



CUSTOMER PROFILE

Customer ID #:	
Report Date:	
Name: Last, First:	
Age:	
Sex:	Female
Metabolic Type:	Slow Metabolism (Type #1)

SUMMARY OF VITAMIN, MINERAL, AND NUTRIENT SUPPLEMENT RECOMMENDATIONS

A regular intake of premium nutrients provides your body with the fuel and building blocks needed to concentrate better, train & work longer & harder, recover faster, and look your best... allowing you to perform at the highest level.

Paragon offers 3 personalized supplement plans: ESSENTIAL / OPTIMIZED / PERFORMANCE

[SEE MY 3 PLANS](#)

Each addresses your specific metabolic needs based on your analysis below.

The **Essential** plan **helps fuel your body and balance your minerals, to improve energy levels, sleep, and wellness.** It provides essential micro-nutrients to address deficiencies and imbalances seen in your hair testing (HTMA) and questionnaire data. **An excellent option for anyone, especially those wanting a minimum of supplements:** a total of 7-10 personalized supplements provided daily, in AM & PM packs.

The **Optimized** plan goes beyond the Essential to help fuel and rebalance the body, and **detoxify and rebuild tissues** by circulating specific additional nutrients indicated by your testing & questionnaire. It addresses greater deficiencies and imbalances, as well as the various medical symptoms or more extreme workloads indicated in the questionnaire, to enhance healing & recovery and improve physical & mental performance.

The **Performance** plan is designed for Paragon's many clients who are elite athletes, as well as others with the most demanding or stressful careers & lifestyles (or those with numerous problematic symptoms). They require more fuel, detoxification, rebuilding, and nutritional support, so Performance provides the same personalized nutrients found in the Optimized plan, circulated at higher levels. This is more nutrient than most need.

Regardless, the beauty of the Optimized and Performance plans is that they circulate additional nutrients as you might naturally circulate foods.

What Your Testing And Report Say:

You indicated multiple symptoms that usually require a higher need for specific nutrients compared to someone without those symptoms. Left unaddressed, such symptoms can lead to a reduced level of

fitness & overall health (effectively aging you). This can make them harder to reverse as you age chronologically, so you might want to consider the Optimized plan and report recommendations below.

Your Optimized plan: 16 supplements daily, split between AM, mid-day, and PM packs - an enhanced level of nutrient to support most busy people's lifestyle.

Tips on making the best choice for you: Some people haven't taken many supplements, find taking them hard, or feel they cost too much. If you think the Optimized is too much, the Essential is still personalized to your profile, and will provide benefit. If after a month or two you feel better than before, but still feel you need a further boost to feel your best, consider the Optimized plan for 2-3 months to help replenish your nutritional reserves.

Your Report: allows you to combine supplements with education and lifestyle changes - to bring your body more into balance. As you make adjustments, any supplements needs fall in step.

It's packed with information specific to your test results and advises individual food choices, exercise, and other lifestyle measures needed to address the multiple symptoms you indicated. It can help you improve how you feel each day. **These recommendations have been carefully researched & tested over 25 years and can be shared with your doctor.**

As the report is a bit technical and long in places, our team is now working to develop a concise summary to go with it. We'll send you your updated version as soon as it's ready.

YOUR PARAGON CUSTOM SUPPLEMENT PLAN OPTIONS:

ESSENTIAL
Formula 1 x 1 daily
Formula 2 x 1 daily
Magnesium x 2 daily
Vitamin C x 1 daily
Minplex x 1 daily
Adrenal-Pack x 1 daily
Para-Pack x 1 every 2 days
Vitamin E x 1 every 4 days

Your analysis also indicates you require probiotic support. Click to purchase [here](#).

OPTIMIZED

Daily Supplements

Formula 1 x 2 daily

Formula 2 x 2 daily

Magnesium x 3 daily

Vitamin C x 2 daily

Minplex x 1 daily

Digestive Enzyme x 1 daily

Adrenal-Pack x 1 daily

Circulated through the month - an average of 4 supplements per day

Vitamin E x 1 every 2 days

Para-Pack x 1 every 2 days

Beta-Carotene x 1 every 3 days

Potassium x 1 every 4 days

Zinc x 1 per week

Vitamin A x 1 per week

Sport-Phos x 1 per week

Vitamin B6 x 1 every 10 days

Vitamin B5 x 1 every 10 days

Tyrosine x 1 every 10 days

Turmeric x 1 every 10 days

NAC x 1 every 10 days

Krill Oil x 1 every 10 days

Glycine x 1 every 10 days

Carnitine x 1 every 10 days

B3 x 1 every 10 days

B2 x 1 every 10 days

Vitamin B12 x 1 every 15 days

Taurine x 1 every 15 days

Silyphos x 1 every 15 days

Manganese x 1 every 15 days

Folate x 1 every 15 days

Copper x 1 every 15 days

Burdock Root x 1 every 15 days

Borage Oil x 1 every 15 days

Arginine AKG x 1 every 15 days

Your analysis also indicates you require probiotic support. Click to purchase [here](#).

PERFORMANCE
Daily Supplements
Formula 1 x 3 daily
Formula 2 x 3 daily
Magnesium x 3 daily
Adrenal-Pack x 3 daily
Vitamin C x 2 daily
Para-Pack x 2 daily
Digestive Enzyme x 2 daily
Potassium x 1.5 daily
Vitamin E x 1 daily
Minplex x 1 daily
Circulated through the month - an average of 7 supplements per day
Zinc x 1 every 2 days
Vitamin A x 1 every 2 days
Sport-Phos x 1 every 2 days
Vitamin B6 x 1 every 3 days
Vitamin B5 x 1 every 3 days
Tyrosine x 1 every 3 days
Turmeric x 1 every 3 days
NAC x 1 every 3 days
Krill Oil x 1 every 3 days
Glycine x 1 every 3 days
Carnitine x 1 every 3 days
Beta-Carotene x 1 every 3 days
B3 x 1 every 3 days
B2 x 1 every 3 days
Vitamin B12 x 1 every 5 days
Taurine x 1 every 5 days
Silyphos x 1 every 5 days
Folate x 1 every 5 days
Burdock Root x 1 every 5 days
Borage Oil x 1 every 5 days
Arginine AKG x 1 every 5 days
Manganese x 1 per week
Copper x 1 every 15 days

Your analysis also indicates you require probiotic support. Click to purchase [here](#).

OVERVIEW OF THE SECTIONS IN YOUR REPORT

Why Metabolic Analysis

How Your Metabolic Analysis & Recommendations Are Generated

Your Full Report and Findings:

- Section 1: Hair Tissue Mineral Analysis (HTMA)
- Section 2: Lifestyle, Foods and Symptoms Analysis

WHY METABOLIC ANALYSIS

A healthy metabolism is required for vibrant health and a long life. This is dependent on a balanced intake of proper foods, vitamins, minerals & nutrients, as well as adequate rest & exercise, all of which are specific to both you and your lifestyle.

Vitamins, minerals, and other related coenzymes are critical to health, as they literally transfer the energy from your food to the enzymes and mitochondria powering your cells.

This is why nutrient imbalances (due to stress, toxins, or less-than-optimum food & lifestyle choices) impede health - by lowering energy, strength, stamina, healing, mood, and concentration.

And this is why Paragon does not advise choosing dietary supplements without proper testing or symptoms analysis.

HOW YOUR METABOLIC ANALYSIS & RECOMMENDATIONS ARE GENERATED

This metabolic analysis shows dietary, toxin, & lifestyle imbalances likely affecting you.

These were determined by examining your:

- 1) hair tissue
- 2) food and lifestyle habits indicated in your questionnaire
- 3) medical symptoms indicated in your questionnaire.

That analysis generated the summary of vitamin, mineral, and coenzyme supplements found above, and generated the dietary and lifestyle recommendations found in the report below.

Please read your full report to learn which food, toxin, and lifestyles imbalances are likely affecting specific aspects of your health and performance. It will help you choose which foods to eat, make certain lifestyle changes, and help you see how simple it can be to better understand, improve, and gain control of your health.

Paragon Sciences was first to develop comprehensive analysis of metabolic testing and client symptoms to generate targeted nutrition, supplement and lifestyle plans to enhance metabolism based on each individual's unique and specific needs - initially to develop & strengthen world champion athletes - and then to dramatically improve the health of patients in clinical settings with serious medical conditions.

The combined metabolic analysis of your hair tissue and questionnaire helps you (and your doctor) quickly identify and understand which specific nutrition and lifestyle imbalances may be adversely affecting cell metabolism and driving symptoms you may have. The recommendations allow you to further optimize balances of vitamins, minerals, and nutrients to balance body chemistry according to your vitamin & mineral status, metabolic type, age, sex, symptoms, and lifestyle. The recommendations show the specific foods, vitamins and supplements you should eat, which to avoid, and how to adjust your exercise and other lifestyle habits.

Properly followed, these enhance your body's ability to efficiently utilize nutrients, resulting in improved energy production and health, as seen in Paragon's 25 years of successful clinical work.

If you are suffering any serious medical symptoms, you should share this report with your healthcare provider so they can further assist you as needed.

SECTION 1: YOUR HAIR TISSUE MINERAL ANALYSIS (HTMA)

INTRODUCTION TO HTMA

Hair cells are used for mineral testing due to their very nature. During the growth phase (under your skin), hair cells are exposed to blood, lymph and extracellular fluids. As your hair continues to grow and reaches the surface of the skin, its outer layers harden, locking in the metabolic products accumulated during the period of formation. This biological process provides a blueprint and lasting record of mineral status and nutritional metabolic activity occurring over this time.

