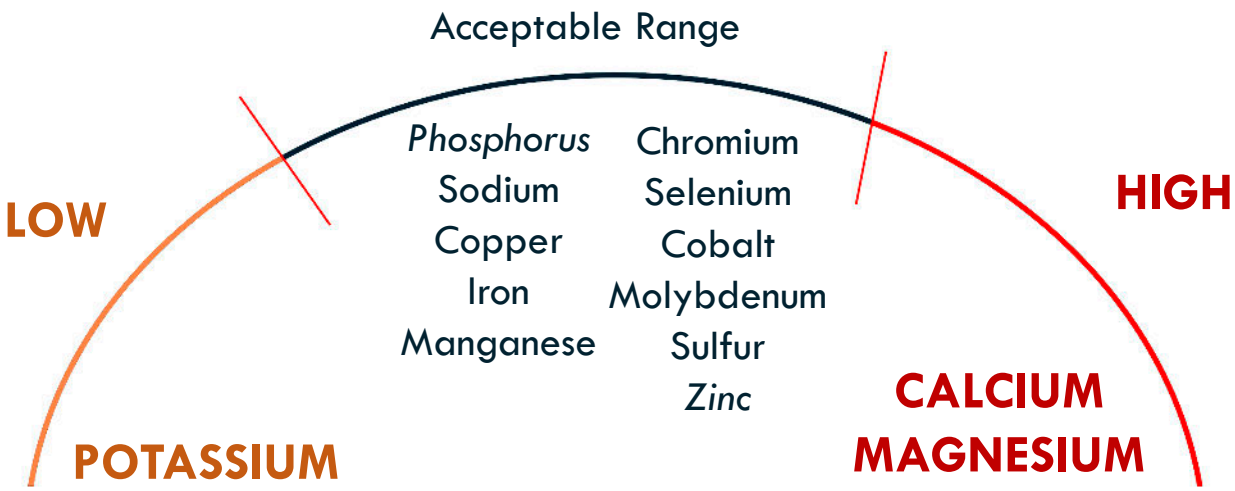
# Hello Ariana.

## Your HTMA result from July 2021 are in.

**Metabolic Type:**
**Slow Metabolism, Type 1**
**Learn More**


**8 toxic elements were tested.**
**URANIUM was detected at toxic levels.**




**15 nutritional elements & 14 subsidiary elements were tested.**
**Potassium is low. Phosphorus is borderline low. Calcium and Magnesium are high. Zinc is borderline high.**
**Trace amounts of 3 Heavy Metals detected.**

*These nutritional mineral levels that reveal moderate or significant deviations from normal based on statistical data that identifies the reference range for a healthy individual. The following sections, however, are based on clinical data. As such, an element that is moderately outside the reference range may not be commented on unless determined to be clinically significant. In contrast, a level that indicated it is within the reference range may be commented on based on level or ratio with other elements. This report is for self-educational and informational purposes only and in no way is intended as medical counseling or medical advice concerning any medical condition, disorder or disease.*

**High Calcium -** Your calcium level is elevated above normal. High tissue calcium is not necessarily due to the consumption of foods high in calcium. Excessive sugar, refined carbohydrates and vitamin D in your diet can cause elevated calcium levels. Deficiency in phosphorus, sodium, vitamin B1, vitamin E, potassium, iron, vitamin B6, vitamin C can increase calcium absorption as well.

**Hydrochloric Acid Production and Protein Digestion -** Your mineral profile may be reflective of a deficiency in hydrochloric acid (HCL) production, which can result in inadequate protein digestion. Hydrochloric acid in a sufficient amount is necessary for the complete digestion and utilization of dietary protein. Symptoms such as bloating, flatulence and constipation may be observed, especially after high protein meals.

**High Magnesium -** Magnesium is essential for muscle relaxation, protein synthesis, nerve excitability and energy production on a cellular level. However, when magnesium is in excess, it may contribute to fatigue, depression, sleepiness or drowsiness, and/or decreased mental alertness. Some factors that may contribute to elevated magnesium other than possible excessive intake are: elevated tissue levels of calcium, low protein intake, Vitamin E or B6 deficiency, low thyroid function and/or low adrenal activity.

