Tuesday Minute Transcript

This Week's Topic

Minimize Mercury Body Burden

"The sicker the patient and the more unusual the symptoms, the greater chance you will find mercury as a body burden."

Are you undecided about the testing and treatment for mercury? Join the crowd. Even the experts, after spending days in seminars, still often disagree on the best ways to test and treat mercury body burden. Imagine how confused the average American feels when they read that the American Heart Association and the Mayo Clinic recommend fish twice a week, yet the EPA warns about excess mercury in fish.

In fact, there is a study confirming mercury exposure from a fish diet cancels the benefits, unless careful consideration is given to the choice of fish, the source and species.

Mercury is one of most toxic substances on the planet and has numerous effects on immune, reproductive, neurological, and cardiovascular health. For most of us, besides seafood, our greatest exposure comes from amalgam fillings, vaccines, industrial exposure, pesticides, herbicides, beauty creams, mirrors, and other industrial byproducts. The mercury we are exposed to appears in the organic and inorganic forms.

The inorganic forms are less biologically active but can be vaporized easily like the dental amalgams in our mouths and then are easily absorbed. The organic forms are easily absorbed via our GI system and then transported to the brain, kidneys, or other storage areas. An interesting side note, our healthy flora turn the organic highly absorbable methyl mercury into a less toxic less absorbable form as they demethylate the mercury. One more reason to keep the good bacteria populated.

Because it has such a profound effect on the nervous system both in the brain and cell mitochondrial function, mercury has been implicated in Parkinson's, Alzheimer's, ALS, and Multiple Sclerosis. But think for a second, if mercury reduces cellular energy, what effect will it have on the immune and cardiovascular systems? In relation to cancer, we know mercury damages chromosomes. In fact, the binding of mercury to DNA is so intense that it occurs at concentrations below that necessary to cause damage to other cellular proteins, such as glutathione and SOD.

Dr. Russell Blaylock, a nationally respected neurologist, summarizes the neurological effects of mercury in his excellent book,

Health And Nutrition Secrets That Can Save Your Life. He writes, "We have seen that mercury, even in concentrations too low to cause cell death, can affect multiple neuron cell functions such as membrane transport, calcium regulation, energy production, neurotransmitter control, free-radical production, excitotoxicity, enzyme function, DNA stability and repair, as well as antioxidant defenses." You get the picture. Even A little mercury is a BIG deal.

Glutathione is recycled by the body and is one of our major antioxidants. Glutathione levels have been associated with longevity in chronically ill patients, especially HIV patients. Yet one molecule of mercury binds and permanently removes two molecules of glutathione from the body.

Diagnosis of mercury toxicity is difficult due to the fact that mercury will hide in the tissue. The body in its wisdom will try to park or store mercury or any other heavy metal in areas of the body where it can do the least amount of damage. So testing can be difficult. Hair tissue analysis will only indicate current exposure. A 24-hour urine collection, after taking a chelating agent like DMSA, will give you stored body burden levels.

We are all exposed to mercury in small amounts. The question is do we have natural chelators that will push the metals out of our cells and membranes? The sicker the patient and the more unusual the symptoms, the greater chance you will find mercury as a body burden.

So what can we do to daily reduce body burdens of mercury and other heavy metals? Eat foods that are high in sulfur that are natural chelating agents; this includes the cruciferous vegetables like cabbage, broccoli, brussel sprouts, cauliflower, mizuna, mustard greens, horseradish, kale, collards, cilantro, watercress, radishes, and turnips.

Other foods like red peppers, oats, chicken, turkey, and duck provide cysteine which is valuable to make another natural chelator called metallothionein. Metallothionein can hold up to dozen molecules of mercury. Also remember chlorophyll is one of nature's true chelators. So anything green will be an asset to minimize metal exposure.

Another class of natural foods is the flavonoids. Blueberries, spinach, garlic, onions, and organic strawberries are excellent sources. Flavonoids reduce heavy metals and have a powerful effect on iron and copper which can be a major factor in increasing oxidation and free radical production.

It is interesting. The more we look at the biological, almost pharmacological effects of fruits and vegetables, the better they look. The suggestion to eat 7-10 servings of fruits and vegetables is more like a prescription than a casual suggestion.

In terms of supplementation, lipoic acid, selenium, zinc, mixed ascorbates, vitamin E, and N-Acetyl -L-Cysteine are important considerations. Also, Porphyra-Zyme has been a steady, consistent clinical asset to reduce heavy metals. Biotics research department isolated the porphorin ring as a major natural chelator some 20 years ago. A link below shows the effects of Porphyra-Zyme on various metals. Some of the specialty labs are now using the porphrin ring structure to help identify metals in the urine.

Dr. David Quig, a nationally known expert in heavy metals, likes using functional foods and shared one of his favorites, un-denatured partially hydrolyzed whey protein. Taken as a protein smoothie or added to food, this inexpensive convenient tasteless protein source contains amino acids necessary to rebuild and restore natural glutathione. Hydrolyzed whey increases glutathione in "intracellular red blood cells", liver, heart, and lymphocytes. The link below summarizes the dosages.

Exposure to mercury and other heavy metals is unavoidable. We should eat natural chelators and supply nutrients daily that can keep our body burden to a minimum.

Thanks for reading this week’s edition. I'll see you next Tuesday.