

Finding and Treating Heavy Metal Toxicity

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Being a chiropractor in the 1990s is a study in irony. Chiropractors have been practicing holistic health care for a century, and now that the nation is becoming interested in natural health care, patients tend to go to other types of practitioners for their chronic health problems.

Even if you practice holistically, haven't you had a patient referred to your office, not sure why they're coming to a chiropractor, since there's nothing wrong with their back? If you do nutritional counseling in your office, you no doubt have had a patient come to you for nutritional counseling and be amazed by the fact that you are a chiropractor. "What do chiropractors know about nutrition?" they often say. In spite of our long history of holistic care many people just don't think of us as holistic practitioners.

In the bookstore at one of the chiropractic colleges is a "Discover Chiropractic -- The Correction of Subluxations, and Nothing Else" poster. Consider what this means to the public. Pretend for a moment that you are not a chiropractor and that you know nothing about chiropractic. No matter how elegantly the concept of correcting subluxations is explained, there is a good chance that you will come away with the idea that chiropractic has something to do with moving bones around, and nothing else, especially since so many chiropractors have this view of chiropractic.

Have you ever heard perspective patient say, "I have pain, but it feels like it's in my muscles (or nerves); not my bones. I don't think you can help me." Have you ever given a patient relief from back pain and found out that they went somewhere else for their headaches or allergies? Why is that? In the public's mind, chiropractors are the treaters of kinks and strains, and of errors in the flow of innate intelligence.

In the average chiropractor's office you see pictures of bones, spinal key rings and even T-shirts with spines on them, all imparting the idea of "bone doctor." To the uninitiated, what does this have to do with holistic health? All of this is complicated by the true believers in our profession who insist that any bit of health or common sense that doesn't have to do with spinal adjusting "ain't chiropractic."

Another little piece of irony is that as the public is becoming more and more interested in natural health, and even medical doctors are trying to learn about more natural methods of treatment, a number of members of the chiropractic profession are becoming interested in being able to prescribe drugs. Let's forget for a moment the malpractice nightmare that this could create. Forget about the burden this will place on chiropractic colleges having to teach drug therapy protocols and safety. Practicing drug therapy will undermine our image as holistic practitioners. The world is moving away from drugs and we are moving toward them. In the midst of an explosion in interest in natural health care, there are those in our profession who want to recreate the chiropractor as "medical doctor lite."

So here we are with a public image as bone doctors and medical wannabes as the public seeks out nutritionists and colon therapists to take care of their chronic health problems. Spinal health is important, and we should educate our patients about the importance of good spinal health. The

problem is that we've been doing that for a century and do not yet have a decent market share of the health care dollar, because we limit ourselves.

So how do we improve our image? How do we begin to see more of the kinds of patients we should be treating? This might be going out on a limb, but maybe we should educate ourselves to be more complete physicians.

With that in mind, what better thing to learn than how to use nutrition? Using nutrition will improve your results with your existing patients and give you an effective tool for treating a wider variety of conditions. Since conventional medicine is not very effective at treating chronic problems, the field is wide open for you.

One thing that is a valuable tool for treating chronically ill patients is screening for heavy metal toxicity. Of course we are not talking about a beleaguered parent who has a son prone to playing Metallica loudly at home, but poor health caused by mercury, cadmium, lead or other heavy metals.

The modern American has about 500 times the amount of lead in his or her body than is found in exhumed bodies from the Middle Ages. In our modern industrial society there are increases in other heavy metals as well. This problem is widespread, but largely ignored.

Many practitioners have ignored heavy metals because the best method for screening for them, hair analysis, had such a horrible reputation. In the 1970s a lot of labs performed hair analysis. Many of them had very poor standards and controls. Unsubstantiated claims were often made. Many physicians used hair analysis inappropriately. In conventional medical circles, doctors who used hair analysis were considered quacks.

It's the 1990s now, lab standards and technology have improved and we have more realistic expectations of this screening tool. Hair analysis is not the best way to find nutrient minerals, although some patterns will give important clues about the patient's nutritional status and health. Testing blood cells and other methods are better for finding out about essential minerals.

