



TEST PATIENT

GUa d'Y'HYghBUa Y
 Sex : :
 DUHY Collected : 00-00-0000
 111 H9GH ROAD TEST SUBURB
@AB =8: 00000000 UR#:0000000

TEST PHYSICIAN

DR JOHN DOE
 111 CLINIC STF 99H
 7@B=7'GI 6I F6J =7'' \$\$\$

P: 1300 688 522
 E: info@nutripath.com.au
 A: PO Box 442 Ashburton VIC 3142

INTEGRATIVE MEDICINE

HAIR	Result	Range	Units	
Hair Mineral Analysis, Level 2			ppm	
Nutrient Mineral Levels			ppm	
Hair Description	Light Brown			
Chromium (hair)	0.10	0.02 - 0.21	ppm	
Cobalt (hair)	0.01	0.01 - 0.30	ppm	
Copper (hair)	48.14 *H	10.00 - 41.00	ppm	
Iodine (hair)	1.07	0.15 - 3.50	ppm	
Iron (Hair)	7.10	4.60 - 17.70	ppm	
Manganese (hair)	0.12	0.05 - 0.92	ppm	
Molybdenum (hair)	0.02 *L	0.03 - 1.10	ppm	
Selenium (hair)	0.89	0.40 - 1.70	ppm	
Vanadium (hair)	0.01	0.01 - 0.20	ppm	
Zinc (hair)	154.69	99.00 - 450.00	ppm	
Calcium (Hair)	1800.00 *H	220.00 - 1600.	ppm	
Magnesium (hair)	96.67	20.00 - 130.00	ppm	
Boron (hair)	<0.25	0.00 - 0.84	ppm	
Germanium (hair)	0.01	0.00 - 1.65	ppm	
Lithium (hair)	0.00	0.00 - 0.30	ppm	
Strontium (hair)	1.91	0.65 - 6.90	ppm	
Tungsten, hair	0.00	0.00 - 0.01	ppm	
Toxic Mineral Levels			ppm	
Aluminium (hair)	2.35	0.00 - 8.00	ppm	
Antimony (hair)	0.03	< 0.30	ppm	
Arsenic (hair)	0.03	0.00 - 0.20	ppm	
Barium (hair)	1.08	0.00 - 4.64	ppm	
Beryllium, hair	<0.01	0.00 - 0.10	ppm	
Bismuth, hair	<0.01	0.00 - 0.20	ppm	
Cadmium (hair)	0.01	0.00 - 0.20	ppm	
Lead (hair)	0.96	0.00 - 3.00	ppm	
Mercury (Hair)	0.73 *H	0.00 - 0.60	ppm	
Nickel (hair)	0.13	0.00 - 1.00	ppm	
Palladium, Hair	<0.05	0.00 - 0.10	ppm	
Platinum, Hair	0.00	0.00 - 0.01	ppm	
Silver, Hair	0.03	0.00 - 1.00	ppm	
Thallium, Hair	0.00	< 0.01	ppm	
Tin, Hair	0.25	0.00 - 0.70	ppm	
Titanium, Hair	0.19	0.00 - 1.50	ppm	
Uranium, Hair	0.02	0.00 - 0.10	ppm	
Zirconium, Hair	<0.05	0.00 - 0.50	ppm	
Hair Mineral Ratios			ppm	
Calcium/Copper Ratio	37.39	5.50 - 292.00	RATIO	

(*) Result outside normal reference range

(H) Result is above upper limit of reference rang (L) Result is below lower limit of reference range



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HAIR	Result	Range	Units	
Calcium/Iron Ratio	253.7	16.1 - 293.0	RATIO	
Calcium/Magnesium Ratio	18.6	4.9 - 26.1	RATIO	
Calcium/Strontium Ratio	941.4	40.7 - 5517.0	ppm	
Calcium/Zinc Ratio	11.6 *H	0.9 - 11.3	RATIO	
Iron/Copper Ratio	0.1 *L	0.1 - 2.5	RATIO	
Iron/Manganese Ratio	60.6	5.5 - 195.0	RATIO	
Zinc/Chromium Ratio	1562.56	383.00 - 2254.	RATIO	
Zinc/Copper Ratio	3.2 *L	8.2 - 13.2	RATIO	
Zinc/Iron Ratio	21.8	10.4 - 45.4	RATIO	
Zinc/Magnesium Ratio	1.60	1.09 - 12.40	RATIO	
Zinc/Manganese Ratio	1322.16	142.00 - 3542.	RATIO	

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Nutrient Minerals Comment

MOLYBDENUM (Mo) deficiency has been linked to gout. Low levels in heavy meat eaters reflect digestive disorder, the need for digestive enzymes and dietary changes. Such patients should avoid pork, beef, whole grain and rather eat poultry, fish and other light proteins. Vegetarians should either add some meat to their diet or take molybdenum chelate with B-vitamins, which aid the absorption of molybdenum. Dietary molybdenum is readily absorbed by the intestine and is excreted in the urine and bile.

