Inflammation, Free Radical Damage, Oxidative Stress, Hydrogen and Cancer

Studies on brain tumors in the past 10 or more years have shown an increase in the incidence of brain tumors in the general population. Can you guess why this is so? Extensive research during last two decades has revealed the mechanism by which continued oxidative stress leads to chronic inflammation, which in turn mediates most chronic diseases including cancer.

Oxidative stress, caused by rivers of free radicals, is a plague on modern man. Whether it's the toxic pollution in the air you breath 24/7, the radiation your doctor exposes you to pharmaceutical medicines, chemotherapy, your cell phone constantly at your brain, or even your WIFI and other EMF pollution generating devices, you expose yourself to oxidative stress,ill which will drag you down into the pit of disease and cancer putting an end to your happiness, health and even life.

Oxidative stress has been associated with numerous health conditions including chronic fatigue syndrome, fibromyalgia, diabetes, Alzheimer's disease, anxiety, insomnia, cancer, and just about every disease you can imagine yet doctors seem to ignore this fact and work as hard as they can to increase your oxidative stress when they know we are already against the wall with toxins and stress. Imagine a patient, newly in remission from cancer, being exposed every three months to CAT or PET scans, which dramatically increase oxidative stress, just begging for the cancer to come back (or a new cancer to emerge) so they can treat the patient again.

Oxidative stress, directly or indirectly caused by chemotherapeutics is one of the underlying mechanisms of the toxicity of anticancer drugs in non-cancerous tissues, including the heart and brain. During cancer chemotherapy, oxidative stress-induced lipid peroxidation generates numerous electrophilic aldehydes that attack many cellular targets. Oxidative stress, generated by almost all prescribed drugs as they are metabolized, acts as a source of origin and progression of many dreadful diseases. Reactive metabolites formed during this process cause oxidative stress and can impair the function of drug metabolizing enzymes leading to toxicity.

Pollution is a greater global threat than Ebola and HIV, according to warnings by the World Health Organization. According to its recent report, one in four deaths among children aged under five are now due to environmental hazards such as air pollution and contaminated water. It is simple; poisons in our air and water create oxidative stress, which leads to disease, cancer and death. Epidemiological studies have shown a clear association between cardiovascular morbidity, decreased lung function, increased hospital admissions, mortality, and airborne concentrations of photochemical and particulate pollutants.

Cellular exposure to ionizing radiation leads to oxidizing events that alter the molecular structures of macromolecules through direct interactions of radiation that target the macromolecules, or via products of water radiolysis. Further, the oxidative damage may spread from the targeted to neighboring, non-targeted bystander cells through redox-modulated inter-cellular communication mechanisms. People who started using cell phones at an earlier age have a greater chance of developing a brain tumor when compared to people who started late (during their adult years).

When certain chemicals in the body have their electron configuration changed, they become very reactive (and are called “free radicals” or “oxidants”). These chemicals roam freely through the rest of the body stealing electrons from other cells. Free radicals damage cellular DNA. The majority of modern science has come to the conclusion that free radical damage in the human body is an important cause of aging. Aging is evidence of the damage to millions of the body’s cells through oxidation. This oxidation is due to the lack of anti-oxidants that are available to stop free radical damage.

Reactive oxygen species (ROS) are a byproduct of normal metabolism. Even under pristine conditions when our cells use glucose to make energy we create a cascade of free radicals that cause oxidative stress. The more sugar we consume the greater our oxidative stress. When our immune system is fighting off bacteria and creating inflammation we suffer from increased oxidative stress. When our bodies detoxify pesticides, herbicides, fungicides and cigarette smoke we create oxidative stress.

Pancreatic cancer cells use the sugar fructose to help tumors grow more quickly. Tumor cells fed both glucose and fructose used the two sugars in two different ways, a team at the University of California Los Angeles found. Their findings, published in the journal Cancer Research, helps explain other studies that have linked fructose intake with pancreatic cancer, one of the deadliest cancer types. Researchers concluded that anyone wishing to curb their cancer risk should start by reducing the amount of sugar they eat.