**Low Potassium -** Low tissue potassium may be due to poor retention of the mineral, even though dietary intake of potassium may be adequate. Poor potassium retention can result from adrenal and thyroid insufficiency, prolonged diarrhea, or from the use of medications, such as diuretics and laxatives. Non-steroidal anti-inflammatories will also suppress adrenal function.

**High Bismuth -** The bismuth level is elevated above the referenced range. This element is relatively non-toxic and has no known biochemical function, although it is commonly found in low concentrations in the body. High levels may be found in the following products: cosmetics, burn ointments, antiseptic powders, products used for G.I. disturbances, wart treatments, hair dyes. Other sources may include superconductors, dentistry and silvering of mirrors.

**High Calcium/Phosphorus -** Phosphorus is involved in almost every reaction of metabolism. When low levels of phosphorus are found in the hair relative to tissue calcium, it often reflects abnormal calcium and/or phosphorus metabolism.

**High Sodium/Potassium -** Your sodium-potassium profile is elevated above normal range. When sodium is high relative to potassium, it is indicative of excessive sodium. This mineral profile, if chronic, may lead to fluid retention and weight gain that is contributed to water retention. At this time, it is not necessary to reduce sodium intake, but recommended that dietary potassium intake be increased relative to sodium.

**High Calcium/Potassium and Hypothyroidism -** High calcium relative to potassium will frequently indicate a trend toward hypothyroidism (underactive thyroid). The mineral calcium antagonizes the retention of potassium within the cell. Since potassium is necessary in sufficient quantity to sensitize the tissues to the effects of thyroid hormones, a high calcium-potassium ratio would suggest reduced thyroid function and/or cellular response to thyroxine. If this imbalance has been present for an extended period of time, the following symptoms associated with low thyroid function may occur, fatigue, dry skin, constipation, depression, overweight tendencies, cold sensitivity.

**High Zinc/Copper -** The zinc level is high relative to tissue copper status. Zinc and copper are intricately related to the hormones progesterone & estrogen, respectively. This mineral imbalance has been correlated with low levels of estrogen relative to progesterone, which is reflective of a hormonal imbalance. If the imbalance is both severe and chronic, it can result in a failure to menstruate and/or may show an increase in infections, shortened menstrual cycle and/or oily skin.

**Low Sodium/Magnesium -** This ratio is below normal. The adrenal glands play an essential role in regulating sodium retention and excretion. Studies have also shown that magnesium will affect adrenal cortical activity and response, and reduced adrenal activity results in increased magnesium retention. You may notice fatigue, dry skin, allergies, constipation, low blood pressure, and/or lowered immunity function.

**High Uranium -** Naturally occurring uranium (U238) is found throughout the environment (air, water, food and soil). While it is a slightly radioactive element, its radioactive properties are quite mild and are not considered a health risk, as compared to the enriched, industrial-processed form of uranium commonly associated with nuclear materials and weapons. It is important to note that this uranium measurement performed is not indicative of exposure to or accumulation of the enriched and highly radioactive form of uranium.

Most often, elevated hair levels of uranium are found to occur in people living in areas where the natural concentration of this element is high. In particular, geographical regions with granite and rocky soils are typically higher when compared to other areas of the country. Root vegetables grown in high uranium soils and groundwater are also two of the most common sources. Other potential sources include ceramics, colored glass, light bulbs, photographic chemicals, coal-burning plants and mining areas. Uranium is also found higher in agricultural areas due to the use of phosphate fertilizers which contain slightly higher amounts of natural uranium.

Although the uranium level is elevated when compared to the population in general, this tissue level should not be considered as clinically significant at this time. However, uranium does occur with other elements that can pose a health risk. Past history has shown that radon gas has been found in the homes of individuals with markedly elevated hair uranium levels. Therefore, it may be important to have the home checked for radon gas.

Reduction in exposure and improved nutritional status will, in time, assist in mobilizing and excreting this element.

**Toxic Metal Retention and Nutritional Status -** Every individual is constantly being exposed to sources of heavy metals. However, the main factor contributing to the absorption and retention of these metals in the body, is influenced by one's own nutritional status. For instance, a lack of nutrients that will combat the accumulation of lead will then allow tissue lead levels to rise. This accumulation can occur even if lead exposure is minimal. Improving your nutritional status can help in reducing toxic metal burden as well as reducing the adverse effects that toxic metal accumulation can produce in the body.

