

PATIENT: Number 777 SEX: Female AGE: 42

## Toxic & Essential Elements; Hair

		TOXIC N	IETALS			
		RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>		5 <sup>th</sup>
Aluminum	(AI)	5.9	< 7.0			
Antimony	(Sb)	< 0.01	< 0.050			
Arsenic	(As)	0.044	< 0.060			
Barium	(Ba)	0.38	< 2.0	-		
Beryllium	(Be)	< 0.01	< 0.020			
Bismuth	(Bi)	0.013	< 2.0	•		
Cadmium	(Cd)	< 0.009	< 0.050			
Lead	(Pb)	0.14	< 0.60	-		
Mercury	(Hg)	0.80	< 0.80			
Platinum	(Pt)	< 0.003	< 0.005			
Thallium	(TI)	0.001	< 0.002	•		
Thorium	(Th)	< 0.001	< 0.002			
Uranium	(U)	0.015	< 0.060			
Nickel	(Ni)	0.06	< 0.30			
Silver	(Ag)	0.04	< 0.15			
Tin	(Sn)	0.23	< 0.30			
Titanium	(Ti)	0.20	< 0.70			
Total Toxic Representation	(/					
		ESSENTIAL AND C				
		RESULT	REFERENCE	1	PERCENTILE	
		μg/g	INTERVAL	2.5 <sup>th</sup> 16 <sup>th</sup>		84 <sup>th</sup> 97.5 <sup>th</sup>
Calcium	(Ca)	349	300- 1200			
Magnesium	(Mg)	64	35- 120		-	
Sodium	(Na)	72	20- 250		•	
Potassium	(K)	130	8- 75			
Copper	(Cu)	15	11- 37		-	
Zinc	(Zn)	250	140- 220			
Manganese	(Mn)	0.09	0.08- 0.60			
Chromium	(Cr)	0.40	0.40- 0.65			
Vanadium	<b>`</b> ` ` ` `	0110				
	(V)	0.050				
	(V) (Mo)	0.050	0.018- 0.065			
Molybdenum	(Mo)	0.031	0.018- 0.065 0.020- 0.050		•	
Molybdenum Boron	(Mo) (B)	0.031 0.90	0.018- 0.065 0.020- 0.050 0.25- 1.5			
Molybdenum Boron Iodine	(Mo) (B) (I)	0.031 0.90 3.0	0.018-0.065 0.020-0.050 0.25-1.5 0.25-1.8			
Molybdenum Boron Iodine Lithium	(Mo) (B) (I) (Li)	0.031 0.90 3.0 0.018	0.018- 0.065 0.020- 0.050 0.25- 1.5 0.25- 1.8 0.007- 0.020			
Molybdenum Boron Iodine Lithium Phosphorus	(Mo) (B) (I) (Li) (P)	0.031 0.90 3.0 0.018 133	0.018- 0.065 0.020- 0.050 0.25- 1.5 0.25- 1.8 0.007- 0.020 150- 220			
Molybdenum Boron Iodine Lithium Phosphorus Selenium	(Mo) (B) (I) (Li) (P) (Se)	0.031 0.90 3.0 0.018 133 0.74	0.018-0.065 0.020-0.050 0.25-1.5 0.25-1.8 0.007-0.020 150-220 0.55-1.1			
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium	(Mo) (B) (I) (Li) (P) (Se) (Sr)	0.031 0.90 3.0 0.018 133 0.74 1.5	$\begin{array}{c} 0.018-\ 0.065\\ 0.020-\ 0.050\\ 0.25-\ 1.5\\ 0.25-\ 1.8\\ 0.007-\ 0.020\\ 150-\ 220\\ 0.55-\ 1.1\\ 0.50-\ 7.6\end{array}$			
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium Sulfur	(Mo) (B) (l) (Li) (P) (Se) (Sr) (S)	0.031 0.90 3.0 0.018 133 0.74 1.5 50300	$\begin{array}{c} 0.018-\ 0.065\\ 0.020-\ 0.050\\ 0.25-\ 1.5\\ 0.25-\ 1.8\\ 0.007-\ 0.020\\ 150-\ 220\\ 0.55-\ 1.1\\ 0.50-\ 7.6\\ 44000-\ 50000\\ \end{array}$			
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium Sulfur Cobalt	(Mo) (B) (l) (Li) (P) (Se) (Sr) (S) (Co)	0.031 0.90 3.0 0.018 133 0.74 1.5 50300 0.002	$\begin{array}{c} 0.018-\ 0.065\\ 0.020-\ 0.050\\ 0.25-\ 1.5\\ 0.25-\ 1.8\\ 0.007-\ 0.020\\ 150-\ 220\\ 0.55-\ 1.1\\ 0.50-\ 7.6\\ 44000-\ 50000\\ 0.005-\ 0.040\\ \end{array}$			
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium Sulfur Cobalt Iron	(Mo) (B) (I) (Li) (P) (Se) (Sr) (S) (Co) (Fe)	0.031 0.90 3.0 0.018 133 0.74 1.5 50300 0.002 5.5	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium Sulfur Cobalt Iron Germanium	(Mo) (B) (I) (Li) (P) (Se) (Sr) (S) (Co) (Fe) (Ge)	0.031 0.90 3.0 0.018 133 0.74 1.5 50300 0.002 5.5 0.030	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium Sulfur Cobalt Iron Germanium Rubidium	(Mo) (B) (I) (Li) (P) (Se) (Sr) (S) (Co) (Fe) (Ge) (Rb)	0.031 0.90 3.0 0.018 133 0.74 1.5 50300 0.002 5.5 0.030 0.20	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium Sulfur Cobalt Iron Germanium	(Mo) (B) (I) (Li) (P) (Se) (Sr) (S) (Co) (Fe) (Ge) (Rb) (Zr)	0.031 0.90 3.0 0.018 133 0.74 1.5 50300 0.002 5.5 0.030 0.20 < 0.007	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium Sulfur Cobalt Iron Germanium Rubidium Zirconium	(Mo) (B) (I) (Li) (P) (Se) (Sr) (S) (Co) (Fe) (Ge) (Rb)	0.031 0.90 3.0 0.018 133 0.74 1.5 50300 0.002 5.5 0.030 0.20 < 0.007	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		RATIOS	
Molybdenum Boron Iodine Lithium Phosphorus Selenium Strontium Sulfur Cobalt Iron Germanium Rubidium	(Mo) (B) (I) (Li) (P) (Se) (Sr) (S) (Co) (Fe) (Ge) (Rb) (Zr)	0.031 0.90 3.0 0.018 133 0.74 1.5 50300 0.002 5.5 0.030 0.20 < 0.007	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			<b>RANGE</b> 4- 30

