Hair Tissue Mineral Analysis

child friendly

Hair Tissue Mineral Analysis (HTMA) is a safe and non-invasive pathology test. It measures the levels and comparative ratios of essential and toxic minerals found in hair. HTMA is unique in that it inexpensively provides information directly about cellular activity, which is the main site of nutritional metabolism. As important as vitamins are, they can do nothing for the body without proper mineral intake. Vitamins cannot function and are unable to be assimilated without the aid of minerals.

HTMA has been shown to be reliable in identifying over-exposure to toxic metals such as aluminium, lead, arsenic and mercury. This makes the test a cheap and invaluable screening tool in diagnosing underlying health problems and in preventive health care. Children in particular can accumulate heavy metals more readily as they play on the ground where heavy metals accumulate, and absorb heavy metals more readily than adults due to their higher metabolism.

The HTMA measures:

- ***Essential minerals*** *– Calcium, Magnesium, Phosphorus, Potassium and Sodium*
- ***Trace minerals*** *– Chromium, Copper, Iron, Manganese, Selenium, Silicon and Zinc*
- ***Toxic metals*** *– Aluminium, Arsenic, Cadmium, Lead, Mercury and Nickel*

Who would this test benefit?

Children, especially if suspected or diagnosed with behavioural disorders (ADHD or autism spectrum disorder):

- non-invasive sample collection
- assesses nutritional status in "picky eaters" and failing to thrive
- children readily accumulate heavy metals such as lead, aluminium, mercury
- ADHD—low zinc and iron, high copper
- poor immunity
- calcium, magnesium, for bone and nervous system support

In adults a HTMA can give valuable information as to the persons:

- toxic metal exposure (mercury, lead, arsenic, nickel, etc)
- malabsorption & gastrointestinal function
- thyroid function
- adrenal function
- pancreatic function
- fatigue
- allergies
- mood

A HTMA is a non expensive test, that together with a comprehensive clinical history is an invaluable tool to identify the underlying causes to the persons symptoms or illness.

All Natural Advantage

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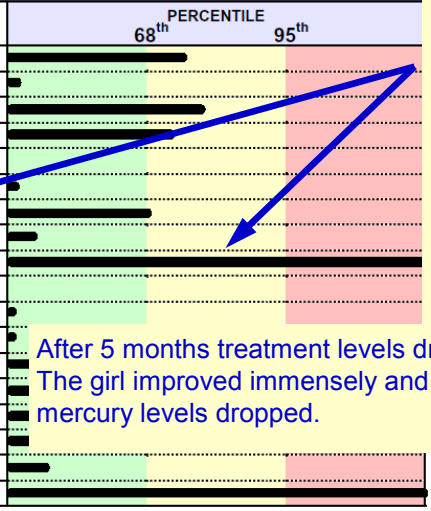
Taking the guesswork out of diagnosis

Some examples of hair test results of patients that have attended my clinic.

A 6 year old autistic girl, with severe teeth grinding and behavioural issues

TOXIC METALS		RESULT µg/g	REFERENCE INTERVAL
Aluminum	(Al)	12	< 8.0
Antimony	(Sb)	0.012	< 0.066
Arsenic	(As)	0.13	< 0.080
Barium	(Ba)	1.2	< 0.75
Beryllium	(Be)	< 0.01	< 0.020
Bismuth	(Bi)	0.047	< [illegible]
Cadmium	(Cd)	0.076	< 0.070
Lead	(Pb)	0.17	< 1.0
Mercury	(Hg)	9.5	< 0.40
Platinum	(Pt)	< 0.003	< 0.005
Thallium	(Tl)	0.001	< 0.002
Thorium	(Th)	0.001	< 0.002
Uranium	(U)	0.017	< 0.060
Nickel	(Ni)	1.7	< 0.30
Silver	(Ag)	0.09	< 0.20
Tin	(Sn)	0.12	< 0.30
Titanium	(Ti)	0.26	< 0.90
Total Toxic Representation			



This girls hair mercury was very high. Parents took her to a GP to confirm with blood mercury testing.