**Important Note on Toxic Metal Elimination -** As toxic metals are mobilized from storage tissues for removal from the body, you may experience an exacerbation of his/her present symptoms or new symptoms, associated with a particular mineral. If this occurs, or if the symptoms become too uncomfortable, discontinue supplementation for 3 days, during which time symptoms should be relieved.

**Note:** At this time, further contamination of toxic metal exposure using a blood test may or may not reveal an elevated level. This is due to the protective response of the body, in which following a toxic metal exposure, the element is sequestered from the blood and stored in various other tissues. Therefore, if the exposure is not ongoing or chronic, elevated blood levels may not be present.

# Hello Ariana.

## Your HTMA result from July 2021 Page 5.

*These dietary and supplement recommendations are not intended to be a permanent recommendation plan. These recommendations are made based on your existing HTMA results. Periodic reevaluation is recommended as desired.*

Dietary Recommendations

Optimize your body chemistry

⬆ **Lean Protein** - beef, fish, chick, beans, eggs with every meal - increase metabolic rate & energy production.

⬆ **Frequency of meals** - 4-6/day - balance nutrient levels & decrease blood sugar fluctuations.

**>40% daily carbohydrates -** preference for unrefined carbs - vegetables, legumes, whole grains.

**Avoid sugars and refined carbs** – sugar, pastries, candy, honey, alcohol and white bread…

**Avoid high purine protein** – liver, kidney, sardines, salmon and more…

⬇ **Fruit-based juices** - vegetables juices are okay!

⬇ **Milk & milk products** - cheese, yogurt, cream to once every 3-4 days a week..

⬇ **Fats and Oils** – fried foods, cream, butter, salad dressings and mayo…

Supplement Recommendations

**TAKE:**

ActivFulvic

Daily Multiple

Iodine

Potassium

Copper (90-120 days)

Vitamin E

Digestive Support

*(prebiotic and probiotic)*

**DON'T TAKE:**

Zinc

Thymus

Cod Liver Oil

*The above nutrient levels should be met through dietary recommendations without additional supplementation that may contribute to mineral ratio imbalances.*

# Hello Ariana.

## Your HTMA result from July 2021 Page 6.

# Your Customized Supplement Plan

### Keeping Your Nutritional Health on Target

Not all supplements are created equal. We create high-quality professional-grade mineral supplements that are uniquely formulated for maximum bio-availability and rapid absorption. Our liquid base formulas enhanced with CHD-FA Fulvic Acid increases nutrient availability up to 99.9%.

## ActivFulvic – 21 Day Detox Protocol

Balance elevated mineral levels with the 21 day detox protocol helping to reduce higher levels of heavy metals.

## Daily Multiple – 1x Daily AM or PM

Daily support for you bringing in vitamin B6, trace elements of copper, potassium and vitamin E.

## Iodine – 2-3 drops, 3-4 days/week

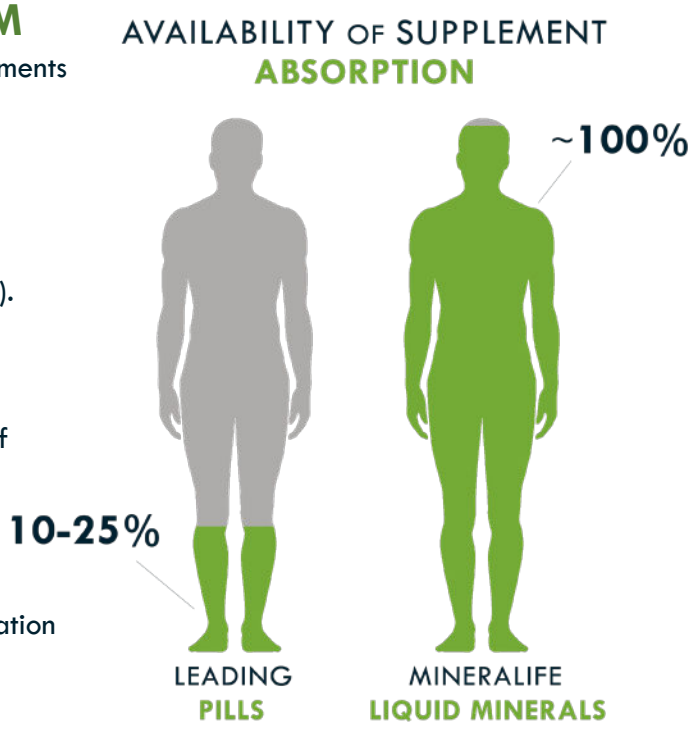
An essential mineral for thyroid health stimulating the thyroid hormones: thyroxin (T) and triiodothyronine (T3).