It's important for you and your healthcare professional to determine your mineral status, as minerals are critical for life and abundant health affecting: DNA function, cellular metabolism, structural support, nerve conduction, muscular activity, immune functions, anti-oxidant and endocrine activity, enzyme functions, and water and acid/alkaline balance.

Many factors affect mineral nutrition, such as: food preparation, dietary habits, genetic and metabolic disorders, disease, medications, stress, environmental factors, as well as exposure to heavy metals. Rarely does a single nutrient deficiency exist in a person. Instead, multiple nutritional imbalances are common, contributing to an increased incidence of adverse health conditions today. Clinical research indicates that mild and sub-clinical nutritional imbalances are up to ten times more common than nutritional deficiency alone.

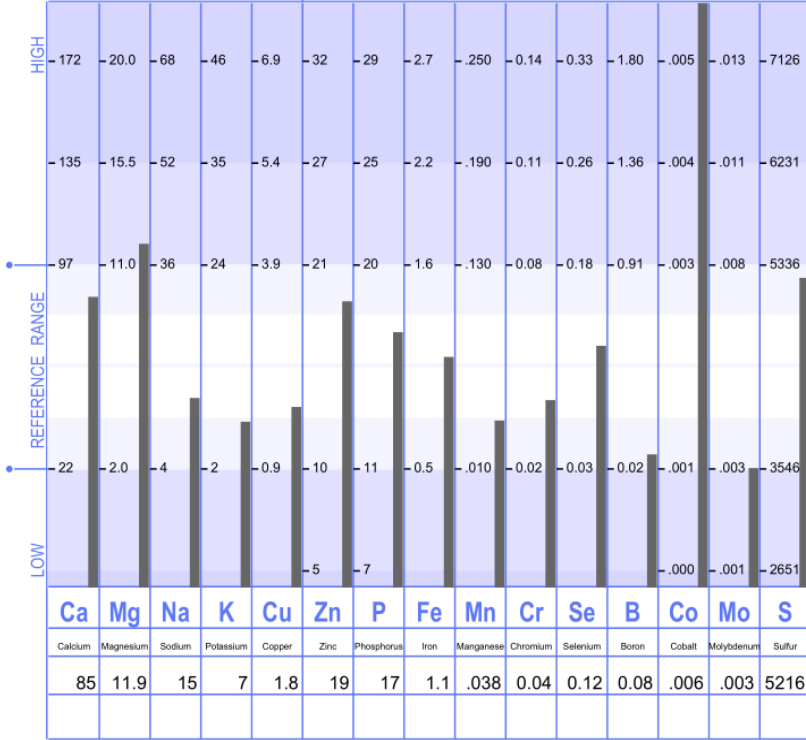
Determining mineral levels in hair requires a sophisticated analytical technique. When performed to exacting standards and interpreted correctly, it may be used as a screening aid for determining mineral deficiencies, excesses, and/or imbalances. HTMA provides you and your healthcare professional with an economical and sensitive indicator of the long-term effects of diet, stress, toxic metal exposure and their effects on your mineral balance that is difficult to obtain through other clinical tests.

The HTMA laboratory test results and analysis should not be construed as diagnostic. This analysis is provided as an additional source of information to you and your attending doctor. The test results were obtained by Trace Elements, Inc. U.S.A., a licensed clinical laboratory adhering to analytical procedures that comply with governmental protocol and standards established by Trace Elements, Inc. The interpretive data based upon these results has been determined by David L. Watts, Ph.D. based on Trace Elements, Inc. research and test results from more than 1.4 million patients conducted & collected with thousands of health professionals of all specialties in over 46 countries since 1984.

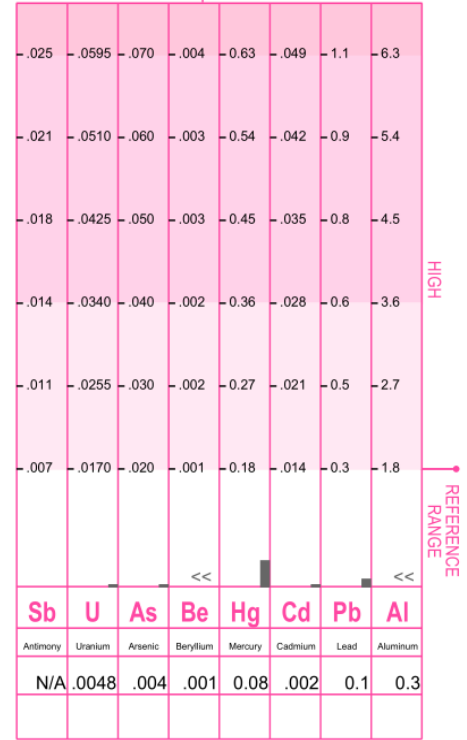
LABORATORY NO.: 1455611	
PROFILE NO.: 2	SAMPLE TYPE: SCALP

PATIENT:	AGE:	SEX: F	METABOLIC TYPE: SLOW 1
REQUESTED BY:	ACCOUNT NO.: 5630	DATE: 10/26/2018	

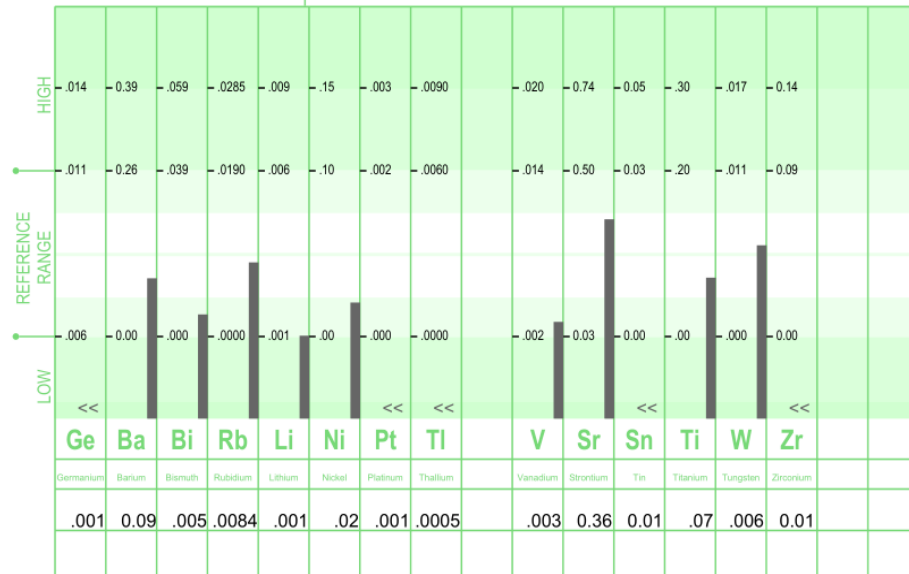
NUTRITIONAL ELEMENTS



TOXIC ELEMENTS



ADDITIONAL ELEMENTS



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

QNS: Sample Size Was Inadequate For Analysis.

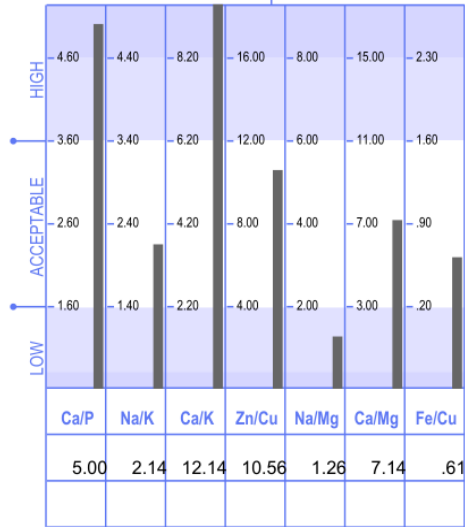
N/A: Currently Not Available

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

Laboratory Analysis Provided by Trace Elements, Inc. an H. H. S. Licensed Clinical Laboratory, No. 45 D0481787

10/26/2018
CURRENT TEST RESULTS
PREVIOUS TEST RESULTS

SIGNIFICANT RATIOS



TOXIC RATIOS



ADDITIONAL RATIOS

RATIO	CALCULATED VALUE		EXPECTED
	Current	Previous	
Ca/Sr	236.11		131/1
Cr/V	13.33		13/1
Cu/Mo	600.00		625/1
Fe/Co	183.33		440/1
K/Co	1166.67		2000/1
K/Li	7000.00		2500/1
Mg/B	148.75		40/1
S/Cu	2897.78		1138/1
Se/Tl	240.00		37/1
Se/Sn	12.00		0.67/1
Zn/Sn	1900.00		167/1

LEVELS

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

NUTRITIONAL ELEMENTS

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

TOXIC ELEMENTS

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

ADDITIONAL ELEMENTS

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

RATIOS

A calculated comparison of two elements to each other is called a ratio. To calculate a ratio value, the first mineral level is divided by the second mineral level.

EXAMPLE: A sodium (Na) test level of 24 mg% divided by a potassium (K) level of 10 mg% equals a Na/K ratio of 2.4 to 1.

SIGNIFICANT RATIOS

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

TOXIC RATIOS

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

ADDITIONAL RATIOS

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

REFERENCE RANGES

Generally, reference ranges should be considered as guidelines for comparison with the reported test values. These reference ranges have been statistically established from studying an international population of "healthy" individuals.

Important Note: The reference ranges should not be considered as absolute limits for determining deficiency, toxicity or acceptance.

UNDERSTANDING THE GRAPHICS

NUTRITIONAL ELEMENTS display test results for nutritional elements and how they compare to the established population reference range. Values above or below the reference range indicate a deviation from "normal". The more significant the deviation, the greater the possibility a deficiency or excess may be present.

TOXIC ELEMENTS display the results for each of the reported toxic elements. It is preferable that all levels be as low as possible and within the lower white section. Any test result that falls within the upper dark red areas should be considered as statistically significant, but not necessarily clinically significant. Further investigation may then be warranted to determine the possibility of actual clinical significance.

