



PATIENT: Number 786
 SEX: Male
 AGE: 32

Toxic & Essential Elements; Hair

| TOXIC METALS | | | |
|----------------------------|----------------|-----------------------|---|
| | RESULT µg/g | REFERENCE INTERVAL | PERCENTILE 68 th 95 th |
| Aluminum (Al) | 2.3 | < 12 | |
| Antimony (Sb) | 0.012 | < 0.080 | |
| Arsenic (As) | 0.015 | < 0.12 | |
| Barium (Ba) | 0.65 | < 1.5 | |
| Beryllium (Be) | < 0.01 | < 0.020 | |
| Bismuth (Bi) | 0.003 | < 2.0 | |
| Cadmium (Cd) | 0.030 | < 0.065 | |
| Lead (Pb) | 1.5 | < 1.5 | |
| Mercury (Hg) | 0.36 | < 0.80 | |
| Platinum (Pt) | < 0.003 | < 0.005 | |
| Thallium (Tl) | < 0.001 | < 0.002 | |
| Thorium (Th) | < 0.001 | < 0.002 | |
| Uranium (U) | 0.018 | < 0.060 | |
| Nickel (Ni) | 0.77 | < 0.40 | |
| Silver (Ag) | 0.03 | < 0.10 | |
| Tin (Sn) | < 0.02 | < 0.30 | |
| Titanium (Ti) | 0.48 | < 0.70 | |
| 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) | 1010 | 375- 1100 | |
| Magnesium (Mg) | 35 | 40- 140 | |
| Sodium (Na) | 10 | 60- 400 | |
| Potassium (K) | < 3 | 28- 160 | |
| Copper (Cu) | 25 | 11- 32 | |
| Zinc (Zn) | 170 | 120- 200 | |
| Manganese (Mn) | 0.29 | 0.15- 0.65 | |
| Chromium (Cr) | 0.33 | 0.40- 0.70 | |
| Vanadium (V) | 0.015 | 0.018- 0.065 | |
| Molybdenum (Mo) | 0.052 | 0.040- 0.080 | |
| Boron (B) | 0.20 | 0.40- 2.5 | |
| Iodine (I) | 0.41 | 0.25- 1.8 | |
| Lithium (Li) | < 0.004 | 0.008- 0.030 | |
| Phosphorus (P) | 189 | 200- 300 | |
| Selenium (Se) | 0.57 | 0.80- 1.3 | |
| Strontium (Sr) | 1.0 | 1.0- 6.0 | |
| Sulfur (S) | 46800 | 41000- 47000 | |
| Cobalt (Co) | 0.010 | 0.006- 0.035 | |
| Iron (Fe) | 11 | 7.0- 16 | |
| Germanium (Ge) | 0.025 | 0.030- 0.040 | |
| Rubidium (Rb) | 0.003 | 0.030- 0.25 | |
| Zirconium (Zr) | 0.029 | 0.040- 1.0 | |

| SPECIMEN DATA | | RATIOS | |
|----------------------------|--------------------|-----------------|---------------|
| COMMENTS: | | ELEMENTS | RATIOS |
| Date Collected: 05/23/2013 | | Ca/Mg | 28.9 |
| Date Received: 05/29/2013 | | Ca/P | 5.34 |
| Date Completed: 05/31/2013 | | Na/K | 3.33 |
| Methodology: ICP/MS | | Zn/Cu | 6.8 |
| Sample Size: 0.199 g | Sample Type: Pubic | Zn/Cd | > 999 |
| Hair Color: Brown | Treatment: | | |
| Shampoo: Tea Tree | | | |
| | | RANGE | |
| | | 4- 30 | |
| | | 0.8- 8 | |
| | | 0.5- 10 | |
| | | 4- 20 | |
| | | > 800 | |



