

WHOLE CHIROPRACTIC HEALTHCARE, LLC

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NUTRITION EVALUATION: 09/16/2020

PATIENT INFORMATION

Ann Onymous
1234 Anywhere St.
Anywhere OH 45425
(555) 555-5555
Sex: F
Birth Date: 10/01/1966
Age: 53
Blood Type: A+

DATA USED FOR ANALYSIS

Vitals	02/20/2019
Hair	02/20/2019
Urinalysis	02/20/2019
Stool	02/20/2019
PSS	02/21/2019
Medication	02/21/2019
Blood	02/22/2019

VITALS

Height: 5'6"
Weight: 145
Blood Pressure: 139 / 95
O2 Level: 83%
Heart Rate: 98

PRIMARY SYMPTOMS

1. Hypercholesterolemia (High Cholesterol) E78.0
2. Tendency of High Blood Pressure
3. Tachycardia (High Heart Rate) R00.0
4. Diabetes Mellitus E11.9

PRESENTING SYMPTOMS

Allergic Rhinitis from food J30.5 • Anxiety Disorder F41.9 • Arthritic Disorder M12.9 • Constipation K59.00 • Depression F32.9 • Diabetes Mellitus E11.9 • Edema R60.9 • Fibromyalgia M79.7 • GERD K21.9 • Headaches R51 • Hypercholesterolemia (High Cholesterol) E78.0 • Indigestion K30 • Poor Concentration/Memory F07.8 • Rheumatoid Arthritis M06.9 • Sinusitis J01.90 • Tachycardia (High Heart Rate) R00.0 • Energy level is worse than it was 5 years ago • Fingernails are soft • Fingernails are splitting • Has tattoos • Sensitive to chemicals, paint, exhaust fumes, cologne • Difficulty concentrating • Cold feet • Cold hands • Heart skips beats • Heart palpitations • Spells of rapid heart rate • Tendency of High Blood Pressure • Excessive

thirst • Frequently feels cold • Gets lightheaded when standing quickly • Painful feet • 3 or less bowel movements per week • Abdominal gas • Belching and burping after eating • Indigestion in 2 hours or more after meals • Irritable Bowel • Tends to constipation • Drinks alcohol • Drinks caffeinated pop/soda • Drinks Decaffeinated Pop/Soda • Drinks 1 or more pop/sodas per day • Frequent use of Artificial Sweeteners • Amalgam dental fillings • Bitter taste in the mouth in the morning • Frequent fever blisters • Frequent sore throats • Glands often swell • Tongue has grooves or fissures • Tongue is coated • Frequent headaches • Frequently feels faint • Frequent colds • Frequent sinus infections • Post nasal drip • Bruises easily • Problems with Eczema • Urinates more than 2 times per night • Frequent bladder infections • Frequent urination • Troubled by urgent urination • Abnormal cycle >29 days and/or <26 days • Breast Fibroids • Excessive menstrual flow • Retains fluid during periods • Radiated Thyroid • Thyroid removed

Patient Comments

Patient states that over the last 5 years she has seen over 10 doctors and specialists and she is still getting worse. She states that this is very frustrating and depressing. She is having problems doing basic living and household duties and that this is affecting her family and she is no longer able to work full time. She notices her balance isn't as good as it used to be; she is bumping and tripping more. Her mother has Alzheimer's disease and she is very concerned about her loss of memory and concentration.

Provider Comments/Findings

Patient tends to lose concentration and I had to repeat questions several times. Her skin is pale and pasty and she has dark circles around the eyes. Her eyes are blood shot and she looks tired. She does have some difficulty standing on one leg and walking on her toes and heels. She has a general disheveled appearance

PRIMARY FINDINGS SUGGESTIVE OF

- Hyperlipidemia
- Possible Kidney Involvement
- Gastro/Intestinal Dysfunction
- Inflammation of Liver
- Anemia and Possible Hemochromatosis
- Mutagenic Considerations
- Very Low Hair Chromium
- Noted Hair Values
- Urinary Findings
- Diabetic Factors
- Gout
- Vitamin D Deficiency
- Thyroid Considerations
- Possible Infection and/or Inflammation
- Noted Blood Values
- High Hair Cadmium
- Stool Findings

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.

MEDICATIONS

- Acetaminophen - Occasional.
- Diflucan - 6 months - 2 years.
- Hydrochlorothiazide - 6 months - 2 years.
- Naproxen Oral - 6 months - 2 years.
- Zetia - More than 2 years.
- Coumadin - 6 months - 2 years.
- Glucophage - 6 months - 2 years.
- Lipitor - Less than 6 months.
- Prilosec - More than 2 years.

SIDE EFFECTS OF MEDICATIONS

- **Acetaminophen** (Otherwise known as Tylenol) is indicated for use in treating minor aches and pains for pain/arthritis & Panadol.
Side Effects: hepatitis; hives; decreased blood platelets; decreased white blood cells; discolored spots and small elevations of the skin.
Possible Nutrients Depleted: Glutathione.
- **Coumadin** indicated for treatment of venous thrombosis and embolism.
Side Effects: hemorrhage, necrosis (death), systemic atheroemboli (blood clots), cholesterol micro emboli (small blood clots), effecting the leg, foot, and toes, kidneys, liver, brain, pancreas, spleen, easy bruising and bleeding, unusual bleeding, excessive bleeding, bleeding gums, chest pain, accidental injury, pain, fatigue, edema, hypertension, headaches, dizziness, abdominal pain, diarrhea, nausea, back pain, depression, confusion, bronchitis, coughing, rash, urinary tract infection, dark or bloody urine.
NOTE: Use of certain nutrients can enhance the effect of Coumadin causing increased bleeding and bruising. A partial list of nutrients and the nutrients that are the most known to increase the effect of Coumadin include: garlic, chlorella, vitamin E, DHEA, bromelain, fish oils and American ginseng, devil's claw, fenugreek, ginger, ginkgo biloba, cranberry, red clover or sweet woodruff, cranberry, melatonin, antioxidants, grapefruit, joint supplements glucosamine and chondroitin, Valerian, Echinacea and Vitamin D supplements. Use of these or similar nutrients needs to be with careful consideration and possible additional INR/PT testing.
Possible Nutrients Depleted: Vitamin E and Vitamin K.
- **Fluconazole Oral** (Otherwise Known As: Diflucan) is used to treat fungal and yeast infections.
Side Effects: nausea; vomiting; diarrhea; stomach pain; headache; dizziness; and hair loss.
Possible Nutrients Depleted: Magnesium and Potassium.
- **Glucophage** (Otherwise known as Metformin) is indicated as an adjunct to diet to lower blood glucose.
Side Effects: diarrhea; nausea; vomiting; abdominal bloating; flatulence; anorexia; unpleasant or metallic taste; rash/dermatitis; & subnormal serum vitamin B 12 levels.
Possible Nutrients Depleted: Coenzyme Q10, Magnesium, Folic Acid, Vitamin B12 and B1.
- **Hydrochlorothiazide** (HCTZ) used as a "water pill" (diuretic) used to treat high blood pressure.
Side Effects: dizziness, lightheadedness, headache, blurred vision, loss of appetite, stomach upset, diarrhea, or constipation, excessive loss of body water and minerals (including potassium), muscle cramps or weakness, confusion, severe dizziness, unusual dry mouth or thirst, nausea or vomiting, fast/irregular heartbeat, unusual decrease in the amount of urine, fainting, seizures, numbness/tingling of the arms/legs, decreased sexual function, persistent

sore throat or fever, easy bleeding or bruising, stomach/abdominal pain, persistent nausea/vomiting, yellowing of eyes/skin.

