

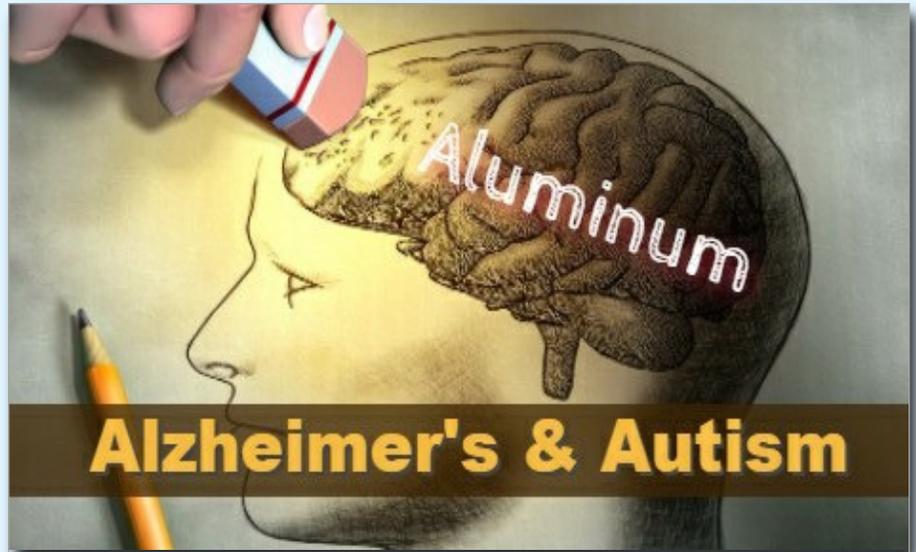
## Aluminum, Alzheimer's & Autism?

*"Considerable amounts of aluminum cross the blood brain barrier, enter into the brain, & accumulate in a semi-permanent manner."*

Over the years many of us have heard that Alzheimer's as well as other neurodegenerative conditions were linked to aluminum which is a very common element in the earth's crust. Later we heard that mercury was another leading factor in neurodegeneration. Toxic metals are generally heavier and have a strong electrical charge hence they lodge in the receptor sites of cell membranes or intracellular organelle membranes.

Because they are locked intracellularly, normal urine, blood or hair testing does not reveal their presence unless the exposure is ongoing. As a result, a chelating agent must be used for a few days to mobilize the metals and then assess them as they leave the body. For example, in the past we could evaluate heavy metal status by giving a chelating agent like dimercaptosuccinic acid (DMSA), for three days and on the fourth day do a 24-hour urine collection. Unfortunately, DMSA is now a script item.

Recently I discussed this dilemma with a colleague from



Canada, and she shared her protocol with me. Use Porphyra-Zyme from Biotics Research at six tablets twice a day for three days, but instead of collecting urine on the fourth day, collect a fecal metals profile from Dr. Data which screens for 13 metals: arsenic, cadmium, copper, lead, mercury, nickel, antimony, beryllium, bismuth, platinum, thallium, tungsten and uranium. She showed me 40 or 50 heavy metal profiles before and after treatment that she has collected on her website.

I'm pretty excited about this test for a couple of reasons. One, its reasonably priced.

Second, many of the methylation issues are due to heavy metals blocking receptor sites and short circuiting pathways.

Let's come back to aluminum because it's widely accepted that aluminum is a recognized neurotoxin. Recent studies using mass spectrometry have demonstrated that small, but considerable amounts of aluminum cross the blood brain barrier, enter into the brain, and accumulate in a semi-permanent manner. Therefore, aluminum can cause severe health problems in particular populations, including infants and elderly people.

Aluminum is not only in our environment but we are using it as a food additive. Aluminum is being used as a firming agent, anti-caking agent, a buffer, neutralizing agent, emulsifying agent, leavening agent or texturizer. These additives are used in milk, processed cheese, yogurt, food tins, jams and jellies, baking sodas, sugars, cereals, flours, grains, and powdered or crystalline dessert products.

Researchers tell us that we ingest 10 mg per day of this neurotoxin yet people who take antacids are getting aluminum in the GRAM amounts if aluminum-containing pharmaceutical products, such as buffered analgesics and antacids are used.

Aluminum hydroxide is the most common aluminum salt used in antacids. In analgesics, aluminum is included to improve the dissolution of the active substance which is poorly soluble in the acidic environment of the stomach.

Aluminum may also be present in drinking-water owing to the use of aluminum salts as flocculants in the treatment of surface waters. And let's not forget the aluminum from aluminum cookware. The aluminum leaching from utensils and packaging was studied and evaluated to add between 2 and 4 mg of aluminum a day.

"Aluminum absorption through the GI tract is low but about 2% of aluminum entering the blood is retained within the body and accumulates with age. However, researchers tell us as much as 38% of ingested aluminum accumulates at the intestinal mucosa. Although still poorly documented to date, the impact of oral exposure to aluminum in conditions relevant to real human exposure appears to be deleterious for gut homeostasis. Aluminum ingestion affects the regulation of the permeability, the microflora and the immune function of the intestine."

Let's add another layer of concern. Here is a quote from researchers questioning the safety of aluminum in vaccines. "The notion that aluminum in vaccines is safe appears to be widely

accepted. Experimental research, however, clearly shows that aluminum adjuvants have a potential to induce serious immunological disorders in humans. In particular, aluminum in adjuvant form carries a risk for autoimmunity, long-term brain inflammation and associated neurological complications and may thus have profound and widespread adverse health consequences."

So if aluminum is an established neurotoxin and it accumulates at the intestinal mucosa and affects gut permeability, and as we discussed, a small, but a considerable amount of aluminum crosses the blood brain barrier, enters into the brain, and accumulates in a semi-permanent manner; and since children and the elderly have the greatest risk, and children and the elderly are the ones targeted for increased immunizations, maybe we have a problem? Maybe the three As: aluminum, Alzheimer's and autism have their connection through the gut? I think it's worth testing.

The good news about the aluminum issue is that Porphyra-Zyme is also a natural aluminum chelator. So not only is it used for testing but also used in treatment.

By the way there was a very interesting unpublished study done on podiatry patients many years ago when Porphyra-Zyme was called Chela-Zyme. The podiatrist gave elderly patients Porphyra-Zyme and Intenzyme three times a day and took pedal temperature. At the end of 12 weeks, pedal temperatures were increased. Interestingly, leg ulcers that were present and unresponsive to treatment healed up. Patients reported an increased sense of wellbeing and zest for life. All things you would expect from better circulation.

I know I have raised a few questions, but hopefully I have also connected a few dots.

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