

Heavy Metals and Your Health

Metals Testing: Hair, Blood, Urine and Fecal



Toxic metals, can affect development, neurological functioning, and overall health.

In our modern world, with ever-increasing pollution levels, the presence of toxic metals in the environment is constantly growing. Chemical products, fertilizers, industrial paint, building materials, fish, silver dental fillings, and vaccines are just some of the sources of heavy metals in everyday life. Toxic metals may normally be present in the body in very low levels, but acute or continuous exposure, as well as metabolic abnormalities can cause accumulation of heavy metals in body tissues, and subsequently, in the brain.

Many symptoms of heavy metal poisoning are identical to symptoms of neurological and psychiatric disorders; therefore, it is difficult, if not impossible to identify their cause without expert laboratory testing. Test results frequently show high heavy metal levels coupled with low mineral levels in people with developmental and neurological disorders and chronic fatigue, as well as otherwise healthy individuals who do not feel well.

Why is Metals Testing Important?

Metals testing is important for measuring toxic metals that can impede development and normal brain functioning, as well as measuring levels of minerals essential for normal growth and good health. It is equally important to measure levels of minerals, which play an essential part in numerous physiochemical reactions within body cells. These reactions include absorbing nutrients and vitamins, transforming energy, eliminating toxins, and many others. Toxic overload and metabolic imbalances are more apt to happen when minerals are depleted.



Determining the Best Testing Method

The Great Plains Laboratory, Inc. can check metal levels in hair, blood, urine and fecal matter, using samples appropriate for each specific situation. Hair is ideal for the initial evaluation because of easy sample collection procedures, accuracy, and economy of price. As blood transports metals to body tissues and hair follicles, toxic elements get incorporated and excreted in the hair tissue. The hair test also provides exact ratios between nutrients and toxic metals. The results show levels of 39 toxic and essential elements and 5 ratios. The blood test is best for detecting recent heavy metal poisoning and for measuring levels of minerals in the body. Urine and fecal tests are most sensitive after taking a chelating agent. Chelating agents help extract heavy metals deposited in the tissues and bone. These tests are also important for evaluating the efficiency of chelating treatments, since they measure levels of metals excreted from the tissues during the chelation. Urine and fecal element tests are not recommended unless a chelating agent is used before sample collection.



Important Markers in Metals Testing

- **Mercury** can cause depression, fatigue, developmental disorders, neurological and behavioral disorders, and more.
- **Aluminum** can be an important factor in Alzheimer's disease.
- **Lead** can cause depression, nausea, fatigue, communication and concentration problems, developmental problems, neurological and behavioral disorders, and more.
- **Zinc** deficiency can be responsible for allergies, developmental problems, hair loss, acne, weight problems, and more.
- **Magnesium** deficiency can cause anxiety, depression, spasms, behavioral disorders, and more.
- **Copper** deficiency can cause increasing cholesterol levels, anemia and chronic infections, and more.
- **Cobalt** deficiency can be responsible for bad circulation, migraines, and spasms.

Easy to Understand Results

A free phone consultation with our nutritional consultant is available to practitioners, as well as to patients with physician approval.

POTENTIALLY TOXIC ELEMENTS			
TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE
			68 th 95 th
Aluminum	40	< 8.0	
Antimony	0.14	< 0.080	
Arsenic	0.067	< 0.080	
Beryllium	< 0.01	< 0.020	
Bismuth	0.034	< 2.0	
Cadmium	0.64	< 0.15	
Lead	1.9	< 1.0	
Mercury	< 0.03	< 0.40	
Platinum	0.003	< 0.005	
Thallium	0.005	< 0.010	
Thorium	< 0.001	< 0.005	
Uranium	0.011	< 0.060	
Nickel	0.66	< 0.40	
Silver	68	< 0.20	
Tin	1.0	< 0.30	
Titanium	1.0	< 1.0	
Total Toxic Representation			
ESSENTIAL AND OTHER ELEMENTS			
ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE
			2.5 th 16 th 50 th 84 th 97.5 th
Calcium	653	125- 370	
Magnesium	61	12- 30	
Sodium	85	12- 90	
Potassium	89	12- 40	
Copper	30	8.0- 16	
Zinc	69	100- 190	
Manganese	1.4	0.20- 0.55	
Chromium	0.49	0.26- 0.50	
Vanadium	0.56	0.030- 0.10	
Molybdenum	0.19	0.050- 0.13	

SPECIMEN DATA		RATIOS		
		ELEMENTS	RATIOS	EXPECTED RANGE
Sample Size:		Ca/Mg	10.7	4- 30
Sample Type:		Ca/P	3.22	0.8- 8
Hair Color:		Na/K	0.955	0.5- 10
Treatment:		Zn/Cu	2.3	4- 20
Shampoo:		Zn/Cd	108	> 800

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Recommended for Patients With:

- AD(H)D
- Alzheimer's Disease
- Anemia
- Anxiety or Excessive Stress
- Autism Spectrum Disorders
- Chronic Fatigue
- Depression
- Digestive Disorders
- Food Allergies
- Migraines & Spasms
- Mood Swings
- Movement Disorders
- OCD
- Psychosis
- Reproductive Problems
- Skin Problems & Acne
- Sleep Disorders
- Tic Disorders / Tourette's Syndrome
- Weak Nails



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