

# STOP THE CLOCK!



## Anti-Aging Secrets of Glutathione

By Adrian Goad

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**To my Father, whose illness led me to discover my passion for health sciences, research, and helping others achieve better health.**

**To my Mother, whose personal passion for life, health, and nutrition continues to inspire me each day.**

# A Life and Death Education

It was 1998 when I first started to manage the healthcare of my ailing father who was stricken with Parkinson's disease. Over the next 5 years I researched hundreds of medical papers, traditional and alternative treatments, and experimental options.

I was on a mission. I refused to just give up on his well-being like so many already had.

If I wasn't working or spending time with family, I was immersed in study. I learned virtually every thing known at that time about treatment options for Parkinson's. I reached a point where I actually spoke the language of neurology.

I even remember when one of my father's doctors asked me where I had received my medical degree. It was at that point I knew I had reached a significant level of self-education. In fact, I was even educating his doctors about new areas of emerging medicine they had not yet learned.

Along this journey, I became fascinated with an interesting substance called Glutathione (pronounced Gloo-tah-thigh-own). A neurologist in Florida was having great success with Glutathione injections for Parkinson's patients. This was not something you could just easily get a prescription for since it was a non-standard treatment and not very well known.

I'll never forget the first injection. We saw an immediate improvement in his ability to walk and perform basic motor skills. We were both elated. Unfortunately, the effects did not last long and it soon became impractical to inject the large volumes necessary to see therapeutic effect. It was a valiant effort, but I truly wish I knew then what I know now.

The trials and tribulations I experienced during the 5 years I helped my father taught me several life-changing lessons. I realized that I had a gift and a calling to help other people. I had a duty to share the things I had learned so that people would not suffer with things that could be avoided or helped if they only had more information.

My eagerness to study and learn both traditional and alternative health sciences gave me a unique perspective and balance. I was able to connect dots where others would only see half of the picture.

It is my hope that you find a personal benefit in your own health and happiness from this informative article about Glutathione.

**This article will help you understand what Glutathione is,  
how it impacts the quality of your life, and how you can properly  
nourish your body's ability to produce Glutathione.**



# The Body at War

Every day, your body is fighting thousands of battles at the cellular level just to keep you alive. It's the outcome of these battles that will ultimately decide your quality of life and how long you live.

## The Enemy: Environmental toxins, pathogens, and free radicals.

By now, most people have heard the words “free radical” and “antioxidant”. Free radicals are now understood to be the underlying cause of most diseases including heart disease and cancer. They are also understood to be a primary cause of aging.



As your body goes through its normal process of creating energy to fuel the cells, it creates free radicals as a byproduct. These free radicals bounce around in your body desperately trying to steal an electron from another cell. As this reaction occurs, the electron donor cell can become damaged so severely that it stops working efficiently, mutates, or completely dies.

This can lead to a dangerous cascade of cellular damage that can only be stopped if your body finds a way to quench the free radicals and break the cycle of cell destruction.

Fortunately, your body has its own natural way to deal with these enemies of health and keep the entire system in a natural balance.

## The Hero: Antioxidants.

Scientists have discovered that antioxidants counteract free radicals and actually help to prevent or stop disease.

Of all the antioxidants produced within your body, the most important and abundant is Glutathione. In fact, your life depends on Glutathione. Without it, your liver would literally be poisoned to death due to accumulating toxins, your cells would all be destroyed from oxidative stress, and your entire immune system would collapse from little resistance to bacteria, viruses, or cancers.

This incredibly powerful antioxidant isn't just your primary defense against the harmful effects of free radicals, it also plays a crucial role in removing metabolic wastes, and in finding and eliminating toxins such as heavy metals and other environmental poisons.

In other words, without sufficient levels of Glutathione in your body, your cells start to lose the battle for life and ultimately the war is over much too quickly.

However, emerging science is showing us that if we can retain healthy levels of Glutathione throughout our life, then the battleground could become a field of victory, abundant health, and longer life.

“Glutathione is a substance, the levels of which in our cells are predictive of how long we will live.”