ADDITIONAL ELEMENTS display the results of additional elements for which there is limited research. These may be necessary for biochemical function and/or may adversely affect biochemical function. Further study will help to reveal their function, interrelationships and eventually their proper therapeutic application or treatment.

SIGNIFICANT RATIOS display the important nutritional mineral relationships. This section consists of calculated values based on the respective elements. Mineral relationships (balance) is as important, if not more so, than the individual mineral levels. The ratios reflect the critical balance that must be constantly maintained between the minerals in the body.

TOXIC RATIOS display the relationships between important nutritional elements and toxic metals. Each toxic metal ratio result should be in the white area of the graph, and the higher the better. Toxic ratios that fall within the darker red area may indicate an interference of that toxic metal upon the utilization of the nutritional element.

ADDITIONAL RATIOS The additional ratios section provides calculated results on some additional mineral relationships. At this time, there is limited documentation regarding these ratios. For this reason, these ratios are only provided as an additional source of research information to the attending health-care professional.

METABOLIC TYPE

This section discusses your metabolic profile, which is established by evaluating your hair tissue mineral results and the degree to which those mineral balances may be associated with a stimulating or inhibiting effect upon the main "energy producing" endocrine glands. These glands regulate nutrient absorption, excretion, metabolic utilization, and incorporation into the tissues of the body: the skin, organs, bone, hair, and nails. How efficiently each nutrient is used depends largely upon proper function of the endocrine glands.

SLOW METABOLISM (TYPE #1)

** Para-Sympathetic Dominance

** Tendency Toward Decreased Thyroid Function (reduced secretion of hormones)

** Tendency Toward Decreased Adrenal Function (reduced secretion of hormones)

** The mineral pattern reflected in these test results is indicative of a slow metabolic (Type #1) pattern. This particular profile can be related to a number of contributing factors, such as:

* Diet - Dietary factors such as low protein intake, high carbohydrate intake and eating refined carbohydrates, especially those containing appreciable amounts of sugar have an indirect yet significant effect in suppressing the metabolic rate.

* Endocrine Function - Low thyroid activity as well as low adrenal gland function will contribute to lowering the metabolic rate.

* Digestion - Poor absorption and utilization of nutrients found in the foods that are consumed will result in decreased energy production on a cellular level, thereby, affecting metabolism. In turn, a lowered

metabolic rate will have an adverse effect upon the digestion process, thereby creating a vicious cycle.

* Viral Infections - A past occurrence of a severe or chronic viral infection can contribute to a decrease in the metabolic rate, due to the body's neuro-immunological response to infection.

After a prolonged period of time, a diminished metabolic rate, such as indicated in these test results, has been correlated with fatigue, cold hands and feet, easy weight gain and craving for sweets.

NUTRIENT MINERAL LEVELS

HYDROCHLORIC ACID PRODUCTION AND PROTEIN DIGESTION

Your mineral profile may be reflective of a deficiency in hydrochloric acid (HCL) production, which can result in inadequate protein digestion. Hydrochloric acid in sufficient amounts is necessary for the complete digestion and utilization of dietary protein. Symptoms, such as, bloating of the stomach, flatulence and constipation may be observed with an HCL deficiency, especially following high protein meals.

MAGNESIUM (Mg)

Magnesium is the fourth most abundant metal found in the body, and is essential for muscle relaxation, protein synthesis, nerve excitability and energy production on a cellular level. However, magnesium also has a sedating effect upon the body, and when in excess may contribute to a number of conditions, such as:

Low Blood Pressure	Depression
Fatigue	Dizziness
Craving for Salt	Muscle Weakness
Decreased Mental Alertness	Lowered Body Temperature

SOME FACTORS THAT MAY CONTRIBUTE TO HIGH TISSUE MAGNESIUM LEVELS:

Some factors that may contribute to elevated magnesium other than possible excessive magnesium intake, include:

High Carbohydrate Intake	Low Adrenal Function
Vitamin B6 Deficiency	Vitamin E Deficiency
Elevated Tissue Calcium	HCL Deficiency
Hypothyroidism (Low Thyroid)	Low Protein Intake

COBALT (Co)

Your cobalt level is far above the established reference range for this essential trace element. Cobalt has been indirectly associated with anemia due to its recognized antagonistic affect on iron metabolism. Symptoms of excess cobalt may also include:

Flushing	Chest Pains
Dermatitis & Skin reactions	Nausea
Vomiting	Kidney Problems
Thyroid Disturbance	Deafness
Cardiac Abnormalities	Asthma

The current cobalt level is elevated. Studies have found that industrial exposure to cobalt is associated with allergy symptoms and contact dermatitis. If this pattern becomes chronic, potential sources of this

element should be evaluated and reduced.

Cobalt metal and its compounds are used extensively for the production of:

High Temperature Alloys	Hard Metals
Diamond Tools	Drying Agents in Paints
Additives in Animal Feeds and Pigments	Salts Used for Electroplating
Dental Materials	

HERBAL SOURCES OF COBALT INCLUDE:

Some herbs naturally contain significant levels of cobalt. At this time, the following herbs should be discontinued if presently being consumed:

Goldenseal	Alfalfa
Black Cohosh	Chamomile
Slippery Elm	

GERMANIUM (Ge)

Your germanium level is below the established reference range for this trace element. However, deficiency signs and conditions have not yet been documented in humans. Therefore, clinical significance cannot be placed on a low germanium level at this time.

NUTRIENT MINERAL RATIOS

HIGH CALCIUM/POTASSIUM (Ca/K) RATIO

Since calcium and potassium will antagonize each other's absorption and utilization by the body, an excess in calcium intake, or the increased retention of calcium will increase the need for additional potassium.

High calcium relative to potassium will frequently indicate a trend toward hypothyroidism see food notes (underactive thyroid). The mineral calcium antagonizes the retention of potassium within the cell. Since potassium is necessary in sufficient quantity to sensitize the tissues to the effects of thyroid hormones, a high Ca/K ratio would suggest reduced thyroid function and/or cellular response to thyroxine. If this imbalance has been present for an extended period of time, the following symptoms associated with low thyroid function may occur:

Fatigue	Depression
Dry Skin	Over-weight Tendencies
Constipation	Cold Sensitivity

LOW SODIUM/MAGNESIUM (Na/Mg) RATIO

This ratio is below the normal range. The adrenal glands play an essential role in regulating sodium retention and excretion. Studies have also shown that magnesium will affect adrenal cortical activity and response, and reduced adrenal activity results in increased magnesium retention. The sodium-magnesium profile is indicative of reduced adrenal cortical function. The following associated symptoms may be observed:

Fatigue	Constipation
Dry Skin	Lowered Resistance
Allergies (Ecological)	Low Blood Pressure

TOXIC METAL LEVELS

ALL CURRENT TOXIC METAL LEVELS ARE WITHIN THE ACCEPTABLE RANGE

TOXIC METAL RATIOS

Every person is exposed to toxic metals to some degree. The retention of these toxic metals, however, is dependent upon the individual's susceptibility. The balance of the protective nutrient minerals within the body in relation to the heavy metals can frequently be the determining factor to this susceptibility. As an example, the accumulation of lead will have a more detrimental effect upon body chemistry when sufficient levels of calcium and iron are not available. By examining the toxic metal levels in relation to the protective minerals, the extent to which the heavy metals may be involved in abnormal chemistry can frequently be seen.

TRENDS

The trends below may or may not be manifesting in the patient at this time. Each listed is: a result of research including statistical and clinical observations; advanced merely for the consideration of the health professional; and should not be considered an assessment of a medical condition. Further investigation may be indicated based upon a clinical evaluation by your health professional.

SPECIAL NOTE:

It's emphasized that the following are only trends of potential health conditions. The probability for each trend's occurrence is based upon the degree and duration of the specific mineral imbalance. Since the analysis is not capable of determining the previous degree of imbalance and/or previous duration, the trend should only be used as an indicator of potential manifestations, particularly if the biochemical imbalance continues.

TENDENCY	1	2	3	4	5	6	7	8

COMMENTS

HYPOADRENIA: Low tissue sodium and potassium relative to calcium and magnesium is associated with adrenal insufficiency. This may result in low blood pressure, postural hypotension, and fatigue.

HYPOTHYROID: High calcium relative to potassium indicates a tendency toward a low thyroid function. It has been found that an elevated TSH, even when circulating T-3 and T-4 are normal, is an early indication of hypothyroidism.

GENERAL DIETARY GUIDELINES FOR THE SLOW METABOLIZER

EAT A HIGH PROTEIN FOOD AT EACH MEAL...Lean protein is recommended and should constitute at least 40% of the calories in each meal. Recommended sources are eggs, fish, fowl and lean meats, as well as higher protein vegetables such as asparagus, mushrooms, peas and peapods, beans, bean sprouts, lentils, cauliflower, broccoli, spinach, collards, artichokes, brussels sprouts, leeks, and mushrooms. Other good sources of protein include bean and grain combinations. Increased protein intake is necessary in order to increase the metabolic rate and energy production.

INCREASE FREQUENCY OF MEALS...while decreasing total calories for each meal. This is suggested in order to sustain the level of nutrients necessary for energy production, and decrease blood sugar fluctuations.

EAT A MODERATE AMOUNT OF UNREFINED CARBOHYDRATES...Carbohydrate intake should not exceed 40% of total daily caloric intake. Excellent sources of unrefined carbohydrates include whole grain products, legumes and root vegetables.

AVOID ALL SUGARS AND REFINED CARBOHYDRATES...This includes white and brown sugar, honey, dextrose, glucose, fructose, modified starches, maltodextrin, corn syrup, rice syrup, evaporated cane or fruit juices, candy, soft drinks, cake, pastries, alcohol and white bread.