Possible Nutrients Depleted: Coenzyme Q10, Phosphorous, Potassium, Sodium, Calcium, Vitamin D, Magnesium, Vitamin B1, Vitamin B6, Vitamin B12, Folic Acid, Selenium, Chromium, Vitamin C, and Zinc.

- **Lipitor (also known as Atorvastatin)** is used to treat cholesterol problems.
Side Effects: liver dysfunction; adrenal failure; diffused muscle pain; muscle tenderness; weakness; malaise, fever; myopathy; muscle disease; edema; digestive problems; gastritis; colitis; vomiting; ulcers; bleeding gums; bleeding ulcers; hepatitis, pancreatitis; gall bladder disease; asthma; decreased libido; leg cramps; bursitis; itching; alopecia; dry skin; acne; cystitis; hematuria; kidney stone; breast tenderness; various hemorrhage; loss of taste; palpitations; migraines; arrhythmia; and gout.
Possible Nutrients Depleted: Vitamin A, Vitamin D, Vitamin E, Vitamin K, Vitamin B12, Calcium, Folic Acid, Iron, Magnesium, Potassium, and CoQ10.
- **Naproxen Oral** (Otherwise known as Anaprox & Naprosyn) is used to relieve pain and inflammation associated with various conditions.
Side Effects: constipation; heartburn; abdominal pain; nausea; dyspepsia; diarrhea; stomatitis; headache; dizziness; drowsiness; lightheadedness; vertigo; skin eruptions; ecchymosis; sweating; purpura; tinnitus; hearing disturbances; visual disturbances; edema; dyspnea; palpitations; thirst; abnormal function liver tests; colitis; gastrointestinal bleeding and/or perforation; hematemesis; jaundice; pancreatitis; melena; vomiting; glomular nephritis, hematuria; hyperkalemia; interstitial nephritis; nephrotic syndrome; renal disease; renal failure; renal papillary necrosis; agranulocytosis; eosinophilia; granulocytopenia; leukopenia; thrombocytopenia; depression; dream abnormalities; inability to concentrate; insomnia; malaise; myalgia; muscle weakness; alopecia; photosensitive dermatitis; urticaria; skin rashes; hearing impairment; congestive heart failure; eosinophilic pneumonitis; anaphylactic reactions; angioneurotic edema; menstrual disorders; chills and fever; aplastic anemia; hemolytic anemia; aseptic meningitis; cognitive dysfunction; epidermal necrolysis; erythema multiforme; Steven-Johnson syndrome; non-peptic gastrointestinal ulceration; ulcerative stomatitis; vasculitis; hyperglycemia; hypoglycemia.
Possible Nutrients Depleted: Folic Acid, Iron.
- **Prilosec** (Otherwise known as Omeprazole) is used to treat acid related stomach and throat problems.
Side Effects: gastric tumors; cancer; and impairment of fertility; headache; diarrhea; abdominal pain; nausea; dizziness; vomiting; rash; constipation; cough; fever; pain; fatigue; malaise; chest pain; tachycardia; bradycardia; palpitation; high blood pressure; edema; elevated liver enzymes (SGOT and SGPT); hepatitis; pancreatitis; anorexia, dry mouth; hypoglycemia; weight gain; muscle cramps; muscle and joint pain; muscle weakness; depression; hallucinations; confusion; insomnia; nervousness; tremors; apathy; anxiety; vertigo; skin inflammation; toxic epidermal necrolysis; alopecia; tinnitus; gynecomastia; and various anemia's.
Possible Nutrients Depleted: Vitamin B12, Folic Acid, Vitamin D, Calcium, Iron and Zinc.
- **Ezetimibe** (Otherwise known as Zetia) is used to help lower cholesterol.
Side Effects: acute infection of the nose; throat or sinus; gall stones; chest pains; joint pain; muscle pain; back pain; low energy; cough; diarrhea; stomach cramps; muscle disease; hepatitis; inflammation of the gall bladder; acute inflammation of the pancreas; erythema multiform; hives; rash; abnormal liver function tests; depression; decreased blood platelets;

dizziness; nausea; numbness; & tingling sensations.

Possible Nutrients Depleted: Vitamin A, Vitamin D, Vitamin E, Vitamin B12, Calcium, Folic Acid, Iron, Magnesium, Potassium, and CoQ10.

SUPPLEMENTS

B6 100mg, Methyl B12 Plus, Vitamin C 1000mg

INTERPRETING ALL TEST RESULTS

Your test results are color coded for ease of analysis:

Yellow = values are outside the healthy range but still within the clinical range

Red = values are outside the clinical range

Blue = values extremely higher or lower than the clinical range limits

INTERPRETING BLOOD LAB RESULTS

On the blood test results page found later in the report, you'll notice two columns on the right side of the page labeled "Healthy Range" and "Clinical Range". The clinical range is used by the medical community. Any values outside this range are indicative of a disease process. The healthy range is more narrow than the clinical range. Test values outside of the healthy range indicate results which are not as good as they should be. The tighter guidelines of the healthy range allows us to see signs of any developing diseases/conditions.

INTERPRETING HAIR LAB RESULTS

The hair analysis screening is looking for essential, nonessential and potentially toxic elements. These elements are irreversibly incorporated into growing hair. The amount of each element found in the hair is proportional to levels in other body tissues. This makes the hair analysis a suitable indirect screening for physiological excess, deficiency or maldistribution of elements in the body. All screening tests have limitations which must be taken into consideration. Scalp hair is vulnerable to external contamination by water, hair treatments and other products. The data provided by a hair analysis should be considered in conjunction with symptoms, diet analysis, occupation and lifestyle, water source, physical examination and the results of other laboratory tests. However, accepting these limitations, hair analysis can provide useful insights into the toxic load and biochemical condition of the body.

For each elevated toxic element in the hair, the most common sources of exposure are listed in the report. Due to pollution, our industrial culture and other environmental factors, it is impossible to completely eliminate your exposure to some toxic elements. However by knowing the sources of toxins elevated in your body, you can work to reduce your exposure, thus lessening the total toxic burden on your body.

DIAGNOSTIC FINDINGS

CORONARY RISK ASSESSMENT

■ Total Cholesterol: 220	■ HDL Cholesterol: 63
■ LDL Cholesterol: 114	■ VLDL Cholesterol: 18

Coronary Risk Assessment: 3.49 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. Think of HDL as the healthy cholesterol and generally the higher the better. LDL is the bad cholesterol, as it tends to plug the arteries. The VLDL is the very worst cholesterol and is more like sludge. Lower is better for the LDL and VLDL in determining coronary risk and overall health.

HYPERLIPIDEMIA

The Total Cholesterol, Triglycerides, LDL Cholesterol are high and the HDL Cholesterol, VLDL Cholesterol, and Total Cholesterol/HDL Ratio are optimal. This is hyperlipidemia, which is basically too much fat in the blood. The first considerations are probably liver and/or pancreatic dysfunction, diabetes mellitus, anemia, infection or inflammation. Be aware that more serious conditions may be developing. Excess weight, poor diet, caffeine intake and lack of exercise all contribute to this situation.

This finding is supported by:
High Blood Uric Acid

Nutrients Recommended:
Clinical Omega 3 • High Allicin Garlic

DIABETIC FACTORS

The Glucose and Hemoglobin A1-C are high. 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.

The Urinary Glucose is a little high. Glucose/sugar in urine is an abnormal finding. Normally, the kidney filters blood in such a way that it holds on to blood sugar, keeping it in the blood. No glucose should be present in the urine under normal circumstances. Sugar can be found in urine in conditions where the blood glucose levels are high, hyperglycemia, as occurs with diabetes mellitus.

