

## **Turmeric and Myrrh Protect Against Lead Toxicity**

*By: David Gutierrez, Natural News*

Lead is a ubiquitous industrial chemical and a potent neurotoxin. As such, lead toxicity remains a major public health concern worldwide. Fortunately, research suggests that turmeric root and myrrh can significantly mitigate lead's toxic effects on the body.

In a study conducted by researchers from Alexandria University Research Development in Egypt and published in the journal *Basic & Clinical Pharmacology & Toxicology* in 2006, mice were divided into five separate groups. One group was fed only a normal diet (negative control), while another was fed the same diet plus 0.5 percent w/w toxic lead acetate (positive control). The other three groups were also fed the lead acetate-supplemented diet, plus an additional 1 percent myrrh powder, 1 percent turmeric powder or 5 percent turmeric powder.

### **Reducing lead damage**

The researchers found that levels of the naturally occurring antioxidant glutathione (GSH) decreased significantly in all mice exposed to lead acetate, indicating lead toxicity. In addition, activity of the detoxifying enzyme glutathione S-transferase (GST) was significantly lower in the positive control group than in any of the other groups.

Among its other functions, GST interacts with GSH to help detoxify cells.

In all three experimental groups, however, activity of GST significantly increased compared with both the positive and negative control groups. This means that GST activity was actually higher in mice given both lead and turmeric or myrrh than in mice not given lead at all.

Furthermore, the researchers found that levels of lipid peroxidation in liver homogenate and bone marrow chromosomes were significantly increased in the positive control group, indicating higher levels of cell and DNA damage. These levels were decreased by 31 percent, however, among mice whose diets were supplemented with 1 percent turmeric powder, by 45 percent among mice given 1 percent myrrh powder, and by 49 percent among mice given 5 percent turmeric powder.

Among all the mice treated with lead, the researchers were able to observe signs of lead genotoxicity, including increases in the frequency of chromosomal aberrations, increases in the number of aberrant

cells and decreases in the number of cells dividing. All of these markers of genotoxicity were reduced by supplementation with turmeric or myrrh; as before, the greatest protective benefit was seen with a dose of 5 percent turmeric.

"It may be concluded that turmeric and myrrh are useful herbal remedies," the researchers concluded, "especially for controlling oxidative damages and genotoxicity induced by lead acetate intoxication."

### **The benefits of healing plants**

Turmeric and myrrh both have a long history of use as healing plants, and turmeric in particular has been heavily studied by Western science for its potent antioxidant and anti-inflammatory properties.

The active ingredients in turmeric are known as the curcuminoids, or simply as curcumin. Studies suggest, in fact, that they may be as effective of an anti-inflammatory as certain over-the-counter drugs, but without the side effects. Another series of studies found that curcumin supplementation could improve heart health as much as moderate aerobic exercise; health benefits were magnified dramatically when curcumin and exercise were combined.

Curcumin has also been shown to be able to insert itself into cell membranes, helping to protect them from infection and cancer. It functions as an antiviral and antibiotic. Research has even linked curcumin to improvement in certain chronic health conditions, including cancer, cystic fibrosis, Alzheimer's disease and inflammatory bowel disease.

As for myrrh, studies have shown that it can help relieve inflammation, heart disorders, menstrual irregularities and pain, arthritis and rheumatoid arthritis, digestive upset, bronchial congestion, skin disorders and even cold sores. It helps support healthy functioning of the liver and spleen as well.

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