



SEX: Male  
AGE: 40

## Toxic & Essential Elements; Hair

TOXIC METALS			
	RESULT µg/g	REFERENCE INTERVAL	PERCENTILE 68 <sup>th</sup> 95 <sup>th</sup>
Aluminum (Al)	1.5	< 7.0	
Antimony (Sb)	< 0.01	< 0.066	
Arsenic (As)	0.026	< 0.080	
Barium (Ba)	0.51	< 1.0	
Beryllium (Be)	< 0.01	< 0.020	
Bismuth (Bi)	< 0.002	< 2.0	
Cadmium (Cd)	< 0.009	< 0.065	
Lead (Pb)	0.15	< 0.80	
Mercury (Hg)	0.70	< 0.80	
Platinum (Pt)	< 0.003	< 0.005	
Thallium (Tl)	< 0.001	< 0.002	
Thorium (Th)	< 0.001	< 0.002	
Uranium (U)	0.001	< 0.060	
Nickel (Ni)	0.09	< 0.20	
Silver (Ag)	0.04	< 0.08	
Tin (Sn)	0.07	< 0.30	
Titanium (Ti)	0.51	< 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)	307	200- 750			
Magnesium (Mg)	17	25- 75			
Sodium (Na)	14	20- 180			
Potassium (K)	3	9- 80			
Copper (Cu)	17	11- 30			
Zinc (Zn)	190	130- 200			
Manganese (Mn)	0.06	0.08- 0.50			
Chromium (Cr)	0.30	0.40- 0.70			
Vanadium (V)	0.023	0.018- 0.065			
Molybdenum (Mo)	0.14	0.025- 0.060			
Boron (B)	0.39	0.40- 3.0			
Iodine (I)	0.14	0.25- 1.8			
Lithium (Li)	< 0.004	0.007- 0.020			
Phosphorus (P)	146	150- 220			
Selenium (Se)	1.3	0.70- 1.2			
Strontium (Sr)	0.49	0.30- 3.5			
Sulfur (S)	48300	44000- 50000			
Cobalt (Co)	0.004	0.004- 0.020			
Iron (Fe)	5.9	7.0- 16			
Germanium (Ge)	0.032	0.030- 0.040			
Rubidium (Rb)	0.004	0.011- 0.12			
Zirconium (Zr)	0.012	0.020- 0.44			

SPECIMEN DATA		RATIOS	
<b>COMMENTS:</b>		<b>ELEMENTS</b>	<b>RATIOS</b>
Date Collected:	Sample Size: 0.199 g	Ca/Mg	18.1
Date Received: 01/08/2015	Sample Type: Head	Ca/P	2.1
Date Completed: 01/10/2015	Hair Color:	Na/K	4.67
Methodology: ICP/MS	Treatment:	Zn/Cu	11.2
	Shampoo:	Zn/Cd	> 999
		<b>RANGE</b>	
			4- 30
			0.8- 8
			0.5- 10
			4- 20
			> 800

## Health history for hair test 1119

### 1. Current symptoms/health history

- Chronic Fatigue Syndrome (on and off since 1995). Started in February/March 1995. Felt physically drained for a very long period. Tiredness was the main physical symptom, although I experienced some mental symptoms as well (problems with concentration and cognitive impairment, difficulties in motivating myself, flat mood). The condition gradually improved, although I continued to feel fatigued easily.
- Mild Depression (since 1997). Towards the end of my time at university (and as the fatigue started to lift) I felt very emotionally unsettled and flat. My doctor thought I was mildly depressed and prescribed Prozac, which I took for 3-4 months. I stopped taking it because it didn't seem to be having an effect.
- Ongoing headache (from 2000). I woke up one Sunday morning with a migraine in my left temple. The pain dissipated over the next day or so, but I was left with a mild throbbing tension/tightness above my left eye which has never fully gone away. In 2001 I had an operation to drain one of my sinuses and widen the aperture through the skull, but this didn't cure the headaches. I'd previously had recurring migraines as a child, mainly focussed on my left temple.
- Chest/back pains (from 2000/1). Initially I experienced periods of stiffness in my neck and lower back (I wouldn't be able to straighten my neck upright, or go from a sitting to a standing position). I also experienced chest pains around this time – stabbing pains slightly to the left of my sternum. Medical investigation didn't reveal any heart problems, and I was subsequently told by a physiotherapist that several of my thoracic vertebrae had locked together, referring nerve pain round to my chest. In 2013 I had an MRI of my spine which revealed numerous bulging and herniated discs. The rheumatologist told me it was extremely unusual to see so many back problems in someone my age, but couldn't offer any suggestions as to why or how they had come about.
- Ongoing gastro-intestinal issues (from 2002). I experienced painful cramps in my stomach (just below ribcage) and my colon (belt-level), both on my left side. These pains have also lessened, but I continue to get cramps, bloating, constipation and very occasional episodes of diarrhoea.
- Major Depression (from 2003). I started to feel anxious and unhappy in summer 2002. I was frequently tearful without knowing why and I didn't want to have any contact with my friends. I found it increasingly difficult to think, concentrate or make decisions, and in May 2003 I was put on anti-depressants (Venlafaxine) and referred for CBT. This seemed to help at first, but from October 2003 I started to deteriorate again. In July/August 2004 I had a major depressive episode and was signed off work for a number of months. I returned to work part-time and gradually worked my way back to full-time employment. For a short period (6 months) in 2006/7 I was put on Citalopram, but this was no more effective than the Venlafaxine so I didn't continue with it. I've struggled with periods of low mood and emotional volatility ever since. I've also struggled with anhedonia and a loss of motivation and general interest constantly since 2003/4. I have brain fog and find thinking noticeably harder than I used to (ie before 2002/3).
- Slow recovery from soft tissue injuries (2010). I injured my knee playing squash in late 2009/early 2010. It took until mid-2011 for this to be diagnosed as an injury to my iliotibial band. Despite extensive physio it hasn't fully healed. In late 2012 I had a fall on a dry ski slope, and pulled some of the muscles below my rib cage on my left hand side. Again, despite extensive physio this hasn't fully healed several years later.

