

## NUTRITIONAL EVALUATION

PATIENT: Anne Onymous  
ADDRESS: 1234 Healthy Way  
CITY: Somewhere  
STATE: OH 12345  
PHONE: (555) 555-5555

PATIENT #: 12345  
DATE OF ANALYSIS: 01/25/2006  
SEX F  
AGE: 36  
BLOOD TYPE: A+

### Tests Used for Analysis:

Medication	4/1/02
Stool	4/8/02
Urinalysis	4/1/02
Vitals	6/1/02
Blood	6/1/02
PSS	4/13/05
Hair	1/14/05

### Vitals:

Height: 5'8"  
Weight: 155  
Blood Pressure: 115 / 65  
O2 Level: 97%  
Heart Rate: 68

### Primary Symptoms:

1. Hypercholesterolemia (High Cholesterol)
2. High blood pressure
3. Diabetes Mellitus
4. Insomnia

The glucose has been averaging 165, even on the medications and the blood pressure has been going up.

### Presenting symptoms:

Allergic Rhinitis (Nasal Discharge); Diabetes Mellitus; Fibromyalgia; Hypercholesterolemia (High Cholesterol); Indigestion; Insomnia; Poor Concentration/Memory; Skin Disorder; Swollen Joints; Energy level is worse than it was 5 years ago; Fingernails are soft; Fingernails peel; Has tattoos; Sensitive to chemicals, paint, exhaust fumes, cologne; Difficulty concentrating; Easily angered; Has to be on guard even with friends; Under considerable emotional stress; Heart skips beats; High blood pressure; Leg cramps during bedtime; Frequently feels cold; Gets lightheaded when standing quickly; Dry Eyes; Fungal Infection; 6 or more bowel movements per week; Abdominal gas; Tends to constipation; Drinks alcohol; Drinks caffeinated pop/soda; Drinks diet pop/soda; Drinks 1 or more pop/sodas per day; Eats no red meat; Frequent use of Artificial Sweeteners; Smoked for more than 5 years; Amalgam dental fillings; Bad breath; Tongue has grooves or fissures; Tongue is coated; Pain between the shoulders; Frequent sinus infections; Dry Skin; Skin Itches; Bruises easily;

Frequent bladder infections; Painful urination; Diminished sexual desire; Has taken birth control medication for more than one year; Lumps in the breasts; Mild to Moderate Hot Flashes; Gallbladder

**Comments:**

**Patient Symptom Survey.**

**Doctor's comments and/or findings:**

Both father and mother are type 2 diabetics, the mother is on insulin. Both have had heart attacks. Patient is having early sign of peripheral neuropathy of both feet. Vision has been worse the last few months. Complains of more stiffness, achiness and malaise in the morning and has noticed less mobility and cannot walk over 5 minutes without having to sit down.

**Patient's comments:**

"Other doctors have said not to worry, that these things are normal for my age."

This analysis and the recommendations are not for the purpose of treating or curing disease (cancer, hepatitis, arthritis, diabetes, M.S., heart disease, etc). The purpose for this nutrition and lifestyle program is to create an optimum environment in which your body can heal and repair itself. This is achieved by eliminating foods and toxins, which adversely affect the body, and by providing nutrients that the body may be lacking.

**Primary Findings Suggestive of:**

Diabetes; Dehydration effects; Gastro/Intestinal dysfunction; Inflammation of Liver; Low Functioning Thyroid; Anemia; Possible allergy, reactivity or toxicity; Possible infection and/or inflammation; Noted blood Values; Very High Hair Aluminum; Very High Hair Bismuth; Very High Hair Cadmium; Very High Hair Lead; Very High Hair Potassium; Very High Hair Zinc; Very High Hair Iodine; Very High Hair Lithium; Very High Hair Germanium; Noted Hair Values

**Medications:**

Alesse-28 - More than 2 years.; Diflucan - 6 months - 2 years.; Glucophage - 6 months - 2 years.; Lipitor - Less than 6 months.; Tylenol for pain/arthritis - Occasional.

**Side Effects of Medications:**

ALESSE-28 -indicated for use as a contraceptive. Side Effects - thrombophlebitis; Arterial thromboembolism; pulmonary embolism; myocardial infarction; cerebral hemorrhage; cerebral thrombosis; hypertension; gallbladder disease; hepatic adenomas or benign liver tumors; nausea; vomiting; gastrointestinal symptoms( such as cramps and bloating);breakthrough bleeding; spotting; change in menstrual flow; amenorrhea; temporary infertility after discontinuation of treatment; edema, melasma which may persist. Breast changes: tenderness, enlargement, secretion. Change in weight (increase or decrease); change in cervical erosion and secretion. Cholestatic jaundice; migraine; rash; mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; cataracts; optic neuritis; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; hemorrhagic eruption; hemolytic uremic syndrome; acne; colitis. Nutrients Depleted: Folic Acid, Magnesium, Tyrosine, B2, B3, B6, B12, Vitamin C, Zinc

Diflucan (for treatment of candidiasis or yeast infections) WARNING: liver disease. Other adverse reactions: jaundice, seizures, skin problems, alopecia (hair loss), various anemia's, high cholesterol, high triglycerides.

Nutrients Depleted: unknown at this time

Glucophage (for diabetics) diarrhea; nausea; vomiting; abdominal bloating; flatulence; anorexia; unpleasant or metallic taste; rash

Nutrients Depleted: Folic Acid, Vitamin B12

Lipitor (lipid or cholesterol lowering drug) causes liver dysfunction; SGOT and SGPT three times the upper limit of normal is considered normal; CPK values greater than 10 times the normal limit is considered normal. Adrenal failure, diffused muscle pain; muscle tenderness; weakness; malaise; fever; myopathy or muscle disease if used with certain other drugs (these drugs include: antacid (maylox), dioxin, erythromycin, and oral contraceptives). Long term use in laboratory studies of two years indicated an increase in liver cancer. Should not be used in pregnant women. Other adverse reactions include: edema (part or whole of the body), digestive problems, gastritis, colitis, vomiting, ulcers, bleeding gums, bleeding ulcers, hepatitis, pancreatitis, gall bladder disease, asthma, decreased libido, leg cramps, verticis, monocytis, itching, alopecia, dry skin, acne, cystitis, hemoteria, kidney stone, breast tenderness, various hemorrhage, loss of taste, palpitations, migraines, arrhythmia, gout  
Nutrients Depleted: Co-Enzyme Q-10

Tylenol:(indicated for the temporary relief of minor aches and pains associated with headache; muscular aches; backache; minor arthritis pain; common cold; toothache; menstrual cramps; and for the reduction of fever.) If a rare sensitivity reaction occurs, the drug should be discontinued. Alcohol should be avoided with use of tylenol. Hepatitis or liver disease is seen with toxicity.