Diabetes, with increased blood sugar, is a common cause of sugar in the urine. However, other conditions can cause this finding on urinalysis. Some situations in which sugar may be found in the urine, other than diabetes, include kidney disease, other endocrine disorders, pregnancy with or without gestational diabetes, and other more rare conditions. While sugar in the urine alone is not diagnostic of any one disease, it can help in the screening for diabetes and other disorders and may indicate the need for further testing and retesting.

Exercise and eating a low carbohydrate and low sugar diet will often help lower urine glucose. Retesting the urine glucose is recommended within a few days. Correlate this urine glucose with serum glucose testing.

This finding is supported by:

High Blood LDL Cholesterol • High Blood Uric Acid • Low Blood Chloride • High Blood Magnesium • Low Blood Phosphorus • Low Blood Total Protein • High Blood LDH • High Blood SGPT (ALT) • High Blood GGT (r-GTP) • High Blood Ferritin • High Blood Total Cholesterol • High Blood Triglyceride • High Blood White Blood Count • Low Hair Chromium

This finding is associated with:

Presenting symptoms - Edema R60.9
Medications Taken - Naproxen Oral

Nutrients Recommended:

Clinical Omega 3 • Multiple Trace Minerals

POSSIBLE KIDNEY INVOLVEMENT

The Blood Urea Nitrogen (BUN) and Magnesium are high and the Creatinine is very high. This most commonly indicates significant kidney disease and possible involvement including urinary tract infections or obstructions. This is a serious condition and needs appropriate treatment. A decrease in animal protein and an increase in plant based protein will probably be beneficial. Proper water intake is important.

This finding is supported by:

High Blood LDL Cholesterol • High Blood Uric Acid • High Blood BUN (Blood Urea Nitrogen) • Low Blood Chloride • High Blood Magnesium • Low Blood Phosphorus • Low Blood Total Protein • Low Blood Globulin • High Blood Creatine Kinase • High Blood LDH • High Blood SGOT (AST) • High Blood GGT (r-GTP) • High Blood Total Cholesterol • High Blood Triglyceride • High Blood White Blood Count • Low Blood Red Blood Count • Low Blood Platelets • High Blood Eosinophils • High Blood ESR-Erythrocyte Sed Rate, Westergren • High Blood Creatinine • High Hair Selenium

This finding is associated with:

Medications Taken - Coumadin • Lipitor • Naproxen Oral • Hydrochlorothiazide

Nutrients Recommended:

Aqua A • Biomax-C • L-Arginine 500mg**

GOUT

The Uric Acid is high. High Uric Acid is associated with an increased risk for developing high blood pressure, diabetes, obesity, and kidney disease. Although high Uric Acid is commonly associated with excessive intake of red meat and alcohol; the connection between fructose consumption and increased uric acid is so reliable that a uric acid level can be used as a marker for fructose toxicity. One sugary drink daily, most commonly with high fructose syrup (HFCS), increases the risk of NALFD (non alcoholic fatty liver disease). Sugary beverages, including not only soda but also fruit juice, lemonade, fruit punch, and the like, are a major source of fructose. Fructose increases uric acid through a complex process that causes "cell shock" and increased cell death. Massive cellular die-off leads to increased uric acid levels. Nearly 10% of US children have NALFD, anyone with NALFD are at particular risk of complications, poor prognosis and the need for a liver transplant. Improvements in diet are imperative in lowering an elevated Uric Acid.

This finding is associated with:

Medications Taken - Lipitor

Nutrients Recommended:

Pantothenic Acid 500mg

GASTRO/INTESTINAL DYSFUNCTION

The Chloride and Globulin are low, the Total Protein is a little low, and the Albumin is a little high. This is most likely due to poor digestion and/or low protein/high carbohydrate diet and seen in edema, malnutrition and malabsorption. Digestive enzymes with Chloride might be of benefit. Chloride, an electrolyte, is necessary for proper metabolism and digestion, especially the digestion of protein. A low Chloride is often due to loss of fluids from vomiting, diarrhea, sweating or high fevers but also drugs such as bicarbonates, corticosteroids, diuretics and laxatives can cause a loss of Chloride. Various vague symptoms of malaise or just not feeling well might occur. Chloride is regulated by the kidneys and helps control the acid and base balance in the body. Avoiding caffeine and alcohol is advised, stay well hydrated and digestive enzymes containing Chloride might be of benefit.

Many drugs or medications can cause or contribute toward any of these findings. Globulin, a type of protein, is important for a strong immune system and to fight disease. Albumin, another type of protein, helps with the transport of nutrients and is important for healing and repair. This mildly elevated level of Albumin might be of benefit in this case. One out of every four bites of food you eat (25%) should be of a protein source, preferably more plant based protein such as seeds, nuts, beans and sprouts. Eggs and even some fish, chicken, turkey and possibly small amounts of red meat may be beneficial.

This finding is supported by:

High Blood SGOT (AST) • High Blood Monocytes

This finding is associated with:

Presenting symptoms - Abdominal gas • Belching and burping after eating • 3 or less bowel movements per week

Medications Taken - Coumadin • Lipitor • Prilosec • Naproxen Oral • Zetia • Hydrochlorothiazide • Diflucan • Glucophage

Nutrients Recommended:

Multi-Enzyme • Probiotic Complete (4 billion)

VITAMIN D DEFICIENCY

The Vitamin D 25 Hydroxy blood test is a little low. Levels less than 32 ng/mL have been shown to significantly reduce intestinal calcium absorption, reduced bone density, reduced immune system, increased insulin resistance and risk of many types of cancer. This is the best way to determine true Vitamin D status. Minimal levels should be at least 50 ng/mL. Increase sun exposure and/or take Vitamin D.

This finding is associated with:

Presenting symptoms - Depression F32.9 • Fibromyalgia M79.7 • Frequent fever blisters • Frequent sore throats • Frequent colds • Diabetes Mellitus E11.9 • Abnormal cycle >29 days and/or <26 days • Rheumatoid Arthritis M06.9 • Breast Fibroids

Nutrients Recommended:

Clinical D3 Microtabs

INFLAMMATION OF LIVER

The SGOT (AST) and GGT are a little high and the SGPT (ALT) is high. The liver is a little hypermetabolic or a little inflamed. Many drugs or alcohol can cause or contribute to this.

This finding is supported by:

High Blood Glucose • High Blood LDH • High Blood SGOT (AST) • High Blood GGT (r-GTP) • High Blood Serum Iron • High Blood Ferritin • High Blood Triglyceride • High Blood White Blood Count • High Blood ESR-Erythrocyte Sed Rate, Westergren

This finding is associated with:

Medications Taken - Coumadin • Lipitor • Prilosec • Naproxen Oral • Hydrochlorothiazide

Nutrients Recommended:

Biomax-C • Liver**

THYROID CONSIDERATIONS

The Thyroid gland function has been removed by either surgery or radiation and special consideration needs to be made. Thyroid medication must be used. The TSH is high, the T3 Free, T7, and T4 are low, and the T3 Uptake is optimal. The thyroid metabolism appears low due to the level of T3 Free which is the most active thyroid hormone and thyroid function will likely trend lower. Since the thyroid gland has been removed and thyroid medication is being used the TSH should be low or even very low. The TSH being high in this case indicates that true thyroid function is at least a little low and will likely go lower.

Note: if there is a history of thyroid cancer the TSH needs to be low or very low. It is thought that TSH stimulates the growth of thyroid cancer, in which case an increase in thyroid support medication might be of benefit and a Thyroglobulin test needs to be done if there is a history of thyroid cancer.

Symptoms of low thyroid functions include fatigue, digestive problems, sensitivity to cold, heart problems including slow pulse, abnormal heartbeats and weakened pulse, nerve damage, infertility in men and women; and menstrual irregularities.

Poor digestion, low vitamin D, low protein, lack of exercise, infection, inflammation, liver and kidney dysfunction, deficiencies of minerals and vitamins as well as exposure to toxic elements and chemicals can cause or contribute to thyroid dysfunction.