- Chronic Fatigue Syndrome again (2012). At the start of January 2012 I went skiing for a week – at the time I'd been eating healthily, exercising, taking supplements, and was in a better place mentally than I had been for a long time. Towards the end of the 8 days skiing I started to feel fatigued, but assumed this was just the cumulative toll of all the exercise I was getting. When I returned to the UK the tiredness didn't lift and my lower legs (knees and below) ached constantly. My GP initially suspected a thyroid problem (Subclinical hypothyroidism) based on elevated TSH levels in a blood test – but this turned out to be a rogue result when the blood tests were repeated a few months later. In the latter half of 2012 these symptoms improved, but didn't entirely go away. At the beginning of January 2013 I went on another (shorter) skiing holiday – and the fatigue and leg aches reappeared upon my return to the UK. I've had muscular aches and pains ever since, along with what I've told is restless leg syndrome – a compulsive need to move my legs when sitting/lying down.
- Hypermobility (diagnosed 2013). While seeing a physiotherapist for my ongoing back problems (this was before my MRI scan revealed the extent of the problems) it was suggested to me that I was probably hypermobile, and this may have a bearing on (or even be a contributory cause to) my other health issues. This was subsequently confirmed by a rheumatologist.
- Neurological issues? (suspected 2013). The rheumatologist who diagnosed my hypermobility noticed on examining me that I had reduced reflexes down my right hand side and absent ankle reflexes in both feet. After the MRI of my spine was performed I was told that my back problems wouldn't cause these issues. I attempted to get my GP to refer me to a neurologist for further investigations, but he was unwilling to do so. A physiotherapist has subsequently told me that I have neuromuscular issues and imbalances in my upper back and shoulders, which are probably contributing to my chest/back pains and my headaches.
- Other ongoing symptoms; Recurring sore throats and sinusitis. Poor co-ordination and loss of balance. Frequent ankle sprains. Cracking joints. Swollen lymph nodes.

## 2. Dental history

All 4 wisdom teeth were removed when I was about 14/5. I had four amalgam fillings, all placed when I was a teenager. A couple of years ago I had a dental bridge fitted.

## 3. Current dental work

I still have the bridge, but all my amalgams were removed earlier this year (the hair test was carried out at the start of this year, while the amalgams were still in place).

## 4. Mother's dental history

My mother had lots of amalgam fillings in place at the time she gave birth to me. No idea how many - seven or eight at a guess.

## 5. Vaccinations

I've never had any travel shots. I will have had the usual childhood vaccines (diphtheria, tetanus, whooping cough, polio, BCG, etc) but I don't remember having had any since.

## 6. Supplements when hair test was taken

Folate (1mg), Acetyl L-Carnitine (2g), Potassium (99mg), Thorne Pic-Mins, Molybdenum (1000ug), Vitamin D (2000iu), Vitamin C (3000mg), Kelp (1200mg), Glutathione (400mg), Co-Q10 (200mg),

Omega 3/6/9 (2400mg), Pure Encapsulations B Complex, Zinc (150mg), Magnesium (300mg), 5-HTP (100mg), TMG (500mg), B6 (50mg), Methylcobalamin (2.5mg), Dibenzozide (2mg), Calcium (300mg), Taurine (500mg), Ox Bile (500mg). All daily.

7. **Age – 40. Weight – 79kg. Height – 185cm**

8. **Other information**

I was diagnosed with a copper toxicity/deficiency problem in early 2014 (hence all the supplements I was taking at the time of the hair test). My ceruloplasmin level is low/borderline low resulting in a buildup of copper in my body. This doesn't seem to be genetic in origin, so it's not Wilson's Disease. The treatment regime (supplements, saunas, etc) seems to have had an impact – the high copper readings had noticeably improved by early 2015.

9. **Location**

United Kingdom, County Durham