Earl Mindell, R.Ph., Ph.D  
'What You Should Know About the Super Antioxidant Miracle'

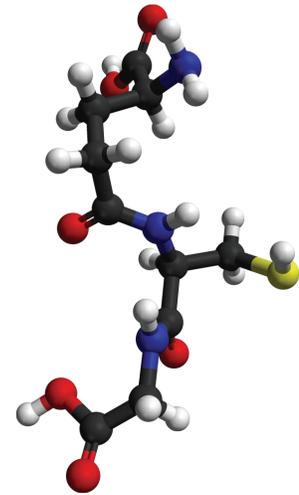
## What is Glutathione:

We're going to talk a little bio-chemistry science here, but I'll keep it as simple as possible so please try not to fall asleep.

First we need to understand that the building blocks for all living plants and animals are amino acids. There are twenty amino acids that support all life on the planet.

Glutathione is a tri-peptide (very small protein), which means it is made from three specific amino acids: Glycine, Glutamic Acid, and the all-important Cysteine. Glutathione is the general term used to describe Glutathione Sulfhydryl (GSH).

Glutathione is produced within the cell from these three amino acids. Of these three, Cysteine is the most important because its availability is what determines how much Glutathione your body can produce. Unfortunately, a quality source of naturally occurring Cysteine is absent or deficient in many diets.



In fact, one scientist has proposed the idea that aging is largely due to a simple deficiency of this one key amino acid – Cysteine. We will discuss the best sources for dietary Cysteine later in this article.

When the body experiences a deficiency of Cysteine, your cells cannot produce adequate levels of Glutathione. This causes a greater degree of cellular oxidation, a decline in health, accelerated aging, accumulation of toxins, and less protection from disease.

However, when levels are maintained or elevated, Glutathione wonderfully performs its metabolic functions as follows:

- Improved immune response
- Elimination of toxins and carcinogens
- Antioxidant cell protection
- Protection against radiation
- DNA synthesis and repair
- Amino acid transport
- Enzyme activation and regulation
- Protein, Prostaglandin, and Leukotriene synthesis

## What Does All This Mean?

Dr. Earl Mindell refers to Glutathione as the “**Triple Threat Amino Acid**”. To put it simply, Glutathione performs three major roles in the body:

### **Antioxidant:**

Glutathione is clearly understood to be the most powerful antioxidant known to the human body. Thus, it is commonly referred to as “**The Master Antioxidant**”.

In fact, the effectiveness of other well known antioxidants like Vitamin C, Vitamin E, Lipoic Acid, and Selenium depends on the presence of Glutathione. All of these antioxidants work synergistically together with Glutathione at center stage. Ultimately, it is Glutathione that neutralizes the free radicals and allows the other antioxidants to be recycled back onto the battleground.

### **Detoxifier:**

The Glutathione enzyme system helps eliminate numerous toxins from the body including pollutants, heavy metals like mercury and lead, carcinogens, radiation damage, and drug metabolites.

Glutathione’s highest concentration is in the liver, the body’s primary detoxification organ. Studies have shown that low levels of Glutathione lead to poor liver function. When the liver suffers, the entire body suffers from an increased toxin load.

### **Immune System Enhancer:**

Glutathione plays a central role in the proper function of our immune cells, especially in the production of white blood cells. The immune system uses a variety of immune cells to ward off pathogens and other threats. The growth and activity of these cells depends on the availability of Glutathione.

When your body has sufficient levels of Glutathione, it will fight off illness better than if your levels are deficient.

Clearly, Glutathione is perhaps one of the most important components of overall health yet discovered. When our levels of Glutathione are sufficient or elevated, we are better able to prevent illness, disease, and many of the degenerative processes of aging.

When our Glutathione levels are deficient, we become much more vulnerable to pathogens, toxins, cellular damage, carcinogens (cancer causing agents), radiation, and virtually every other threat known.

## The Fountain of Youth:

Has the answer to the legendary quest for the “Fountain of Youth” been hiding under our noses (or actually within our own cells) all these years? Perhaps!

The most widely accepted theory of aging is based upon the free-radical theory. In other words, the cumulative effect of oxidative stress eventually degenerates the body’s ability to win the daily battles within, and ultimately the war.

Several scientists have found that blood Glutathione levels predictably decline with age in otherwise healthy men and women.



But wait....

Because Glutathione is so critical and central to all of the primary processes of cellular protection, it begs one to question what would happen if we could slow or reverse the age-related decline we see in Glutathione levels.

