

STRUCTURAL & FUNCTIONAL ABNORMALITIES ASSOCIATED WITH VARIOUS HEAVY METAL TOXINS	ALUMINUM	ARSENIC	CADMIUM	COPPER	LEAD	MERCURY	THALLIUM	XMETALS
IMMUNE SYSTEM								
Increased incidence of asthma, autoimmune-like symptoms							X	
Inhibition of lymphocytes, T-cells, monocytes							X	
Immunosuppression				X				
Decreased white blood cell count		X				X		
REPRODUCTIVE SYSTEM								
Genital abnormalities	X					X		
Disturbances in menstrual cycle, menstrual pains			X		X			
Birth defects, premature births, spontaneous abortion		X		X	X			
Reproductive dysfunction	X	X	X	X				
OTHER PHYSICAL DISTURBANCES								
Hypotonia or hypertonia, decreased muscle strength							X	
Rashes, contact dermatitis, eczema, itchy/irritating skin	X	X	X		X			
Muscle pain, headache, acrodynia, colic		X	X	X		X		
Allopecia (hair loss)						X		
Information provided by Extreme Health, Inc.								
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http://www.extremehealthus.com								

report Compliments of Extended Health (Copy of the complete report by Maile Pouls, Ph.D, & Lester Rose, MD, with references available by calling 1-800-800-1285)

Psychiatric Disturbances:

- Social Deficits, Social withdrawal - Mercury
- Repetitive, perseverative, stereotyped behaviors; OCD-typical behaviors - Mercury
- Depression, mood swings, flat affect; impaired facial recognition - Arsenic, Copper, Lead, Mercury
- Schizoid tendencies; hallucinations; delirium - Mercury
- Irritability, aggressive behaviors, temper tantrums - Lead, Mercury
- Suicidal Behaviors - Copper, Mercury

Sleep difficulties/ disturbances - Lead, Mercury, Thallium

Chronic Fatigue Syndrome (CFS)

weakness, malaise - Aluminum, Arsenic, Cadmium, Copper, Lead, Mercury, Thallium

Anorexia; symptoms reflecting **eating disorders**, loss of appetite/weight - Arsenic, Lead, Mercury

Anxiety; nervous tendencies - Thallium

Attentional problems (ADHD), lacks eye contact, impaired visual fixation - Lead, Mercury

Speech and Language Deficits:

- Speech disorders - Aluminum, Mercury
- Loss of speech, developmental problems with language - Mercury
- Speech comprehension deficits - Mercury
- Dysarthria; articulation problems; slurred speech, unintelligible speech - Mercury

Cognitive Impairments:

- Mental retardation, borderline intelligence - Arsenic, Lead, Mercury
- Uneven performance on IQ scores, low IQ scores - Copper, Lead
- Poor concentration, attention deficits (ADHD), response inhibition - Aluminum, Lead
- Poor memory (short term, verbal, and auditory) - Aluminum, Lead
- Difficulties understanding abstract ideas; difficulty carrying out complex commands - X metals
- Dementia; pre-senile and senile dementia - Aluminum
- Stupor - Aluminum, Arsenic,
- Impaired reaction time; lower performance on timed tests - Lead

Sensory Abnormalities:

- Abnormal Sensations in the mouth and extremities - Arsenic
- Hearing loss, difficulty hearing - Arsenic, Lead, Mercury
- Abnormal touch sensations; diminished touch sensations, aversion to touch - Arsenic
- Blurred vision; sensitivity to light - Arsenic, Mercury

Motor Disorders:

- Choreiform movements, myoclonal jerks, unusual postures -Copper, Mercury
- Difficulty walking, swallowing, talking - Copper, Mercury
- Flapping, circling, rocking, toe walking - Mercury
- Problems with intentional movements or imitation - Mercury
- Abnormal gait/posture; incoordination, loss of balance; problems sitting, lying, crawling, and walking - Mercury
- Decreased locomotor activity - Aluminum, Arsenic
- Convulsions; seizure - Aluminum , Arsenic, Copper, Lead, Mercury, Thallium
- Structural and Functional Abnormalities associated with various Heavy Metal Toxins: Physiological Impairment

Brain and Central Nervous System:

- Neurofibrillary tangles - Aluminum
- Neuritis, retrobulbar neuritis; neuropathy - Aluminum, Arsenic, Thallium
- Encephalopathy - Aluminum, Arsenic, Lead, Thallium
- Cerebrovascular disease - X metals
- Alterations in nerve conduction velocity - Lead
- Alterations in the spinal chord - Thallium
- Accumulates in CNS structures - Aluminum, Mercury

- Abnormal EEGS - Arsenic, Lead

- Autonomic disturbances - Copper, Lead, Mercury, Thallium

Peripheral Nervous System:

- Peripheral neuropathy - Arsenic, Mercury
- Alterations in peripheral nerves - Arsenic
- Loss of feeling/ numbness in the extremities; paresthesia - Arsenic, Mercury, Thallium

Gastrointestinal Tract:

- Nausea, vomiting, diarrhea; loss of appetite - Arsenic, Copper, Mercury, Thallium
- Abdominal pain, stomach cramps; burning of the throat and mouth - Arsenic, Copper, Lead, Mercury, Thallium
- Esophagitis; gastroenteritis; colitis - Arsenic, Mercury, Thallium
- Cancers (colon, pancreatic, stomach, or rectal) - Arsenic

Renal and Hepatic Impairment:

- Hepatotoxicity; Liver dysfunction, damage - Arsenic, Copper, Thallium
- Cirrhosis of the liver; hepatitis - Copper
- Kidney disease ; kidney failure - Arsenic, Lead, Mercury
- Renal toxicity; tubular proteinosis - Arsenic, Copper, Lead
- Kidney Damage, histological alterations - Arsenic, Lead

Cardiovascular System:

- Blood vessel damage - Arsenic
 - Anemia; decreased red blood cell count - Arsenic, Copper, Lead
 - Hypertension; increased heart rate (tachycardia) - Arsenic, Copper, Lead, Thallium
- #### **Electrocardiac disorders**
- Peripheral vascular disease; cardiovascular disease; vascular collapse - Arsenic, Lead

Respiratory System:

- Pulmonary Fibrosis - Aluminum, Arsenic
- Pulmonary edema - X metals
- Pneumonia, laryngitis, pharyngitis, bronchitis - Aluminum, Arsenic, Mercury
- Restrictive airway disorders, asthmatic conditions, pneumoconiosis - Arsenic, Aluminum
- Respiratory tract cancers - Arsenic
- Nasal ulcers, perforation of the nasal septum - X metals

Immune System:

- Increased incidences of asthma, autoimmune-like symptoms, & allergies - X metals
- Inhibition of lymphocytes, T-cells, monocytes - X metals
- Immunosuppression - Lead
- Decreased white blood cell count - Arsenic, Thallium

Reproductive System:

- Genital abnormalities - Aluminum, Thallium
- Disturbances in menstrual cycle; menstrual pains -Copper, Mercury
- Birth defects; premature births; Spontaneous abortion -Arsenic, Lead, Mercury
- Reproductive dysfunction - Arsenic, Aluminum, Cadmium, Lead

Other Physical Disturbances:

- Hypotonia or hypertonia; decreased muscular strength - X metals
- Rashes, contact dermatitis, eczema, itchy/irritating skin - Aluminum, Arsenic, Copper, Mercury
- Muscle pain; headache; acrodynia; colic - Arsenic, Copper, Lead, Thallium
- Alopecia (hair loss) - Thallium

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