Nutrients Depleted: Glutathione

### **Interpreting Blood Lab Results**

Concerning the Blood Tests Results that are found later in this report. There is a Healthy Range and a Clinical Range. Test values that are outside of the Healthy Range are highlighted in yellow. This Healthy Range indicates something not as good as it should be or it may be a sign of a developing condition that isn't bad enough to need medical treatment...yet. The Clinical Range, which is a much broader range, is the only range the typical medical community uses. Test values outside of this range indicate a disease process or serious condition and are highlighted in red.

### **Interpreting Hair Lab Results**

The Hair Elements chart is a colored chart that is found close to the end of this report. The analysis of this report, the Hair Analysis, follows shortly. The measurement of hair element levels is a screening test for physiological excess, deficiency, or maldistribution. Hair element analysis is not a diagnostic test of element function, and hair element levels (either high or low) are not always indicative of pathology. This is **because hair levels of some elements can be influenced by many factors such as shampoo, swimming pool and spa water, and hair treatments.**

Because of pollution, industry, and other environmental factors, there is no way you can totally eliminate your exposure to some of these toxic elements. However, there are things we can do daily to limit or reduce our exposure to these toxic elements and therefore lessening the total toxic burden

on your body. **For each elevated toxic element the most common sources of exposure are highlighted.**

### **Coronary Risk Assessment**

Total Cholesterol: 197  
HDL Cholesterol: 63  
LDL Cholesterol: 111  
VLDL Cholesterol: 16  
Coronary Risk Assessment: 3.13 Average

The coronary risk is determined by taking the total cholesterol and dividing it by the HDL. To reduce your risk of cardiovascular problems a value below 4 is recommended. The Total Cholesterol is determined by adding the HDL, LDL, and VLDL together. Recent studies have shown a correlation between a high HDL and longevity. A value higher than 75 is encouraged. Think of HDL as the Healthy cholesterol. The LDL is the bad cholesterol. It tends to plug the arteries. A value below 110 is preferred. The VLDL is the Very worst cholesterol. It is more like sludge. This value should be below 20.

### **Diabetes**

The Glucose is a little high and the Hemoglobin A1-C is high. Don't be misled by the glucose, this is still diabetes. The Hemoglobin A1-C indicates diabetes and the severity of diabetes. At this time, with the recommended vitamins and the Category 2 Diabetic Diet (found later in this report), the body should be able to regulate the glucose better to the point that the need for medication can be avoided or at least reduced. **WARNING:** If you are on medication for diabetes you should not stop your medication without contacting the doctor. Be sure and get retested. Significant change can occur within days.

This finding is supported by:

High Blood LDL Cholesterol; High Blood SGPT; High Blood GGT; High Blood Total Cholesterol

**Nutrients:** Omega-3 Fatty Acids + EPA + DHA; Vanadium 250mcg

### **Dehydration effects**

Low Sodium.

High Protein.

High Creatinine.

This finding is associated with:

Presenting symptoms - Fibromyalgia; Bad breath; Leg cramps during bedtime; Frequent bladder infections; Drinks 1 or more pop/sodas per day; Tends to constipation; Skin Itches

### **Gastro/Intestinal dysfunction**

The Calcium is a little low. This is likely a calcium deficiency associated with poor digestion or malnutrition (insufficient proper calcium intake).

This finding is supported by:

High Blood SGOT

This finding is associated with:

Medications Taken - Glucophage; Lipitor

**Nutrients:** Betaine 496mg + Pepsin 140mg; Calcium 500mg + Phos. 260mg

### **Inflammation of Liver**

The GGT is high and the SGOT and SGPT are a little high. This is seen with inflammation of the liver and/or pancreas and needs to be monitored. This can also be seen with chronic alcohol use. Certain drugs or combinations of drugs could cause, contribute to or accelerate this liver condition.

This finding is supported by:

High Blood Glucose; High Blood Total Protein; High Blood Globulin; Low Blood A/G Ratio; High Blood SGOT; High Blood GGT; High Blood Serum Iron; High Blood ESR-Erythrocyte Sed Rate, Westergren

This finding is associated with:

Medications Taken - Diflucan; Lipitor; Alesse-28

**Nutrients:** Beta Carotene 25.000IU; Liver 500mg; Vit. C 1000mg + bioflavonoids

### **Low Functioning Thyroid**

Mild low thyroid function is present with a low T4 & low T7. This is not hypothyroidism but is low thyroid function. The thyroid may not be low enough to need medication but it is still functioning below optimum levels. This means your metabolism is going to be slow. The thyroid gland controls your basal metabolic rate. This is the rate at which your body heals and repairs itself. It also determines how fast chemical reactions occur in the body. With a low-functioning thyroid, your immune system is going to be low, digestion is going to be slow and energy will be reduced. It is difficult to have a good cholesterol level with a low functioning thyroid. Large amounts of cauliflower, sauerkraut (cabbage), and asparagus do lower thyroid function, so do not eat these foods everyday. A couple of times per week would be acceptable. Note: poor digestion can cause or contribute to a low thyroid function and caffeine lowers thyroid function. Interestingly, most cancers are seen in people with low thyroid function. Many environmental toxins and drugs can also alter thyroid function.

This finding is supported by:

High Blood LDL Cholesterol; Low Blood Sodium; High Blood SGOT; High Blood Total Cholesterol; Low Blood T4 Thyroxine; Low Blood T7 Free Thyroxine Index (FTI); High Blood ESR-Erythrocyte Sed Rate, Westergren; High Hair Uranium

This finding is associated with:

Presenting symptoms - Fibromyalgia; Hypercholesterolemia (High Cholesterol); Energy level is worse than it was 5 years ago; Frequent sinus infections; Frequently feels cold; Has taken birth control medication for more than one year; Drinks 1 or more pop/sodas per day; Drinks caffeinated pop/soda; Drinks diet pop/soda

**Nutrients:** Thyroid Support 1

### **Anemia**

This is anemia. The Ferritin is a little low. This Ferritin level indicates depressed iron reserves. The Serum Iron is a little high which may be good because it indicates the available iron for the body to produce Red Blood Cells but there may be a lack of other nutrients that the body needs to produce

these Red Blood Cells. The Red Blood Count is low and the Hemoglobin and Hematocrit are a little low. The ability to transport oxygen and other nutrients will be reduced. This will affect the immune system and the ability to heal and repair. This could be the result of blood loss. Concentration may also be affected. This level of anemia will affect the cardiovascular system and contribute or cause heart attacks.

The MCHC is a little high. MCHC is the concentration of hemoglobin in the average red cell. The body is producing new red blood cells. The MCHC indicates a B12/folate deficiency and/or cell dehydration.