AVOID HIGH PURINE PROTEIN...Sources of high purine protein include: liver, kidney, heart, sardines, mackerel and salmon.

REDUCE OR AVOID MILK AND MILK PRODUCTS...Due to high levels of calcium, milk and milk products including "low-fat" milk should be reduced to no more than once every three to four days.

REDUCE INTAKE OF POOR QUALITY FATS AND OILS... including fried foods, salad dressings, most vegetable oils, mayonnaise, etc... Eat the quality oils recommended in your symptoms analysis in the second section of your report.

REDUCE FRUIT JUICE INTAKE... This includes orange juice, apple juice, grape juice and grapefruit juice. Note: Diluted vegetable juices sipped gradually over time are acceptable.

AVOID CALCIUM SUPPLEMENTS... unless recommended by physician.

VITAMIN B-1 AND THYROID HORMONE

The following foods high in Vitamin B-1 may be increased in the diet until the next evaluation. Vitamin B-1 has been associated with increasing the effectiveness of thyroid hormone (thyroxine) upon metabolism.

Wheat Germ	Brewer's Yeast
Eggs (soft, hard, poached)	Seeds
Pork	Beef
Poultry	Organ Meats
Pinto Beans	Other Legumes
Brazil Nuts	Other Nuts
Oats	Rice Bran
Peas	

METHIONINE RICH FOODS

The following foods are a rich source of the essential amino acid methionine, which supplies sulfur to the cells for the activation of enzymes, and energy metabolism. Sulfur is also involved in detoxification processes. Toxic substances are combined with sulfur, converted to a nontoxic form and then excreted. The following foods from organic sources may be consumed liberally during course of therapy:

Eggs (soft, hard, poached)	
Pumpkin Seeds	Short Ribs
Round Steak	Chicken
Turkey	High Fat Plain Goat Yogurt
Steamed or cooked Cabbage	
Steamed or baked Cauliflower	
Steamed or baked Brussel Sprouts	

FOODS THAT MAY AFFECT THYROID ACTIVITY

The following list of foods belongs to a family of foods that are known to decrease thyroid activity when eaten in appreciable quantities. If an under-active condition is present, excessive consumption can contribute to symptoms associated with hypothyroidism, such as; fatigue, cold sensitivity, depression, weight gain, dry skin and hair, and constipation. Intake of the following foods should be reduced considerably until the next evaluation:

Raw Cabbage	Raw Kale
Rutabagas	White Turnips
Cole Slaw	Fluorides
Sauerkraut	Horseradish
Soybeans	Chlorinated Water
Mustard	Walnuts

CALCIUM/PHOSPHORUS IMBALANCE

It is suggested that the following foods be reduced until the next evaluation. At this time they may contribute to a further disturbance in the Ca/P balance and contribute to the accumulation of calcium into the soft tissues.

Swiss Cheese	Turnip Greens
Yogurt	Kale
Monterey Cheese	Hazelnuts
Mozzarella Cheese	Kelp
Broccoli	Carob Powder
Baking Powder	Sardines

SPECIAL NOTE:

This report contains only a limited number of foods to avoid or to increase in the diet. FOR THOSE FOODS NOT SPECIFICALLY INCLUDED IN THIS SECTION, CONTINUED CONSUMPTION ON A MODERATE BASIS IS ACCEPTABLE UNLESS RECOMMENDED OTHERWISE BY YOUR DOCTOR. Under some circumstances, dietary recommendations may list the same food item in the "TO EAT" and the "TO AVOID" categories at the same time. In these rare cases, always follow the avoid recommendation.

The following organic and wild foods may be increased in the diet:

Beef	Brazil Nuts	Brewer's Yeast
Chicken	Eggs (soft, hard, poached)	High Fat Plain Goat Yogurt
Legumes	Oats	Organ Meats
Other Legumes	Other Nuts	Peas
Pinto Beans	Pork	Poultry
Pumpkin Seeds	Rice Bran	Root Vegetables
Round Steak	Seeds	Short Ribs
Steamed or baked Brussel Sprouts	Steamed or baked Cauliflower	Steamed or cooked Cabbage
Turkey	Wheat Germ	Whole Grain Products

The following foods should be avoided:

Apple Juice	Baking Powder	Broccoli
Calcium Supplements	Carob Powder	Chlorinated Water
Cole Slaw	Fluorides	Fried Foods
Grape Juice	Grapefruit Juice	Hazelnuts
Heart	Horseradish	Kale
Kelp	Kidney	Liver
Low-fat Milk	Mackerel	Mayonnaise
Milk	Monterey Cheese	Most Vegetable Oils
Mozzarella Cheese	Mustard	Orange Juice
Raw Cabbage	Raw Kale	Rutabagas
Salad Dressings	Salmon	Sardines
Sauerkraut	Soybeans	Swiss Cheese
Turnip Greens	Walnuts	White Turnips
Yogurt		

These sugars and refined carbohydrates should be avoided at all times:

Alcohol	Brown Sugar	Cake
Candy	Corn Syrup	Dextrose
Evaporated cane	Evaporated fruit juices	Fructose
Glucose	Honey	Maltodextrin
Modified Starches	Pastries	Rice Syrup
Soft drinks	White Sugar	White bread

SECTION 2: SYMPTOMS AND LIFESTYLE ANALYSIS

Adequate Sleep

Adequate sleep is critical to your body's regeneration, healing, and long term brain health. Ideally your body requires 7.5 hours per night for 5 complete sleep cycles of roughly 90 minutes each. (Cycles range from 80-120 minutes depending on the individual and how rested they are). During a complete sleep cycle healthy brain cells are able to contract slightly, clearing toxins that cannot be removed in any other manner. This is especially important for long-term brain health after the age of 35. Chronic sleep deprivation can not only lead to accumulation of plaque and other unwanted cellular wastes within your brain cells, but poor cellular regeneration of all body parts as well.

So if a young full-time athlete needs 9 hours of sleep a day to properly regenerate his/ her body, then how many do you need when you are stressed or working hard? Probably at least as many. Continue to get your sleep, and if you've had a particularly busy week, when you can, sleep in for 90 minutes on the weekend or days off.

Time to Bed

Try to be in bed by 11PM or earlier until you are feeling more rested in the morning. Avoid screen time an hour before bed.

Daily Screen Time

As you are on a screen so much, your eyes need extra support. Smaller Vitamin A and beta carotene maintenance dosages are advised. To reduce oxidative stress and damage to your eyes, it's best to reduce screen time at home when possible, decrease intake of simple & refined sugars and alcohol, maintain excellent hydration, get moderate exercise, and get adequate sleep.

Daily Sunshine

Since you are not getting much exposure to sunshine your Vitamin D requirements are higher.

Exercise Habits

1. Muscles function and stretch better when they are in the proper bio-chemical state. And nutrition is essential. Ensuring adequate supplemental magnesium, other minerals, B Complex and other nutrients prevents muscles from tightening and restores normal muscle function. This is because magnesium is needed to generate the electrical forces to both power and relax the brain and muscles, but is deficient in most foods due to commercial fertilizer use, and is further depleted by stress and mental work.

Most magnesium supplements on the market are in the wrong forms and will not optimally relax muscles. Paragon has tested, compounded, and experimented with premium magnesium compounds for athletic and mental performance since 1989. Our proprietary formulas of magnesium aspartate, orotate and malate are the most advanced ever developed. They boost and replenish specific metabolic pathways depleted by mental and physical stress and are blended with other minerals like manganese, chromium and vanadium to enhance delivery of magnesium to your cells. Your muscle & mental performance, sleep, and recovery will all benefit significantly. We've suggested a specific blend of magnesium based on your metabolic testing, to ensure your stretching is effortless and pleasurable. (Avoiding alcohol for 3-10 days when you have muscle pain is essential to rapid healing, otherwise the injury can become chronic.)

2. Paragon's top athletes have found it's best not to stretch too hard before exercising fully, but rather after your main training when fully warm. Over stretching in static positions after the workout isn't the best either. Rather, warming up and then using your muscles gradually & properly during exercise is the best way to dynamically stretch and maintain optimum muscle tone & tendon strength. This prevents chronically tight or spasming muscles which can pull on your tendons and joints causing joint pain, or tendon inflammation around your joints. Remember that your muscles are a little like rubber elastics - and just as you wouldn't yank on a frozen elastic until its been made warm and pliable, you

shouldn't stretch your tissues until they are fully warm. Warming down muscles is critical as well.

While static stretching was the norm as part of most warm-up routines until recently, Paragon found when training our Olympic and professional athletes back in the early 1990s that static stretching early in a workout did not feel effective and left our muscles feeling strained and lacking optimum "tone" or elasticity (bounce). So, instead we developed a new form of dynamic stretching where we used light easy training movements to warm up and gradually stretch out and establish the optimum tone of our muscles. A decade later most high level athletes began training this way. More recently several studies in 2013 indicate that static stretching before workouts weakens muscles. For this reason, dynamic stretching is now becoming widely recommended before exercise in place of static stretching, while the latter helps to reduce muscle soreness afterwards.

Maintaining an even body temperature, and wearing an even level of clothing over your body is important, especially in northern climates. Exposed limb muscles and joints are more prone to injury.

Eating Organic Dairy, Milk & Eggs

Keep eating organic dairy, meats, and eggs! Because as you probably already know, non-organic foods have levels of pesticides, hormone residues, heavy metals, and other toxic and/or estrogen mimicking chemicals that can accumulate to problematic levels in the body over time. Dairy, meats, eggs and fish have the highest concentrations of toxins - multiples higher than fruits and vegetables due to bioaccumulation in the animals eating them. As you probably know, these toxins inhibit liver and lymph system cleansing and function, and can lead to a buildup of toxins deep within tissues and organs.

