



PATIENT: Number 632  
 SEX: Male  
 AGE: 15

**Toxic & Essential Elements; Hair**

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	6.4	< 8.0	
Antimony (Sb)	0.015	< 0.066	
Arsenic (As)	0.029	< 0.080	
Barium (Ba)	1.5	< 0.75	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.007	< 2.0	
Cadmium (Cd)	0.013	< 0.060	
Lead (Pb)	0.09	< 1.0	
Mercury (Hg)	0.18	< 0.40	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.011	< 0.060	
Nickel (Ni)	0.14	< 0.20	
Silver (Ag)	0.15	< 0.10	
Tin (Sn)	0.14	< 0.30	
Titanium (Ti)	0.40	< 0.60	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 <sup>th</sup> 16 <sup>th</sup> 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup>
Calcium (Ca)	1250	200- 700	
Magnesium (Mg)	130	18- 70	
Sodium (Na)	170	20- 200	
Potassium (K)	48	9- 80	
Copper (Cu)	36	11- 32	
Zinc (Zn)	190	150- 230	
Manganese (Mn)	0.34	0.08- 0.50	
Chromium (Cr)	0.50	0.40- 0.70	
Vanadium (V)	0.021	0.020- 0.075	
Molybdenum (Mo)	0.028	0.030- 0.060	
Boron (B)	4.3	0.34- 3.0	
Iodine (I)	3.0	0.25- 1.3	
Lithium (Li)	0.006	0.007- 0.020	
Phosphorus (P)	167	150- 220	
Selenium (Se)	1.5	0.70- 1.2	
Strontium (Sr)	1.3	0.30- 3.2	
Sulfur (S)	44900	44000- 50000	
Cobalt (Co)	0.033	0.004- 0.020	
Iron (Fe)	9.9	7.0- 16	
Germanium (Ge)	0.028	0.030- 0.040	
Rubidium (Rb)	0.043	0.009- 0.090	
Zirconium (Zr)	0.76	0.047- 0.70	

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		<b>ELEMENTS</b>	<b>RATIOS</b>
Date Collected: 6/24/2012		Ca/Mg	9.62
Date Received: 6/27/2012		Ca/P	7.49
Date Completed: 6/30/2012		Na/K	3.54
Methodology: ICP/MS		Zn/Cu	5.28
Sample Size: 0.195 g	Sample Type: Head	Zn/Cd	> 999
Hair Color: Brown	Treatment:		
Shampoo: Pantene			
		<b>RANGE</b>	
		4- 30	
		0.8- 8	
		0.5- 10	
		4- 20	
		> 800	



SEX: Male  
AGE: 17

**Toxic & Essential Elements; Hair**

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	2.7	< 8.0	
Antimony (Sb)	0.017	< 0.066	
Arsenic (As)	0.017	< 0.080	
Barium (Ba)	1.4	< 0.75	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	0.042	< 2.0	
Cadmium (Cd)	< 0.009	< 0.060	
Lead (Pb)	0.11	< 1.0	
Mercury (Hg)	0.03	< 0.40	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.015	< 0.060	
Nickel (Ni)	0.23	< 0.20	
Silver (Ag)	0.13	< 0.10	
Tin (Sn)	0.08	< 0.30	
Titanium (Ti)	0.60	< 0.60	
Total Toxic Representation			

ESSENTIAL AND OTHER ELEMENTS					
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 2.5 <sup>th</sup> 16 <sup>th</sup> 50 <sup>th</sup> 84 <sup>th</sup> 97.5 <sup>th</sup>		
Calcium (Ca)	834	200- 700			
Magnesium (Mg)	87	18- 70			
Sodium (Na)	230	20- 200			
Potassium (K)	42	9- 80			
Copper (Cu)	59	11- 32			
Zinc (Zn)	180	150- 230			
Manganese (Mn)	0.22	0.08- 0.50			
Chromium (Cr)	0.31	0.40- 0.70			
Vanadium (V)	0.013	0.020- 0.075			
Molybdenum (Mo)	0.026	0.030- 0.060			
Boron (B)	6.5	0.34- 3.0			
Iodine (I)	0.58	0.25- 1.3			
Lithium (Li)	0.006	0.007- 0.020			
Phosphorus (P)	151	150- 220			
Selenium (Se)	0.82	0.70- 1.2			
Strontium (Sr)	0.84	0.30- 3.2			
Sulfur (S)	45100	44000- 50000			
Cobalt (Co)	0.046	0.004- 0.020			
Iron (Fe)	6.5	7.0- 16			
Germanium (Ge)	0.024	0.030- 0.040			
Rubidium (Rb)	0.037	0.009- 0.090			
Zirconium (Zr)	0.26	0.047- 0.70			