This finding is supported by:

High Blood Hemoglobin A1C; Low Blood Total Bilirubin; High Blood SGOT; High Blood Eosinophils; High Blood ESR-Erythrocyte Sed Rate, Westergren; High Hair Aluminum; High Hair Cadmium; High Hair Lead; High Hair Tin

This finding is associated with:

Presenting symptoms - Fibromyalgia; Poor Concentration/Memory; Energy level is worse than it was 5 years ago; Bruises easily; Gets lightheaded when standing quickly; Difficulty concentrating; Eats no red meat

Medications Taken - Diflucan

**Nutrients:** B12 1000mcg + Folic Acid; Iron Chelate 25mg

#### **Possible allergy, reactivity or toxicity**

The Eosinophils are a little high which suggests allergies environmental in nature including asthma and hayfever. This could also suggest parasitic infestations, infectious diseases, Collagen-vascular disease such as SLE (Lupus) and possibly skin diseases.

This finding is supported by:

High Blood Total Protein; High Blood Globulin; High Blood GGT; High Blood Eosinophils; High Blood ESR-Erythrocyte Sed Rate, Westergren

This finding is associated with:

Medications Taken - Diflucan; Glucophage; Lipitor; Tylenol for pain/arthritis

#### **Possible infection and/or inflammation**

The Erythrocyte Sed Rate (ESR) is a little high and the C-reactive Protein (CRP) is high, which indicates nonspecific tissue injury and inflammation. It doesn't tell where, just that there is a problem and these values are good to monitor response to treatment.

NOTE: Recent studies have shown that the CRP is one of the best markers for predicting the chances of a having heart attack or stroke. A CRP close to zero is desired.

The Globulin is a little high and the A/G Ratio (Albumin/Globulin) is a little low. There are in fact several things that these values can indicate including infections, inflammatory diseases, arthritis, chronic fatigue syndrome and of course more serious conditions. These findings result in a mildly lowered immune system.

This finding is supported by:

Low Blood Sodium; High Blood Total Protein; High Blood Globulin; Low Blood A/G Ratio; High Blood SGOT; High Blood CRP C-Reactive Protein; High Blood Eosinophils; High Blood Creatinine

This finding is associated with:

Presenting symptoms - Allergic Rhinitis (Nasal Discharge); Indigestion; Skin Disorder; Swollen Joints; Abdominal gas; Frequent bladder infections

Medications Taken - Lipitor; Alesse-28; Tylenol for pain/arthritis

**Nutrients:** Ginger + Turmeric; Vit. C 1000mg + bioflavonoids; Vit. E 400IU + Selenium 50mcg

### **Noted blood Values**

A common reason for a mildly low Bilirubin is caffeine or other drugs.

The Cholesterol is a little high, the LDL Cholesterol is high and the Triglycerides are a little low. Excess weight, poor diet, caffeine intake and lack of exercise all contribute to this condition. This should be reasonable to manage and correct with the recommended dietary plan and nutrients.

**Nutrients:** Omega-3 Fatty Acids + EPA + DHA

### **Very High Hair Aluminum**

The Aluminum level is very high. Any Aluminum is too much. Aluminum toxicity is associated with Alzheimer's and Parkinson's disease, behavioral/learning disorders such as ADD, ADHD and autism. High levels of aluminum have been found in the hair of delinquent, psychotic, and prepsychotic boys, and in juvenile offenders. Aluminum has neurotoxic effects at high levels, but low levels of accumulation may not elicit immediate symptoms. Early symptoms of Aluminum burden may include fatigue, headache, and other symptoms. Aluminum is a heavy metal that displaces your other good minerals, such as magnesium, calcium, zinc and phosphorus. One of the things that you should do to help your overall long-term health is to reduce your aluminum intake. **The most common sources of aluminum to avoid are: antiperspirants, aluminum cookware, antacids, some baking sodas, baking powder, some breath mints, pickles, some skin lotion, some cosmetics, aluminum foil, canned goods, emulsifiers in some processed cheese, table salt - anti-caking compound, bleaching agent used in white flour, buffered aspirin, some toothpaste, dental amalgams, cigarette filters, and drinking water (tap water). Do not eat or drink anything that comes in a can. Read your labels before you purchase. Aluminum has also been found in a granola bar.**

Aluminum rods are commonly used in hot water tanks in area of acidic water. These rods will desolve neutralizing the water, thus protecting the hot water tank. A rod of magnesium is an option for the same purpose.

Note: Fluoride and Fluoridation increases the absorption of Aluminum.

Chlorella and Magnesium with Malic Acid have been reported to be quite effective in lowering Aluminum.

**Nutrients:** Chlorella 250mg + Spirulina; Mg 100mg + Malic Acid 400mg

### **Very High Hair Bismuth**

Bismuth is a major player in the metallurgical industry. Many industries are using bismuth instead of lead because lead is so toxic. Bismuth is nontoxic in ordinary amounts, but prolonged exposure or excessive use may lead to toxicity. It is a basic ingredient in a range of fusible alloys; an additive to aluminum, steel, and cast iron to improve machinability; and widely used to support dyes and molds. Bismuth has been used in health care for centuries. Slightly soluble mineral salts are used in antacids such as Pepto-Bismol. Bacterial properties of bismuth salts are used to treat skin injuries and infection. The medical profession used bismuth castings to shield vital organs during radiation therapy.

Symptoms of toxicity are: nephrotoxicity, encephalopathy, constipation, bowel irregularity, foul breath, neurotoxicity, mental confusion, memory loss, lack of coordination, slurred speech, joint pain, tremor, memory loss, monoclonic jerks, dysarthria, dementia, seizures, muscle twitching and

spasms, blue/black gum line and malaise.

Sources of Bismuth are: **antacids, Pepto Bismol, dental cement, glass, ceramics, optical lenses, synthetic pearls, cosmetic formulations where they impart pearlescence to lipstick, nail polish and eye shadow.**

**Nutrients:** Chlorella 250mg + Spirulina

### **Very High Hair Cadmium**

#### **HIGH CADMIUM**

The Cadmium is very high. Cadmium (Cd) is a toxic, heavy metal with no positive metabolic function in the body. Hair cadmium levels provide an excellent indication of body burden. Moderately high cadmium levels are consistent with hypertension, while very severe cadmium toxicity can cause hypotension. Cadmium affects the kidneys, lungs, testes, arterial walls and bones. It interferes with many enzymatic systems, leads to anemia, proteinuria and glucosuria and depletes glutathione, calcium, phosphorus and zinc. Cadmium absorption is reduced by zinc, calcium and selenium. Alkaline Phosphatase is commonly elevated with Cadmium toxicity. One of the things that you should do to help your overall long-term health is to reduce your cadmium intake. The **most common sources of cadmium are: refined foods (white flour, white sugar, etc.), acid drinks left in galvanized pails or ice trays, superphosphate fertilizers, gluten flour, some cola drinks, tap water, atmospheric pollution in the burning of coal and petroleum products, margarine, canned fruits and beverages, sugar and molasses, alcoholic drinks, cigarette smoke, zinc smelters, cadmium plating used in soft drink dispensing machines. Cadmium toxicity is common among welders and construction workers (cement dust).**

Contamination may come from perms, dyes, bleach and some hair sprays, and can cause false highs for Cd.