Oxidation increases when we are physically and/or emotionally stressed. However, as long as we have enough anti-oxidants, a careful balance is maintained and damage is prevented. Oxidative stress happens when the amount of free radicals exceeds the amount of anti-oxidants. That’s when oxidation damages our cells, proteins and our DNA (genes). Oxidative stress is essentially an imbalance between the production of free radicals and the ability of the body to counteract or detoxify their harmful effects through neutralization by anti-oxidants.

Hydrogen as Key Anti-oxidant against Oxidative Stress and Cancer

Oxidative stress is closely related to all aspects of cancer, from carcinogenesis to the tumor-bearing state, from treatment to prevention. The human body is constantly under oxidative stress arising from many sources. Active oxygen species are involved in carcinogenesis through two mechanisms: (1) the induction of gene mutations that result from cell injury and (2) the effects on signal transduction and transcription factors.

Molecular hydrogen (H_2) functions as an extensive protector against oxidative stress, inflammation and allergic reactions. H_2 reduces the strong reactive nitrogen species peroxynitrite (ONOO-) as well as hydroxyl radicals (OH), but not nitric oxide radical (NO). Molecular hydrogen is a new medical gas that can be dissolved in water and administered through drinking, inhalation, baths, intravenous drip (IV), and has been shown to suppress VEGF (Vascular Endothelial Growth Factor), a key mediator of tumor angiogenesis (the development of new blood vessels), by the reduction of excessive ROS (oxidative stress) and through the down regulation of ERK (key growth factor needed for cellular division).

"Effects of molecular hydrogen have been observed essentially in all the tissues and disease states including the brain, spinal cord, eye, ear, lung, heart, liver, kidney, pancreas, intestine, blood vessel, muscle, cartilage, metabolism, perinatal disorders, and inflammation/allergy. Among them, marked effects are observed in ischemia/reperfusion disorders as well as in inflammatory disorders. It is interesting to note, however, that only three papers addressed effects on cancers. First, molecular hydrogen caused growth inhibition of human tongue carcinoma cells HSC-4 and human fibrosarcoma cells HT-1080 but did not compromise growth of normal human tongue epithelial-like cells DOK. Second, hydrogen suppressed the expression of vascular endothelial growth factor (VEGF), a key mediator of tumor angiogenesis, in human lung adenocarcinoma cells AS49, which was mediated by down-regulation of extracellular signal-regulated kinase (ERK). Third, hydrogen protected BALB/c mice from developing radiation-induced thymic lymphoma. Elimination of radical oxygen species by hydrogen should reduce a probability of introducing somatic mutations.

H_2 has also been shown to reduce the excessive expressions of MMP genes (MMP proteins are in involved in multiple functions in cells, including cell proliferation, cartilage synthesis, apoptosis, angiogenesis, etc.). It has been shown that cancerous cells have a higher expression of MMP genes leading to tumor invasion and tumor angiogenesis. H_2 has been shown to reduce tumor invasion and tumor growth and because of this effect, H_2 has been shown to have anti-tumor effects.

"ERW hydrogen water causes telomere shortening in cancer cells and suppresses tumor angiogenesis by scavenging intracellular ROS and suppressing the gene expression and secretion of vascular endothelial growth factor. In addition, ERW induces apoptosis together with glutathione in human leukemia HL60 cells (Tsai et al. 2009a, b)."

"Treatment with both H_2 waters (HHW and NHW) increased the expression of p-AMPK, AIF and Caspase 3 (cell apoptosis pathways) in colon 26 cells. Thus, H_2 water resulted in cell apoptosis mediated by the AMPK pathway in colon 26 cells."

H_2 may protect healthy tissue/cells from anti-cancer drugs and has been shown through medical studies that molecular hydrogen has a protective effect against chemotherapy drugs. Hydrogen has potential for improving the quality of life of patients during chemotherapy by efficiently mitigating the side effects of cisplatin.

Molecular hydrogen may have the potential to retard the development of some cancers. For example, it was demonstrated that molecular hydrogen may protect and retard the development of thymic lymphoma in mice.

