TEI TRACE ELEMENTS, INC.
4501 Sunbelt Drive · Addison, Tx · 75001 · U.S.A.

		LABORATORY NO.:			
		PROFILE NO.: 2		SAMPLE TYPE: SCALP	
PATIENT: FERNAND		AGE: 46	SEX: M	METABOLIC TYPE: SLOW 1	
REQUESTED BY: UNI KEY HEALTH SYSYTEMS		ACCOUNT NO.:		DATE: 5/16/2012	

NUTRITIONAL ELEMENTS

	Ca	Mg	Na	K	Cu	Zn	P	Fe	Mn	Cr	Se	B	Co	Mo	S
	Calcium	Magnesium	Sodium	Potassium	Copper	Zinc	Phosphorus	Iron	Manganese	Chromium	Selenium	Boron	Cobalt	Molybdeum	Sulfur
HIGH	172	20.0	68	46	6.9	32	29	2.7	.250	0.14	0.33	1.80	.005	.013	7126
	135	15.5	52	35	5.4	27	25	2.2	.190	0.11	0.26	1.36	.004	.011	6231
REFERENCE RANGE	97	11.0	36	24	3.9	21	20	1.6	.130	0.08	0.18	0.91	.003	.008	5336
	22	2.0	4	2	0.9	10	11	0.5	.010	0.02	0.03	0.02	.001	.003	3546
LOW						5	7						.000	.001	2651
Result	107	8.5	5	2	8.7	18	16	1.8	.045	0.04	0.08	0.47	.002	.006	4087

TOXIC ELEMENTS

	Sb	U	As	Be	Hg	Cd	Pb	Al
	Antimony	Uranium	Arsenic	Beryllium	Mercury	Cadmium	Lead	Aluminum
	.025	.0595	.070	.004	0.63	.049	1.1	6.3
	.021	.0510	.060	.003	0.54	.042	0.9	5.4
	.018	.0425	.050	.003	0.45	.035	0.8	4.5
HIGH	.014	.0340	.040	.002	0.36	.028	0.6	3.6
	.011	.0255	.030	.002	0.27	.021	0.5	2.7
REFERENCE RANGE	.007	.0170	.020	.001	0.18	.014	0.3	1.8
				<<	<<	<<	<<	
Result	N/A	.0053	.004	.001	0.01	.001	0.1	0.7

ADDITIONAL ELEMENTS

	Ge	Ba	Bi	Rb	Li	Ni	Pt	Tl	V	Sr	Sn	Ti	W	Zr
	Germanium	Barium	Bismuth	Rubidium	Lithium	Nickel	Platinum	Thallium	Vanadium	Strontium	Tin	Titanium	Tungsten	Zirconium
HIGH	.014	0.39	.059	.0285	.009	.15	.003	.0090	.020	0.74	0.05	0.30	.017	0.14
REFERENCE RANGE	.011	0.26	.039	.0190	.006	.10	.002	.0060	.014	0.50	0.03	0.20	.011	0.09
LOW	.006	0.00	.000	.0000	.001	.00	.000	.0000	.002	0.03	0.00	0.00	.000	0.00
			<<				<<	<<					<<	
Result	.002	0.07	.002	.0025	.007	.04	.001	.0005	.002	1.19	0.02	0.09	.001	0.04

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

"QNS": Sample Size Was Inadequate For Analysis.

"N/A": Currently Not Available

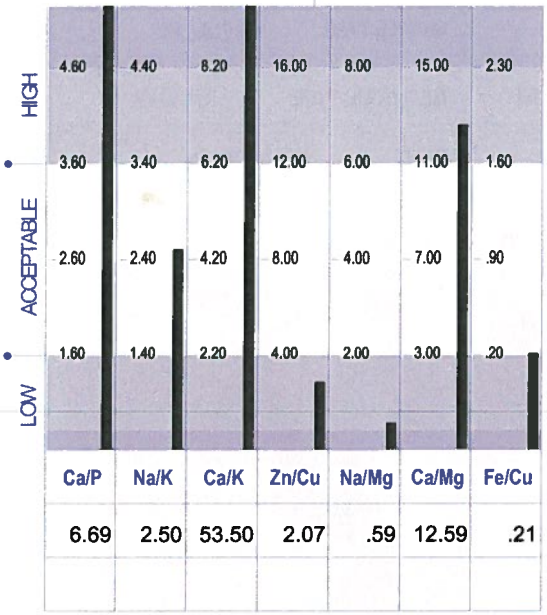
Ideal Levels And Interpretation Have Been Based On Hair Samples Obtained From The Mid-Parietal To The Occipital Region Of The Scalp.