Research has already shown that the age-related decline in Glutathione levels has a direct link to the onset or severity of many diseases.

In fact, Glutathione has been referenced in thousands of studies and medical papers discussing its role or possible therapeutic use in all of the following areas:

- Aging
- Cancer
- Heart Disease
- Stroke
- Arthritis
- Parkinson’s
- Alzheimer’s
- Rheumatoid Arthritis
- Diabetes
- Hepatitis & Liver Disease
- AIDS/HIV
- Lung Disease
- Kidney Disease
- Prostate Disease
- Macular Degeneration
- Glaucoma & Cataracts
- Respiratory Disease
- Multiple Sclerosis
- Lupus
- Chronic Fatigue Syndrome
- Skin & Hair Disorders

Plus many more.....

So, what would happen if we could preserve or elevate our Glutathione levels? While direct human studies have not yet declared Glutathione the sole victor in our quest for eternal youth, numerous studies give us reason to look closer.

Doctors J.P. Richie and Calvin Lang, Department of Biochemistry, University of Louisville demonstrated that Glutathione levels decline with age in several organisms including mosquitoes, mice, and humans.

They proposed that restoring Glutathione levels to those of a younger person might result in an extension of life. In their first experiment, they increased the Glutathione levels of mosquitoes by 50-100 percent.

The result? The average mosquito **lifespan increased by 30-38 percent**. Ok, I realize that helping a mosquito live longer may not sound like good news, but it confirmed their Glutathione hypothesis and demonstrated a specific mechanism of aging that can be nutritionally modified. That is definitely some good news for all of us.

Ok...Let's move up the food chain a little bit further.

Dr. Buonous of the Montreal General Hospital Research Institute studied the effects of a biologically-active whey protein diet. The bio-active whey protein fed mice had an average lifespan of 27 months (equivalent to a human age of 80 years old ) as compared to the control diet mice who only averaged 21 months (equivalent to a human age of 55-60 years old).

Not only did the mice **lifespan increase by 30 percent**, they clearly showed an increase in Glutathione tissue levels as the result of a diet rich in a bio-active whey protein concentrate.

In a study of enzyme activity in older humans, Dr. Helle Anderson at Odense University in Denmark compared levels of Glutathione reductase in centenarians between 100-105 years old to a group of individuals aged 60-79. They found that the centenarians had higher Glutathione concentrations than the comparison group.

Dr. Mara Julius at the University of Michigan studied a community-based sample of 33 subjects over the age of 60. Dr. Julius found that higher Glutathione levels were associated with fewer illnesses, higher levels of self-rated health, lower cholesterol, lower body mass index, and lower blood pressure. This was an important study because it confirmed the clear evidence of Glutathione's importance to overall health in a non-control group, a community-based sample.

Another point to notice in this study was the higher levels of self-rated health. No one wants to just live longer unless they can also **live longer in vibrant health**.

We also know that one of the characteristics of aging is a decrease in the immune system which could account for numerous diseases and infections associated with growing older. Not surprisingly, researchers have also proven that low Glutathione levels are linked to this increased susceptibility.

Drs. Dayang Wu and Simin Meydani at Tufts University showed that by adding Glutathione to the white blood cells of elderly people, immune activity approached levels of much younger individuals.

Clearly, there is sufficient evidence to conclude that Glutathione is perhaps the closest thing to the 'Fountain of Youth' yet discovered.

However, discovering Glutathione's importance to your health is only the first step. Next, we must understand how to preserve or boost our Glutathione levels to help ensure optimal health.

“You must get your levels of Glutathione up if you want to keep your youth and live longer. High blood levels of Glutathione predict good health and a long life. Low levels predict early disease and death.”

Excerpt taken from Jean Carper's bestseller 'Stop Aging Now!'

## **Boost Your Glutathione**

Knowledge is power, but it is also useless without action. We must take action to give our body its best chance at a long healthy life. Part of our strategy should involve an effort to avoid things that can cause an increase in oxidative stress.

- Exposure to Environmental Toxins
- Exposure to Household Chemicals
- Smoking and Tobacco Use
- Alcohol and Drug Use
- Radiation Exposure
- Trauma, Injury, and Burns
- Infection and Illness
- Poor Diet
- Lack of Sleep
- Stress

Wait a minute. Are you thinking what I'm thinking? There's no way we can avoid all of these on a daily basis unless we live in a bubble!

