

Toxic Element Exposure

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I don't know about you but when I read about the toxicity of the planet it gets kind of depressing. But I think it is important to talk to your patients about it in a way they can understand and take action. Here are two pieces of information that they should find motivating.

I was just reading how thallium is increasingly prevalent in the environment partly as a result of modern industrial practices and crop irrigation. Thallium is more toxic to humans than mercury, cadmium or lead, and has no physiologic value. Sadly, testing reveals that thallium is being found in spinach, lettuce, and the brassica family. So all the anticancer benefits we thought we were eating may be an illusion. We generally think kale and broccoli as the only members of the brassica family but actually cauliflower, Brussel sprouts, kohlrabi, turnips, collard greens, mustard greens and cabbage are also members.

My thanks to Julia Malkowki, ND, DC from Dr. Data for a



great summary article on thallium and testing options. You can see a link to the right.

Thallium elicits neurotoxic effects as it inhibits DNA and protein synthesis, binds sulfhydryl groups on proteins of neurons and mitochondria, impairs the production of ATP, and competes with potassium. Thallium toxicity may manifest as alopecia, fatigue, headaches, depression, sleeplessness, ataxia, neuropathy, vision disturbances, psychosis, lack of stomach acid, loss of appetite and/or weight, cardiac arrhythmias, angina-like pain, hypertension and irregular

pulse. Direct sources of thallium exposure include cement dust, combustion of some types of coal and leakage of fracking wastewater from legal and illegal storage pits and wells. Current irrigation practices permit the use of fracking waste water for irrigation of crops such as vegetables and fruit.

We've discussed the problem of heavy metals in food on other Tuesday Minutes. I've shared that there is arsenic in commercial rice from years of pesticides combating the boll weevil. Millions of pounds of arsenic, as pesticides, had

been used for more than a century on millions of acres and is concentrated in the soil in Arkansas, Louisiana, Mississippi, Missouri, and Texas. We've learned that commercial green drinks may not be as healthy as we would expect, based on the work Consumer Labs reported several years ago, that several green drinks contained lead and other unwanted metals.

Not to be a doom and gloomer, but I also just read a report that 20/51 samples of prenatal vitamins exceeded established safety standards for lead, and 3/51 for arsenic. 26 commonly used prenatal vitamin brands including one prescription brand were collected from Canadian health food outlets and pharmacies and tested for toxic element contamination. 16 of the 26 supplement brands had testing performed on two or more different lot numbers. The total number of samples was 51. All 51 samples contained lead, the average amount was (0.535µgm) but 20/51 samples exceeded established standards for lead toxicity (0.50µgm/day), Of the 26 different products analyzed, 14 (more than half of the samples tested) had levels higher than what is considered safe. One product contained 4.0µgm/day.

Remember heavy metals create a cumulative exposure. For example if we take average lead accumulation, 90 preconception days and 270 lactation days would yield an accumulated burden of 341µgm on average, and 2.56mg for the brand with the highest amount of Pb. In addition, all 51 samples contained some level of aluminum, lead, cadmium, arsenic, nickel, titanium and thallium, 14/51 were found to contain mercury. The authors went on to say the cumulative intake of tainted prenatal supplements over many months may constitute a significant source of toxic element exposure to the mother and offspring.

We've discussed research suggesting that autism may be a result of cumulative toxins.

Could prenatal vitamins and vegetables be a factor? Let's stop and think about this for a second. Do you think that these manufacturers intentionally put those metals in the formula to harm the moms or baby? Do you think the green drink manufactures reported by Consumer Labs were trying to scam someone? Absolutely not, I don't believe the manufacturers had a clue there was a problem. That's the problem "they don't know what they don't know". Like the professional company who had high levels of arsenic in their kelp product, or a different company that had mercury in their liver product, they didn't know because they didn't have the capacity to do testing on their raw materials before they put the ingredients in the tablets. How can this information be motivating for your patients? First, hopefully they will start buying more organic fruits and vegetables.

Second, based on the report on thallium, on kale and other cruciferous vegetables and the Canadian study, you can encourage them to buy supplements from companies that are actively screening for toxins like Biotics Research. Biotics screens all their raw materials for heavy metals as well as other chemicals. The quality control team assures that the products are biologically active before they are accepted for production. For example, the product Nitro-Greens comes from all organic sources and heirloom seeds. But more importantly the individual ingredients are screened for heavy metals before the product is made. This is the kind of integrity you can count on. And this is the kind of message you want to communicate to your patients that you are ahead of the curve when it comes to their health and their family's health. That is how you build loyalty and commitment.

Thanks for reading this week's Tuesday Minute edition. I look forward to being with you again next Tuesday.