SPECIMEN DATA		RATIOS		
<b>COMMENTS:</b>		ELEMENTS	RATIOS	RANGE
Date Collected: 08/10/2014	Sample Size: 0.202 g	Ca/Mg	9.59	4- 30
Date Received: 08/29/2014	Sample Type: Head	Ca/P	5.52	0.8- 8
Date Completed: 09/02/2014	Hair Color: Brown	Na/K	5.48	0.5- 10
Methodology: ICP/MS	Treatment:	Zn/Cu	3.05	4- 20
	Shampoo: Pantene	Zn/Cd	> 999	> 800

## **Health history for hair test 632 follow-up September 2014**

**What are your current symptoms and health history?** Have completed 112 rounds of frequent low dose chelation with 250mg ALA and 50mg DMSA with NO difference on or off round. He's taking all the recommended supplements on and off round. Most original symptoms have reduced or resolved (see hair test 632). New and residual symptoms are: continued (but reduced) mild fatigue throughout the day regardless how much sleep, sometimes spastic colon, infrequent bouts of asthma, no hunger sensation, difficulty gaining weight, sometimes mumbled speech (chelating seems to help), dark circles under eyes but much less than before.

**Dental history (Wisdom teeth removed and when? Any other extractions. First root canal placed? Braces? First amalgam etc...)** Braces at ages 9-10 and again at ages 14-16.

**What dental work do you currently have in place? What part of the dental clean-up have you completed?** Retainer worn only at night. Never had amalgam or other fillings.

**What dentistry did your mother have at any time before or during pregnancy? 8 amalgam fillings during pregnancy.** Braces as a teen. Wisdom teeth extracted early 20s (10 years prior to pregnancy).

**What vaccinations have you had and when (including flu and especially travel shots)?** Fully vax'd until age 12. Several flu shots up to age 12.

**Supplements and medications (including dosages) taken at time of hair test, or for the 3-6 months before the sample was taken?** Vitamins A 25K iu, B1 250mg, C 1000mg twice/day, D 10k iu, E 400iu, K2 100mcg, magnesium 170mg twice/day, ACE 500mg (Essential Therapeutics brand) morning, flax oil 1000mg morning and bed, Keflex (for acne), biotin 10,000mcg, zn/cp combo tab 30mg twice/day, taurine 500mg twice/day, glutamine 500mg, oil of oregano (1 softgel twice/day), probiotics (at least 2 hours separate from Keflex and OoO), pine bark extract (for asthma)

**What is your age, height and weight?** Age 17, 6'1", 165 lbs.

**Other information you feel may be relevant?** Previous hair test results #632. Dx'd with scoliosis in 2013. Took a 6 month break from chelating February-June 2014 because of persistent cough starting end of January. Doctor thought it might be whooping cough from sound and ferocity, but testing was about 8 weeks after onset and result was negative. Three non-consecutive rounds of Prednisone (5 days each) finally eliminated the cough after 5 months.

**What is your location – city & country (so that we can learn where certain toxins are more prevalent).** Indianapolis, Indiana USA

## Health history for hair test 632 - (2012)

What are your current symptoms and health history?

**He is neuro-typical but chronically tired, lethargic, has asthma, allergies, is thin, and was dx'd as hypothyroid a few years ago by an alternative MD. Same MD also dx'd him with zinc deficiency and vit D deficiency. He has multiple food allergies/sensitivities based on a food panel blood test and is also sensitive to chemicals (smells). Elimination of these foods/taking Trienza enzymes with food, adding nutritional supplements, and chelating have all helped tremendously, but he has a way to go.**

**Prior to these interventions, he was one of the shortest in his class - yet mom is 5'9" and dad is 6'2". He grew only minimally for years. After these interventions, his growing seems to have caught up with his peers.**

**At age 2.5 he was dx'd with asthma as well as Developmental Apraxia of Speech and was in speech therapy for 9 years. Speaks fine now with no noticeable speech problem. Around the same time he was also dx'd with vestibular and mild sensory issues. Eye contact was a struggle, but now is pretty good.**

Dental history (Wisdom teeth removed and when? Any other extractions. First root canal placed? Braces? First amalgam etc...)