Symptoms of Contamination: hypertension; fatigue; muscle and joint pain/osteomalacia; anemia; lumbar pain; atherosclerosis; kidney damage with associated urinary loss of essential minerals, amino acids and protein.

**Nutrients:** Calcium 500mg + Phos. 260mg; Chlorella 250mg + Spirulina; Zinc 50mg

### **Very High Hair Lead**

Clinical signs and symptoms:

The Center for Disease Control (CDC) reports the following symptoms as those frequently seen in exposed children:

Abdominal pain, colics, severe and repeated vomiting; Irritability; Hyperactivity; Anorexia; Loss of appetite; Ataxia; Mental disturbances. Advanced stage: mental retardation; Learning disability; Speech disturbances; Stupor or fatigue; Intermittent fever; Dehydration; Constipation, Diarrhea, Nausea; Altered sleep; Epileptic seizures; Headaches; Poor memory; Inability to concentrate; ADD/ADHD; Aberrant behavior; Decreased coordination; Irritability; Pain in abdomen, bones and muscles; Gout; Anemia.

Physiologically, the renal, nervous, reproductive, endocrine, immune, and hemopoietic systems are affected. Sub-toxic oral exposure to lead and cadmium increases the susceptibility to bacterial and viral infections.

Other symptoms associated with the early stages of lead intoxication are:

Headaches; Vertigo; Tremor; Joint pain; Neuritis; General mental symptoms, psychoneuroses

Symptoms of acute intoxication include:

Colic; Loss of muscle strength; Muscle tenderness; Paresthesia; Signs of neuropathy. Lead is known to damage the kidney, the liver, and the reproductive system, as well as to interfere with bone marrow function, basic cellular processes and brain functions. It is known to be responsible for convulsions, abdominal pain, paralysis, temporary blindness, extreme pallor, loss of weight and appetite, constipation and numerous other problems.

Lead causes nerve and mental problems, especially affecting learning ability in children. It was reported that the IQs of middle-class children dropped five to seven points after lead exposure, and Moon, et. al., demonstrated that lead levels also related to decreased visual and motor performance.

Therapeutic considerations:

Mild lead exposure can be treated successfully with oral chelating agents, targeted mineral therapy and dietary measures. The following should be considered:

Lead displaced calcium. In the case of calcium deficiency, lead is more readily deposited in tissues. Increases in phosphorus intake, vitamin C, vitamin B-complex, pectin, Vitamin E, Vitamins A and C, and Chromium can avoid cellular damage and reduce lead levels; Inadequate vitamin D intake facilitates the absorption of lead.

#### **COMMON SOURCES OF LEAD:**

**lead based paints; older homes; crystal; ceramics; canned food; food crops; water contamination.**

This finding is supported by:

High Blood SGOT; Low Blood Red Blood Count; High Blood ESR-Erythrocyte Sed Rate, Westergren

**Nutrients:** B-complex; Calcium 500mg + Phos. 260mg; Chlorella 250mg + Spirulina; Magnesium Glycinate 100mg; Vit. C 1000mg + bioflavonoids; Vit. E 400IU + Selenium 50mcg; Zinc 50mg

#### **Very High Hair Potassium**

High hair Potassium is not necessarily reflective of dietary intake or nutrient status. However, elevated Potassium may indicate adrenocortical insufficiency or it may be reflective of metabolic disorders associated with exposure to potentially toxic elements and toxic heavy metals. Elevated Potassium may reflect overall retention by the body or maldistribution of this element. Hair is occasionally contaminated with Potassium from shampoos.

**Nutrients:** Multiple

#### **Very High Hair Zinc**

The Zinc levels in the Hair are very high. This is commonly associated with contaminated water, welding, brass manufacturing, white paint, and pesticide production. Symptoms of Zinc toxicity include gastrointestinal disorders, tachycardia, blurred vision, and hypothermia.

#### **Very High Hair Iodine**

The Iodine is very high. This may be due to external contamination by hair treatments or it may be associated with hypersensitivity reaction, hypothyroidism, thyroiditis, goiter, immunologic or nonimmunologic, dermatological irritation or contact dermatoses, angio-edema, burning or soreness of mouth and throat, nausea/diarrhea and autoimmune thyrotoxicosis (Graves'disease) or

autonomous thyrotoxicosis (Plummer's disease).

**Nutrients:** Multiple

### **Very High Hair Lithium**

The Hair Lithium is high. Lithium is used in the manufacture of lightweight metal alloys, glass, lubrication greases, and batteries. Toxicity can cause dermatitis, nausea, confusion, edema, or hypotension.

### **Very High Hair Germanium**

The Germanium levels in the Hair are very high. This does not necessarily correlate with high levels of serum germanium.

### **Noted Hair Values**

#### SILVER

Silver, which is a little high, occurs naturally in very low concentrations in **soil, plants, and animal tissues. It can also be found in food that comes from silver plated vessels, silver solder, silver foil (used in decorating cakes), jewelry, electronic equipment, dental fillings and photographic materials. Silver is found at hazardous waste sites and in water. Some water treatment systems including water filters use silver compounds to kill bacteria. Silver has been used extensively for medicinal purposes particularly in the treatment of burns.**

There is much controversy over the long term safety of consumption of colloidal silver. Very high intake of colloidal silver has been reported to give rise to tumors in the liver and spleen of laboratory animals. Silver contributes to or can cause copper deficiency.

Toxicity: Silver is deposited in the skin and organs, causing gray discoloration.

#### HIGH TIN

**The most common sources of tin are: tap water, preserved foods in tin cans, asparagus packaged in glass, processing and packaging of: gelatin, smoked fish, macaroni, dried legumes, dried milk, milk in large cans, tea, dental amalgams, cosmetics, preservatives, pewter, bronze, and anticorrosive platings.**

Experiments have shown that increased tin ingestion causes depressed growth and reduced hemoglobin levels and liver function in rats.

Elevated tin resulted in elevated losses of calcium, selenium and zinc.

Symptoms of excess Tin include: skin, eye, GI tract irritation, muscle weakness, anemia and testicular degeneration, vomiting, diarrhea, abdominal cramps, loss of appetite, tightness of chest, metallic taste, dry throat, coma (in very extreme cases) and pneumoconiosis as a result of excessive inhalation of tin oxide.

#### TITANIUM

Titanium, which is a little high, generally has low toxicity. Titanium (Ti) has wide industrial uses, and elevated Ti may be the result of industrial exposure. Titanium is used in metal alloying and is used as titanium dioxide to coat welding rods. Titanium dioxide pigment is present in **paints, inks, dyes, shoe whiteners, plastics, some cosmetics, toothpaste, conditioners, shampoos, paper fillers and ceramic glazes. Elevated hair titanium also may be an artifact (false high) of hair treatments such as dyeing or "highlighting". Surgical or dental implants may be a source of**

## **Titanium in the hair.**

### HIGH RUBIDIUM

The Rubidium levels in the Hair were high. Symptoms of rubidium toxicity include inhibition of iodine uptake by the thyroid and interference with cardiac muscle contraction. Sources of rubidium include electrical equipment, soybeans, beef, tomatoes, and ground coffee.