Caution for post thyroidectomy: the most frequent complication occurring in 20-50% of patients is inadvertent devascularization, nerve damage or removal of the parathyroid glands leading to hypocalcemia and the need for calcium and vitamin D supplementation. However, a low PTH (Parathyroid Hormone) value does not always cause hypocalcemia nor does a normal PTH value guarantee normocalcemia. Regular testing of calcium and vitamin D would be required if such is the case.

Use of nutrients to support the thyroid need to be carefully considered and possibly avoided so that they won't interfere with the thyroid medication. Modification of thyroid support medication might be needed and a referral to a thyroid specialist is encouraged if there is a history of thyroid cancer.

This finding is supported by:

Low Blood Total Protein • Low Hair Iodine

This finding is associated with:

Presenting symptoms - Depression F32.9 • Hypercholesterolemia (High Cholesterol) E78.0 • Energy level is worse than it was 5 years ago • Cold hands • Cold feet • Heart skips beats • Frequently feels cold • Excessive menstrual flow • Thyroid removed • Radiated Thyroid • Abnormal cycle >29 days and/or <26 days • Heart palpitations

Medications Taken - Lipitor

ANEMIA AND POSSIBLE HEMOCHROMATOSIS

The Ferritin is very high, the Serum Iron is a little high, the Red Blood Count (RBC), Hemoglobin, and Hematocrit are a little low, the White Blood Count (WBC) is high, and the MCV, MCH, MCHC, and RDW are optimal. Ferritin is a blood test that typically indicates iron reserves. High levels of iron reserves (Ferritin) show the severity of Hemochromatosis or iron overload. Hemochromatosis is possibly the most common genetic condition in the world. The severity of

Hemochromatosis symptoms and levels of Ferritin vary widely even within the same family. As levels of iron build up in the organs there can be rust like build up in organs most likely affecting the pancreas, liver, heart and spleen function. This rust/excess iron will destroy cells in the body and alter function. Donating blood or blood letting (phlebotomies) are performed regularly depending on the levels of Ferritin in order to lower your iron stores. As the iron stores are reduced, the Ferritin will also go down. Serial Ferritin testing will indicate the frequency of phlebotomy needed to maintain optimal Ferritin levels as well as the need for future phlebotomies.

Hemochromatosis is difficult to diagnosis based on symptoms because early symptoms are commonly associated with other conditions like chronic fatigue syndrome, arthritis, muscle weakness, thyroid disorders, hormonal problems in men and women, cardiovascular problems including arrhythmias like A-Fib, headaches, high blood pressure, prostate problems and even hair loss are seen. Many autoimmune diseases often show significant improvement with just one phlebotomy if high Ferritin is present. Some people also notice a darkening of mood, lower energy and reduced thought clarity as Ferritin increases.

Interestingly, in pre-menopausal women, Hemochromatosis is rare due to the loss of blood with monthly menstruation but once menopause occurs women develop Hemochromatosis at the same rate as men but rarely is it diagnosed in menopausal women. Post-menopausal women develop progressive hormone and thyroid problems leading to ever increasing drugs for HRT, bio-identical HRT and thyroid hormone medications as well as conditions associated in men with hemochromatosis like heart diseases, diabetes, liver, kidney diseases and other problems. The mild low Hemoglobin, Hematocrit, and Red Blood Count (RBC) are mild anemia but the very high Ferritin and elevated Serum Iron indicate that this is not an iron deficiency anemia.

Nutrients other than iron need to be considered.

The high WBC usually indicates an acute type of infection.

Nutrients Recommended:

B12 Plus • B6 Plus • Biomax-C • Lauricidin** • Milk Thistle

POSSIBLE INFECTION AND/OR INFLAMMATION

The Creatine Kinase (CK) and ESR are a little high and the LDH and C-Reactive Protein are high. This CK is commonly associated with breakdown of muscle, either cardiac or skeletal. This could be the result of exercise in which case the nutrient recommendation can be reduced. It could also be a sign of a more serious condition developing. The elevated C-reactive Protein, LDH and ESR indicates mild 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 heart attack or stroke. A CRP close to zero is desired.

The Eosinophils are very high, the Monocytes and White Blood Count (WBC) are high, and the Platelets are a little low. Bacterial and viral infections will most commonly elevate WBC's initially, with more severe problems or chronic infections the WBC's reserves and productive capacity of bone marrow may be incapable of keeping up with demand, resulting in lower and lower WBC's, indicating a weakening immune system and slower healing. The Monocytes being high most likely suggest an immune deficiency, auto-immune imbalance, viral infection, or even food allergies. A food allergy test may be necessary. The high Monocytes and very high Eosinophils may be due to environmental allergies but would quite possibly indicate parasites.

This finding is supported by:

Low Blood Phosphorus • Low Blood Total Protein • Low Blood Globulin • High Blood Creatine Kinase • High Blood LDH • High Blood SGOT (AST) • High Blood Triglyceride • High Blood CRP C-Reactive Protein • High Blood White Blood Count • Low Blood Platelets • High Blood Eosinophils • High Blood Creatinine

This finding is associated with:

Presenting symptoms - Arthritic Disorder M12.9 • Indigestion K30 • Sinusitis J01.90 • Abdominal gas • Problems with Eczema • Frequent bladder infections • GERD K21.9 • Irritable Bowel • Edema R60.9
Medications Taken - Coumadin • Lipitor • Prilosec • Naproxen Oral • Zetia • Hydrochlorothiazide • Acetaminophen • Glucophage

Nutrients Recommended:

CoQ10 100mg • Pro-Enz (300 mg Turmeric)

MUTAGENIC CONSIDERATIONS

The very high Alkaline Phosphatase is commonly seen in bone and/or liver disease and/or biliary duct obstruction. This level may be associated with cancers. Further testing and retesting needs to be considered. The SBN Cancer Panel and Alkaline Phosphatase Isoenzymes are recommended now unless they have very recently been done and it is advised that the Alk Phos and other significant markers to be retested within 2-3 weeks. Note: if this is a child, youth or young adult, this high or very high Alk Phos reading is probably normal because of bone growth.

This finding is supported by:

High Blood LDL Cholesterol • High Blood Uric Acid • Low Blood Total Protein • High Blood Creatine Kinase • High Blood LDH • High Blood GGT (r-GTP) • High Blood Ferritin • High Blood CRP C-Reactive Protein • High Blood White Blood Count • Low Blood Hemoglobin • High Blood Monocytes • High Blood Eosinophils • High Blood ESR-Erythrocyte Sed Rate, Westergren

This finding is associated with:

Medications Taken - Lipitor • Prilosec

Nutrients Recommended:

Biomax-C • Glucosamine/Chond/MSM

NOTED BLOOD VALUES

The Glomerular Filtration Rate Estimated (eGFR) is optimal. The eGFR is a calculated estimate of the actual glomerular filtration rate and is based on your serum Creatinine concentration. The calculation uses formulas that may also include your age, gender, height, and weight. In some formulas, race may also be used in the calculation.

The kidneys filter blood and help control blood pressure. They remove waste and water and produce urine. eGFR is one of the best tests to indicate how healthy your kidneys are. It is important to know your eGFR because one may not be able to feel kidney damage.

Over 59-preferred

35 to 58-early kidney damage

16 to 34-moderate kidney damage

1 to 15 severe kidney damage

* Please note that if your test result is less than 15, dialysis or transplant may be needed soon.