Laboratory Analysis Provided by Trace Elements, Inc., an H. H. S. Licensed Clinical Laboratory. FNo. 45 D0481787

5/16/2012
CURRENT TEST RESULTS

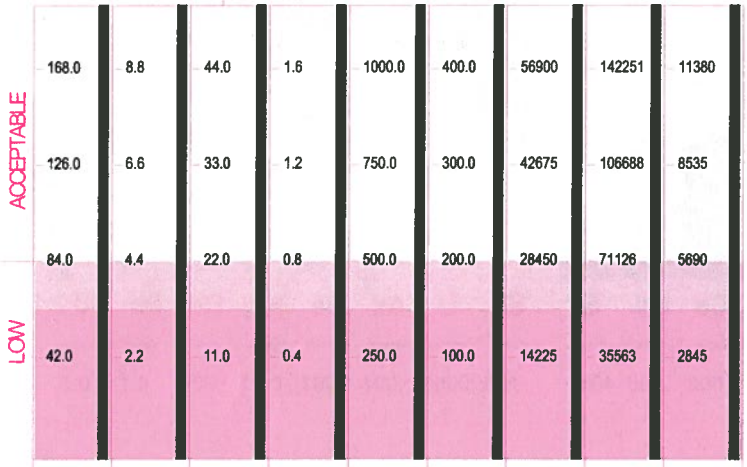
PREVIOUS TEST RESULTS

SIGNIFICANT RATIOS



Ca/P	Na/K	Ca/K	Zn/Cu	Na/Mg	Ca/Mg	Fe/Cu
6.69	2.50	53.50	2.07	.59	12.59	.21

TOXIC RATIOS



Ca/Pb	Fe/Pb	Fe/Hg	Se/Hg	Zn/Cd	Zn/Hg	S/Hg	S/Cd	S/Pb
1070.0	18.0	180.0	8.0	18000.0	1800.0	4087004087000		40870

ADDITIONAL RATIOS

RATIO	CALCULATED VALUE		EXPECTED
	Current	Previous	
Ca/Sr	89.92		131/1
Cr/V	20.00		13/1
Cu/Mo	1450.00		625/1
Fe/Co	900.00		440/1
K/Co	1000.00		2000/1
K/Li	285.71		2500/1
Mg/B	18.09		40/1
S/Cu	469.77		1138/1
Se/Tl	160.00		37/1
Se/Sn	4.00		0.67/1
Zn/Sn	900.00		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.

INTRODUCTION TO HAIR TISSUE MINERAL ANALYSIS (HTMA)

Hair is used for mineral testing because of its very nature. Hair is formed from clusters of specialized cells that make up the hair follicle. During the growth phase the hair is exposed to the internal environment such as blood, lymph and extra-cellular fluids. As the 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 that has occurred during this time.

The precise analytical method of determining the levels of minerals in the hair is a highly sophisticated 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.

It is important for the attending healthcare professional to determine your mineral status as minerals are absolutely critical for life and abundant health. They are involved in and are necessary for cellular metabolism, structural support, nerve conduction, muscular activity, immune functions, anti-oxidant and endocrine activity, enzyme functions, water and acid/alkaline balance and even DNA function.

Many factors can 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 today. Multiple nutritional imbalances however are quite common, contributing to an increased incidence of adverse health conditions. In fact, it is estimated that mild and sub-clinical nutritional imbalances are up to ten times more common than nutritional deficiency alone.

The laboratory test results and the comprehensive report that follows should not be construed as diagnostic. This analysis is provided only as an additional source of information to the attending doctor.

Test results were obtained by a licensed clinical laboratory adhering to analytical procedures that comply with governmental protocol and standards established by Trace Elements, Inc. U.S.A. The interpretive data based upon these results is defined by research conducted by David L. Watts, Ph.D.

UNDERSTANDING THE GRAPHICS

NUTRITIONAL ELEMENTS

This section of the cover page graphically displays the test results for each of the reported nutritional elements and how they compare to the established population reference range. Values that are 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

The toxic elements section displays 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

This section displays the results of additional elements for which there is limited documentation. These elements may be necessary for biochemical function and/or may adversely effect biochemical function. Further study will help to reveal their function, interrelationships and eventually their proper therapeutic application or treatment.

SIGNIFICANT RATIOS

The significant ratios section displays 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

This section displays the relationships between the 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 of the report will discuss the metabolic profile, which is based on research conducted by Dr. D. L. Watts. Each classification is established by evaluating the tissue mineral results and determining the degree to which the minerals may be associated with a stimulating and/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 utilized depends largely upon proper functioning of the endocrine glands.

SLOW METABOLISM (TYPE #1)

** Parasympathetic Dominant
** 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.

It should be noted that even though this patient may not be overweight at this time, he can still have a lowered metabolic rate, as overweight and underweight tendencies may not always be reflective of metabolism on the cellular level.

