

NATURAL CELLULAR DEFENSE, ZEOLITES, AND ITS ACTIVITY PROPERTIES IN ELIMINATION OF HEAVY METALS

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Forget chelation. For now, at least...as we currently have been using a new and extremely promising product that verifiably reduces heavy metal intoxication without any toxic side effect or contra-indication.*

A random web search reveals mountains of evidence about pandemic toxic exposures to heavy metals, newborns included. Any metabolic minded health practitioner will eventually come to the fundamental conclusion regarding the relationship of heavy metal toxicity and health issues. The ongoing investigation is always around finding more efficient and less harmful ways of eliminating tissue bound metals and excreting them without further burden to already weakened tissues and organs.

Without addressing the underlying metals issue, treatments using many natural medicine approaches become merely palliative and symptomatic relief, and allopathic in Naturopathic clothing. Removal of the stressors to a system is always the *a priori* option to improve the function of the system. We cannot ignore the metals issue any longer particularly when a product as efficient and easy to use as zeolites is available to us.

Zeolites are a family of minerals and related minerals. They are hydrated aluminosilicates of the alkaline and alkaline-earth metals. About 40 natural zeolites have been identified during the past 200 years. Technically, zeolites are framework silicates with exchangeable cations that form in complex quaternary structures. They have 4-, 5-, and 6-sided cavities that hold cations and anions.ⁱ These zeolitic channels (or pores) are microscopically small and have molecular size dimensions such that they are often termed "molecular sieves."

The size and shape of the channels have extraordinary effects on the properties of cationic materials for adsorption processes, and this property leads to their use in separation processes, as in many commercial uses of zeolites today. Zeolite crystals have been grown on board the space shuttle and are undergoing extensive research into their formation and unique properties. Promising research using zeolites to clean up environmental radioactivity is also underway.ⁱⁱ

Back to these pores and zeolitic channels: In the more useful zeolites, the spaces are interconnected and form long wide channels of varying sizes depending on the mineral. These channels allow the easy movement of the resident ions and molecules into and out of the structure. (Zeolites are characterized by their ability to lose and absorb water without damage to their crystal structures.)

Natural Cellular Defense (NCD) by Waiora is based on the above characteristics. It is simply a purified type of zeolite suspended in solution, and is amphoteric – viable in an acid or base solution. Being an inert substance, it does not degrade or change its chemistry by reacting with the cations it adsorbs. It has been shown that metal oxides and salts can disperse spontaneously to the surface and pores of zeolites.ⁱⁱⁱ The NCD is specifically formulated to be charge and reaction specific in a "specific reactivity series," meaning there are a low affinity for calcium, magnesium, potassium, etc. and a high affinity for lead, mercury, arsenic, and cadmium.

This is the good news in comparison to many oral and IV chelation protocols that can be compromising for osteoporotic individuals. I am personally convinced of the safety of the NCD for geriatric and advanced osteoporosis patients. More good news is that the zeolites are excreted with the adsorbed

* Metallic containing medications (i.e., Lithium, platinum, etc.) would contraindicate or warrant monitored usage.

metallic cations maintaining isotonicity, or same “tone” as compared to other fluids in the body. This means there is no dumping, re-intoxicating, or trapping of the metal ions on their way out and the liver, kidney (particularly) and bowel are uncompromised.

These brief comments here are gleaned from some easily available research, a little understanding of chemistry and electrostatic properties of minerals and metals, and nearly 30 years of clinical experience in Natural Medicine. The questions that remain for this practitioner surrounding the metals elimination properties of NCD are around its activity and ability to address the profoundly embedded tissue-bound metals. We know that metals compartmentalize in specific sites in different individuals (e.g., hypothalamus, marrow, etc.) for multiple reasons: trauma, infection, inflammation, allergy sites, etc. We know that metal intoxications underlie mood disorders, chronic pain, cystic processes, connective tissue conditions, etc. dependent on the tissues affected. Does the NCD eventually get to these deeper encapsulated areas with the heavier protocol (10 drops 3x/day/10 days), or do we await the appropriate confluence of therapeutic interventions, conditions, and psycho-emotional release and resolutions inducing the next healing moment and dose-up then? I anticipate answers to this will be forthcoming soon.

This information pertains to the heavy metals elimination properties of the NCD. The buffering activity toward a low systemic alkaline pH seems to me to be of incredible importance and power in the overall health “experience” of one taking NCD. The anti-tumor, bactericidal and anti-viral properties are subjects for future discussion.

I hope this can serve to clarify a little bit of the mystery and mechanism of this important and timely discovery for our collective Health and Wellbeing. Thanks to the selfless jewel of a human being, Bob Schmidt for requesting this.

ⁱ Since silicon typically exists in a 4+ oxidation state, the silicon-oxygen tetrahedra are electrically neutral. However, in zeolites, aluminum typically exists in the 3+ oxidation state so that aluminum-oxygen tetrahedra form centers that are electrically deficient one electron. Thus, zeolite frameworks are typically anionic, and charge compensating cations populate the pores to maintain electrical neutrality. These cations can participate in ion-exchange processes, and this yields some important properties for zeolites.

ⁱⁱ Different zeolites have different sized holes that allow molecules to enter the cage. Recently, scientists at Sandia National Laboratory developed a zeolite with just the right dimensions to trap radioactive strontium.

Of course, now you've just got a whole bunch of molecular canisters of individual radioactive chemicals, and it's easy for those chemicals to flow back out of the zeolites just the way they came in. That's why the Sandia researchers are trying to develop zeolite materials that seal up when they're heated, as heating the material makes the holes clamp shut, sealing the toxin inside. The process is called sepulchration – the radioactive chemicals are locked up forever in a kind of molecular sepulcher, or tomb.

ⁱⁱⁱ The dispersion of a salt or an oxide to a zeolite includes that both cations and anions disperse on the external surface and, on the internal surface (wall of larger cages and channels) of the zeolite, inclusion in small cages of the zeolite, in addition, solid ion exchange might occur at the same time.

Xie Youchang and Tang Youqi, “Spontaneous Dispersion of Oxides and Salts to Zeolites and Its Applications,” *Acta Scientiarum Naturalium Universitatis Pekinensis* 34, no. 2 (Beijing: College of Chemistry and Molecular Engineering, Peking University, 4/20/98): 302-308.