Hair analysis is, however, a good, noninvasive, inexpensive way to screen for heavy metal toxicity. Heavy metal toxicity can affect every enzyme system in the body. It is commonly associated with fatigue, depression, myalgia, sugar cravings, ADD/ADHD (although copper/zinc balance is important here), and a variety of other symptoms. This is not surprising because heavy metals inhibit cytochrome P450 and mitochondrial energy production; and they are neurotoxins.

Every so often you will get a patient who is being treated for candidiasis by a nutritionist or colon therapist. They are chronically ill, fitting typical description of a candida patient in William Crook's book, *The Yeast Connection*. More often than not they are carrying a shopping bag full of vitamins and herbs designed to kill yeast, aid digestion, restore normal flora, and support the immune system. In spite of heavy nutrient therapy, the patient will still be ill. They persist with treatment because they have had some improvement. They seem to be on a quest to find the perfect yeast therapy.

Very often, this type of patient has heavy metal toxicity. If it is missed, they are doomed to an existence of seeking new and better digestive treatments and continually being frustrated by their failure to "kill the yeast."

Since the incidence of heavy metal toxicity is so common and can cause so many common health

problems, routine hair analysis is a valuable screening tool for your chronically ill patients. It is inexpensive, around \$40 (doctor's cost).

It may be worth noting here that not all patients with a heavy metal burden will demonstrate it in an initial hair analysis. This is sometimes found in the sickest patients: ones who do not have sufficient endogenous detoxication processes to mobilize heavy metals from deep tissue stores. This is most common in severely mercury burdened patients. In such cases you may have to do an oral chelation challenge, followed by a 24-hour urine test to find the insidious heavy metal.

If heavy metals are present in a patient's hair sample, you don't necessarily have to send them out for IV chelation. In many cases you can successfully chelate the patient orally using nutrients. Here are some general rules for finding and treating problems uncovered in a hair analysis.

Rule out the possibility of external contamination of the hair sample: Some cosmetic hair treatments, such as darkening agents and dyes contain lead acetate and mercury, and nickel and beryllium, respectively. In addition, anti-dandruff shampoos may contain high levels of zinc and selenium. Hot tubs and swimming pools can contribute copper. Despite the rigorous wash procedures that hair samples go through in a quality lab, these metals can yield false positive results. Therefore, you need to question the use of hair treatments and, if they are used by the patient, be sure to submit only new hair growth, less than one inch from the scalp. Ideally, the sample should be taken about six weeks after the last cosmetic treatment. A second option is to submit pubic hair for heavy metal analysis (although general mineral patterns for pubic hair are a little different than those for head hair).

The presence of a significant amount of heavy metals in hair will almost invariably be accompanied by a general "stress pattern," and marked alterations of the essential elements: The stress pattern, indicative of adrenal stress is presented in hair analysis by a marked, paired deviation in calcium and magnesium with an opposing deviation in sodium and potassium in the opposite direction. This pattern is accompanied by an increased level of zinc (which is displaced from functional sites by cadmium, nickel, lead and mercury), and elevated boron.

Commonly associated with significant levels of heavy metals in hair, invariably with mercury, is a distinct pattern of malabsorption of essential elements. The malabsorption pattern is characterized by very low levels of calcium, manganese, cobalt, chromium, copper and sometimes zinc. The malabsorption pattern can be associated with intestinal yeast over growth, hypochlorhydria, achlorhydria (B12, thiamin, zinc or histamine deficiency), food allergies (increased with heavy metal burden), or inflammatory bowel disease.

Low sulfur is something else to look out for. Very often this means that the body is not effectively moving the heavy metal and often reflects a burden on the liver. Sulfhydryl amino acids are an important part of the treatment here.

When treating a person with a heavy metal burden, use a mineral that has the same valence as the toxic metal: for instance, mercury has a +2 charge. To help displace it, use magnesium, calcium or manganese. If you use zinc to displace cadmium, be aware that it is in balance with copper, and that taking large amounts of zinc may deplete copper. Selenium binds mercury very tightly in the gut, but be careful, selenium can be toxic at as little as 500 mcg/day. Also, at the gut level, lead and cadmium absorption are increased with insufficient dietary calcium, iron and zinc. Also, silicon and magnesium malate are very effective in removing aluminum.