This finding is associated with:

Medications Taken - Glucophage

VERY LOW HAIR CHROMIUM

The Chromium level in the hair is very low. Chromium is very important in carbohydrate and

glucose metabolism and in the mechanism of insulin action. Basically, this mineral is very important for hypoglycemics and diabetics. Depletion can result in reduced metabolism of amino acids, glucose and lipid metabolism. It is also associated with protein malnutrition, elevated cholesterol levels, atherosclerosis and corneal damage.

Nutrients Recommended:
Multiple Trace Minerals

HIGH HAIR CADMIUM

The Cadmium level in the hair is high. Cadmium (Cd) is a toxic, heavy metal with no positive metabolic function in the body. It is relatively rare but it is more toxic than lead. 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. Recent studies have shown associations with cadmium and tumors of the lung, kidney, breast and prostate.

Cadmium also 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, seafood, plastic water pipes, 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 cadmium.

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

Nutrients Recommended:
Green Protect • Osatate

NOTED HAIR VALUES

The Lead level in the hair is a little high. Clinical signs and symptoms: abdominal pain; colic; severe and repeated vomiting; irritability; hyperactivity; anorexia; loss of appetite; ataxia; mental disturbances. In advanced stage you may see signs of 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 and hair loss. 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 lead intoxication are: anemia; gastric distress; fatigue; weight loss; headaches; vertigo; tremor; joint pain; decreased coordination; neuritis; general mental symptoms; psychoneuroses; poor memory; constipation; inability to concentrate; colic; loss of appetite; loss of muscle strength; muscle tenderness; paresthesia and signs of neuropathy. Lead is known to damage the kidney, the liver, and the reproductive system. It also is known to interfere with bone marrow function, basic cellular processes and brain functions. It has been the

cause of 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 are related to decreased visual and motor performance. Lead interferes with utilization of calcium, magnesium, vitamin D and zinc.

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 displaces 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, vitamin 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; automobile emissions, lead smelting and lead-soldered cans, water contamination, newsprint, industrial pollution and some fertilizers.

The Selenium level in the hair is high. This is most often from external exposure, such as to dandruff shampoos. Toxicity can cause interference in the metabolism of sulfur-bearing amino acids, structural changes and red pigmentation of the hair and nails, garlic breath, metallic taste in the mouth, discoloration of teeth and skin, and gastroenteritis. High hair selenium is an accurate indicator of high serum levels.

The Barium level in the hair is a little high. 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.

The Germanium level in the hair is high. This does not necessarily correlate with high levels of serum germanium.

The Aluminum level in the hair is a little 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. 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. Prosthetic devices produced by Zimmer Company and Johnson and Johnson typically are made of aluminum, vanadium, and titanium, which might cause increased levels in the hair and/or urine.

Aluminum rods are commonly used in hot water tanks in area of acidic water. These rods will dissolve 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.

The Arsenic level in the hair is a little high. Chronic arsenic exposure is known to cause: Bone marrow depression; leukopenia; normochromic anemia; exfoliation and pigmentation of skin; neurological symptoms; polyneuritis; altered hematopoiesis; liver degeneration; kidney degeneration; skin cancer; cancers of the respiratory tract; agitation; learning impairment; and confusion. Delayed toxicity symptoms include abdominal pain, nausea, vomiting, hematuria, and jaundice. Ingestion of relatively large amounts of soluble arsenic compounds, especially on an empty stomach, affect the myocardium, causing death within a few hours. Ingesting smaller amounts of arsenic can cause epigastric pain, vomiting and diarrhea, followed by inflammation of the conjunctiva and respiratory mucous membranes, epistaxis, transient jaundice, cardiomyopathy, erythematous or visceral rashes, and sweating. Other symptoms: malaise; muscle weakness; eczema; dermatitis; increased salivation; strong "garlic breath", alopecia totalis, vomiting, diarrhea and skin cancer. Hematological, renal, or pancreatic dysfunction may be observed. Symptoms of neuropathy are experienced typically appear as with tingling and paresthesia in the extremities. Proteinuria and methemoglobinemia are frequently observed, causing renal failure and death.

Arsenic can be absorbed by the human body through the respiratory and gastrointestinal tracts and through the skin. Arsenic is found in tobacco smoke and is a suspected causative factor in lung cancer. Metal smelting and the production of glass, ceramics, insecticides, fungicides and herbicides mobilize environmental arsenic. Drinking water may also be a source of arsenic, and the use of arsenic-containing paints is a known source of arsenic poisoning. Elevated hair levels are seen long before acute clinical signs of arsenic toxicity are obvious.

Therapeutic consideration for chronic overexposure: antioxidant therapy, especially ascorbic acid or calcium ascorbate, vitamin E (all tocopherols), increased intake of sulfur-containing amino acids, vitamin B6. Note: arsenic suppresses iodine and selenium.

Research: the relationship between cognitive functions and hair mineral concentrations of lead, arsenic, cadmium, and aluminum was examined for a random selection of 69 children. The data obtained showed a significant correlation between reading and writing skill and elevated arsenic levels, as well as interaction between arsenic and lead. Children with reduced visual-motor skills, had clearly elevated aluminum and lead levels.

The Mercury (Hg) level in the hair is a little high. Mercury is a toxic element for humans and animals. Hair mercury level is an accurate indicator of mercury body burden. A considerable variance in the sensitivity of different individuals to mercury has been observed, with some exhibiting symptoms at 3 to 5 ppm. Even very low levels of mercury have been found to suppress biological selenium activity. After dental amalgams are used, elevated hair mercury may be observed for six months to over a year. Hair mercury has been found to correlate with acute myocardial infarction where on average a 1 ppm mercury was found to correlate with a 9 percent increase in acute myocardial infarction risk.

Mercury displaces selenium (which is a major anti-oxidant), zinc (protein, DNA and energy metabolism) and copper. Supplementation of magnesium, zinc, calcium, selenium, and manganese has been shown to be beneficial in relieving mercury loads.

Symptoms of acute contamination: metallic taste, thirst, discoloration and edema of oral mucosa, burning mouth pain, salivation, abdominal pain, vomiting, bloody diarrhea, severe gastroenteritis, colitis, nephrosis, anuria, uremia, shock.

Symptoms of chronic contamination: gingivitis; weakness; ataxia; intention tremors; chronic fatigue (caused by inhibition of thyroid conversion of T4 to T3); depression; poor memory and cognitive function; learning disabilities; behavioral disorders; emotional instability; speech

impairment, irritability; peripheral numbness, tingling or neuropathy; sleep disturbance; decreased senses of touch; hearing or vision; hypersensitivity and allergies; persistent infections including chronic yeast overgrowth; compromised immune function; cardiovascular disease. It disrupts intracellular transport in neurons and can decrease the production of neurotransmitters. Eventually this can lead to autoimmune diseases such as SLE (systemic lupus erythematosus), myelinopathies such as MS and myasthenia gravis, rheumatoid arthritis, MCS (multiple chemical sensitivity), and chronic candidiasis. An inverse relationship has been observed between hair mercury levels and intelligence scores in elementary school children.

Other sources of mercury are: large fish, pesticide residues, mercurial fungicides on seed grains, dental fillings, coal burning, calomel (mercurous chloride), interior paints, pharmaceuticals, the manufacture of paper, pulp and plastic products, and water.

The Calcium level in the hair is a little high. High levels of calcium in the hair is most often associated with an imbalance of the calcium to phosphorus ratio in the body. Other causes include hyperparathyroidism and excess vitamin A or D intake. Excess calcium may depress nervous functions, and lead to depression, irritability, memory impairment, and psychosis.

The Sulfur level in the hair is a little low. The mineral sulfur is needed for the manufacture of many proteins, including those forming hair, muscles, and skin. Sulfur contributes to fat digestion and absorption, because it is needed to make bile acids. Sulfur is also a constituent of bones, teeth, and collagen (the protein in connective tissue). As a component of insulin, sulfur is needed to regulate blood sugar. Most dietary sulfur is consumed as part of certain amino acids in protein-rich foods. Meat and poultry, organ meats, fish, eggs, beans, and dairy products are all good sources of sulfur-containing amino acids. Sulfur also occurs in garlic and onions.