"The radiation-induced thymic lymphoma rate in the H_2 (+) group was significantly lower than in the control group and H_2 treatment significantly increased the latency of lymphoma development after the split-dose irradiation. These data indicated that H_2 protects mice from radiation-induced thymic lymphoma in BALB/c mice."

Conclusion

I have personally observed a patient recover from near death with reoccurring breast cancer years after surgery, which had spread to her lymph system and then on to her brain. She wrote, "After a few visits to the ER, I found out I had a tumor on the cerebellum that was blocking fluid from draining down the spinal cord. On the base of my skull is a 2 cm tumor. It's making me vomit and walk sideways. I could not keep food or water down and I began walking like a crab," she reported on the 9th of September 2017. Understanding the severity of the situation I took a long shot and recommended not only hydrogen water but also a hydrogen inhaler. On the 26th of September, using the full Natural Allopathic protocol with incredible dedication to slowing her breathing down, using the Frolov breathing device, she wrote, and "So I walk now! Eat like crazy, gained 10 pounds, and feel better every day. Don't drive yet but I walk in the neighborhood. Not far. Have not thrown up. Feel stronger every day! Just hope to keep going!" I published her initial success in my essay New Advances in Gas Therapy and will soon report her full testimony. My readers will have to excuse my reporting on this case as it is happening but it is too exciting and too important.

We Know Cancer can be Cured

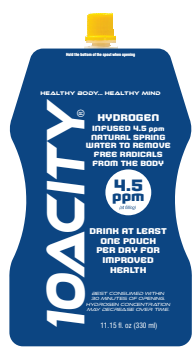
Two years ago, before I even had heard about the miracles of molecular hydrogen I got a letter from another patient also on the verge of death. This patient reported, “Significant metastases in my spine, hips, ribs, neck, lymph nodes - and my PSA was 2,080,” I entitled my essay, ‘One foot in the grave when I found Dr. Sircus. He wrote, “I wanted to contact Dr. Sircus when I was completely healed and tell him my story. My PSA is now 2.1. If his protocol plus my work and the grace of God could get me off my death bed, and dancing all night with my family well maybe people should consider this wonderful protocol and try it.” I share these cases to show what is possible if people work hard enough doing the right things.

Both of these patients showed extraordinary will successfully and willfully doing the most difficult part of the Natural Allopathic protocol, which is breathing retraining. Another famous case written up in my bestselling book Sodium Bicarbonate was Vernon Johnston, who breathed his way back to life by using sodium bicarbonate perfectly while breathing consciously four hours a day.

Hydrogen is new in medical science and even newer in relationship to the treatment of cancer. Hydrogen is safe, easily administered, a potent anti-oxidant effect, and gets everywhere it is needed because of its small size. I do not know of anyone reporting anything close to a case like this. It should be everyone’s hope that she makes it and recovers fully though a relapse is always possible. There is nothing to lose administering high dosages of hydrogen and everything to gain for cancer patients.

Some common substances with anti-oxidant properties are vitamin C, vitamin E, beta-carotene, selenium, manganese, glutathione, lipoic acid, flavonoids, phenols, polyphenols, phytoestrogen, and many more.

According to Tyler W. LeBaron of the Molecular Hydrogen Foundation/ Institute, “The body requires a certain balance/ratio of anti-oxidants and oxidants. We actually require some free radicals, and because H_2 is a stable molecule, it unlike conventional antioxidants. H_2 will not react with these. However, it is clear from animal and human studies that H_2 can decrease oxidative stress via its cell-modulating effects. This may potentially afford protection against radical-induced cancer formation, as suggested by some cell/animal studies.”



According to the National Cancer Institute considerable laboratory, evidence from chemical, cell culture, and animal studies indicates that anti-oxidants may slow or possibly prevent the development of cancer. Anti-oxidants are nutrients (vitamins and minerals) as well as enzymes (proteins in your body that assist in chemical reactions). Hydrogen just happens to be the smallest and as it does its work it promotes full hydration. It also just happens to be the icing on the cake in terms of my protocol. Please note that I never promote a single agent for the treatment of cancer or any other disease. Hydrogen should always be used in the context of a rational protocol.