NUTRIENT MINERAL LEVELS

This section of the report may discuss those nutritional mineral levels that reveal moderate or significant deviations from normal. The light blue area's of each graph section represent the reference range for each element based upon statistical analysis of apparently healthy individuals. The following section, however, is based upon clinical data, therefore an element that is moderately outside the reference range may not be commented on unless determined to be clinically significant.

NOTE:
For those elements whose levels are within the normal range, it should be noted that nutritional status is also dependent upon their critical balance with other essential nutrients. If applicable, discussion regarding their involvement in metabolism may be found in the ratio section(s) of this report.

CALCIUM (Ca)

Your tissue calcium level is elevated above normal. High tissue calcium does not necessarily indicate excessive calcium, but rather the calcium is not being properly utilized. Proper utilization is often dependent upon calcium's relationship with other essential minerals, such as phosphorus and magnesium. A deficiency of either or both can result in excessive calcium deposition into tissues other than the primary storage sites of calcium (bones and teeth). Deposition of calcium into the soft tissues, includes not only the hair, but also the skin, joints, arteries, lymph nodes, gallbladder, etc... If soft tissue deposition of calcium continues for an extended period of time, certain conditions may develop, such as:

- Joint Stiffness
- Muscle Cramps
- Fatigue
- Premature Aging of the Skin
- Depression
- Anemia
- Insomnia

SOME FACTORS THAT MAY CONTRIBUTE TO HIGH CALCIUM LEVELS

- Low Thyroid Activity
- Low Protein Intake
- Tissue Alkalinity
- Low Adrenal Activity
- High Carbohydrate Intake
- Low Phosphorus Retention

HYPOGLYCEMIA PROFILE

According to this laboratory's research, slow metabolizers are prone to hypoglycemia (low blood sugar). This condition has become relatively common in modern society due to a number of factors, one of which is an improper diet. Hypoglycemia can be contributed to by dietary factors other than the commonly known factors of eating excess refined carbohydrates and sugars. Dairy products, fruit juices and foods high in fat content may also produce hypoglycemic symptoms. For this reason, observance of the dietary recommendations is of special importance for individuals at risk of hypoglycemic episodes.

The most common symptoms associated with hypoglycemia include, headaches, mood swings, lethargy, loss of concentration, and mid-afternoon loss of energy.

HYDROCHLORIC ACID PRODUCTION AND PROTEIN DIGESTION

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

COPPER (Cu)

Your copper profile is indicative of excess copper in the tissues. This element will have an antagonistic effect upon the functions of other essential elements. In particular, copper has a direct antagonistic effect on zinc activity within the body. Excess accumulation of copper may produce signs of zinc deficiency, even though zinc intake may be adequate or even if the tissue zinc level is within the normal range.

INCREASED BODY BURDENS OF COPPER HAVE BEEN ASSOCIATED WITH

- Anemia
- Low Thyroid Activity
- Headaches (frontal)
- Hair Loss
- Appetite Disturbance
- Learning Disability
- Iron Deficiency
- Allergies
- Constipation
- Skin Conditions
- Hyperactivity

SOME SOURCES THAT MAY CONTRIBUTE TO ELEVATED TISSUE COPPER LEVELS

Excess copper accumulation can be contributed to by several factors:

* Foods high in copper
* Drinking water run through copper water pipes
* Prolonged copper supplementation
* Zinc deficiency
* Vitamin B6 Deficiency
* Vitamin C Deficiency

NOTE:

* Exogenous contamination can occur from frequently swimming in pools or spas where copper sulfate has been added as an algicide.
* During pregnancy, the fetus inherits many of the mother's mineral profiles. Research studies have shown that children of high copper profile women have a much greater frequency of acquiring higher levels of copper, than from those women whose levels were normal.

COPPER (Cu) AND SCOLIOSIS

Elevated hair levels of copper have been correlated with ligamentous abnormalities. Excess copper is frequently seen in cases of scoliosis (spinal curvature). These cases are usually seen in families and will affect the female more often than the male. Other members of the family may be tested, especially if they are in the growing stages.

METABOLIC FACTORS ASSOCIATED WITH HIGH COPPER (Cu)

Tissue copper retention can occur in the body in the absence of excessive dietary copper intake. High copper levels have been found to be a result of past incidence of hepatitis, mononucleosis, decreased liver or gallbladder function and adrenal insufficiency. Excessive tissue copper levels may have been present for several years, as a result of an inability to eliminate the metal rather than just recent excessive dietary intake. However, it is still recommended that excessive intake of those foods that contain appreciable amounts of copper be avoided. The Dietary Section will contain a listing of high copper foods to temporarily avoid or limit in the diet.