Take large doses of vitamin C: It is best to take vitamin C in the form of mineral ascorbates, because when getting rid of a heavy metal it is necessary to replace it with nutrient minerals. Vitamin C should be taken at bowel tolerance. Slowly increase the dose until the stools become soft. Speeding up the bowel transit time helps to eliminate the heavy metal through the intestines. Vitamin C is also an important water soluble antioxidant. Heavy metals are transition metals that induce free radical production, hence lipid peroxidation and damage to cell membranes. Thus in addition to vitamin C, one should include between 400-800 IU of vitamin E/day during detoxification. Also, reduced glutathione, taken on an empty stomach to maximize bio-availability readily binds heavy metals due to its free sulfhydryl group. Glutathione is also a very potent antioxidant (note: it is better absorbed on an empty stomach than on a full one). Cysteine is the rate limiting amino acid for the synthesis of glutathione. Free cysteine and n-actyl cysteine are contra indicated because they create a "ping-pong" effect, that is to say they move metals around from cell to cell without directed irreversible excretion.

Take fiber and/or eat a lot of vegetables: Heavy metals bind to fiber. Also, fiber helps speed up the bowel transit time. Cruciferous vegetables, like broccoli and cauliflower, are especially good because of their high sulfur content.

Let's not forget the value of sweating and hydration. The patient should drink plenty of good quality water (we're going to avoid the debate about how "quality water" is defined except to say it is not tap water with its chlorine and fluorine, and possibility of having traveled through lead pipes). Think of what you are doing here. You are taking a toxin, one that is hard to remove, that is permeating all of the body's tissues, and displacing it.

Without adequate water, the patient will not be able to eliminate the poison and will actually begin to feel worse. Sweating is a great way to remove wastes, but only if the body is adequately hydrated.

Take a chelating agent. There are drugs for this purpose, and you could opt for a medical referral. This is a good idea if the toxic burden and the patient's symptoms are especially severe. Some products are made by vitamin companies with the claim that they facilitate heavy metal detoxification. Chlorella (and not blue-green algae), garlic and cilantro are useful for assisting chelating agents, especially in getting rid of mercury. One thing to be aware of while chelating, the chelating agent doesn't know the difference between minerals that belong in the body and minerals that do not belong in the body. They chelate the good with the bad so between treatments you have to supplement with essential elements to offset the actions of the chelating agent.

Take additional nutrients, especially B6, B12, folate, E, A, carotinoids and other antioxidants. Nutrients that support liver function and repair, such as lipoic acid SOD, betaris, milk thistle extract (silymarin) are also valuable.

You can look for clues as to whether the patient needs these nutrients. If they need vitamin B6, they may not remember their dreams, will react severely to MSG and may have low SGOT and SGPT on a blood chemistry.

Folic acid and B12 will be necessary in patients who tend to confuse left and right (transpose letters), women who have irregular (non-cancerous) pap smears. On a CBC you may see an MCV greater than 91, or an MCH greater than 31.9, a uric acid less than 3.0 (which also is an indicator for heavy metal toxicity); you may also see a white count less than 5.5.

Also high homocysteine indicates a need for B12, folic acid and/or B6. A high neutrophil segmentation index is also a sign of folate deficiency.

B12 deficiency is the most common cause of depression in the elderly. When severe enough, it can mimic Alzheimer's disease (serum B12 is not necessarily an accurate way of measuring B12 status).

While finding and treating heavy metal toxicity is not a panacea, it is a valuable tool for you to help your chronic patients get better. That, ultimately, is the best thing for your practice and for your profession. Patients who are suffering with fatigue, depression and pain, who are not having much luck getting help from other practitioners, will be very grateful when you make them feel better. The more people who are out in the world saying that they were chronically ill until their chiropractor found and fixed the problem, the more likely it is that other chronically ill people will find our offices.

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