## Potassium – 1x Daily AM or PM

Balance potassium ratios with daily supplementation of important electrolyte potassium.

## Copper – 3-4x Weekly, 120 days

Balance zinc-copper ratio with temporary supplementation of trace mineral copper.



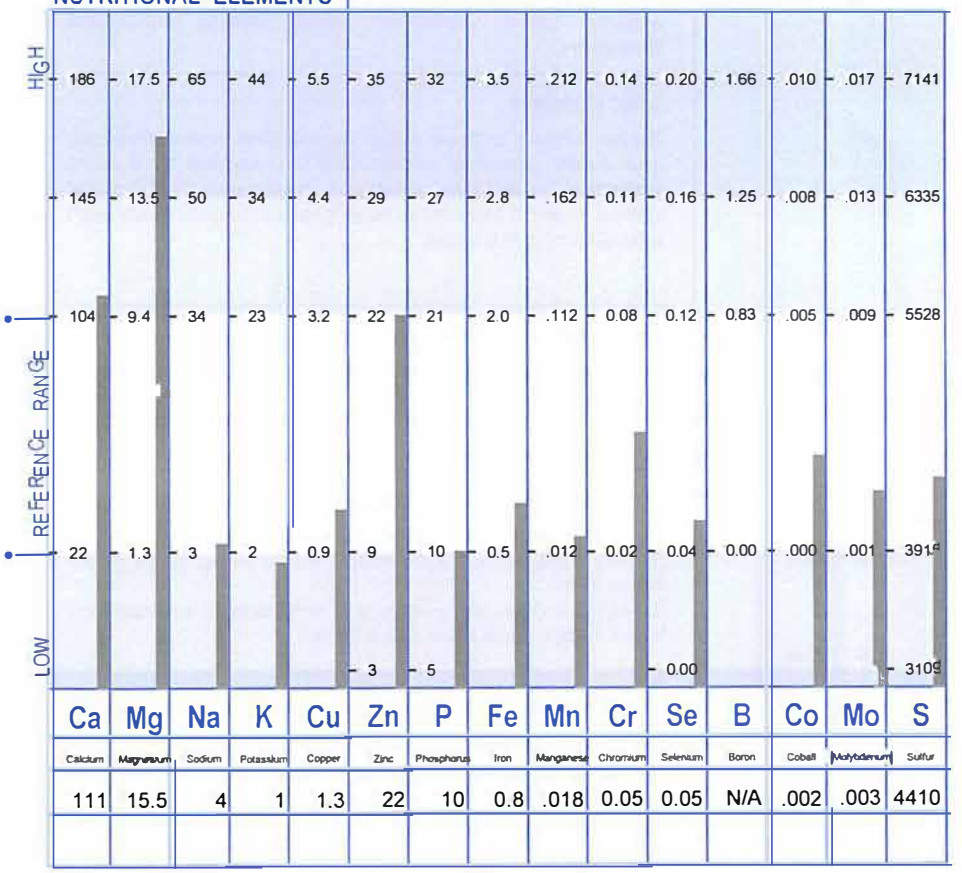

### Are You Ready for Better Health?

Start resolving nutrient shortfalls, balance your nutrition, and optimize your metabolism with our supplement recommendation plan.

Get your supplement program and **Save 30% and Get FREE shipping**!