### HIGH URANIUM

Hair is a good indicator of uranium exposure. Blood and urine have been noted as NOT being representative of the body burden since the blood is rapidly cleared of uranium. Most forms of uranium are poorly absorbed by the body with the exception of the lungs, which absorb airborne uranium readily. Uranium forms many complexes with proteins and bone and can substitute for calcium. It is deposited throughout the body and chronic fatigue is often reported in association with high hair levels. Published data correlates Uranium exposure, nephrotoxicity and all forms of cancer. Kidney and bone are the primary sites of Uranium accumulation. Uranium has been noted to be higher in female hair than males living in the same home.

Uranium is considered to be a toxic element, although its toxic effects are not well known. It is a moderately common element with three isotopes. U238, the most common isotope, represents over 99% of the naturally occurring element. It is the only isotope of concern in this analysis. It is reasonably stable with a low level of radioactivity and a half life of 4.5 billion years. **Uranium is used in glass manufacturing, ceramics, colored glass, high phosphate fertilizers and in some chemicals. Drinking water is a significant source of U238 in many regions. Radon can be a by-product of U238 decomposition.**

### NICKEL

The Nickel value is a little high. **The most common sources of Nickel are: atmospheric pollution by burning of coal and petroleum products, cigarette smoking, nickel coins, eyeglass frames, costume jewelry, kitchen appliances, pins, scissors, hair clips, hydrogenated oils and margarine, electronics and computers.**

Its widespread presence in environmental pollution and its toxic effects on human health warrant its classification as toxic. High nickel tissue levels have been associated with myocardial infarction, and are often present in patients who suffered strokes, dermatitis, chronic rhinitis, hypersensitivity reactions, hypersensitize the immune system, hyperallergenic responses to many different substances, pulmonary inflammation (due to smoke and dust), liver necrosis and toxemia. It is well established to be nephrotoxic and carcinogenic. Early symptoms of toxicity include: apathy, diarrhea, dermatitis, dyspnea, fever, insomnia, tachypnea, vertigo, vomiting, headaches, gastrointestinal pain and eczema. Other symptoms include allergies, immunosuppression and vitiligo.

### HIGH CALCIUM and MAGNESIUM

The calcium is high and the magnesium level is quite high in the hair. This doesn't mean you are getting or taking too much. These high levels are associated either with deficient minerals and vitamins to properly utilize calcium and magnesium or what is more likely the case is that the body is using these minerals to help carry toxic metals and elements out of the body through the hair.

### HIGH SODIUM

Sodium (Na) is an essential element. Blood testing for Sodium and electrolyte levels is much more diagnostic and indicative of status. High Hair Sodium may be the result of an electrolyte imbalance, or possibly adrenocortical hyperactivity. In this condition, Blood Sodium is elevated while potassium is low. Potassium is elevated (wasted) in the urine. High levels of Sodium and

Potassium in the hair are commonly high in association with elevated levels of toxic elements or xenobiotics. Elevated Sodium and Potassium levels are frequently concomitant with low levels of Calcium and Magnesium in hair.

#### HIGH COPPER

The Hair Copper is high. The first thing is to rule out exogenous contamination sources: permanent solutions, dyes, bleaches, swimming pool/hot tubs, water carried through copper pipes. Common copper sources include food, drinking water, excess copper supplementation, and occupational or environmental exposure, chocolate, nuts, wheat germ and shellfish. Wilson's Disease, a genetic disorder that causes excessive copper accumulation in the liver or brain, may be a consideration. Insufficient intake of competitively absorbed elements such as Zinc or Molybdenum can lead to, or worsen Copper excess. Estrogen can increase copper in blood and hair levels

Excess Copper conditions can lead to: biliary obstruction (reduced ability to excrete Copper), liver disease (hepatitis or cirrhosis), renal dysfunctions, Hodgkin's disease, leukemia and other malignancies, anemia, hemochromatosis, Rheumatic fever, Major and minor thalassemia, dyslexia, collagen diseases, and is a potential complication in long-term hemodialysis patients. Symptoms of excess Copper are muscle and joint pain, insomnia, arthritis, depression, irritability, hyperactivity, emotional instability, tremor, hemolytic anemia, learning disabilities, and behavioral disorders.

Therapeutic considerations to normalize excess Copper include iron, manganese, selenium, zinc, molybdenum, vitamin C, amino acids and vitamin B6.

#### HIGH MANGANESE

The Hair Manganese is high. Symptoms of excessive Manganese include lethargy, disorientation, memory loss, anxiety, emotional instability, and bipolar-like disorders. Some possible causes of Manganese toxicity are iron or calcium deficiency, chronic infection, alcoholism, and impaired liver or kidney function.

#### HIGH CHROMIUM

The Hair Chromium is high. This has been seen in patients with allergic dermatitis, skin ulcers, bronchitis, lung cancer, cerebral thrombosis, and cerebral hemorrhaging, and has been reported to lead to insomnia and an increase in unpleasant dream activity. Elevated levels of chromium have been detected in the hair of children with psychotic and neurotic behavior, and in the hair of children with learning disabilities when compared to controls. Sources of exposure include stainless steel manufacturing, wood finishing, leather tanning, and handling of cement.

#### HIGH VANADIUM

Vanadium is a by-product of the heavy metal industry and is found in industrial waste, dust, and fumes. Long-term excessive vanadium supplementation can be toxic because vanadium readily combines and interferes with the biological functions of amino acids, peptides, proteins, enzyme substrates, nucleotides, carbohydrates and ATP. Toxicity is higher after inhalation. Vanadium is poorly absorbed by the gastrointestinal tract.

The major toxic effects of Vanadium are: Purple/green tongue, gastrointestinal problems, including diarrhea and cramps (especially when concurring with discoloration of the tongue), impaired reflexes and neuromuscular irritation, eczema, dermatitis, conjunctivitis, respiratory tract irritation (resulting in rhinitis, pharyngitis, chronic bronchitis and diffuse pulmonary fibrosis), tachycardia, manic depression, central nervous system problems, hematological effects including anemia, neutropenia and leukocyte changes and hypoglycemia.

#### HIGH MOLYBDENUM

The Hair Molybdenum is high. Possible symptoms of excess include loss of appetite, anemia, and arthritic conditions. Sources of exposure are mostly occupational and include lubricants, catalysts, pigments, organic glazes, and steel alloys.

