

HAIR ELEMENTS



PATIENT: Number 519
SEX: Male
AGE: 40
LOCATION: Ann Arbor, Michigan, USA

POTENTIALLY TOXIC ELEMENTS

TOXIC ELEMENTS	RESULT $\mu\text{g/g}$	REFERENCE RANGE	PERCENTILE	
			68 th	95 th
Aluminum	3.5	< 7.0		
Antimony	0.011	< 0.066		
Arsenic	0.075	< 0.080		
Barium	0.18	< 1.0		
Beryllium	< 0.01	< 0.020		
Bismuth	< 0.002	< 2.0		
Cadmium	0.011	< 0.065		
Lead	0.11	< 0.80		
Mercury	0.48	< 0.80		
Platinum	< 0.003	< 0.005		
Thallium	< 0.001	< 0.002		
Thorium	< 0.001	< 0.002		
Uranium	0.019	< 0.060		
Nickel	0.04	< 0.20		
Silver	< 0.006	< 0.08		
Tin	0.02	< 0.30		
Titanium	0.32	< 0.60		
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	396	200- 750					
Magnesium	22	25- 75					
Sodium	11	20- 180					
Potassium	7	9- 80					
Copper	12	11- 30					
Zinc	190	130- 200					
Manganese	0.10	0.08- 0.50					
Chromium	0.37	0.40- 0.70					
Vanadium	0.026	0.018- 0.065					
Molybdenum	0.029	0.025- 0.060					
Boron	0.90	0.40- 3.0					
Iodine	0.24	0.25- 1.8					
Lithium	< 0.004	0.007- 0.020					
Phosphorus	234	150- 220					
Selenium	0.90	0.70- 1.2					
Strontium	0.62	0.30- 3.5					
Sulfur	47900	44000- 50000					
Cobalt	0.009	0.004- 0.020					
Iron	6.9	7.0- 16					
Germanium	0.030	0.030- 0.040					
Rubidium	0.008	0.011- 0.12					
Zirconium	0.015	0.020- 0.44					

SPECIMEN DATA

COMMENTS:
 Date Collected: 6/24/2011 Sample Size: 0.205 g
 Date Received: 6/27/2011 Sample Type: Head
 Date Completed: 6/28/2011 Hair Color: Brown
 Client Reference: Treatment:
 Methodology: ICP-MS Shampoo: 365 Unscented

RATIOS

ELEMENTS	RATIOS	EXPECTED RANGE
Ca/Mg	18	4- 30
Ca/P	1.69	0.8- 8
Na/K	1.57	0.5- 10
Zn/Cu	15.8	4- 20
Zn/Cd	> 999	> 800



PATIENT: Number 519 Follow-up
 SEX: Male
 AGE: 40

Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 th 95 th
Aluminum (Al)	3.0	< 7.0	
Antimony (Sb)	< 0.01	< 0.066	
Arsenic (As)	0.018	< 0.080	
Barium (Ba)	0.52	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.004	< 2.0	
Cadmium (Cd)	0.016	< 0.065	
Lead (Pb)	0.05	< 0.80	
Mercury (Hg)	0.13	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.046	< 0.060	
Nickel (Ni)	0.07	< 0.20	
Silver (Ag)	0.01	< 0.08	
Tin (Sn)	0.03	< 0.30	
Titanium (Ti)	0.23	< 0.60	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS					
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 th 16 th 50 th 84 th 97.5 th		
Calcium (Ca)	841	200- 750			
Magnesium (Mg)	140	25- 75			
Sodium (Na)	28	20- 180			
Potassium (K)	5	9- 80			
Copper (Cu)	13	11- 30			
Zinc (Zn)	190	130- 200			
Manganese (Mn)	0.22	0.08- 0.50			
Chromium (Cr)	0.37	0.40- 0.70			
Vanadium (V)	0.013	0.018- 0.065			
Molybdenum (Mo)	0.079	0.025- 0.060			
Boron (B)	0.63	0.40- 3.0			
Iodine (I)	0.24	0.25- 1.8			
Lithium (Li)	0.008	0.007- 0.020			
Phosphorus (P)	196	150- 220			
Selenium (Se)	0.80	0.70- 1.2			
Strontium (Sr)	2.6	0.30- 3.5			
Sulfur (S)	46600	44000- 50000			
Cobalt (Co)	0.024	0.004- 0.020			
Iron (Fe)	12	7.0- 16			
Germanium (Ge)	0.037	0.030- 0.040			
Rubidium (Rb)	0.005	0.011- 0.12			
Zirconium (Zr)	0.009	0.020- 0.44			