Rather than stress about this, the very good news is that regular moderate exercise, in combination with various organic whole foods diets, detoxifying supplements, and/or periodic cleansings of the tissues all work very well to clean the liver and lymphatic system and can prevent and/or reverse serious toxin-related health problems (including digestive, bowel, neurological, and many other serious diseases including cancers), as seen many times in Paragon's clinical case studies.

And even though organic food may be more expensive, remember it contains far more nutrient, and tastes much better. So in the long run you need less food, and feel much better.

It's also important to always read your organic labels, as you still want to avoid unwanted sugars and processed foods. Try to buy and eat whole foods. And remember that with the proper knowledge you are in control of your destiny!

Eating Organic Fruits & Vegetables

Keep eating organic fruits and veggies! Avoiding the glyphosphates pesticides and other chemicals will pay off.

Eating Organic Oils

Keep eating organic oils! Most chemicals are made from oil-based petrochemicals, and are therefore oil and fat soluble, and capable of easily storing in and penetrating the fatty acids found in the cells walls of all your tissues, including the brain.

Whereas, clean organic oils help flush out prior toxins stored in your cells. Use these in salads or yogurt shake mixtures. Remember not to cook with any thinner vegetable oil - as this will produce toxic trans fatty acids. Instead saute at lower temperatures with organic butter or olive oil.

Eating in a Calm, Relaxed Manner

Rushing your eating makes it difficult to properly digest foods, robbing you of energy and tiring your body.

Chewing Well

Not chewing your food well makes it more difficult for both your stomach and pancreas to aid in the digestion of your food, robbing you of energy, and making it easier for bacteria and virus in foods to infiltrate your body.

Waking in the Middle of the Night

Waking in the middle of the night and then tossing and turning with anxiousness, or Type 2 insomnia, is usually caused by a lack of magnesium and B6, which can be made worse by an excess of calcium. Reducing simple & refined sugar & carb and alcohol intake, dairy, and calcium rich foods; and getting moderate daily exercise to relieve the body of daily stress challenges usually solves the problem, providing you with sound sleep each night and the improved mental and muscular performance that goes with this.

Lethargy In The Morning

This usually indicates impaired adrenal and/or thyroid gland support. Your hair test shows the nutritional imbalances impairing specific glandular function. Other factors contributing are often overwork, excess caffeine, alcohol and/or drugs, too little or excess exercise, and chronic sleep deprivation.

Fortunately, the dietary, supplement and lifestyle recommendations provided for you have been shown through extensive clinical study to address symptoms like yours. They can help you get you back on track and waking with the energy you want.

Anxiety or Panicky Feeling During the Day

Increase daily bioavailable magnesium intake, moderate exercise for detox of lymphatic system, and sleep for recovery. Ingest higher level of Paragon's Formulas 1 & 2 (B1,2,3,5,6,9,12,folate, R-ALA, choline, CoQ10, A, D, K), Vitamin C, Mg, Zn to maintain smooth level of energy flow and stable generation of dopamine and neurotransmitters. Breathe deeply and slowly for 5 minutes before leaving bed in the morning. Take 1 minute to breathe deeply and slowly many times during the day when working, particularly when at a desk or doing mundane work. Significantly reduce sodium & caffeine. Avoid alcohol on work nights. Increase clean proteins (organic high protein vegetables & legumes, eggs, and grass fed meats), healthy fats (organic olive, flax & sun or safflower oils (2:1 ratio), coconut, palm oils and butter), and lots of low carb vegetables to ensure a non-depleting, clean fuel running the body. Eliminate or significantly decrease refined sugars and other carbs (pasta), trans fats & vegetable oils, and alcohol all which contribute to drive anxiety when faced with life's challenges. Consider 5-10 minutes of yoga-style relaxing of all muscles in the body in bed prior to sleep (from toes to head & face muscles) to ensure maximum circulation through the body and the regeneration that comes with it.

Frequent Anger, Frustration, or Agitation

Increase daily bioavailable magnesium intake, moderate exercise for detox of lymphatic system, and sleep for recovery. If too heavy, reduce workload if possible. Take 1 minute to breathe deeply and slowly many times per day when working, particularly when at a desk or doing mundane work. Significantly reduce sodium & caffeine. Avoid alcohol on work nights. Ingest higher level of Paragon's Formulas 1 & 2 (B1,2,3,5,6,9,12,folate, R-ALA, choline, CoQ10, A, D, K), Vitamin C, Mg, Zn to maintain smooth level energy flow and stable generation of dopamine and neurotransmitters.

Increase clean proteins (organic high protein vegetables & legumes, eggs, and grass fed meats), healthy fats (organic olive, flax & sun or safflower oils (2:1 ratio), coconut, palm oils and butter), and lots of low carb vegetables to ensure non-depleting, clean fuel running the body. Eliminate or significantly decrease refined sugars and other carbs (pasta), trans fats & vegetable oils, and alcohol all which deplete nutrient levels and contribute to drive frustration and anger when faced with life's challenges. Consider meditation before bed.

Prone to Depression or Sadness

Sadness and depression are often driven by a combination of chronic anxiety, poor diet, and/or lack of exercise which can leave the body depleted of energy and neurotransmitters necessary for happiness and optimism. A deficiency of B vitamins, iron and/or an excess of calcium, carbohydrates, refined foods, sugars, and or excess alcohol and/or drugs can drive this.

Eliminate or significantly decrease refined sugars and other carbs (pasta), trans fats & vegetable oils, and alcohol. Supplement proper bioavailable magnesium and B6. To level out uneven fuel consumption by the body, ingest higher levels of vitamins and nutrient found in Paragon's Formulas 1 & 2 (B1,2,3,5,6,9,12,folate, R-ALA, choline, CoQ10, A, D, K), Vitamin C, Zn to maintain smooth level energy flow and stable generation of dopamine and neurotransmitters. Increase clean proteins (organic high protein vegetables & legumes, eggs, and grass fed meats), healthy fats (organic olive, flax & sun or safflower oils (2:1 ratio), coconut, palm oils and butter), and lots of low carb vegetables to ensure non-depleting, clean fuel running the body.

Restless Legs

Check iron, ferritin, magnesium, and tyrosine - increase if required. Restless Legs is usually made worse by overly-tight thigh muscles that need additional stretching. You may also need to eliminate or reduce calcium-rich dairy products which can lead to over-contraction and spasming of muscles. Decrease refined sugars & alcohol that do the same by depleting magnesium. To level out nervous system function, ingest tyrosine and higher levels of vitamins and nutrient found in Paragon's Formulas 1 & 2 (B1,2,3,5,6,9,12,folate, R-ALA, choline, CoQ10, A, D, K), Vitamin C, Zn to maintain smooth level energy flow and stable generation of dopamine and neurotransmitters. Also work to reduce your stress levels through moderate exercise, yoga-style end-of-workout relaxation of muscles, and / or meditation.

Congested Lungs

Lung problems are usually due to detoxification issues and congested liver function, and are an important early warning to make simple - but necessary - dietary & lifestyle changes to regain full health.

Decongestion of the lungs can be assisted by improving both liver and cellular detoxification by using the right combination of food, probiotics, and supplements.

Lung and liver issues are often caused by poor diet, alcohol, toxic stressors, prescription drugs, and/or lifestyle imbalances, thereby driving nutrient uptake and depletion, diminished liver function, hormone imbalances, and reduced cellular detoxification that result. This can be made worse by too little exercise (which is needed to pump our lymph systems, clear toxins, and balance hormones), or too much exercise (which increases the toxic stress load on the body).

Nature uses sulfur-rich protein, vitamins, and other minerals to bind onto such toxins, so when your lungs are congested your body need more sulfur-rich foods, as well as the complimenting nutrients necessary to support the detoxification bio-pathways in our bodies. You'll also need more sleep, and, when healthy enough, a moderate level of regular exercise.

To determine what extra nutrient you need, we check your symptoms and HTMA mineral and heavy metal levels, and if required, advise increased intakes of magnesium, salt, sulfur (NAC), copper, selenium, zinc, manganese, chromium, vanadium, glycine and AAKG. These should be used with Formula 1B complex, Formula 2 D/A/K/CoQ10, short term therapeutic Vitamin A, B3, and B2, Beta-carotene, E complex, Flax & Borage oils, burdock root, turmeric, silybin, and grapeseed extract to provide extra nutrients needed for your body, lungs, and liver to cleanse and heal. Extra carnitine enhances fat metabolism in your liver and cells, and helps your body run on fat rather than carbs. Extra short term therapeutic B3 and B2 to power the initial detoxification process are often required. Short term therapeutic probiotics are also often needed to rebalance the gut.

Toxic chemicals are stored in the fats of human and animals. Therefore non-organic sources of fats and oils are particularly problematic for your liver and lungs. Reduce the amount of certain fats in your diet, in particular from non-organic and processed animal meats. Work to eliminate fried fats and non-organic commercial vegetable oils which are high in toxins, and do not cook with commercial vegetable oils (mazola, corn, sesame, soybean, and or canola oils) or eat vegetable oils subjected to

heat. Further, mazola, corn, sesame, soybean, and or canola oils all have a relative excess of γ -tocopherol (gamma form of Vitamin E) which causes inflammation in patients with lung conditions. Hemp and pumpkin seed oils also have higher levels of γ -tocopherol and should be avoided by asthma and lung patients.

Temporarily (or permanently) eliminate/reduce alcohol, all refined sugars and carbs, dried fruits, potato chips, non-dark chocolate (under 85% cocoa), most fruits, all fruits juices, all cow dairy products, and all milk products, other than a few tablespoons of plain high fat goat yogurt (mixed with healthy oils and a few berries - which is delicious).