#### HIGH BORON

Boron is high. Signs of toxicity include nausea, vomiting, diarrhea, dermatitis, lethargy, inflammation and edema in the legs, growth problems, testicular atrophy and other health problems. Boron is present in some cleaners, cements, ceramics, glass, water and soil. Make sure there are adequate levels of calcium, magnesium, phosphorus, riboflavin and B6.

#### HIGH BARIUM

Barium compounds are found in soaps, ceramics, paper, glass, plastics, textiles, dyes, fuel additives, rubber, paint and pesticides. Barium toxicity can cause vomiting, diarrhea, abdominal pain, muscular and myocardial stimulation, tingling in the extremities, and loss of tendon reflexes.

#### HIGH IRON

The Iron levels in the Hair are high. This does not necessarily correlate with high serum iron.

**Nutrients:** Calcium 500mg + Phos. 260mg; Chlorella 250mg + Spirulina; Magnesium Glycinate 100mg; Multiple; Vitamin A 2000 units + Kelp; Vitamin B6 500mg

To help get these heavy metals out of your system, which is very important, Chlorella is recommended. Magnesium and selenium, are both very important in getting these toxic metals through the kidneys. Chlorella and cilantro have the unique ability to actually get these heavy metals out of brain, liver, heart, and lung tissue. Adding fresh cilantro to the diet is also recommended. Cilantro is an herb that can be found in most supermarkets. Chop it up and add it to salads, sauces, etc. Since we are constantly being exposed to heavy metals in our society, it is recommend that even after you are feeling better that you continue with the Chlorella.

#### **Lifestyle / Dietary Recommendations:**

Below is a list of foods and items that we strongly recommend you avoid. **READ YOUR INGREDIENT LABELS!!** Later in the report, you will find exchanges for these foods and helpful hints on implementing these new lifestyle habits.

1. Artificial Sweeteners: aspartame, saccharin, sucralose, xylitol, sorbitol, maltitol, etc.
2. Processed Meats: "nitrate" or "nitrite" foods: pork products; bologna; wieners; any luncheon meat with additives or preservatives
3. MSG (monosodium glutamate): found in many dressings, sauces and Chinese foods. HVP (hydrolyzed vegetable protein) can contain up to 40% MSG.
4. All Canned Foods and Drinks
5. Microwave Cooking
6. Fried Foods: deep fried, breaded foods
7. Hydrogenated Fats [a.k.a. Trans Fat]: margarine, most pre-packaged foods and dressings, "Olestra" products, etc

8. Refined Carbohydrates: processed foods such as white sugar, white flour, "unbleached or unbrominated" foods, corn syrup, "enriched" foods, etc
9. Preservatives, additives, sulfites, artificial colors, FD&C colors and dyes
10. Commercial Meats: Try to get the cleanest, freshest meat you can find. Look for meat that is labeled with terms such as "No Hormones", "No Steroids", "No Antibiotics", etc.
11. Shellfish and Bottom-dwellers: crab, shrimp, lobster, oyster, catfish, etc.
12. Dairy Products: cottage cheese, yogurt, cheese, butter, sour cream, etc. (anything with cow's milk). This does not include eggs.
13. Coffee (regular & chemically decaffeinated), Liquor (distilled), All sodas, Tea (black decaf & black regular)
14. Soy Products: isolated soy protein, texturized vegetable protein, soy supplements, soy protein powder, soy protein bars, tofu, etc. Limited fermented soy products (tempeh and miso) and whole soy beans are acceptable. Don't make soy your main protein source, limit to 3-4 servings per week.
15. Chlorine and Fluoride Sources: tap water, heavy chlorine exposure in swimming pools, fluoride toothpaste, fluoride supplements, fluoride mouthwash, etc.

#### Diabetic Recommendations:

(these recommendations are for your diabetic condition and should be followed closely)

1. Avoid all fruit juices.
2. Eat only one fruit and at least four fresh vegetables.
3. Eat a snack every hour and a half to two hours. (Eat by the clock. This is going to help take stress off your liver and help to maintain your glucose at a good level so it doesn't fluctuate so much.)
4. The snack should be 4 to 5 bites of a complex carbohydrate, protein or foods that have good fats in them such as: whole grain bread, sunflower seeds, pumpkin seeds, nuts, carrots or even a piece of chicken would be fine to eat.
5. Do this for at least the next two months or until your re-evaluation.

Aerobic Exercise [i.e. jogging, cycling, fast-paced walking, etc]: It is recommended that you build up to at least 40 minutes a day. If at first you do not have the energy to exercise this much, it is recommended that you start slowly by exercising 10 minutes two or three times a day until you can gradually build up to 40 minutes a day.

Strength Training: If you are not currently on a weight training program, a muscle building exercise (i.e. step exercise) 10 minutes a day is encouraged. If at first you do not have the energy or physical ability to perform this exercise, it is recommended that you start slowly by setting a goal to do this exercise 2 minutes two or three times a day until you can gradually build up to 10 minutes a day.

Water Consumption: Drink 1 quart of clean, filtered water per 50lbs of body weight per day. We recommend using "reverse osmosis" filtration for your drinking and cooking water. Reverse Osmosis is a type of filtration that gets the water the cleanest that technology has to offer without robbing the water of all essential minerals. Distilled water is not recommended. Since distilled water has little or no mineral content, it acts like a vacuum that can actually leach minerals from your system. If you are already mineral deficient, it will worsen the problem. Cooking foods in distilled water will pull the minerals from the food and lowers the nutrient value.

A word of caution - **anytime you make drastic changes in diet, vitamin intake, or exercise, realize that you may feel somewhat worse before you feel better.** It doesn't happen often, but as your body detoxifies, you may feel worse if it occurs too fast. If you do feel worse, don't panic, it will pass in probably 2-3 days. If this problem does occur, take half of what is recommended for

three days and slowly over two weeks progress to taking the complete program.

Everything that has been recommended is very important and many of these things work together. In order to get the most effective results, it is important that you follow the program exactly as outlined. Following the diet may not be easy, but if you do, you will get the best outcome. Likewise, if you don't take the vitamins, or only take part of them, you may not see the expected results. Many people with some very serious problems have been helped using this program. The purpose of this analysis is to benefit you. This is for your well being, so please do the program as recommended so that you will achieve the best results.

Attached is a list of vitamins that have been carefully selected for your specific problems. These vitamins are recommended because they are of the highest quality. Occasionally, you will hear rumors regarding vitamin toxicity. Rest assured that these issues have been researched and the risk of significant side effects is extremely low. Historical data and experience have shown these vitamins, along with the dietary changes, to be the best in helping you achieve the necessary improvements needed on your test results. If for some reason you need to return the supplements, there will be a 15% restocking fee. You must return them within the first 30 days to receive any refunds.

Please keep this report for future reference and bring it with you to your next evaluation. We will be happy to provide you with an extra copy or fax/send your report to any other doctors at your request for \$20.00 per copy or fax.

If we can be of any further assistance to you or your family please do not hesitate to ask.

