



## **Not Thinking Clearly? A Closer Look at Copper Toxicity**

*By Bernard Rosen, PhD, Nutrition Consultant and Educator*

**N**ot thinking clearly? Have “brain fog?” Feeling crazy or emotionally unstable? It may be copper that is having these affects on you. High copper levels or copper toxicity has been found in some people with disorders such as depression, phobias, paranoid schizophrenia, and bi-polar disorder. Copper is a trace mineral. It is needed in the human body, but in small amounts. It is now so prevalent in our environment that more and more people are suffering from the effects of copper toxicity.

Here’s a quick background: Copper and zinc are natural antagonists in the body. This means that as copper levels increase in the body, zinc levels decrease. It is important to understand that we need both copper and zinc. Our body utilizes these and other metals for a variety of functions. However (and this is the challenge) all metals need to maintain specific relationships with each other. When this goes out of balance, our body and mind soon follow.

Copper stimulates the diencephalon – the emotional brain, while zinc stimulates the cortex – the calming, rational mind. In stimulating the brain, copper produces high levels of neurotransmitters, such as serotonin, dopamine, epinephrine, and norepinephrine. These work together and in opposition directing a wide range of emotional responses. This over-stimulation may become the root cause in creating an unstable mind and ultimately mental illness. The various disorders previously mentioned have been associated with high blood or tissue copper levels.

As copper levels increase in the body, zinc and magnesium levels decrease. Hence, zinc deficiency is often associated with copper toxicity. Zinc is an important mineral for the adrenal glands. The reduction of zinc and magnesium lowers our ability to handle normal levels of stress and significantly impairs adrenal function. This leads to increased levels of anxiety and exhaustion with a constant sense of urgency added to the mix. Zinc is also important to immune function. Lowered immune function can lead to being sick more often or having illnesses last longer. For men, zinc is critical to healthy prostate gland function.

Excess copper impairs energy production in the cells. Copper is a conductive metal with strong electrical charges which promotes free radical activity. Low energy production and damage from free radicals may lead to a variety of other health issues such as acne, anemia, rheumatoid arthritis, PMS, Candidiasis (yeast infections), chronic

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fatigue, hormonal irregularities (elevated estrogen, decreased sexual function), hair loss, reduced thyroid function, irritable bowel syndromes (IBS), impaired liver function, and gall bladder congestion.

All of us need to watch our copper intake, particularly women. Food sources with high levels of copper include coffee, chocolate, avocado, soy, shellfish, pecans, and the drinking water in some areas. Household sources of copper include plumbing and cookware. Women are further susceptible to copper exposure through birth control pills and copper IUDs.

Vegetarians and others who consume high amounts of soy or soy protein beware, as these products contain high amounts of copper. To counter the increased copper we need zinc. Zinc is found in meat and eggs.

If you would like to know your copper and zinc levels both blood tests and tissue mineral analysis (hair analysis) are effective ways to determine your copper levels and can identify other metal imbalances as well.

One last word of wisdom: Many women take multivitamins. Many of these products contain copper. This may be an additional source of copper that your body does not need, so be sure to check the supplement label.

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