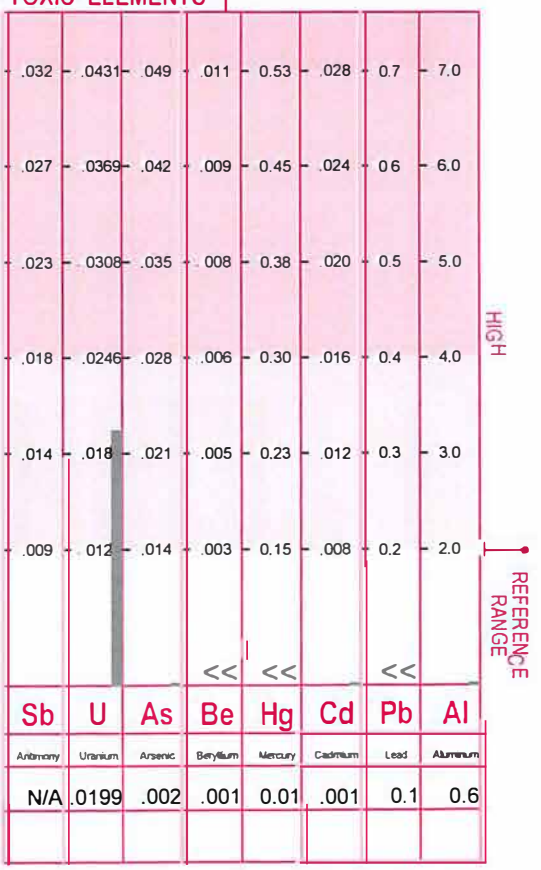
| | | | |
|---|---|---|---|
| PROFILE NO.: 2 | | | SAMPLE TYPE: SCALP |
| PATIENT: ARIANA | AGE: 26 | SEX: F | METABOLIC TYPE: SLOW 1 |
| REQUESTED BY: MINERALIFE | | | |

## NUTRITIONAL ELEMENTS



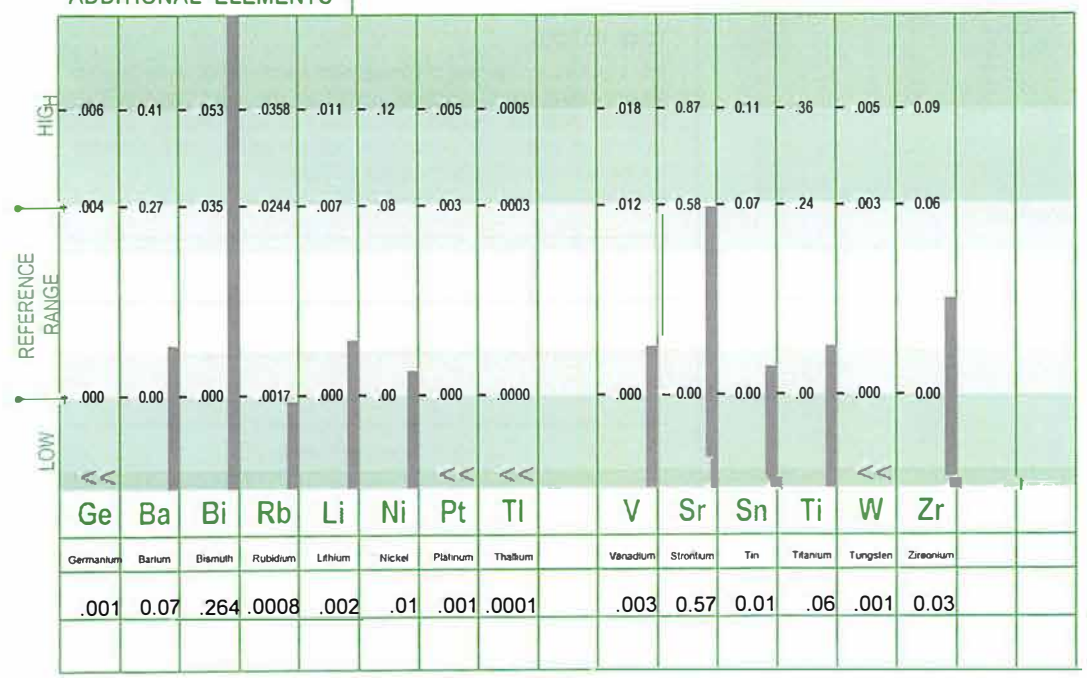

| Ca | Mg | Na | K | Cu | Zn | P | Fe | Mn | Cr | Se | B | Co | Mo | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | Magnesium | Sodium | Potassium | Copper | Zinc | Phosphorus | Iron | Manganese | Chromium | Selenium | Boron | Cobalt | Molybdenum | Sulfur |
| 111 | 15.5 | 4 | 1 | 1.3 | 22 | 10 | 0.8 | .018 | 0.05 | 0.05 | N/A | .002 | .003 | 4410 |