SOURCES: whole grains, legumes, leafy vegetables and organ meats. The recommended daily intake is 0,15-0,5 mg/day, depending on age and status. Acute deficiency symptoms are unknown in humans. Excess intake of copper, zinc, and sulfates can depress Mo-update, causing disturbances in the uric acid cycle. Low molybdenum levels have been associated with impotency, increased cancer susceptibility, gout, dental caries, defects in the metabolism of sulfur-containing amino acids, and asthma.

Calcium (Hair) Comment:

High calcium in hair was related to low aortic calcium.
Calcium - aids in apoptosis, blood clotting and nerve signaling. Low serum amounts are known to cause osteoporosis, poor growth and maintenance of bones and teeth.

CALCIUM (Ca): high tissue levels of chemically untreated hair reflect malabsorption problems and a masked deficiency, which is caused by calcium being drawn from bones and redistributed into other tissues such as hair. Thus, high hair levels reflect bone withdrawal and osteoporotic tendency.

HIGH Copper (Hair): - Unbound copper is known to be an even more reactive prooxidant than iron, especially in the presence of strong reducing agents such as ascorbate or homocysteine. High levels of copper can induce oxidative damage. Small amounts are required for CuZnSOD and ceruloplasmin. Toxic levels cause nausea, behaviour problems, vomiting and diarrhoea (250mg CuSO4). Elevated levels of copper often reflect exposure to swimming pool water treated with algacide. Occasionally, elevated copper occurs from hair treatments, perm, dye, or bleach. If these conditions do not apply to your patient, then look for possible sources of copper in the environment that may be causing the elevated level.



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Toxic Hair Metals Comment

HIGH Mercury (Hair) Comment:

Mercury is a well-known neuro-toxin that has no known human need. Circulating metals in blood 'feed' the hair root. Therefore, hair reflects longterm or chronic exposure. Early symptoms of mercury overexposure include insomnia, dizziness, fatigue, drowsiness, weakness, depression, tremors loss of appetite, loss of memory, nervousness, headache, dermatitis, numbness, and tingling of lips and feet, emotional instability and kidney damage. Symptoms of acute toxicity: loss of teeth, extreme tremor, mental and emotional disorders, kidney failure. Chronic mercury ingestion may be a risk factor for cardiovascular disease. This increased risk has been proposed to be due to the promotion of lipid peroxidation by mercury. Elevated levels of mercury in hair have been associated with inducement of autoimmune diseases, multiple sclerosis.

Sources: Shellfish, large fish, dental amalgams, electrical relays, fungicides, mining, paints, explosives, batteries, mercurial diuretics, fungicides, fluorescent lamps, cosmetics, hair dyes, and petroleum products. Vaccines containing thimerosal are another source of exposure. Improper disposal of broken mercury thermometers and other apparatuses that use mercury including button cells and tube lights may also result in mercury exposure.

Physiological Interactions: Accumulates in kidney, liver. Organic mercury has a 1/2 life of 2 months & binds to enzymes, proteins, and glutathione. MAO, catalase, P-450, and mitochondrial functions are affected.

Symptoms of excessive exposure: Headache, fine tremor, increased salivation, excitability, poor mental concentration, metallic taste, fatigue, anorexia, psychoses, hypertension with renal dysfunction.

Synergistic for Uptake/Retention: Selenium Deficient

Hair Minerals Analysis Comments

The measured hair analysis results never reveal exactly how much to supplement when a level is abnormal. What we are measuring is the tissue (hair) saturation of each particular mineral.

When nutritionally essential elements are low or deficient, the Reference Daily Intake (RDI) levels provide guidance for supplementation. The RDI's for elements or minerals are the daily intakes recommended for essential body functions.

ELEMENT	RDI**
Calcium	1000 milligrams***
Chromium	120 micrograms
Copper	2 milligrams
Magnesium	400 milligrams
Manganese	2 milligrams
Selenium	70 micrograms
Zinc	15 Milligrams

Tests ordered: HAIR2