SEX: Male
AGE: 34

Toxic & Essential Elements; Hair

| TOXIC METALS | | | | |
|----------------------------|--|----------------|-----------------------|---|
| | | RESULT µg/g | REFERENCE INTERVAL | PERCENTILE 68 th 95 th |
| Aluminum (Al) | | 3.1 | < 12 | |
| Antimony (Sb) | | 0.044 | < 0.080 | |
| Arsenic (As) | | 0.013 | < 0.12 | |
| Barium (Ba) | | 1.6 | < 1.5 | |
| Beryllium (Be) | | < 0.01 | < 0.020 | |
| Bismuth (Bi) | | 0.014 | < 2.0 | |
| Cadmium (Cd) | | 0.10 | < 0.065 | |
| Lead (Pb) | | 0.90 | < 1.5 | |
| Mercury (Hg) | | 0.05 | < 0.80 | |
| Platinum (Pt) | | < 0.003 | < 0.005 | |
| Thallium (Tl) | | < 0.001 | < 0.002 | |
| Thorium (Th) | | < 0.001 | < 0.002 | |
| Uranium (U) | | 0.023 | < 0.060 | |
| Nickel (Ni) | | 0.36 | < 0.40 | |
| Silver (Ag) | | 0.02 | < 0.10 | |
| Tin (Sn) | | 0.04 | < 0.30 | |
| Titanium (Ti) | | 0.33 | < 0.70 | |
| 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) | | 1460 | 375- 1100 | |
| Magnesium (Mg) | | 55 | 40- 140 | |
| Sodium (Na) | | 23 | 60- 400 | |
| Potassium (K) | | 9 | 28- 160 | |
| Copper (Cu) | | 14 | 11- 32 | |
| Zinc (Zn) | | 180 | 120- 200 | |
| Manganese (Mn) | | 0.15 | 0.15- 0.65 | |
| Chromium (Cr) | | 0.32 | 0.40- 0.70 | |
| Vanadium (V) | | 0.023 | 0.018- 0.065 | |
| Molybdenum (Mo) | | 0.090 | 0.040- 0.080 | |
| Boron (B) | | 0.27 | 0.40- 2.5 | |
| Iodine (I) | | 0.35 | 0.25- 1.8 | |
| Lithium (Li) | | 0.009 | 0.008- 0.030 | |
| Phosphorus (P) | | 189 | 200- 300 | |
| Selenium (Se) | | 0.87 | 0.80- 1.3 | |
| Strontium (Sr) | | 1.3 | 1.0- 6.0 | |
| Sulfur (S) | | 46100 | 41000- 47000 | |
| Cobalt (Co) | | 0.007 | 0.006- 0.035 | |
| Iron (Fe) | | 8.7 | 7.0- 16 | |
| Germanium (Ge) | | 0.030 | 0.030- 0.040 | |
| Rubidium (Rb) | | 0.009 | 0.030- 0.25 | |
| Zirconium (Zr) | | 0.008 | 0.040- 1.0 | |

| SPECIMEN DATA | | RATIOS | | |
|----------------------------|----------------------|----------|--------|---------|
| COMMENTS: | | ELEMENTS | RATIOS | RANGE |
| Date Collected: 11/21/1980 | Sample Size: 0.199 g | Ca/Mg | 26.5 | 4- 30 |
| Date Received: 02/28/2015 | Sample Type: Pubic | Ca/P | 7.72 | 0.8- 8 |
| Date Completed: 03/02/2015 | Hair Color: Brown | Na/K | 2.56 | 0.5- 10 |
| Methodology: ICP/MS | Treatment: | Zn/Cu | 12.9 | 4- 20 |
| | Shampoo: | Zn/Cd | > 999 | > 800 |

Health history for hair test 786

Profile: 32yrs Male, Birmingham, UK

1. What are your current symptoms and health history?

- Current symptoms: fatigue (especially in legs); muscle twitching; restless legs / arms; migraines; sinusitis; brain fog; weight loss / difficulty gaining weight; gastritis
- CFS since 2007
- Treatment for PTSD with antidepressants, anti-convulsants and (for a short period) lithium between 2002-2005

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

- One white filling in 2005.

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

- Invisalign braces since 2008 (ongoing)

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

- Mercury fillings, at least before pregnancy.

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

- 2000: flu and tetanus injections during the same appointment

6. Supplements and medications (including dosages) taken at time of hair test, or for the 3-6 months before the sample was taken?
- Betaine HCL (200mcg, 3 times per day), molybdenum (150mcg, 3 times per day), vitamin C (500mg), zinc (15mg), coconut oil (16tsps), SF722 (6 caps)
7. What is your age, height and weight?
- 32yrs; 1m 72 (5' 8"); 60kgs (9 stone)
8. Other information you feel may be relevant?
- Periods of steroid, growth hormone, thyroid hormone use, 2000-2002
 - Significant exposure to black mold between 2006 and 2007.
 - CFS since 2007 (following a sustained period of physical and emotional stress). Significant relapse in symptoms late-2011.
 - Saliva test 2007: adrenal tests showed flat cortisol
 - Stool test 2013: high levels of candida (10 to the 7) / oral thrush; no parasites.
 - Methylation Pathways Analysis: glutathione levels low
9. What is your location – city & country (so that we can learn where certain toxins are more prevalent).
- Recently moved in Birmingham; 2011-2013: Burton-upon-Trent; 2002-2011: Leicester