Nutrients Recommended:

AVED MULTI • Clinical Magnesium • Green Protect • Multiple Trace Minerals • Osatate

STOOL FINDINGS

The test was negative for blood in the stool.

URINARY FINDINGS

The urine pH is a little low. 7.0 is a neutral pH, although the average urine sample is around 6.0. The lower the pH number, the more acidic the urine is. A lower pH indicates an acidic environment. The causes of acid urine, called acidosis, are associated with diets high in meats and processed foods. The urine is more acid with dehydration, diabetic ketoacidosis, diarrhea, starvation, gout, fever and use of aspirin and other similar medications. Several more drugs can affect urine pH including: acetazolamide, used to treat glaucoma, epilepsy, and other disorders; ammonium chloride, used in some cough medicines; methenamine mandelate, used to treat urinary tract infections; potassium citrate, used to treat gout and kidney stones; sodium bicarbonate, used to treat heartburn and acid indigestion and thiazide diuretics, used to treat high blood pressure and to reduce the risk of stroke and heart attacks. The lower pH of urine might indicate a predisposition to kidney stones. A change of diet, increased water intake, reduced use of drugs and possibly vitamin nutrients and electrolytes will commonly improve most low urine pH problems.

The urine test for protein is a little high. Temporarily very high levels of protein in urine can be seen with extreme vigorous exercise or during acute illness especially with a fever. Excessive protein intake might be a factor but drugs, including prescription drugs, are also causes of protein in the urine. Exposure to toxic chemical and even heavy metals might be involved. This elevated level of protein might be an indicator of early developing kidney disease. Retesting and further testing is required.

The urine color is a deep or darker yellow. This indicates the urine is concentrated and not enough fluid is being consumed. Drink plenty of water. Note - foods such as asparagus, beets, multivitamins, and B vitamins may change urine color.

Nutrients Recommended:
Acetyl-L-Cartine (500mg)

LIFESTYLE & DIETARY RECOMMENDATIONS

DIET FOCUS

Food can be broken down into basically two categories:

1. Energy (calories from fat, carbohydrates and protein)
2. Nourishment (the nutrient density of the food; vitamin and mineral content).

When planning your meals, use this thought process:

1. Get at least 2 vegetables with each meal. Fruit should be limited only if you have glucose handling issues. However, always consume more vegetables than fruits.
2. Proteins: 25-35% of the meal needs to be of a protein source.
 - > Focus on good quality protein and not the processed protein bars, drinks, and powders.
 - > Most desirable proteins: meats (like chicken, fish, turkey and even red meat), eggs, beans, seeds, nuts, sprouts, quinoa, nut butters (ie. peanut butter, cashew butter, almond butter).
 - > Eliminate these least desirable proteins: processed soy, processed dairy, pork, processed luncheon meats (those that contain "nitrates" or "nitrites").
3. Carbohydrates: 40-60% of your meal needs to be carbohydrate.
 - > Most desirable carbohydrates sources: whole grain breads, pastas (including egg noodles), and rice, whole vegetables, whole fruit
 - > Eliminate these least desirable carbohydrates: white sugar, white flour, fruit juice, high fructose corn syrup, chips, French fries, pop/soda
4. Fats: Your meal should contain anywhere from 15-25% fat.
 - > Most desirable fat sources: nuts (cashews, almonds, pecans, walnuts, Brazil nuts (raw and unsalted are preferred), seeds (sunflower seeds, pumpkin seeds), avocados, coconut oil, fish, nut butters (peanut butter, almond butter, etc)
 - > Desirable Cooking Oils: Grape Seed Oil, Olive Oil, Coconut Oil, Palm Oil
 - > Eliminated these least desirable fat sources: anything with trans-fat (AKA: hydrogenated fat), interesterified fat or Olestra. Bacon, sausage, etc.
 - > Strictly avoid hydrogenated/trans-fats: About 80% of trans fats in your diet come from processed foods, fast food, primarily snack foods and desserts.
5. Special instructions may be given based upon certain metabolic conditions such as cancer, diabetes, kidney disorders etc.

IDENTIFYING LOW NUTRIENT DENSE FOODS

Below is a list of foods and items that will help you identify low nutrient dense foods and cooking/storage processes that lower the nutrient density in foods. Pay close attention to the ingredient labels. The following are recommend to avoid.

1. Artificial Sweeteners: "aspartame", "saccharin", "sucralose", "acesulfame potassium", "sorbitol", "maltitol", etc.
2. Flavor Enhancers and Preservatives: "MSG", "monosodium glutamate", "nitrate" or "nitrite" ingredients found in many dressings, sauces, Chinese foods, processed meats, pork products, bologna, some wieners, and many luncheon meat. HVP (hydrolyzed vegetable protein) and processed soy proteins can contain up to 40% MSG.
3. Artificial colors and dyes: look for terms such as "FD&C", "lake", "red", "yellow", etc. Read your supplement labels carefully.
4. Canned Foods and Drinks: choose fresh or frozen varieties. Limit canned food consumption to canned beans and tuna. Foods stored in glass are acceptable.
5. Microwave Cooking and Deep Frying lower the nutrient density more so than stove top cooking.
6. Artificial Fats: "hydrogenated" [a.k.a. "trans fat"] and "interesterified" fats are found in margarine, many pre-packaged foods, supplements, and dressings; avoid "Olestra" containing products.
7. Refined Carbohydrates: processed foods such as white sugar, white flour, corn syrup, "enriched" foods, etc.
8. 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 Antibiotics", "Free Range", "Organic", etc.
9. Shellfish and Bottom-feeders: crab, shrimp, lobster, oyster, catfish, etc.
10. Dairy Products: cottage cheese, yogurt, cheese, sour cream, etc. (anything with cow's milk). This does not include eggs.
11. Coffee (regular & chemically decaffeinated), Liquor (distilled), All sodas, Tea (black decaf & black regular). Organic herbal teas are acceptable.
12. 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.
13. Chlorine and Fluoride Sources: tap water, heavy chlorine exposure in swimming pools, fluoride toothpaste, fluoride supplements, fluoride mouthwash, etc.

DIABETIC RECOMMENDATIONS

1. Avoid all fruit juices.
2. Eat only one fruit and at least four fresh vegetables per day.
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 maintain your glucose at a good level so it doesn't fluctuate so much.
 - > The snack should be 4 to 5 bites of a complex carbohydrate, protein or foods that have healthy fats in them such as: sunflower seeds, pumpkin seeds, nuts, carrots with hummus or a few bites of chicken would be fine to eat.
4. Do this for at least the next two months or until your evaluation.

AEROBIC EXERCISE

Examples of aerobic exercise are jogging, cycling, elliptical trainer, 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. Do not go over 3 quarts regardless of your weight. More water might be necessary depending on exercise, environment and perspiration. We recommend using a multiple filtration system for your drinking and cooking water. There are several types of these, which include reverse osmosis. 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.

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 a few 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 supplements that have been carefully selected for your specific problems. All supplement dosages should be spread throughout the day and taken with food unless otherwise suggested. These supplement brands are recommended because they are of the highest quality. It might seem that a lot of vitamins are recommended, but the number of vitamins is only an indication of how sick you are. It is unreasonable to need this number of vitamins very long, but you need them now. The closer you follow the program, the better results you will likely have and the number of vitamins will go down with improvement.

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 supplements, along with the dietary changes, to be the best in helping you achieve the necessary improvements needed on your test results.

Please keep this report for future reference and bring it with you to your next evaluation.