Date Collected: 04/28/2013 Date Received: 05/07/2013 Date Completed: 05/09/2013 Methodology: ICP/MS Sample Size: 0.199 g Sample Type: Head Hair Color: Blond Treatment: Shampoo: Dr Rons

	RATIOS		
ELEMENTS	RATIOS	RANGE	
Ca/Mg	5.45	4- 30	
Ca/P	2.62	1- 12	
Na/K	0.554	0.5- 10	
Zn/Cu	16.7	4- 20	
Zn/Cd	> 999	> 800	

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# Toxic & Essential Elements; Hair

	TOXIC METALS					
		RESULT μg/g	REFERENCE INTERVAL	6	PERCENTILE 8 <sup>th</sup> 9	5 <sup>th</sup>
Aluminum	(AI)	1.2	< 12	-		
Antimony	(Sb)	< 0.01	< 0.060			
Arsenic	(As)	0.023	< 0.090	-		
Barium	(Ba)	0.54	< 2.0		••••••	
Beryllium	(Be)	< 0.01	< 0.020		••••••	
Bismuth	(Bi)	0.015	< 2.0	•		
Cadmium	(Cd)	0.014	< 0.050	-		
Lead	(Pb)	0.15	< 1.0	-	••••••	
Mercury	(Hg)	0.34	< 0.80			
Platinum	(Pt)	< 0.003	< 0.005			
Thallium	(TI)	< 0.001	< 0.002			
Thorium	(Th)	< 0.001	< 0.002			
Uranium	(U)	0.013	< 0.060	-		
Nickel	(Ni)	0.13	< 0.40			
Silver	(Aq)	0.02	< 0.10	-	••••••	
Tin	(Sn)	0.06	< 0.30	-		
Titanium	(Ti)	0.43	< 1.3			
Total Toxic Representati	ion					
·		ESSENTIAL AND C	THER ELEMENTS			
		RESULT	REFERENCE		PERCENTILE	
		μg/g	INTERVAL	2.5 <sup>th</sup> 16 <sup>th</sup>	50 <sup>th</sup>	84 <sup>th</sup> 97.5 <sup>th</sup>
Calcium	(Ca)	505	475- 1500			
Magnesium	(Mg)	33	45- 180			
Sodium	(Na)	11	80- 450			
Potassium	(K)	5	28- 160			
Copper	(Cu)	8.5	11- 30			
Zinc	(Zn)	190	130- 200			
Manganese	(Mn)	0.21	0.15- 0.65			
Chromium	(Cr)	0.34	0.40- 0.65			
Vanadium	(V)	0.024	0.018- 0.065			
Molybdenum	(Mo)	0.060	0.040- 0.10		•	
Boron	(B)	0.89	0.40- 4.0			
lodine	(I)	1.0	0.25- 1.8			
Lithium	(Li)	0.043	0.008- 0.030			<b></b>
Phosphorus	(P)	194	250- 500			
Selenium	(Se)	1.1	0.80- 1.3			
Strontium	(Sr)	1.2	1.0- 8.0			
Sulfur	(S)	47100	42000- 48000			
Cobalt	(Co)	0.038	0.006- 0.035			
Iron	(Fe)	6.1	7.0- 16			
Germanium	(Ge)	0.028	0.030- 0.040			
Rubidium	(Rb)	0.005	0.030- 0.25			
Zine e miume		0.040	0.040- 1.0			
Zirconium	(Zr)	0.040	0.040- 1.0			
COMMENTS:	(Zr) SPECIMEN		0.040- 1.0		RATIOS	