## TOXIC ELEMENTS




| Sb | U | As | Be | Hg | Cd | Pb | Al |
|---|---|---|---|---|---|---|---|
| Antimony | Uranium | Arsenic | Beryllium | Mercury | Cadmium | Lead | Aluminum |
| N/A | .0199 | .002 | .001 | 0.01 | .001 | 0.1 | 0.6 |

## ADDITIONAL ELEMENTS




| Ge | Ba | Bi | Rb | Li | Ni | Pt | Tl | V | Sr | Sn | Ti | W | Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Germanium | Barium | Bismuth | Rubidium | Lithium | Nickel | Platinum | Thallium | Vanadium | Strontium | Tin | Titanium | Tungsten | Zirconium |
| .001 | 0.07 | .264 | .0008 | .002 | .01 | .001 | .0001 | .003 | 0.57 | 0.01 | .06 | .001 | 0.03 |

"<<": Below Calibration Limit; Value Given Is Calibration Limit

"QNS": Sample Size Was Inadequate For Analysis.

"N/A": Currently Not Available

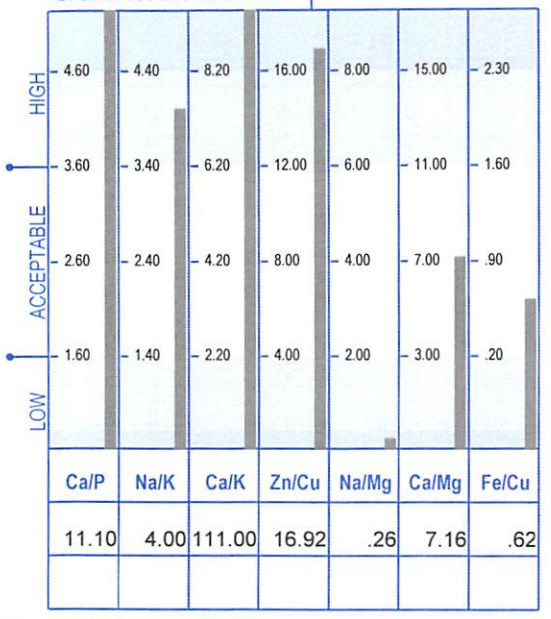
Ideal Levels And Interpretation Have Been Based On Hair Samples Obtained From The Mid-Parietal To The Occipital Region Of The Scalp.

Laboratory Analysis Provided by Trace Elements, Inc.
an H. H. S. Licensed Clinical Laboratory.
No. 45 D0481787 Lab Dir: P. Mendershausen, Ph.D.