Blood mercury: 113 nmol/L

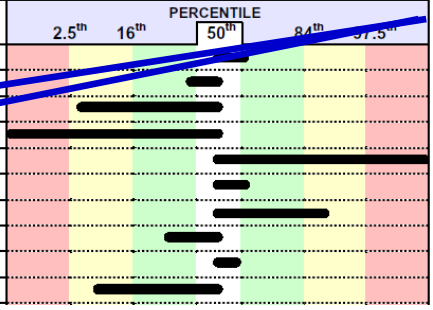
Ref range: 0-50 nmol/L

"GP did not know what to do with the result"

After 5 months treatment levels dropped to 56 nmol/l. The girl improved immensely and continued to improve as mercury levels dropped.

A 30 year old female presenting with low mood and high stress levels

ESSENTIAL AND OTHER ELEMENTS		RESULT µg/g	REFERENCE INTERVAL
Calcium	(Ca)	260	125- 370
Magnesium	(Mg)	16	12- 30
Sodium	(Na)	8	20- 200
Potassium	(K)	< 3	12- 200
Copper	(Cu)	140	11- 18
Zinc	(Zn)	150	100- 190
Manganese	(Mn)	0.77	0.10- 0.50
Chromium	(Cr)	0.49	0.43- 0.80
Vanadium	(V)	0.061	0.030- 0.10
Molybdenum	(Mo)	0.038	0.050- 0.13



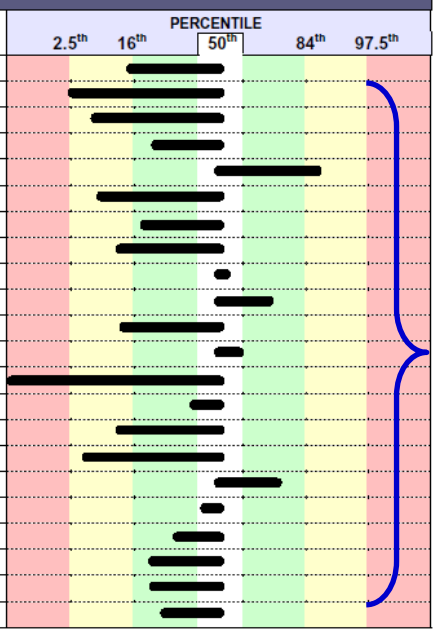
This patient has very high copper levels and low hair potassium. Note that molybdenum is also low due to the high copper levels.

High copper levels can contribute to headaches and mood disorders as well as allergies, learning disorders, anaemia and increased susceptibility to viral infections.

Low potassium and sodium in a hair test reflects adrenal stress, particularly due to high levels of emotional stress.

A 4 year old child described as a "picky eater" and failure to thrive

ESSENTIAL AND OTHER ELEMENTS		RESULT µg/g	REFERENCE INTERVAL
Calcium	(Ca)	121	125- 370
Magnesium	(Mg)	6	12- 30
Sodium	(Na)	11	20- 200
Potassium	(K)	21	12- 200
Copper	(Cu)	22	11- 18
Zinc	(Zn)	78	100- 190
Manganese	(Mn)	0.11	0.10- 0.50
Chromium	(Cr)	0.41	0.43- 0.80
Vanadium	(V)	0.054	0.030- 0.10
Molybdenum	(Mo)	0.11	0.050- 0.13
Boron	(B)	0.62	0.70- 5.0
Iodine	(I)	0.73	0.25- 1.3
Lithium	(Li)	< 0.004	0.007- 0.020
Phosphorus	(P)	171	150- 220
Selenium	(Se)	0.65	0.70- 1.1
Strontium	(Sr)	0.09	0.16- 1.0
Sulfur	(S)	51500	45500- 53000
Cobalt	(Co)	0.009	0.004- 0.020
Iron	(Fe)	8.5	7.0- 16
Germanium	(Ge)	0.031	0.030- 0.040
Rubidium	(Rb)	0.022	0.016- 0.18
Zirconium	(Zr)	0.13	0.040- 1.0



This child's essential mineral levels are mostly all below the 50% line (to the left) of the white column.

Restoring this child's zinc and iron levels saw an improvement in the child's appetite, sleep, energy and weight.

The Hair Tissue Mineral Analysis test, when interpreted by an experienced practitioner can be a very valuable tool in diagnosing underlying health issues.