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

Yours in Health,

Thomas K Hyland Robertson, DC, with PT priveleges, RYT

Legend: ■ Warning ■ High Risk ■ Critical ★ Optimal 😊 Improvement 😞 Worse ∅ No Improvement

Test Description	Current Rating 02/22/2019		Prior 04/15/2018	Delta	Healthy	Clinical	Units
Glucose	122.000	High	178.000	😊	80.000 - 95.000	65.000 - 99.000	mg/dL
Hemoglobin A1C (Gly-Hgh)	7.100	High	8.700	😊	4.800 - 5.605	4.500 - 6.405	%
Uric Acid	8.100	High	5.600	😞	3.500 - 6.600	2.500 - 7.100	mg/dL
BUN (Blood Urea Nitrogen)	26.000	High	28.000	😊	8.000 - 18.000	6.000 - 24.000	mg/dL
Creatinine	2.500	Very High	3.200	😊	0.700 - 0.870	0.570 - 1.000	mg/dL
GFR Est.	66.000	★	70.000		59.000 - 145.000	45.000 - 150.000	mL/min/1.7
BUN / Creatinine Ratio	18.480	★	21.000	😊	12.000 - 19.000	9.000 - 23.000	ratio
Sodium	141.000	★	139.000		139.000 - 143.000	134.000 - 144.000	mmol/L
Potassium	4.110	★	4.100		3.800 - 4.500	3.500 - 5.200	mmol/L
Chloride	94.000	Low	90.000	😊	102.000 - 105.000	96.000 - 106.000	mmol/L
Calcium	9.400	★	9.300		9.200 - 9.710	8.700 - 10.200	mg/dL
Phosphorus	0.000	Very Low	3.900	😞	3.400 - 3.900	3.000 - 4.300	mg/dL
Magnesium	2.500	High	2.200	😞	1.900 - 2.200	1.600 - 2.300	mg/dL
Total Protein	6.170	low	5.950	😊	7.100 - 7.610	6.000 - 8.500	g/dL
Albumin	4.700	high	3.550	😊	4.200 - 4.500	3.800 - 4.900	g/dL
Globulin	1.470	Low	1.400	😊	2.800 - 3.510	1.500 - 4.500	g/dL
A/G Ratio	1.230	★	1.220		1.200 - 1.600	1.100 - 2.500	ratio
Total Bilirubin	0.440	★	0.520		0.300 - 0.900	0.000 - 1.200	mg/dL
Alk. Phosphatase	180.000	Very High	210.000	😊	64.740 - 91.260	39.000 - 117.000	IU/L
Creatine Kinase	134.000	high	150.000	😊	81.500 - 132.500	32.000 - 182.000	U/L
LDH	250.000	High	311.000	😊	138.880 - 190.700	119.000 - 226.000	IU/L
SGOT (AST)	32.000	high	65.000	😊	10.000 - 26.000	0.000 - 40.000	IU/L
SGPT (ALT)	40.000	High	70.000	😊	8.000 - 26.000	0.000 - 32.000	IU/L
GGT (r-GTP)	50.000	high	66.000	😊	10.000 - 35.000	0.000 - 60.000	IU/L
Serum Iron	121.000	high	31.000	😊	71.000 - 115.000	27.000 - 159.000	ug/dL
Ferritin	320.000	Very High	430.000	😊	45.000 - 110.000	15.000 - 150.000	NG/ML
Total Cholesterol	220.000	High	227.000	😊	150.000 - 180.000	100.000 - 199.000	mg/dL
Triglyceride	215.000	High	85.000	😞	50.000 - 150.000	0.000 - 200.000	mg/dL
HDL Cholesterol	63.000	★	43.000	😊	50.000 - 150.000	40.000 - 200.000	mg/dL
VLDL Cholesterol	18.000	★	17.000		6.000 - 20.000	5.000 - 40.000	mg/dL
LDL Cholesterol	114.000	High	111.000	😞	50.000 - 75.000	0.000 - 99.000	mg/dL
Total Cholesterol / HDL Ratio	3.490	★	5.200	😊	0.000 - 4.000	0.000 - 4.400	ratio
TSH	5.200	High	2.300	😞	0.500 - 3.500	0.450 - 4.500	uIU/mL
T4 Thyroxine	4.200	Low	9.800	😞	7.100 - 9.000	4.500 - 12.000	ug/dL
T3 Uptake	31.000	★	29.000		29.000 - 35.000	24.000 - 39.000	%
T7 (Free T4 Index) (FTI)	1.100	Low	2.800	😞	2.610 - 3.600	1.200 - 4.900	
T3 Free (Triiodothyronine)	1.500	Low	0.120	😊	2.600 - 3.800	2.000 - 4.400	pg/mL
CRP C-Reactive Protein	11.000	High	13.000	😊	0.000 - 6.700	0.000 - 10.000	mg/L
White Blood Count	12.000	High	3.800	😞	5.700 - 8.500	3.400 - 10.800	k/cumm
Red Blood Count	3.800	low	3.800	∅	4.270 - 4.780	3.770 - 5.280	m/cumm
Hemoglobin	11.700	low	10.200	😊	12.600 - 14.500	11.100 - 15.900	g/dL
Hematocrit	37.000	low	32.400	😊	38.000 - 42.000	34.000 - 46.600	%
MCV	91.000	★	89.000		84.000 - 92.000	79.000 - 97.000	fL
MCH	30.200	★	30.900		28.600 - 31.000	26.600 - 33.000	pg
MCHC	34.500	★	37.000	😊	33.200 - 34.500	31.500 - 35.700	g/dL
RDW	14.100	★			12.900 - 14.200	11.700 - 15.400	%
Platelets	220.000	low	170.000	😊	250.000 - 350.000	150.000 - 450.000	x10E3/uL
Polys/Neutrophils (SEGS-PMNS)	52.000	★	68.000	😊	51.000 - 63.000	40.000 - 74.000	%
Lymphocytes	24.000	★	23.000	😊	24.000 - 36.000	14.000 - 46.000	%
Monocytes	14.000	High	6.000	😞	5.000 - 7.000	4.000 - 13.000	%
Eosinophils	8.000	Very High	3.620	😞	0.000 - 3.500	0.000 - 5.000	%
Basophils	0.090	★	1.000		0.000 - 2.000	0.000 - 3.000	%
ESR-Erythrocyte Sed Rate, Westergren	27.000	high	38.000	😊	0.000 - 10.000	0.000 - 40.000	mm/hr
Vitamin D 25-Hydroxy (total)	45.000	low	12.000	😊	50.000 - 90.000	30.000 - 100.000	ng/mL