SPECIMEN DATA			RATIOS		
COMMENTS:		ELEMENTS	RATIOS	RANGE	
		Ca/Mg	15.3	4- 30	
Date Collected: 02/01/2014	Sample Size: 0.204 g	Ca/P	2.6	1- 12	
Date Received: 02/08/2014	Sample Type: Pubic	Na/K	2.2	0.5- 10	
Date Completed: 02/12/2014	Hair Color: Blond	Zn/Cu	22.4	4- 20	
Methodology: ICP/MS	Treatment:	Zn/Cd	> 999	> 800	
	Shampoo: Castille				

### Health history for hair test 777

#### 1) What are your current symptoms and health history?

Current symptoms include:

-peripheral neuropathy, both stocking and glove as well as left sided numbness that comes and goes (left arm, left leg, facial numbress) -fatigue (for a long, long time) -very painful and heavy periods -irritable bowel, though I can largely control this via diet and massive amounts of probiotics -brain fog -headaches -nausea -worsening vision (could be age) -significantly reduced endurance (legs hurt after climbing stairs some days) -chronic insomnia (can't fall asleep, can't stay asleep, can't get back to sleep) -chronic sinus problems (big infections about 1x per year, drip and congestion most of the rest of the year) -mild depression -moderate anxiety, occasional panic attacks (racing heart, sweats, etc) -significantly worsening ST memory

-have many thyroid cysts, including a large one (~2cm). thyroid tests (TSH, T3) have always been 'within range', though.

-very low DHEA (and all the symptoms that come with that)

-intolerant to gluten, dairy.

Health history:

-ovarian cysts, dx age 18

-endometriosis, dx age 17

-iritis (autoimmune eye condition), during 20s

-irritable bowel, since a teenager

-alternating depression and anxiety, sometimes guite significant, starting in teens -cervical lesions (pre-cancerous)

-always guite tired (can't wake in AM), often cold as adult

-took birth control pills since was about 18 to control menstrual pain until age 34. -started going significantly gray in early 20s.

-tons of ear infections as a child (burst ear drum, etc), with lots of antibiotics for them.

#### 2) Dental history (wisdom teeth removed? First root canal placed? Braces? First amalgam etc...)

First and only dental amalgam age 16. Replaced with composite (incorrectly) at age 40.

Wisdom teeth removed at age 22 (all 4), under general anaesthetic.

3) What dental work do you currently have in place? What part of the dental cleanup have you completed?

I have 2 composite fillings. My only amalgam was removed by a conventional dentist 2.5 years ago.

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

Mouth full of amalgam. Not sure how many, but probably in the order of 10-15.

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

Fully vaccinated as a child in the 70's. I don't have full records, but this would have included polio, MMR, DPT, etc.

Have had travel shots as an adult, starting in 2003. Yellow fever, hepatitis A & B, and typhoid.

Flu shots for about 4 years starting in 2005.

Tetanus booster 10 years ago & DTAP about 2 years ago.

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

Vit C 1000mg/day B complex (mixed dosages) Vit E 500iu/day probiotics (lots) iodine 3mg/day coQ10 100mg/day alpha lipoic acid 100mg/day (ugh!) NAC 200mg/day astaxanthin 4mg/day vit D3 2000-4000iu/day vit K2 5mg/day methyl B12 1000mcg/day Magnesium, about 300mg/day Fish oils daily, including 2 capsules cod liver oil and 2 capsules of salmon oil (~220DHA & 240EPA)

#### 7) Other information you feel may be relevant?

I lived in a big old house growing up for about 10 years. Definitely would have had lead in the water and had other nasties like asbestos insulation. I have not felt well for a very long time, really since my late teens. I have felt some improvements with diet and supplementation in recent years.

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

Born and grew up in midwest, US. Have lived mostly on the East coast of the US, including New York, Philadelphia and DC. Have also lived in Australia as a child for about 10 years.