Treat Magnesium Deficiency by Removing Mercury

by Lyn Hanshew, M.D.

Today, clinicians have major concerns with Toxic Body Burden, consisting of toxic heavy metals, pesticides, volatile organic compounds (VOC's) and pathogen load, and how these poisons adversely affect the nutritional status of their patients. A particularly critical example of the interference of toxins with nutritional status and biochemical function is the competitive aspect of Mercury and Magnesium.

Mercury, Magnesium and Adenosine triphosphate (ATP)

Mercury specifically competes with Magnesium and interferes with all Magnesium-dependent metabolic pathways, such as production of energy from ATP and GTP, which directly leads to lack of chemical energy. Every cell in the body requires chemical energy derived from ATP or GTP to function, heal and regenerate. Adenosine-5'-triphosphate (ATP) is a multifunctional nucleotide that is critical as the "molecular currency" of intracellular energy transfer. In this role, ATP transports chemical energy within cells for metabolism. It is produced as an energy source during the processes of photosynthesis and cellular respiration and consumed by many enzymes and a multitude of cellular processes, including biosynthetic reactions, motility and cell division. In signal transduction pathways, ATP is used as a substrate by kinases that phosphorylate proteins and lipids, as well as by adenylate cyclase, which uses ATP to produce the second messenger molecule cyclic AMP. If Mercury is present, this cannot occur. Signs of Magnesium deficiency include confusion, disorientation, loss of appetite, depression, muscle contractions and cramps, tingling, numbness, abnormal heart rhythms, coronary spasm, migraines and seizures. Numerous illnesses have been associated with Magnesium deficiency including multiple sclerosis, hypertension, insulin resistance, diabetes mellitus, gluten-sensitive enteropathy, premenstrual mood changes, Amyotrophic lateral sclerosis, migraine, rheumatoid arthritis, supraventricular and ventricular arrhythmias, myocardial infarction and sudden coronary death, just to mention a few. The results of Anner and Moosmayer's research showed that the metal-binding interface of Na-K-ATPase molecule is profoundly implicated in active ion transport and that the intracellular part of the Na-K-ATPase molecule presents the primary target for Mercury action.

Remove the Mercury. Restore Magnesium. Heal the Patient.

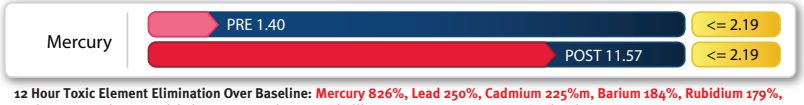
The exciting aspect of this body of research for clinicians is that Advanced Cellular Zeolite (ACZ) from Results RNA is proven to be the superior Mercury chelator available as shown in multiple pre- and post- urine provocation studies. Taken orally ACZ is systemically absorbed, removing toxic heavy metals, pesticides, VOC's and free radicals of all types from the body's tissues with highest affinity for Mercury. ACZ does not bind nutrient minerals. This unique action of preferentially binding Mercury and other harmful toxicants without binding nutrient metals allows Magnesium to

ACZ nano® and ACS 200® are significantly effective in the systemic removal of toxicants.

See the Mercury excretion results of the following pre- and post- urine provocation studies. View complete studies at www.resultsrnaresearch.com

12 Hour Toxic Element Elimination Over Baseline: Mercury 5400%, Nickel 600%, Tin 600%, Lead 500%, Antimony 400%, Gadolinium 400%, Barium 350%, Aluminum 187%, Arsenic 157% over Pre-Provocation levels.

12 Hour Toxic Element Elimination Over Baseline: Mercury 103,500%, Tungsten 11,100%, Cadmum 157%, Arsenic 155% over Pre-Provocation levels.



12 Hour Toxic Element Elimination Over Baseline: Mercury 826%, Lead 250%, Cadmium 225%m, Barium 184%, Rubidium 179%, Cesium 152%, Tin 131% Nickel 429%, Arsenic 355%, Thallium 234% over Pre-Provocation levels.