SPECIMEN DATA		RATIOS	
COMMENTS:		ELEMENTS	RATIOS
Date Collected: 5/7/2012	Sample Size: 0.198 g	Ca/Mg	6.01
Date Received: 5/9/2012	Sample Type: Head	Ca/P	4.29
Date Completed: 5/10/2012	Hair Color: Brown	Na/K	5.6
Methodology: ICP/MS	Treatment:	Zn/Cu	14.6
	Shampoo: 365 Unscented	Zn/Cd	> 999
		RANGE	
			4- 30
			0.8- 8
			0.5- 10
			4- 20
			> 800

Health history for hair test 519

1. Trouble focusing/concentrating, convergence insufficiency and related eye problems, brain fog (moderated by Paleo diet), poor reading speed and comprehension, had a very damaged gut but healed it. Had seasonal allergies but healed with allergy shots, diet and healed gut (most of the immune system is in the gut). Symptoms of high-functioning Asperger's Syndrome, never officially diagnosed, moderated with age (ratio of mercury to weight diminished as I grew?). Lacking ambition, disinclined to leave home but will do so without excessive prompting, not very social.
2. Wisdom teeth removed at 24 years. No fillings, ever.
3. None.
4. Unsure. Not much if at all.
5. The usual for 1970s, 6 years of allergy shots ending 5 years ago, flu shots for a few of the years I received allergy shots. Allergy shot vials were refrigerated, don't know if they added preservatives, shots didn't add noticeably to symptoms.
6. Jigsaw Complete for a few weeks prior to test which unintentionally gave me 75mg ALA twice a day, Jigsaw Health digestive enzymes and probiotics, Butyrex.
7. 40, 6'1", 185 pounds
8. Healing my gut and fixing my diet significantly moderated symptoms. Two months of 50mg ALA after this test plus the inappropriate 75mg ALA twice a day (corrected) has noticeably improved my eyes, I don't have to lean forward to see my computer screen clearly anymore. I believe that mercury and/or arsenic caused my convergence insufficiency as described in AI and caused my vision to deteriorate from 20/15 after LASIK to 20/30 to 20/40 in successive years until being arrested and partially reversed by vision therapy for CI. Large pupils are an indicator that LASIK is inappropriate, likely that surgeons don't understand that mercury causes enlarged pupils? Improvements from vision therapy didn't stick, likely due to undiagnosed metals. Suspect primary mercury poisoning from broken thermometer at 3 or 4 years, mercury spill cleaned up with vacuum cleaner creating mercury vapor? Suspect arsenic not until 14 years when moved to new city and home 2 blocks off highway, eye and academic problems began a year later. Additional arsenic from probable CCA lumber deck at new construction home, lived there 13 years until 2 years ago. Aging remarkably slowly, as does mother and brother.
9. Ann Arbor, Michigan, USA.

Health history for hair test 519 follow-up

1. Follow up to test #519 from 10 months ago. Symptoms have diminished, treatment for adrenal dysfunction is more effective now. Eyes are getting better. I think I'm done with chelation?
2. Wisdom teeth removed just after college, never had dental fillings of any kind.
3. None.
4. Possibly a couple of mercury fillings. Uncertain.
5. The usual for a 40yo American. A few flu shots several years ago. Allergy shots for 6 years, ending several years ago.
6. Magnesium, B100, cod liver oil, molybdenum, acetyl L carnitine, vitamin C, taurine, lithium orotate 5mg, selenium, probiotics, digestive enzymes, Butyrex.
7. 40. 6'1". 180 pounds.
8. Adrenal dysfunction appears to be my biggest remaining problem. Nutricology ACE was counterproductive. Recently started taking ashwagandha and rehmannia tinctures, and goji berry juice for stressed adrenals (high cortisol, high DHEA). Seems to be helping. Both mercury and adrenal dysfunction hurt the eyes, presenting as convergence insufficiency with poor eye tracking as mentioned in AI. See <http://naturalanxietytherapy.com/1430/adaptogens-the-swiss-army-knives-for-adrenal-fatigue/> for a description of those herbal remedies. Also following a mix of Paleo and Weston A. Price diet, thus the weight loss since the last test. Stronger too.
9. Ann Arbor, MI USA.