I once believed that a well balanced diet from organic whole foods like fresh fruits, vegetables, and some lean meats was all we needed to achieve proper nutrition. However, I now know this is not sufficient for optimal health. Good nutrition is only the starting point.

Here's why. First, we can't always eat the right foods in our modern age of constantly being too rushed or too tired to prepare a healthy meal. Second, most our food supply is over-processed and over-farmed leaving and our food and our bodies deficient in many key nutrients. Third, whenever you are stressed, sick, exercising heavily, injured, or exposed to environmental toxins, **you need additional antioxidants** to handle the increase in free-radicals.

Because Glutathione is our body's most important defense against all forms of oxidative stress, we need to ensure our body has a constant fuel supply of the necessary building blocks. To do that, we need to take in more of the critical precursors than we can get from food alone.

While there are several approaches, theories, and even a few drugs that can be used to boost Glutathione, I will only discuss here the three most popular methods that are easily available on the market.

### **Oral Glutathione:**

There are many products and chemical companies that offer the actual Glutathione peptide in pill form or powder form. However, studies on the effectiveness of oral Glutathione are at best controversial.

From all of my own research on the matter, I have concluded that oral Glutathione from foods or supplements may have some effect, but it is most likely negligible and less effective when compared to the other two methods mentioned next, NAC and non-denatured whey protein.

### **NAC:**

NAC stands for N-Acetyl Cysteine. Basically, NAC is a man-made compound designed to provide the amino acid Cysteine in a form the body can use.

Although NAC is available in most health food stores, it is in fact classified as a synthetic pharmaceutical drug. It has commonly been used to break up mucus in lung diseases such as cystic fibrosis, asthma, and emphysema and is also used for acetaminophen (tylenol) poisoning.

However, NAC's effect on glutathione levels is only temporary. Rapid peaks are often followed by a rapid drop, often to below normal levels. To maintain constantly elevated levels, it must be taken several times during the day which can be hard on the body.

NAC is known to have possible side-effects, dose related dangers, long-term use concerns, and documented drug interactions. Therefore, I do not recommend it as a daily supplement for long-term use. It is best reserved for clinical applications.

## Non-Denatured Whey Protein:

Whey protein is one of the two primary protein groups found in all mammalian milk. Casein is the other milk protein. Throughout history, mankind has revered milk as the first food of life. Even Hippocrates, the father of modern medicine, prescribed whey as a “serum” to his patients 2,500 years ago.

We now understand that some of the most important immune-supporting components of milk come from whey protein. In fact, these are the same components responsible for providing newborns with their immune defense: Immunoglobulins, Beta-lactoglobulins, Glyco-macropptides, Glutamylcysteine, and Lactoferrin.

When consumed intact, fresh milk whey protein serves as a rich source of all the known amino acids including the precursor amino acids necessary for the production of Glutathione: Glutamic Acid, Glycine, and the all-important Cysteine.



However, these important precursors are fragile and easily denatured. Denaturing is a process in which proteins lose their 3-D structure by application of some external stress like high-heat pasteurization or acidic modification. The protein literally unfolds or is “broken” apart.

Therefore, it is imperative to understand that a non-denatured protein represents the ideal biological function for which it was designed by nature. In regard to whey protein, a non-denatured whey protein would represent the exact form that was intended to nourish and protect a newborn mammal.

### So what does all this mean?

The ultra-high heat pasteurization methods used in the production of most commercial whey proteins severely denatures the fragile proteins and diminishes the availability of naturally-occurring Cysteine.

By the time most milk and dairy products reach your table their bioactivity is completely lost, although their basic food value remains.

Because the amino acid Cysteine is the critical rate-limiting factor in the body’s ability to produce Glutathione, **whey protein should only be consumed in its original, non-denatured form.**

Clearly, my conclusion finds that the absolute best, all-natural, and safest way to support Glutathione levels is with a high-quality non-denatured whey protein.

Instead of wasting money on isolated nutrients or synthetic supplements while risking possible side-effects, I suggest we use the perfectly designed food that nature has already provided.