**Yours in Health,**

**Dr. Jeffrey P. Meyers, D.C., FIAMA**

## VITAMIN AND SUPPLEMENT RECOMMENDATIONS

PATIENT: Anne Onymous

SEX: F                      AGE: 36                      WEIGHT: 155

<u>Supplement</u>	<u>Number</u>
B-complex	1
B12 1000mcg + Folic Acid	3
Beta Carotene 25.000IU	2
Betaine 496mg + Pepsin 140mg	2
Calcium 500mg + Phos. 260mg	3
Chlorella 250mg + Spirulina	6
Ginger + Turmeric	3
Iron Chelate 25mg	1
Liver 500mg	3
Magnesium Glycinate 100mg	3
Mg 100mg + Malic Acid 400mg	2
Multiple	3
Omega-3 Faty Acids + EPA + DHA	2
Thyroid Support 1	4
Vanadium 250mcg	2
Vit. C 1000mg + bioflavonoids	3
Vit. E 400IU + Selenium 50mcg	1
Vitamin A 2000 units + Kelp	1
Vitamin B6 500mg	1
Zinc 50mg	1

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy		Clinical		Units
		06/01/2002		05/14/2002						
Glucose		95.00	hi	100.00	J	80.00	- 95.00	65.00	- 99.00	mg/dL
Hemoglobin A1C (Gly-Hgh)		5.70	HI	5.80	J	4.61	- 5.40	4.50	- 5.70	%
Uric Acid		5.50	Opt			4.10	- 6.00	2.40	- 8.20	mg/dL
BUN (Blood Urea Nitrogen)		17.00	Opt			13.10	- 18.00	5.00	- 26.00	mg/dL
Creatinine		0.92	hi			0.61	- 0.90	0.50	- 1.50	mg/dL
BUN / Creatinine Ratio		18.48	Opt			13.10	- 20.00	8.00	- 27.00	ratio
Sodium		140.00	lo			140.10	- 144.00	135.00	- 148.00	meq/dL
Potassium		4.15	Opt			3.91	- 4.60	3.50	- 5.50	meq/dL
Chloride		102.00	Opt			100.10	- 106.00	96.00	- 109.00	meq/dL
Magnesium		2.30	Opt			2.21	- 2.51	1.60	- 2.60	mg/dL
Calcium		9.70	lo			9.71	- 10.10	8.50	- 10.60	mg/dL
Phosphorus		3.70	Opt			3.41	- 4.00	2.50	- 4.50	mg/dL
Calcium/Albumin Ratio		2.31	Opt			2.10	- 2.50	2.03	- 2.71	ratio
Total Protein		7.66	hi			7.11	- 7.61	6.00	- 8.50	gm/dL
Albumin		4.20	Opt			4.10	- 4.51	3.50	- 5.50	gm/dL
Globulin		3.52	hi			2.81	- 3.51	1.50	- 4.50	gm/dL
A/G Ratio		1.19	lo			1.22	- 1.60	1.10	- 2.50	ratio
Total Bilirubin		0.38	lo			0.39	- 0.93	0.10	- 1.20	mg/dL
Alkaline Phosphatase 25-150		77.00	Opt			65.00	- 108.00	25.00	- 160.00	IU/L
Creatine Kinase		120.00	Opt			64.00	- 133.00	24.00	- 173.00	u/l
LDH		130.00	Opt			120.10	- 160.00	100.00	- 250.00	mu/mL
SGOT (AST)		30.00	hi			18.10	- 26.00	6.00	- 40.00	mu/mL
SGPT (ALT)		39.00	hi			18.10	- 26.10	6.00	- 40.00	mu/mL
GGT		57.00	HI			22.00	- 39.00	6.00	- 55.00	mu/mL
Serum Iron		121.00	hi			85.10	- 120.00	35.00	- 155.00	mcg/dL
Ferritin		26.00	lo			30.10	- 218.30	10.00	- 291.00	ng/mL
Total Cholesterol		197.00	hi			140.10	- 170.00	100.00	- 199.00	mg/dL
Triglyceride		78.00	lo			80.10	- 115.00	10.00	- 149.00	mg/dL
HDL Cholesterol		63.00	HI			50.00	- 55.00	40.00	- 59.00	mg/dL
VLDL Cholesterol		16.00	Opt			5.10	- 20.10	4.10	- 40.10	mg/dL
LDL Cholesterol		111.00	HI			50.10	- 75.10	6.00	- 99.10	mg/dL
Total Cholesterol / HDL Ratio		3.13	Opt			0.00	- 4.00	0.00	- 5.00	ratio
T4 Thyroxine		6.20	lo			7.10	- 9.00	4.50	- 12.00	mcg/dL
T3 Uptake		33.00	Opt			29.10	- 35.10	24.00	- 39.00	%
T7 Free Thyroxine Index (FTI)		2.20	lo			2.61	- 3.60	1.20	- 4.90	
White Blood Count		7.50	Opt	7.60		5.10	- 8.00	4.00	- 10.50	k/cumm
Red Blood Count		3.79	LO	3.96	L	4.51	- 5.50	3.80	- 5.60	m/cumm
Hemoglobin		12.00	lo	9.20	J	13.30	- 15.20	11.50	- 17.00	gm/dL
Hematocrit		38.70	lo	38.70	K	39.51	- 47.00	34.00	- 50.00	%
MCV		91.00	Opt	90.00		85.10	- 97.00	80.00	- 98.00	cu.m
MCH		30.20	Opt	30.60		28.10	- 32.00	27.00	- 34.00	pg
MCHC		35.20	hi	35.00	L	33.10	- 34.99	32.00	- 36.00	%
Platelets		248.00	Opt	255.00	J	175.10	- 250.00	140.00	- 415.00	k/cumm
Polys/Neutrophils (SEGS-PMNS)		59.00	Opt	55.00	J	55.10	- 65.00	40.00	- 74.00	%
Lymphocytes		32.00	Opt	29.00		25.10	- 40.00	14.00	- 46.00	%
Monocytes		6.70	Opt	6.50		5.10	- 7.10	4.90	- 13.00	%
Eosinophils		4.50	hi	4.33	L	0.00	- 4.10	0.00	- 7.00	%
Basophils		0.00	Opt	1.00	J	0.00	- 0.00	0.00	- 3.00	%
ESR-Erythrocyte Sed Rate, Westerg		10.00	hi			0.00	- 8.00	0.00	- 30.00	mm/HR
CRP C-Reactive Protein		6.90	HI			0.00	- 1.50	0.00	- 4.90	mg/L