Check water intake and increase hydration as required. Clean water is important to flushing toxins from your body. Increase your intake of low-glycemic organic vegetables and leafy greens, and of healthy virgin cold-pressed organic oils (flax, sun or safflower, and olive) and eat more frequent smaller meals containing sulfur-rich protein: from vegetable (cauliflower, broccoli, brussel sprouts, onions, garlic, cabbages, bok choy, spinach, asparagus, peas green beans, turnips, beans and lentils) or other healthier animal protein (organic eggs, lean organic grass or seed fed meats, a few tablespoons of plain high fat goat yogurt, and occasional cleaner smaller fish).

If your lung congestion is chronic, a simple but highly effective cleanse is strongly advised. See instructions in your report if this interests you - your body will thank you!

Once your lung and liver function have improved, the sautéing of vegetables or other foods in organic virgin olive oil at very low temperature may not cause any further problems.

Poor Night Vision

Increase consumption of brightly colored vegetable rich in carotenoids. Increase Taurine, Vitamin A. Reduce screen time, and get extra rest.

One Bowel Movement or Less Per Day

One bowel movement or less per day indicates constipation, and a backup of 6 or more meals held in the body. To regularly eliminate a meal within 24hrs requires 2-3 bowel movements per day. Accumulating meals in the gut lead to stagnation and putrefaction. Eliminating constipation is essential to long-term health.

PMS or Menstrual Breast Soreness

The B complex vitamins, and B6 and B2 in particular, have been shown to help manage the stress of hormonal swings. An increase in exercise, and a reduction in simple & refined sugars and carbs, milk products, and alcohol, along with increases of Flax, Borage and Krill oils, B vitamins, Mg, Zn and other nutrients are important to reducing inflammation & pain, and to balancing hormones, and with that preventing and/or reversing breast cancer.

Dr Lam, an expert in women's hormonal health states the following:

95% percent of PMS can be vastly improved if steps are taken to balance the body's hormones.

PMS consists of physical and emotional symptoms that develop after ovulation and before the onset of the menstrual cycles. It can range from a few days to two weeks. The intensity can be mild (relieved by an aspirin), or severe and debilitating. Generally, symptoms intensify as the period approaches.

Typical complaints of patients with PMS:

- My ring finger is getting swollen (indicative of water retention).
- My breasts are hot and tender (indicative of breast inflammation).
- I feel tired all the time (indicative of fatigue).
- I feel nervous and irritable (indicative of emotional instability).
- I feel like eating chocolate all the time (indicating an innate magnesium deficiency as chocolate is high in magnesium).

It's important to note that not all PMS symptoms are caused by progesterone deficiency and estrogen dominance. Hypothyroidism can produce similar symptoms. Stress leading to adrenal exhaustion and low adrenal reserve commonly seen in working mothers for example, can also cause similar symptoms. A diet low in fiber can cause estrogen to be reabsorbed and recycled. An excessive intake of xenoestrogen-laced beef and poultry also contributes to relative estrogen dominance associated with PMS.

The key dietary adjustments are elimination of:

- Empty calories such as potato chips and other junk foods
- Hydrogenated fats (also called trans fats) found in such foods as cookies and margarine
- Reduced calcium intake and increased magnesium intake

Burdock is often used to help balance hormones by supporting the liver, which metabolizes hormones for excretion. When the liver is overloaded with processing chemicals, alcohol, drugs and fats, hormones can remain in the body, cycling in the blood stream, until the liver has the capacity to clear them. In this case, the balance of hormones in the blood stream becomes imbalanced. Burdock root's support of the liver is the reason that it is called a hormone stabilizer. It is often recommended in estrogen excess health conditions, such as endometriosis, to help clear estrogen from the body. It is also important to keep food containing synthetic hormones to a minimum: i.e. meat and dairy products from cows which have been given hormones. Burdock is a powerful herb, so the minimum dosage should be taken to avoid side effects.

It is often used to help clear skin disease, but can cause exacerbated skin problems if too much is taken, because it clears the internal toxins quickly, when perhaps the bowels and kidneys are compromised and cannot excrete toxins efficiently.

Exercise is also essential to balancing hormones. Without exercise, it's very difficult for your body to make progesterone. Further, it's well established that an excess of exercise will lead to the opposite balance of hormones, with progesterone dominance over estrogen. So, it's essential to get moderate intensity exercise to increase and balance progesterone levels. Exercise is also the only activity, other than fasting which cleans out the lymph system... helping to remove both toxic and estrogen-mimicking chemicals, and preventing and/or often reversing lymphoma and other cancers.

Don't worry if you find exercise difficult. Just start with small amounts each day and build up your level of intensity gradually. Remember to stretch when you are done, and take the time to relax and savor your achievement. Within 3-4 short weeks you will notice a big improvement in your health.

In addition to regular and more intense exercise, elimination of coffee, sugar, alcohol, and dairy products frequently succeed in balancing hormones and reducing the symptoms of PMS. A diet high in phytoestrogens or supplementation of isoflavone extract or DIM, as well as nutritional supplementation with nutrients high in fatty acids such as Krill oil helps to reduce the inflammatory response. If exercise, dietary, and lifestyle changes, are not enough, the use of natural progesterone cream should be considered. Dr. Katherine Dalton published the first medical report on PMS in 1953 observing that the administration of a high dose of progesterone by rectal suppository relieved symptoms of PMS.

However, it should always be remembered that hormone replacement will not clean the body's lymph system as exercise will. Regular moderate exercise is essential to a long healthy life in a polluted world.

FDA-approved estrogen drugs have been documented to cause cancer. Published studies have shown that women taking estrogen and a synthetic progesterone drug had a thirty-two to forty-six percent increase in their risk of breast cancer. This was based upon a large pool of data from the famous Nurses' Health Study conducted at Harvard Medical School. Pathologically, estradiol has been shown to stimulate and up-regulate the oncogene, Bcl-2, leading to cancer cell proliferation. Natural progesterone, on the other hand, up-regulates the p53 gene that increases apoptosis and blocks the Bcl-2 carcinogenic effect. It is clear that estrogen stimulates breast cancer while progesterone has the opposing effect.

Study after study has repeatedly shown that the majority of breast cancers in adult women are non-genetically linked, and upwards of eighty percent of breast cancer, is caused by estrogen dominance. Therefore, breast cancer can be cured and reversed if the body's estrogen level is brought under control. It is not a coincidence that after menopause (and reduced rate of estrogen production),

the rate of increase in the risk for breast cancer drops dramatically.

We shall not dwell in depth on breast cancer here. Suffice to say that reducing estrogen (through dietary measures, lifestyle changes, and exercise) aggressively forms the key foundation to prevention and treatment of breast cancer.

Menstrual Cramps

Check exercise level, calcium & magnesium levels. If indicated, increase exercise, magnesium and B6, flax & krill oils, and decrease dairy, refined sugars & alcohol.

What you need to know to help reduce estrogen dominance naturally:

Dr Lam's protocols have helped thousands of women (and men) rebalance their hormones naturally, as have Dr Lara Braden's protocols.

Dr Lam's compilation of research studies points to wide range of medical studies showing the many causes of the increase in estrogen dominance over progesterone seen in today's modern world. Here are simple things to avoid.

1. **A lack of exercise and poor lifestyle choices:** He particularly emphasizes that a natural restoration of estrogen / progesterone balance through diet, supplements, lifestyle changes, and moderate exercise is the healthiest approach to re-balancing hormones. A lack of exercise will lead to diminished progesterone. Paragon research further indicates that the drop in physical activity levels due over the past century to introduction of cars, appliances and other machines reducing physical work are affecting both sexes and leading to estrogen /progesterone imbalances in both women and men.

2. **Commercially raised cattle and poultry:** fed estrogen-like hormones as well as growth hormone that are passed onto humans. One-half of all antibiotics in the United States are used in livestock – 25 million pounds a year. These antibiotics can contribute to hormone disruptor exposure. **The use of antibiotics is especially prevalent in poultry farms.** It only takes 6 weeks now to grow a chicken to full size (down from four months in 1940). Up to 80,000 birds may be packed into one warehouse. Feeds used contain a myriad of hormone-disrupting toxins including pesticides, antibiotics, and drugs to combat disease when so many animals are packed closely together.

3. **Commercially grown fruits and vegetables containing pesticides.** Pesticide residues have chemical structures similar to estrogen. If you eat in any developed country, you are taking in pesticides from fruits and vegetables, many of which are known hormone disruptors. Approximately 5 billion pounds of pesticides, herbicides, fungicides, and other biocides are being added to the world each year. In the past 100 years, several hundred billion pounds have been released into the environment. Pesticides banned in the US, such as DDT, are still being used in some other countries. Illegal pesticides are being used on crops that we eat everyday. It is estimated that a person eats illegal pesticides 75 times a year just by following USDA recommendation of five servings of fruits and vegetables a day when purchased in regular supermarkets.

Vegetables grown in developing foreign countries from South America and Africa find their way back to our dinner table in this global community. Produce with the most pesticides reported in A Shopper's Guide to Pesticides in Produce include strawberries (contain vinclozolin, a known endocrine disruptor), bell peppers, peaches, apples, apricots, and spinach. Foods with the least amount of pesticides include avocados, corn, onions, sweet potatoes, bananas, green onions, broccoli, and cauliflower. If you are eating non-organic fruits and vegetables, peel and wash them well with diluted vinegar. This will help to reduce pesticides on the surface. However, this will not help to eliminate the pesticides on the inside of the produce.

