's not all. Glutathione is also critical in helping your immune system do its job of fighting infections and preventing cancer. That's why studies show that it can help in the treatment of AIDS.(if)

Glutathione is also the most critical and integral part of your detoxification system. All the toxins stick onto glutathione, which then carries them into the bile and the stool — and out of your body.

And lastly, it also helps us reach peak mental and physical function. Research has shown that raised glutathione levels decrease muscle damage, reduce recovery time, increase strength and endurance and shift metabolism from fat production to muscle development.

If you are sick or old or are just not in peak shape, you likely have glutathione deficiency. In fact, the top British medical journal, the *Lancet*, found the highest glutathione levels in healthy young people, lower levels in healthy elderly, lower still in sick elderly and the lowest of all in the hospitalized elderly. (ii)

Keeping yourself healthy, boosting your performance, preventing disease and aging well depends on keeping your glutathione levels high. I'll say it again ... Glutathione is so important because it is responsible for keeping so many of the keys to UltraWellness optimized.

It is critical for immune function and controlling inflammation. It is the master detoxifier and the body's main antioxidant, protecting our cells and making our energy metabolism run well.