# A Better Whey:

When choosing the best whey protein, I recommend using the following guidelines:

## 1. Does the whey protein come from grass-fed cow's milk?

Cow's naturally graze on grass, not grains. Whey protein from grass-fed cows provides a superior profile of nutrients. It has the highest concentrations of healthy fats like lipolic acid and CLA (conjugated linoleic acid). Although CLA is best known for its antioxidant and anti-cancer properties, it has been found to reduce the risk of cardiovascular disease and may help to reduce body fat. CLA is found exclusively in the dairy fat and thus does *NOT* exist in fat-free dairy proteins such as whey protein *isolates*, skim milk, or casein.

## 2. Is it cold-processed *without* the use of acids/ion-exchange?

The best whey protein is carefully produced to retain the protein's original structure. This ensures maximum biological value while providing the full spectrum of immune-supporting components. These fragile components are highly damaged in the majority of commercial proteins that undergo ultra-high-heat pasteurization as well as acid and ion-exchange treatment. Select only whey that was carefully cold processed from fresh raw organic milk.

## 3. Is it derived from hormone-free, pesticide-free, and GMO-free milk?

A growing number of dairy farmers inject the hormone rBGH into their cows to increase milk production. This hormone can find its way into the milk. Similarly, many of the grains used to feed cattle are genetically modified and were raised with pesticides that can also be passed into the milk.

## 4. Are all the ingredients 100% natural food-based ingredients?

The majority of whey protein shakes on the market today are crammed full of synthetic chemicals, cheap fillers, artificial flavorings, and preservatives. Make sure the ingredients are all 100% natural food-based ingredients.

## 5. Is the whey protein a concentrate instead of an isolate?

The human body was not designed to consume protein in an isolated form devoid of its nutritional cofactors. Most isolates are over-processed, thus destroying (denaturing) the fragile protein structure and rendering them deficient in key amino acids and immune-supporting nutrients. Isolates contain little or no growth factors from the vital protein bound fats, no CLA, and generally have a poor taste.

Unfortunately, you will find it very difficult to find an affordable whey protein on the commercial market that meets all of these requirements.

That is why I was eventually forced to bring together the best experts and raw materials in the industry to create what I believe to be the greatest non-denatured whey protein product available, **Action Whey™**.

Action Whey's™ formulation meets all of these requirements plus a unique and powerful blend of additional nutrients:

**Organic Sweet Whey** - The original "serum" form of whey includes important minerals and other original co-factors that bring our unique formulation one step closer to the original benefits cherished throughout history.

**Arabinogalactin** - A powerful plant based fiber, phyto-nutrient, pre-biotic, and immune booster. It also helps to increase the biological value of the whey protein

**MCT's** - Medium chain triglycerides from coconut oil for easy digestion, fast energy, and healing properties. This natural, metabolic fuel supply is efficient and effective for protein synthesis. The result will be leaner muscle, more volume, faster muscle growth and repair, and greater energy to burn.

**Sunflower Seed Lecithin** - Most commercial products use cheap soy lecithin. Sunflower seed lecithin is a superior plant source for phospholipids. Phospholipids are essential molecules that are found in the lining of practically every cell in the body. They are very important for protecting brain cells and helping the cells communicate.

**Coconut Oil** - The health and nutritional benefits that can be derived from consuming coconut oil have been recognized in many parts of the world for centuries. Coconut oil is a rare and rich source for Lauric Acid which is largely missing in the American diet.

Action Whey™ is not only the superior choice to fuel Glutathione production safely and naturally, it also provides numerous other health benefits. Plus, it tastes absolutely delicious as a shake, a smoothie, or a rich and creamy pudding.

## **Ironic, Isn't It?**

I find it ironic that the very same protein our body needs at the beginning of life is also the same protein that may help us defy the end of life.

When my father eventually passed away 6 months before the birth of my own son, I developed a deeper appreciation of the body's incredible journey through life; a journey that begins with a beautiful radiance of vibrant health. Thus began my own journey to seek and teach a lifestyle that will preserve the radiance of youth in each of us.

Who would have dreamed that the same Glutathione compound I studied for love of my father, is now the same compound I passionately share with others who also seek a better quality of life. I pray that my efforts will bring you health, happiness, and longevity.

*"Education Brings Knowledge, Knowledge Brings Power,  
and Powerful Action Brings Results"*

Adrian Goad