Discard the outer leaves of leafy vegetables, and trim fat from meat and skin from poultry and fish that tend to collect residues. Better still, **it's essential to eat organic to avoid estrogen dominance from estrogen-mimicking pesticides.**

4. **Exposure to xenoestrogens.** When a female embryo develops in the womb, 500,000 to 800,000 follicles are created in the embryo, each enclosing an immature ovum. These fragile ovarian follicles are extremely sensitive to the toxicity of environmental pollutants. When a mother is exposed to toxic chemicals that resemble estrogen, she may experience no apparent damage outwardly. However, the baby is more vulnerable to the toxins that may damage its ovarian follicles and render them dysfunctional. This will not be apparent until the baby reaches puberty some 10 to 15 years later, when symptoms of incomplete ovulation or insufficient progesterone production can be noted.

Petrochemical compounds are found in general consumer products such as creams, lotions, soaps, shampoos, perfumes, hair sprays and room deodorizers. They often have chemical structures similar to estrogen and indeed act like estrogen. Other sources of xenoestrogens include car exhaust, petrochemically derived pesticides, herbicides, and fungicides; solvents and adhesives such as those found in nail polish, paint removers, and glues; dry-cleaning chemicals; practically all plastics, industrial waste such as PCBs and dioxins, synthetic estrogens from urine of women taking HRT and birth control pills that are flushed down the toilet and eventually find their way into the food chain and back into the body. They are fat soluble and non-biodegradable.

5. **Industrial solvents.** A common source of industrial xenoestrogens often overlooked is a family of chemicals called solvents. **These chemicals enter the body through the skin, and accumulate quickly in the lipid-rich tissues such as myelin (nerve sheath) and adipose (fat).** Some common organic solvents include alcohol like methanol, aldehydes like acetaldehyde, glycol like ethylene glycol, and ketones like acetone. They are commonly found in cosmetics, fingernail polish and fingernail polish remover, glues, paints, varnishes, and other types of finishes, cleaning products, carpet, fiberboard, and other processed woods. Pesticides and herbicides such as lawn and garden sprays, indoor insect sprays are also sources of minute amounts of xenoestrogens. While the amount may be small in each, the additive effect from years of chronic exposure can lead to estrogen dominance.

6. **Hormone Replacement Therapy (HRT).** HRT with estrogen alone without sufficient opposing progesterone such as the drug Premarin should be banned. This increases the level of estrogen in the body. Premarin, an estrogen-only drug commonly used in the past 40 years, is the mainstay of estrogen replacement therapy (ERT). It is a patented, chemicalized hormonal substitute that is different than the natural estrogen in your body. It contains 48% estrone and only a small amount of progesterone, which is insufficient to have an opposing effect. The indiscriminate and over-prescription of Premarin to many who may not need it is the problem. Symptoms include water retention, breast swelling, and fibrocysts in the breast, depression, headache, gallbladder problems, and heavy periods. The excessive estrogen from ERT also lead to increased chances of DNA damage, setting a stage for endometrial and breast cancer.

7. **Chronic stress.** The adrenal glands secrete progesterone. Stress causes adrenal gland exhaustion as well as reduced progesterone output. **This tilts the estrogen to progesterone ratios in favor of estrogen.** Excessive estrogen in turn causes insomnia and anxiety, which further taxes the adrenal glands. This leads to a further reduction in progesterone output and even more estrogen dominance. After a few years in this type of vicious cycle, the adrenal glands become exhausted. This dysfunction leads to blood sugar imbalance, hormonal imbalances, and chronic fatigue.

8. Studies have shown that estrogen and progesterone levels fell in women who switched from a typical high-fat, refined-carbohydrate diet to a low-fat, high-fiber and plant-based diet even though they did not adjust their total calorie intake. Plants contain over 5,000 known sterols that have progestogenic effects. People who eat more wholesome foods have a far lower incidence of menopausal symptoms because their pre- and post-menopause levels of estrogen do not drop as significantly.

9. **Liver diseases.** Liver diseases such as cirrhosis from excessive alcohol intake reduce the breakdown of estrogen. Taking drugs that can impair liver function may also contribute to a higher level of estrogen. Paragon note: Therefore, anything interfering with liver function - whether a combination of alcohol, drugs, caffeine, excess stress, pesticides, other toxins refined sugars & processed foods may lead to increased estrogen levels.

10. **Deficiency of Vitamin B6 and Magnesium.** Both of these are necessary for the neutralization of estrogen in the liver. Too much estrogen also tends to create deficiencies of zinc, magnesium and B vitamins. These are all important constituents of hormonal balance.

11. **Excessive intake of sugar, fast food and processed food:** leads to a depletion of magnesium. Paragon note: Metabolic research has clearly demonstrated that these poor dietary choices also deplete other minerals, B vitamins and other nutrients required for hormonal balance and cellular detoxification.

12. **Excessive coffee consumption.** Caffeine intake from all sources is linked with higher estrogen levels regardless of age, body mass index (BMI), caloric intake, smoking, alcohol, and cholesterol intake. Studies have shown that women who consumed at least 500 milligrams of caffeine daily, the equivalent of four or five cups of coffee, had nearly 70% more estrogen during the early follicular phase than women who consume no more than 100 mg of caffeine daily, or less than one cup of coffee. **Most tea is not much better as it contains about half the amount of caffeine compared to coffee.** The exception is herbal tea like chamomile, which contains no caffeine. Paragon note: Research indicates that the increased association of high coffee consumption and estrogen is likely tied in part to the decreased progesterone production caused by adrenal exhaustion driven by excessive caffeine use. And of course this would affect males as well as females.

Decreased Sex Drive:

If you feel your energy level isn't the issue behind a lessened sex drive, then you may need additional boron, magnesium, zinc, arginine, and tyrosine in combination with some weight lifting to get your hormones flowing and in balance. Light squats are best for this, as they recruit your largest muscle groups which create the largest progesterone and estrogen release - start easily and work your way up gradually. Train your other muscle groups as well.

On the other hand, if you don't have your normal zip and energy, the adrenal glands also secrete a wide range of hormones - including progesterone - and help you stay alert, sharp, and excited about life and sex, so low libido is frequently associated with diminished adrenal activity. Low thyroid function can also contribute to reduced sex drive, as the thyroid helps generate energy. Your hair testing shows a lack of dietary support for both your adrenal and thyroid glands. So Improving their function should help too.

Adequate potassium, iodide, selenium, zinc, tyrosine and B1 are all necessary to support thyroid activity.

Adrenal fatigue is typically caused by a number of factors that lead to the accumulation of sedative minerals (calcium and copper) and relative depletion of several stimulatory minerals and vitamins (such as phosphorus, potassium, sodium, zinc, Vitamin C, B complex, and E) as well a magnesium necessary to produce energy. Chronic sleep deprivation and stress - whether mental or physical, deplete you of these nutrients, as do diets higher in refined carbohydrate, as well as stimulants & alcohol. High carb intake also reduces overall protein intake that is required to make neurotransmitters that allow us to feel excitement. So, if you don't pop out of bed "ready" for each day, you may need to give your adrenals some help.

But don't worry - properly nourishing & resting your adrenals will enable them to recover and rescue your libido with it! To do so, reduce or better-pace your workload, get in to bed by 10:30 PM or earlier and sleep for at least 8 hours. Sleeping in an extra hour and half whenever possible helps with the recovery process. You'll need to reduce or eliminate excess caffeine, alcohol and/or drugs. If you are exercising too hard, cool it to for a few weeks and rest, and only do a minimum of warming up to allow your glands to recover. And if not getting exercise, you must get out and move around to cleanse your lymph system and enhance circulation and healing.

Sleep is not only regenerative, but crucial to adrenal recovery, so have your bedroom set up properly. A completely dark room with all electronic devices switched off maximizes melatonin production, the hormone that promotes restful sleep. Bright artificial light coming from television and computers can trick our retinas into thinking it is light outside, thus halting the production of melatonin. Try shutting off televisions, computers, and other devices 2-3 hours before going to sleep. Read a relaxing book or magazine instead.

The dietary, supplement and lifestyle recommendations provided have been shown through extensive clinical study to address these symptoms.

FYI: Testing your adrenal function only takes a few minutes at home with an inexpensive fingertip pulse meter (CDNs order here*** hyperlink - , US order here *** hyperlink). (You can also do this with an electronic blood pressure machine.) Lie down flat relaxing for 3-5 minutes with your head on a pillow. Then stand and check your pulse and / or blood pressure. (Among other things) your adrenal glands regulate blood pressure by relaxing and constricting your arteries on a moment to moment basis. When lying down your arteries relax, as your head is level with your heart, and you don't need extra pressure to raise blood to your head. Upon standing you need that pressure to get blood to your head, or else you'll get dizzy.

So, to prevent this well-rested adrenals instantly excrete hormone to constrict your arteries to generate that extra pressure, and blood pressure should jump 15-20 points, otherwise the heart will have to race 20-30 beats faster to get the blood to your head. If your adrenals are well rested your pulse should only rise ~1-5 beats. But if your adrenals are tired, your blood pressure will not rise fully at first, and your pulse will be racing within seconds to compensate - it will slow down again 10-30 seconds later as your slowly functioning adrenals finally excrete enough hormone to fully constrict your arteries. Every 10 beats faster indicates a deeper level of adrenal fatigue. (BP should rise 15-20 points - each 10 points lower indicates a greater degree of fatigue. When really fatigued your BP may actually drop a few points.)

Bleeding Gums:

Additional Vitamin C and B complex vitamins. Stress reduction and extra sleep are advised.

Dry Skin:

Reduce alcohol and caffeine which both act as diuretics drying out your skin. Reduce cow dairy (excess calcium dries skin), animal & fried fats, potato chips & other trans fats, vegetable oils, sugars, dark (caffeine) & non-dark chocolate (sugar).