Legend: ■ Warning ■ High Risk ■ Critical

	Prior Results			
	06/13/2017	03/17/2016	04/15/2015	05/10/2014
Glucose	93.000	98.000	96.000	99.000
Hemoglobin A1C (Gly-Hgh)	6.700	4.000		5.600
Uric Acid	5.300	4.000		5.500
BUN (Blood Urea Nitrogen)	17.000	21.000		20.000
Creatinine	0.790	1.200		1.000
GFR Est.	66.000			
BUN / Creatinine Ratio	18.480			20.000
Sodium	141.000	138.000		139.000
Potassium	4.110	3.600		4.000
Chloride	96.000	101.000		103.000
Calcium	9.400	9.500		9.300
Phosphorus	0.000	3.800		3.800
Magnesium	2.300	2.400		2.200
Total Protein	6.200	7.800		7.800
Albumin	4.000	4.300		4.100
Globulin	2.200	3.500		3.700
A/G Ratio	1.230			1.100
Total Bilirubin	0.440			0.500
Alk. Phosphatase	77.000	90.000	200.000	68.000
Creatine Kinase	134.000	125.000		
LDH	87.000		44.000	135.000
SGOT (AST)	32.000	50.000	70.000	40.000
SGPT (ALT)	40.000		70.000	55.000
GGT (r-GTP)	50.000	55.000	200.000	70.000
Serum Iron	121.000	80.000		110.000
Ferritin	320.000	10.000		4.000
Total Cholesterol	188.000	200.000		215.000
Triglyceride	84.000	150.000		82.000
HDL Cholesterol	63.000	50.000		45.000
VLDL Cholesterol	18.000	10.000		30.000
LDL Cholesterol	87.000	140.000		140.000
Total Cholesterol / HDL Ratio	3.000	4.000		5.000
TSH	5.200			
T4 Thyroxine	4.200			8.000
T3 Uptake	31.000			31.000
T7 (Free T4 Index) (FTI)	1.100			2.400
T3 Free (Triiodothyronine)				
CRP C-Reactive Protein	1.400	10.000		22.000
White Blood Count	5.800	11.000		7.400
Red Blood Count	4.200	2.200		2.900
Hemoglobin	11.700	9.500		14.000
Hematocrit	37.000	31.000		44.000
MCV	91.000	90.000		89.000
MCH	30.200	31.000		30.000
MCHC	34.500	35.000		34.000
RDW				
Platelets	220.000	280.000		268.000
Polys/Neutrophils (SEGS-PMNS)	52.000			55.000
Lymphocytes	24.000			54.000
Monocytes	6.200			6.000
Eosinophils	3.200			4.000
Basophils	0.090			1.000
ESR-Erythrocyte Sed Rate, Westergren	8.000	20.000		33.000
Vitamin D 25-Hydroxy (total)	45.000			

Legend: Warning High Risk Critical ★ Optimal 😊 Improvement ☹️ Worse ∅ No Improvement

Test Description	Current Rating 02/20/2019		Prior 04/15/2018	Delta	Healthy	Clinical	Units
Toxic Elements							
Aluminum	3.800	high	12.000	😊	0 - 2.200	2.210 - 7.000	ug/g
Antimony	0.020	★	0.050	😊	0 - 0.022	0.032 - 0.050	ug/g
Arsenic	0.040	high	0.130	😊	0 - 0.032	0.042 - 0.060	ug/g
Barium	2.000	high	2.120	😊	0 - 1.501	1.511 - 2.001	ug/g
Beryllium	0.000	★	0.000		0 - 0.015	0.025 - 0.021	ug/g
Bismuth	0.100	★	0.100		0 - 1.000	1.010 - 2.000	ug/g
Cadmium	0.080	High	0.100	😊	0 - 0.031	0.041 - 0.051	ug/g
Lead	0.490	high	5.000	😊	0 - 0.401	0.411 - 0.601	ug/g
Mercury	0.770	high	4.000	😊	0 - 0.500	0.510 - 0.801	ug/g
Platinum	0.000	★	0.000		0 - 0.003	0.013 - 0.005	ug/g
Thallium	0.000	★	0.000		0 - 0.001	0.011 - 0.002	ug/g
Thorium	0.000	★	0.000		0 - 0.001	0.011 - 0.002	ug/g
Uranium	0.010	★	0.900	😊	0 - 0.020	0.030 - 0.060	ug/g
Nickel	0.210	★	0.300	😊	0 - 0.251	0.261 - 0.301	ug/g
Silver	0.090	★	0.140	😊	0 - 0.101	0.111 - 0.151	ug/g
Tin	0.220	★	0.250		0 - 0.291	0.301 - 0.301	ug/g
Titanium	0.300	★	0.600	😊	0 - 0.401	0.411 - 0.701	ug/g
Total Toxic Representation	2.000	★	3.000	😊	0 - 2.004	2.014 - 3.000	
Essential Elements							
Calcium	1000.000	high	2701.000	😊	663.000 - 753.000	300.000 - 1200.000	ug/g
Magnesium	98.000	high	290.000	😊	53.000 - 62.000	35.000 - 120.000	ug/g
Sodium	60.000	low	65.000	☹️	95.001 - 174.001	20.001 - 250.001	ug/g
Potassium	17.000	low	19.000	☹️	30.001 - 53.001	8.001 - 75.001	ug/g
Copper	19.000	★	90.000	😊	18.001 - 29.001	11.001 - 37.001	ug/g
Zinc	142.000	low	150.000	☹️	150.001 - 170.001	140.001 - 220.001	ug/g
Manganese	0.500	high	0.500	∅	0.281 - 0.401	0.081 - 0.601	ug/g
Chromium	0.280	Very Low	0.550	☹️	0.481 - 0.571	0.401 - 0.651	ug/g
Vanadium	0.040	★	0.019	😊	0.035 - 0.045	0.018 - 0.065	ug/g
Molybdenum	0.040	★	0.250	😊	0.031 - 0.041	0.021 - 0.051	ug/g
Boron	1.400	high	1.000	☹️	0.761 - 1.201	0.250 - 1.501	ug/g
Iodine	0.450	low	1.500	☹️	0.761 - 1.301	0.250 - 1.801	ug/g
Lithium	0.010	★	0.010		0.010 - 0.016	0.007 - 0.020	ug/g
Phosphorus	189.000	★	160.000	😊	173.001 - 197.001	150.001 - 220.001	ug/g
Selenium	1.200	High	0.620	☹️	0.621 - 1.031	0.551 - 1.101	ug/g
Strontium	2.500	★	0.660	😊	2.000 - 2.900	0.500 - 7.600	ug/g
Sulfur	45252.000	low	65000.000	😊	46000.000 - 48000.000	44000.000 - 50000.000	ug/g
Cobalt	0.020	★	0.005	😊	0.018 - 0.028	0.004 - 0.041	ug/g
Iron	7.800	low	7.500	😊	9.001 - 13.001	7.001 - 16.001	ug/g
Germanium	0.050	High	0.500	😊	0.031 - 0.039	0.030 - 0.040	ug/g
Rubidium	0.030	★	0.009	😊	0.020 - 0.032	0.007 - 0.096	ug/g
Zirconium	0.110	★	0.300	😊	0.070 - 0.250	0.020 - 0.420	ug/g

Name: Ann Onymous

Lab: Science Based Nutrition

Urinalysis Test Results

Legend: Warning High Risk Critical ★ Optimal 😊 Improvement ⊖ Worse ∅ No Improvement

Test Description	Current Rating 02/20/2019	Prior	Delta
Color	Yellow		
Clarity	Clear ★		
Leukocytes	Negative ★		
Nitrite	Negative ★		
Urobilinogen	Normal ★		
Protein	+30		
pH	6.5		
Blood - Non-Hemolyzed	Negative ★		
Specific Gravity	1.015 ★		
Ketones	Negative ★		
Bilirubin	Negative ★		
Glucose	+/- 100		

VITAMIN AND SUPPLEMENT RECOMMENDATIONS

SUPPLIER: Anabolic Laboratories

PATIENT: Ann Onymous

SEX: F

AGE: 53

WEIGHT: 145

<u>Supplement</u>	<u>Number Per Day</u>
Acetyl-L-Cartine (500mg)	2
Aqua A	1
AVED MULTI	2
B12 Plus	3
B6 Plus	1
Biomax-C	1
Clinical D3 Microtabs	1
Clinical Magnesium	2
Clinical Omega 3	2
CoQ10 100mg	2
Glucosamine/Chond/MSM	3
Green Protect	2
High Allicin Garlic	3
L-Arginine 500mg**	2
Lauricidin**	2
Liver**	2
Milk Thistle	3
Multi-Enzyme	3
Multiple Trace Minerals	2
Osatate	3
Pantothenic Acid 500mg	2
Pro-Enz (300 mg Turmeric)	4
Probiotic Complete (4 billion)	1