**No extractions, root canals, fillings, etc. Has braces currently, and had braces initially 6 years ago to correct an underbite.**

What dental work do you currently have in place? What part of the dental clean-up have you completed?

**Just the braces.**

What dentistry did your mother have at any time before or during pregnancy?

**Mom had 8 amalgams while pregnant (age 31-32 at the time). Had wisdom teeth extracted at age 23. No root canals. Braces at age 14.**

What vaccinations have you had and when (including flu and especially travel shots)?

**He has had all the recommended vaccinations up till age 12 (he is 15 now). Had several years of flu vaccinations. No travel shots.**

Supplements and medications (including dosages) taken at time of hair test, or for the 3-6 months before the sample was taken?

**Morning: Ca/Mg 166mg, milk thistle 175mg, vit e 400iu, carnitine 500mg, taurine 500mg, coQ10 50mg, pantothenic acid 500mg, adrenal rebuilder 2700mg, P5P 50mg, methylfolate 1000mcg, chromium picolinate 500mcg, flax oil 1000mg, olive leaf extract 500mg, biotin 30,000mcg, iodine 25mg, selenium 100mcg, zinc 30mg/copper 300mcg, Oil of oregano (oreganol) several drops, glutamine 500mg, vitamin c complex 1000mg, vit b12 5000mcg (sublingual)**

**Mid-morning: tyrosine 500mg, iodine 25mg, selenium 100mcg, zinc 5mg, copper 2mg**

**Lunch: adrenal rebuilder 1800mg, chromium picolinate 500mcg, biotin 20,000mcg,**

**Mid-day:** adrenal builder 1800mg, ca 66mg/mg 100mg, glucosamine-sulfate 750mg, probiotic 50 billion, biotin 20,000mcg, vit b12 5000mcg (as needed)

**Bed-time:** ca/mg 166mg, vit c complex 1000mg, vit d 5000mg, vit a 10,000iu, vit k2 100mcg, niacinamide 500mg, Thyroid USP 2 grains, glutamine 500mg, milk thistle 175mg, olive leaf extract 500mg, oil of oregano several drops, zinc 30mg/copper 300mcg, arginine 1250mg/orthinine 750mg, flax oil 1000mg

We had completed 50 rounds of Andy Cutler chelation protocol using ALA and DMSA at time of hair test. He was up to 100 mg ALA and 37.5 mg DMSA at time of test.

He takes Trienza enzymes with any foods containing gluten and/or casein.

We did the Humaworm parasite protocol April-May.

What is your age, height and weight?

He is 15, 5'10 1/2" and weighs 142.

Other information you feel may be relevant?

He gets random nose bleeds and has some sore joints (right elbow). He can't take fish oil without getting a nose bleed, so he takes flax oil. Evening primrose oil also seems to cause nosebleeds. He takes chromium because he sometimes is dizzy when standing. Olive leaf extract seems to help with a more pleasant attitude.

I forgot to mention that we took about a 3 week break in chelating prior to the hair test, but when I clipped the hair we were chelating, if that makes any difference.

Also, he has been chronically tired, lethargic, and somewhat "sickly" since he was really small. He never seemed to outgrow naps. Our then pediatrician referred us to the local children's hospital (Riley Hospital for Children) and they treated him for asthma for years and did several sleep studies all with the dx of "Idiopathic Hypersomnolence." The Louisville Sleep Research Center also tested him and confirmed the results from Riley. They prescribed Ritalin to try to give him more energy. I did not give it to him but continued searching for answers. It seemed the older he got, the more tired he was. Riley also tested his adrenal function and deemed it "normal" around age 10. Around the same time, blood tests did show slightly elevated TSH and cholesterol, but again these were deemed "normal" because there were no reference ranges for children.

I am thankful this long journey led us to the real cause of his fatigue/allergies and it can be helped!

What is your location – city & country (so that we can learn where certain toxins are more prevalent).

**Indianapolis, USA**