



IMMUNE SYSTEM

THE GUARDIAN UNDER SIEGE

HUMANS HAVE NEVER BEEN EXPOSED TO AS MANY TOXINS, POLLUTANTS, LOW NUTRITION FOODS, STRESS AND ENVIRONMENTAL RADIATION AS THEY ARE TODAY – OUR MODERN LIFESTYLES ARE SEVERELY IMPACTING OUR HEALTH AND QUALITY OF LIFE.

THINK of your body as a fortress. Now think of the great gate struck and splintered. A screaming horde pressing hard upon it, and there standing alone in the gatehouse is a battered and bloodied contingent of knights, war-torn and wounded, in desperate need of reinforcements, but struggling on, barely keeping the horde from breaking the gate and ravaging the fortress. That contingent of weary knights is glutathione. Most of us have probably never heard of this protector, this defender of the body's realm, but recent research has edged the spotlight onto this simple molecule and its great importance to health maintenance. It's funny to think that a single small molecule plays such a pivotal role in our health, but it is the most important antioxidant in our bodies and could be considered the be-all and end-all of preventative health.

Glutathione is naturally produced in our bodies. It is a simple three-piece complex made up of the amino acids; cysteine, glycine, and glutamine. These are held together by a sulfur chemical group. This sulfur group is what makes glutathione optimally suited for its work. The sulfur acts like a magnet, attracting free radicals and toxins. So what exactly is glutathione protecting? The list is long and documented in over 98,000 scientific studies. It protects the lungs and brain. It protects cell growth, and DNA synthesis and repair from oxidative stress. It protects proteins in their proper forms and helps transport amino acids in and out of our cells. It also acts as an enzyme-changing mechanism

and enzyme activator. It protects the body from heavy metals, toxins, free radicals and carcinogens; especially important in this instance is protection of the body's energy engines, the mitochondria of our cells. Glutathione also enhances immune system function, decreases radiation damage, recycles other antioxidants and helps with nutrient metabolism. Almost every chronic illness has, to some extent, been linked to low levels of glutathione.

Under normal conditions the body produces enough glutathione to keep us healthy, though we produce less as we age. But modern times have created a set of toxic circumstances that our bodies are not evolved to handle. If we imagine the whole of human history as a meter stick, the rise of industry and what we consider modern times would probably constitute less than the last two centimeters.

Our bodies are still making the same amounts of glutathione today as all through our long past. How were our bodies supposed to anticipate that somewhere in the distant future we would be polluting the very air we breathe, eating a very nutrient-poor diet, poisoning our water systems and purposely putting mercury and other heavy metals into our bodies? Toxin intake has grown exponentially and we have not had time to adapt. Industrial pollution, poor diet, alcohol, caffeine, processed foods, medications and chronic stress all contribute to a raised toxic state in our bodies, which in turn decreases glutathione levels. To add to this already bleak outlook, as many as half the