**BLOOD TEST RESULTS**

Test Description	Prior Result	Prior Result	Prior Result	Prior Result	Prior Result	Prior Result
	2	3	4	5	6	7
Date:	04/16/2002	04/02/2002	11/21/2001	04/22/2001	05/01/2000	05/15/1999
Glucose	101.00	109.00	91.00	122.00	6.00	99.00
Hemoglobin A1C (Gly-Hgh)	6.00	6.10	4.00		5.60	5.80
Uric Acid		5.60	4.00		5.60	5.60
BUN (Blood Urea Nitrogen)		20.00	21.00		20.00	20.00
Creatinine		1.00	1.20		1.00	1.00
BUN / Creatinine Ratio		20.00			20.00	20.00
Sodium		139.00	138.00		139.00	135.00
Potassium		4.10	3.60		4.00	4.30
Chloride		103.00	101.00		103.00	101.00
Magnesium		2.20	2.40		2.20	2.20
Calcium		9.30	9.50		9.30	9.40
Phosphorus		3.90	3.80		3.80	3.90
Calcium/Albumin Ratio		2.33			2.20	2.33
Total Protein		7.70	7.80		7.80	7.00
Albumin		4.00	4.30		4.10	4.10
Globulin		3.60	3.50		3.70	3.80
A/G Ratio		1.10			1.10	1.50
Total Bilirubin		0.40			0.50	0.50
Alkaline Phosphatase 25-150		67.00	90.00	200.00	68.00	88.00
Creatine Kinase		138.00	125.00			300.00
LDH		123.00		44.00	135.00	99.00
SGOT (AST)	35.00	38.00	50.00	70.00	40.00	16.00
SGPT (ALT)	45.00	65.00		70.00	55.00	50.00
GGT	62.00	68.00	55.00	200.00	70.00	120.00
Serum Iron		121.00	80.00		110.00	80.00
Ferritin		2.00	10.00		4.00	8.00
Total Cholesterol		227.00	200.00		215.00	200.00
Triglyceride		85.00	150.00		82.00	200.00
HDL Cholesterol		43.00	50.00		45.00	50.00
VLDL Cholesterol		17.00	10.00		30.00	10.00
LDL Cholesterol		167.00	140.00		140.00	140.00
Total Cholesterol / HDL Ratio		5.20	4.00		5.00	4.00
T4 Thyroxine	9.40	9.80			8.00	
T3 Uptake	32.00	29.00			31.00	
T7 Free Thyroxine Index (FTI)	2.90	2.80			2.40	
White Blood Count	7.70	7.60	11.00		7.40	8.00
Red Blood Count	3.55	1.15	2.20		2.90	5.00
Hemoglobin	8.60	9.50	9.50		14.00	14.00
Hematocrit	35.00	35.50	31.00		44.00	40.00
MCV	89.00	89.00	90.00		89.00	98.00
MCH	31.00	30.90	31.00		30.00	33.00
MCHC	34.00	34.50	35.00		34.00	36.00
Platelets	274.00	269.00	280.00		268.00	460.00
Polys/Neutrophils (SEGS-PMNS)	52.00	54.00			55.00	54.00
Lymphocytes	24.00	25.00			54.00	47.00
Monocytes	6.20	6.00			6.00	4.00
Eosinophils	4.23	4.00			4.00	0.00
Basophils	1.00	1.00			1.00	0.00
ESR-Erythrocyte Sed Rate, Westergren	31.00	37.00	20.00		33.00	22.00
CRP C-Reactive Protein	19.00	26.40	10.00		22.00	5.00

Test Description	Date:	Current Result	Current Rating	Prior Result	Delta	Healthy	Clinical	Units
<b>Toxic Elements</b>								
Aluminum	01/14/2005	24.00	HI			0- 0.50	0.51- 8.00	ug/g
Antimony		0.00	Opt			0- 0.03	0.04- 0.05	ug/g
Arsenic		0.00	Opt			0- 0.00	0.01- 0.06	ug/g
Beryllium		0.00	Opt			0- 0.01	0.02- 0.02	ug/g
Bismuth		0.99	HI			0- 0.05	0.06- 0.10	ug/g
Cadmium		0.99	HI			0- 0.00	0.01- 0.10	ug/g
Lead		5.20	HI			0- 0.01	0.02- 1.00	ug/g
Mercury		0.00	Opt			0- 0.00	0.01- 1.10	ug/g
Platinum		0.00	Opt			0- 0.00	0.01- 0.00	ug/g
Thallium		0.00	Opt			0- 0.00	0.01- 0.01	ug/g
Thorium		0.00	Opt			0- 0.00	0.01- 0.00	ug/g
Uranium		0.04	hi			0- 0.01	0.02- 0.06	ug/g
Nickel		0.25	hi			0- 0.20	0.21- 0.40	ug/g
Silver		0.11	hi			0- 0.07	0.08- 0.15	ug/g
Tin		0.25	hi			0- 0.15	0.16- 0.30	ug/g
Titanium		0.77	hi			0- 0.50	0.51- 1.00	ug/g
Total Toxic Representation		2.00	hi			0- 2.00	2.01- 3.00	
<b>Essential Elements</b>								
Calcium		1350.00	HI			663.00- 753.00	300.00- 1200.00	ug/g
Magnesium		450.00	HI			53.00- 62.00	35.00- 120.00	ug/g
Sodium		98.00	HI			37.00- 45.00	12.00- 90.00	ug/g
Potassium		98.00	HI			14.00- 18.00	8.00- 38.00	ug/g
Copper		44.00	HI			13.00- 17.00	12.00- 35.00	ug/g
Zinc		405.00	HI			150.00- 160.00	140.00- 220.00	ug/g
Manganese		0.65	HI			0.21- 0.32	0.15- 0.65	ug/g
Chromium		0.44	HI			0.25- 0.31	0.20- 0.40	ug/g
Vanadium		0.07	HI			0.04- 0.05	0.02- 0.06	ug/g
Molybdenum		0.07	HI			0.04- 0.05	0.03- 0.06	ug/g
Boron		6.50	HI			0.50- 1.40	0.30- 2.00	ug/g
Iodine		6.50	HI			0.32- 0.55	0.25- 1.30	ug/g
Lithium		6.50	HI			0.01- 0.01	0.01- 0.02	ug/g
Phosphorus		240.00	hi			190.00- 220.00	160.00- 250.00	ug/g
Selenium		1.65	hi			1.20- 1.45	0.95- 1.70	ug/g
Strontium		7.22	hi			2.00- 2.90	0.50- 7.60	ug/g
Sulfur		51000.00	hi			49200.00- 49500.00	44500.00- 52000.00	ug/g
Barium		2.00	hi			0.70- 1.20	0.26- 3.00	ug/g
Cobalt		0.05	hi			0.02- 0.03	0.01- 0.05	ug/g
Iron		29.00	HI			6.80- 8.50	5.40- 14.00	ug/g
Germanium		6.05	HI			0.05- 0.05	0.05- 0.06	ug/g
Rubidium		0.27	HI			0.02- 0.03	0.01- 0.10	ug/g
Zirconium		0.33	hi			0.07- 0.25	0.02- 0.42	ug/g