Check HTMA sodium, and increase salt if required. Use Formula 1 B complex, Formula 2 Vitamin D/A/K/CoQ10, Short term therapeutic Vitamin A, Beta-carotene, C, E complex, Se, Zn, Cu, Borage oil to provide extra nutrients needed by dry skin. Check water intake and increase hydration if required. Increase your intake of low-glycemic organic vegetables and leafy greens, plenty of healthy fats & oils (flax, sun or safflower, and olive oils) and eat more frequent smaller meals containing sulfur rich protein: from vegetable (cauliflower, broccoli, brussel sprouts, onions, garlic, cabbages, bok choy, spinach, asparagus, peas green beans, turnips, beans and lentils) or other healthier animal protein (organic eggs, lean organic grass or seed fed meats, and occasional cleaner smaller fish).

Seasonal Allergies & Hay Fever:

To reduce or eliminate your allergies it's best to increase & improve your metabolism to help reduce the load of allergens in your body at any given time. This can be enhanced with balanced levels of vitamin A, C, B Complex, B6, K, Mg, Zn and Cu Se, Flax oil, as well as Burdock root to help cleanse your blood (if not pregnant or lactating).

You also should significantly decrease, or temporarily eliminate, all simple and refined sugars, pasta, and other refined carbs, caffeine or other stimulants, most cow dairy, and reduce alcohol (all of which deplete magnesium and B vitamins). Running your body on cleaner fuel will enhance the elimination of toxins and/or allergens from your body. Increase your intake of low-glycemic organic vegetables and leafy greens. Also eat plenty of healthy organic fats & oils (flax, sun or safflower, olive oils and butter) and eat more frequent smaller meals containing detoxifying sulfur-rich proteins: both from vegetable sources (cauliflower, broccoli, brussel sprouts, onions, garlic, cabbages, bok choy, spinach, asparagus, peas green beans, turnips, beans and lentils) or other healthy animal sources (organic eggs, lean organic grass or seed fed meats, and occasional cleaner smaller fish). You should also use probiotic support to help rebalance your gut.

Increasing exercise and your overall fitness level will increase your metabolism, most often enabling you to better process allergens quickly and efficiently.

You probably also need to get extra sleep, and to get into bed on time... and your body will need time to absorb the nutrients it's missing before you get full results (this may take just a few weeks... or a few months).

Diet - Healthy Fats & Oils:

Healthy fats and oils are essential to health. Deficiencies or imbalances can lead to many of the most serious diseases.

However, you should be aware that non-organic commercial vegetable and other oils are much higher in pesticides and other chemical toxins, both from where they were grown, and from the chemicals and processes used in industrial oil extraction and pressing. Many commercial oils have had all the vitamin E and other critical components removed through filtering and bleaching processes. While such oils make look fine on the shelf, they contain denatured and rancid fatty acids which do not work properly in our bodies and should not be consumed. These oils promote inflammation and disease.

On the other hand, healthy oils keep your cells, key organs, skin, and you functioning at your peak.

Olive Oil:

Extra virgin cold-pressed organic olive oil keeps your blood thin & fluid, skin soft, and your arteries performing well. Liberal consumption (3-5 tablespoons /day) is very healthy for you, while athletes may benefit from more, as it's also a good source of muscle fuel.

Coconut Oil:

You probably should consume more. Coconut oil is a very healthy fat in moderation (1-1.5 tablespoons/day depending on activity level). It also important to help inhibit candida and other fungus.

Flax Oil:

You may need more. Organic Flax oil is high in plant-based Omega 3 fatty acids, which are the healthiest type of Omega 3s (and better than fish oils - see below), and important for down-regulating inflammation in the body, preventing asthma, keeping your joints free of arthritis and your body & muscle lean. (It also has some good Omega 6 as well, but not quite enough to be balanced). However too much can cause a number of problems from excess formation of lipid peroxides to overly low blood pressure. To maintain an ideal balance of plant-based Omega 3 & 6 fatty acids, consume flax oil in a 2:1 ratio with either organic Sunflower or Safflower oil (similar) that are very good sources of plant-based Omega 6 fatty acids that are essential to the proper transport of oxygen through the body.

We need fewer supplemental Omega 6 oils, as many nuts and seeds also provide omega 6 fatty acids, and flax oil has some too. 1 teaspoon/day of flax to a ½ teaspoon sunflower should be adequate for most adults. Athletes may need to double this.

Sunflower or Safflower Oils:

Either organic cold pressed Sunflower or Safflower oil (which are similar in composition) should be consumed in balance with Flax oil and other oils in your diet. Safflower and Sunflower oils are very good sources of plant-based Omega 6 fatty acids that are essential to the proper transport of oxygen through the body, and are high in alpha tocopherols (a type of Vitamin E) which benefit patients with asthma and other lung inflammation disorders. (Alpha tocopherols are in found in roughly 10X greater quantities than gamma tocopherols in healthy human liver tissues and blood streams.)

We need fewer supplemental Omega 6 oils, because many nuts and seeds also provide omega 6 fatty acids, and flax oil has some too. To maintain an ideal balance of plant-based Omega 3 & 6 fatty acids, consume flax oil in a 2:1 ratio with either organic Sunflower or Safflower oil. 1 teaspoon/day of Flax to ½ teaspoon Sunflower should be adequate for most adults (Athletes may need to double this). These oils should be consumed in balance with other fats and oils in your diet, and if you eat a lot of nuts you

will need less Sunflower or Safflower oil.

Cod Liver & Other Fish Oil:

While fish oil capsules also contain Omega 3s (DHA and EPA), they are all too high in PCBs and should not be consumed on a regular basis.

Rather, plant-based Flax and Sun&Safflower; Omega 3 & 6 - along with adequate zinc and B6 - provide adequate synthesis of EPA and DHA in our bodies. Further, newer Harvard Medical School research shows the brains of Parkinson's and dementia-patients with Lewy bodies in their brains on average have 10X more DHA in their brains than normal, and nearly 4X less plant-based omega 6 fatty acids critical to brain function.

Krill Oil:

Krill oil is 100x cleaner than fish oil, and can be effective in helping to reduce inflammation, and elevated LDL cholesterol levels in combination with other nutrients and keep blood thin. It also a good source of DHA and EPA for pregnant and lactating mothers, and the baby's developing brain which need high levels of DHA and EPA.

Pumpkin Seed & Hemp Oil:

Hemp and Pumpkin seed oils have higher levels of γ -tocopherol (only one of the 3 types of Vitamin E), and therefore, to keep the body's Vitamin E in balance, they should only be eaten occasionally, and should be avoided completely by people with asthma and other lung congestion.

Non-organic Vegetable Oils (i.e. Soybean, Corn, Canola, Peanut, Sesame, Mazola):

Continue to avoid or eliminate these oils (mazola, corn, sesame, soybean, peanut and or canola oils) from your diet as they are both high in toxins and proinflammatory fatty acids. And never cook with non-organic commercial vegetable oils, as this generates trans fatty acids.

And remember even the organic non-GMO sources of all these oils still have large excesses of γ -tocopherol (the gamma form of Vitamin E) which in excess causes inflammation in patients with lung conditions.

Mayonnaise:

Unless made from organic olive oil, continue to avoid or eliminate consumption of mayonnaise, as it is usually made with soybean oils and sugar that promote inflammation. Miracle whip is worse, due to its high fructose corn syrup and modified corn starch.

Butter:

Organic butter is a healthy source of fast burning energy and can be eaten in smaller quantities several times a day if you are physically active and not eating an excess of refined sugar and carbs.

Cream & Whipping Cream:

Organic cream or whipping cream is a healthy source of fast burning energy and can be eaten in small quantities several times per week as long as you are physically active and not eating an excess of refined sugar and carbs.

Margarine:

Continue to avoid margarine, as it is a synthetic fat made from vegetable oils, and almost always contains toxic fatty acids.

Diet - Meats, Fish, and Seafood:

Proteins will bind to toxic metals, while fats and oils can absorb fat soluble chemical. Therefore toxic metals and chemicals are stored in the fats and tissues of animals and humans. Therefore non-organic sources of proteins, fats and oils are particularly problematic for your body and liver and sometimes your lungs. Try to reduce those proteins and fats in your diet, in particular from non-organic and processed animal meats.

Hot Dogs:

Continue to avoid Hot dogs. Try organic sausage instead!

Non-Organic Luncheon Meats / Cold Cuts:

You need to eliminate non-organic luncheon meats/Cold Cuts. Try organic sliced meats instead!

Non-Organic Red Meat:

You need to try to eliminate non-organic red meats as well. Again try organic meats instead!

Diet - Sweets:

Many of the foods you are eating are likely contributing to an imbalance in your gut, which can leave you lower in energy, with weakened concentration, and many different symptoms. You should reduce your consumption of the following foods:

- Fruit

LIFESTYLE RECOMMENDATIONS

Cleanse Advised	Yes
Decrease Simple & Refined Sugars & Alcohol	100%
Decrease Stress	33.0%
Eliminate Hydrogenated Oils & Cooking With Vegetable Oils	50.0%
Increase Healthy Fats & Oils	50.0%
Increase Hydration	75.0%
Increase Moderate Aerobic Exercise	100%
Increase Organic Vegetables	50%
Increase Resistance & Higher Intensity Exercise	50.0%
Increase Sleep	90 minutes on weekends
Increase Sulfur-Rich Protein	50.0%
Increase Stretching	33.0%
Increase Vegetable Protein	33.0%
Reduce Caffeine & Stimulants	75.0%
Reduce Dairy	100%
Reduce Red Meat	33.0%
Reduce Vegetable Oils	50.0%
Increase Small Meals of Moderate Protein Content	50.0%