7/2021
CURRENT TEST RESULTS

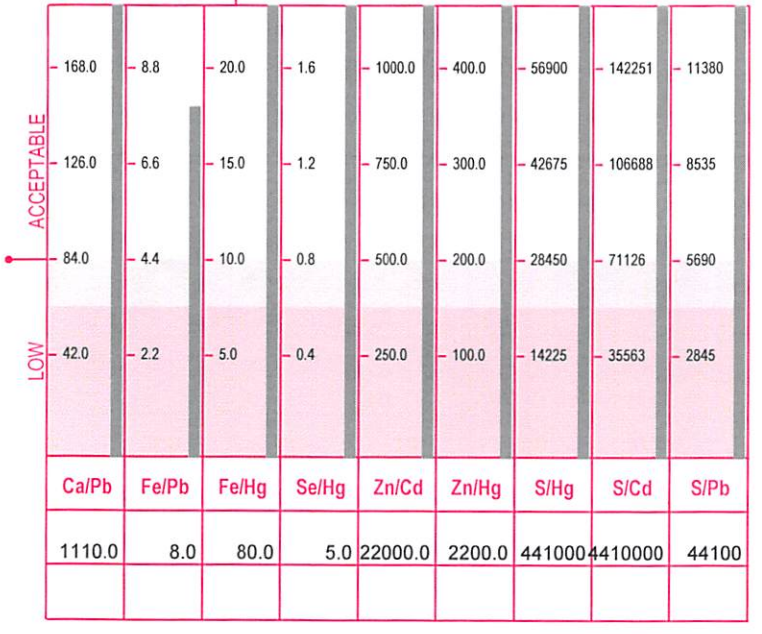
PREVIOUS TEST RESULTS

## SIGNIFICANT RATIOS




| Ca/P | Na/K | Ca/K | Zn/Cu | Na/Mg | Ca/Mg | Fe/Cu |
|---|---|---|---|---|---|---|
| 11.10 | 4.00 | 111.00 | 16.92 | .26 | 7.16 | .62 |

## TOXIC RATIOS




| Ca/Pb | Fe/Pb | Fe/Hg | Se/Hg | Zn/Cd | Zn/Hg | S/Hg | S/Cd | S/Pb |
|---|---|---|---|---|---|---|---|---|
| 1110.0 | 8.0 | 80.0 | 5.0 | 22000.0 | 2200.0 | 441000 | 4410000 | 44100 |

## ADDITIONAL RATIOS

| RATIO | CALCULATED VALUE | | EXPECTED |
|---|---|---|---|
| | Current | Previous | |
| Ca/Sr | 194.74 | | 263/1 |
| Cr/V | 16.67 | | 8/1 |
| Cu/Mo | 433.33 | | 356/1 |
| Fe/Co | 400.00 | | 615/1 |
| K/Co | 500.00 | | 6350/1 |
| K/Li | 500.00 | | 6350/1 |
| Mg/B | N/A | | 21/1 |
| S/Cu | 3392.31 | | 2668/1 |
| Se/Tl | 500.00 | | 370/1 |
| Se/Sn | 5.00 | | 3.2/1 |
| Zn/Sn | 2200.00 | | 624/1 |

### LEVELS

All mineral levels are reported in milligrams percent (milligrams per one-hundred grams of hair). One milligram percent (mg%) is equal to ten parts per million (ppm).

### NUTRITIONAL ELEMENTS

Extensively studied, the nutrient elements have been well defined and are considered essential for many biological functions in the human body. They play key roles in such metabolic processes as muscular activity, endocrine function, reproduction, skeletal integrity and overall development.

### TOXIC ELEMENTS

The toxic elements or "heavy metals" are well-known for their interference upon normal biochemical function. They are commonly found in the environment and therefore are present to some degree, in all biological systems. However, these metals clearly pose a concern for toxicity when accumulation occurs to excess.

### ADDITIONAL ELEMENTS

These elements are considered as possibly essential by the human body. Additional studies are being conducted to better define their requirements and amounts needed.

### RATIOS

A calculated comparison of two elements to each other is called a ratio. To calculate a ratio value, the first mineral level is divided by the second mineral level.
EXAMPLE: A sodium (Na) test level of 24 mg% divided by a potassium (K) level of 10 mg% equals a Na/K ratio of 2.4 to 1.

### SIGNIFICANT RATIOS

If the synergistic relationship (or ratio) between certain minerals in the body is disturbed, studies show that normal biological functions and metabolic activity can be adversely affected. Even at extremely low concentrations, the synergistic and/or antagonistic relationships between minerals still exist, which can indirectly affect metabolism.

### TOXIC RATIOS

It is important to note that individuals with elevated toxic levels may not always exhibit clinical symptoms associated with those particular toxic minerals. However, research has shown that toxic minerals can also produce an antagonistic effect on various essential minerals eventually leading to disturbances in their metabolic utilization.

### ADDITIONAL RATIOS

These ratios are being reported solely for the purpose of gathering research data. This information will then be used to help the attending health-care professional in evaluating their impact upon health.

### REFERENCE INTERVALS

Generally, reference intervals should be considered as guidelines for comparison with the reported test values. These reference intervals have been statistically established from studying an international population of "healthy" individuals.
Important Note: The reference intervals should not be considered as absolute limits for determining deficiency, toxicity or acceptance.