Data provided by Genova Diagnostics

Genova Diagnostics®
Innovative Testing for Optimal Health

pre-provocation
post-provocation
reference range

be absorbed, assimilated and to bind to receptors, so that ATP energetic reactions and other critical Magnesium-dependent pathways can proceed. As an adjunct to Advanced Cellular Zeolite, Advanced Cellular Silver kills pathogens and is itself a nutrient mineral proven to be helpful in cellular healing and regeneration. In my experience, patients can often experience quick, significant improvement in a wide-range of symptomatology through the concomitant use of ACZ and ACS. These exceptional products safely and effectively remove the Toxic Body Burden of toxins and pathogens, which allows the absorption, assimilation and binding of the many nutrients critical for optimal biochemical function and overall health.

Beyond removing Mercury, it is important that patients ingest adequate Magnesium through food and supplementation if necessary. According to recent USDA surveys, the average intake of Magnesium by women 19 to 50 years of age is about 74 percent of the Recommended Daily Allowance. Men of the same age had intake of about 94 percent of the recommended daily amount. Approximately 50 percent of women had intakes below 70 percent of the RDA.

Recommended Daily Requirements of Magnesium:

- Children
- 1-3 years old: 80 milligrams
- 4-8 years old: 130 milligrams
- 9-13 years old: 240 milligrams
- 14-18 years old (boys): 410 milligrams
- 14-18 years old (girls): 360 milligrams
- Adult females: 310 milligrams
- Pregnancy: 360-400 milligrams
- Breastfeeding women: 320-360 milligrams
- Adult males: 400 milligram

Foods High in Magnesium	Serving Size	Magnesium (mg)
Beans, black	1 cup	120
Broccoli, raw	1 cup	22
Halibut	1/2 fillet	170
Nuts, peanuts	1 oz	64
Okra, frozen	1 cup	94
Oysters	3 oz	49
Plantain, raw	1 medium	66
Rockfish	1 fillet	51
Scallop	6 large	55
Seeds, pumpkin and squash	1 oz (142 seeds)	151
Soy milk	1 cup	47
Spinach, cooked	1 cup	157
Tofu	1/4 block	37
Whole grain cereal, ready-to-eat	3/4 cup	24
Whole grain cereal, cooked	1 cup	56
Whole wheat bread	1 slice	24

References

1: Thompson JD, Nechay BR. Inhibition by metals of canine renal calcium, magnesium-activated adenosinetriphosphatase. J Toxicol Environ Health. 1981 Jun;7(6):901-8. PubMed PMID: 6115068.

2: Araujo GM, Silva CB, Hasson-Voloch A. Comparison of the inhibitory effects of mercury and cadmium on the creatine kinase from Electrophorus electricus (L). Int J Biochem Cell Biol. 1996 Apr;28(4):491-7. PubMed PMID: 9026360.

3: Chetty CS, McBride V, Sands S, Rajanna B. Effects in vitro of mercury on rat brain Mg(++)-ATPase. Arch Int Physiol Biochim. 1990 Oct;98(5):261-7. PubMed PMID: 1708994.

4: MilosevićM, PetrovićS, Demajo M, Horvat A. Effects of metal ions on plasma membrane Mg2+-atpase in rat uterus and ovaries. Ann N Y Acad Sci. 2005 Jun;1048:445-8. PubMed PMID: 16154973.

5-Anner, BM, Moosmayer,M. Mercury inhibits Na-K-ATPase primarily at the cytoplasmic side. AmJPhysiology. Vol 262, Issue 5 p843-848, 1992

6-Moreira,CM, Oliveira,EM, Bonan,CD, Sarkis,JJF and Vassallo, DV. Effects of Mercury on myosin ATPase in the ventricular myocardium of the rat. Comparative biochemistry and physiology. Toxicology & pharmacology : CBP 2003;135C(3):269-75

7- Magnesium and carbohydrate metabolism.THERAPIE (France), 1994, 49/1 (1-7)

8-Hypertension, diabetes mellitus, and insulin resistance: the role of intracellular magnesium
Am J Hypertens (UNITED STATES) Mar 1997, 10 (3) p346-55

9-Magnesium and sudden death. S. AFR. MED. J. (SOUTH AFRICA), 1983, 64/18 (697-698)

10- Magnesium and potassium in diabetes and carbohydrate metabolism. Review of the present status and recent results. Magnesium Res. 1984. 3(4-6). P 315-23

11-Magnesium deficiency: Possible role in osteoporosis associated with gluten-sensitive enteropathy. Clinical and biochemical effects of nutritional supplementation on the premenstrual