

GLUTATHIONE

Glutathione is a major antioxidant and detoxifier of the body. It is useful in any condition where there is a risk for oxidative damage. Phase 2 detoxification in the liver requires glutathione to remove drugs and carcinogens (cancer causing toxins). It is crucial for heavy metal clearance from our bodies. "Exposure to high levels of toxins depletes glutathione faster than it can be produced or absorbed from the diet. This results in increased susceptibility to toxin-induced diseases such as cancer." Pizzorno JE, Murray MT. "Detoxification: An Naturopathic Perspective". *Natural Medicine Journal* 1998:12.

STUDIED BENEFITS OF GLUTATHIONE

CANCER

Cancer, chemotherapy and radiation therapy all deplete Glutathione. In one study several cancer cells lines including small cell carcinoma (lung), colon carcinoma, neuroblastoma (brain), mammary (breast) carcinoma, and one acute myelocytic leukemia line were tested with either 5FU which is a chemotherapy drug or Glutathione. Apoptosis (programmed cell death) occurred in the Glutathione cells after four applications while those in the 5FU group did not show any apoptosis. This shows that Glutathione helps cancer cells die in a shorter period of time that the chemotherapy drug. (1)

Unfortunately research in cell lines does not always translate into the same action in the human body.

In another study with glutathione ovarian cancer patients were given glutathione with cisplatin, a chemotherapy drug. This study found that more cycles of treatment with cisplatin could be given to the patients because less toxicity occurred.

Other side effects of cisplatin including depression, nausea, peripheral neurotoxicity, hair loss and shortness of breath were significantly improved. (2)

In another study with cancer patients glutathione was administered 15 minutes before cisplatin in 51 patients with 229 courses of therapy. No patient developed toxicity and all tolerated the high dose regimen. Kidney toxicity was minimal. The most common side effect was slight nerve damage to the ears. 30 of these patients had ovarian

cancer and of these 59% achieved complete remission. 22 of 26 were clear of cancer on a second laparoscopy. This is a high rate of effectiveness as ovarian cancer survival rates are low. (3)

DIABETES

Diabetes is a disease process that depletes glutathione. Glutathione administered IV was found to lower sorbitol levels in the red blood cells of Diabetics. This indicates that glutathione helps diabetics metabolize sugars in a healthier way. Sorbitol is a by product of certain metabolic pathways that can lead to diabetics developing organ damage. (4)

Glutathione administered IV decreased blood pressure in patients who had high blood pressure and diabetes, and patients who just had high blood pressure. It had no blood pressure lowering effect on healthy individuals. This suggests glutathione may help dilate the vessels and restore healthy nitric oxide function. (5)

Glutathione improved insulin secretion from the pancreas in response to increased blood sugar in older patient with impaired glucose tolerance. Because of this effect glutathione may show in the future to help restore normal blood sugar metabolism and prevent progression to DM. (6)

FATTY LIVER

A study was performed in patients who had chronic fatty liver from many different causes including: alcohol and non alcohol related, or HBV, HCV, HDV. This study found that glutathione was reduced in the liver cells of these patients which reduced the cells ability to detoxify the blood. IV administration of glutathione significantly improved hepatic function test during treatment and for several months after it was stopped. (7)

Another study done on rats showed that when glutathione was depleted in their livers the flow of bile was significantly reduced. Without bile flow the liver cannot properly detoxify and the body cannot digest fats. Bile flow was restored when the rats were given IV glutathione. (8)

PARKINSON'S

Studies have shown that Parkinson's patients have decreased glutathione levels in the substantia nigra region of the brain. The amount of glutathione depletion seems to parallel the severity of the patients symptoms so people with lower levels of glutathione have more severe symptoms. In a study of patients with early Parkinson's disease who were treated with IV glutathione for 1 month all patients improved significantly with a 42% decline in disability.

These improvements in symptoms lasted for 2-4 months after the IV glutathione was stopped. Glutathione may retard progression of this disease. (9)

ATHEROSCLEROSIS

In patients with Atherosclerosis IV Glutathione was shown to significantly decrease blood viscosity and significantly increase blood filtration. (10)

Glutathione has been shown to be significantly lower in patients who are older than in patients who are younger. Glutathione levels were significantly lower in diabetics and patients with age related macular degeneration. (11)

References:

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