CANDIDIASIS

The following conditions are associated with a predisposition toward yeast and/or fungal manifestation:

* Brownish Discoloration with thickening or grooving of the nails.
* Eczema like Skin Conditions
* Abdominal Bloating
* Fatigue
* Inflammation of the nail bed

FACTORS CONTRIBUTING TO CANDIDIASIS

The following factors may contribute to or predispose an individual to recurring fungal and/or yeast manifestations:

- Hypothyroidism
- Stress
- Following Major Surgery
- Zinc Deficiency
- Antibiotics
- Iron Deficiency
- Copper Excess

GERMANIUM (Ge)

Your germanium level of 0.002 mg% 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.

STRONTIUM (Sr)
Your strontium level is above the established reference range. In excess, strontium is apparently antagonistic to calcium metabolism, and can therefore interfere with normal calcium function. Strontium may be contained in some mouth rinses and dental varnishes used in the treatment of dentin hypersensitivity.

NUTRIENT MINERAL RATIOS

This section of the report will discuss those nutritional mineral ratios that reveal moderate or significant deviations from normal.

Continuing research indicates that metabolic dysfunction occur not necessarily as a result of a deficiency or excess of a particular mineral level, but more frequently from an abnormal balance (ratio) between the minerals. Due to this complex interrelationship between the minerals, it is extremely important that imbalances be determined. Once these imbalances are identified, corrective therapy may then be used to help re-establish a more normal biochemical balance.

NOTE: The "Nutritional Graphic" developed by researchers at Trace Elements, and presented on the cover of this report shows the antagonistic relationships between the significant nutrients, including the elements (arrows indicate antagonistic effect upon absorption and retention).

HIGH CALCIUM/POTASSIUM (Ca/K) RATIO
High calcium relative to potassium will frequently indicate a trend toward hypothyroidism (underactive thyroid). The mineral calcium antagonizes the retention of potassium within the cell. Since potassium is necessary in sufficient quantity to sensitize the tissues to the effects of thyroid hormones, a high 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
- Dry Skin
- Constipation
- Depression
- Over-weight Tendencies
- Cold Sensitivity

ZINC/COPPER (Zn/Cu) RATIO AND THE THYROID
Zinc is required in sufficient amounts for the retention of potassium. A low zinc-to-copper ratio is frequently indicative of a trend toward reduced thyroid activity or expression as a result of a potassium deficit.

LOW ZINC/COPPER (Zn/Cu) RATIO
This HTMA profile has been associated in the past with an increased frequency and intensity of blood sugar fluctuations. This is partially due to the requirement and role of zinc in the storage of insulin in the pancreas. In addition to blood sugar fluctuations, if this mineral pattern becomes chronic, this patient may have an increased tendency toward skin blemishes and fungal manifestations.

Zinc deficiency relative to copper is frequently seen in strict vegetarians, and the degree of imbalance is often directly proportional to the rigidity of the vegetarian diet.

A low zinc-to-copper ratio is usually seen with the following;

- Viral Infections
- Estrogen Therapy
- Liver Dysfunction
- Gallbladder Obstruction

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

MINERAL METABOLISM AND VITAMIN B6

A deficiency of, or increased requirement for vitamin B6 (pyridoxine) leads to alterations in the metabolism, utilization and balance between calcium and magnesium. Calcium retention will increase and the excretion of magnesium will also increase when vitamin B6 is lacking. Therefore, an increased need for vitamin B6 may be indicated by your current HTMA pattern.

TOXIC METAL LEVELS

ALL CURRENT TOXIC METAL LEVELS ARE WITHIN THE ACCEPTABLE RANGE

TOXIC METAL RATIOS

ALL CURRENT TOXIC METAL RATIOS ARE WITHIN THE ACCEPTABLE RANGE

DIETARY SUGGESTIONS

The following dietary suggestions are defined by several factors: the individual's mineral levels, ratios and metabolic type, as well as the nutrient value of each food including protein, carbohydrate, fat, and vitamin and mineral content. Based upon these determinations, it may be suggested that foods be avoided or increased temporarily to aid in the improvement of your biochemistry.

SLOW METABOLISM

Dietary habits may contribute to slow metabolism. Low protein, high carbohydrate, high fat intake and the consumption of refined sugars and dairy products have an excessive slowing-down effect upon metabolism and energy production.

GENERAL DIETARY GUIDELINES FOR THE SLOW METABOLIZER

* EAT A HIGH PROTEIN FOOD AT EACH MEAL...Lean protein is recommended and which should constitute at least 40% of the total caloric value of each meal. Recommended sources are fish, fowl and lean beef. Other good sources of protein include bean and grain combinations and eggs. Increased protein intake is necessary in order to increase the metabolic rate and energy production.

* INCREASE FREQUENCY OF MEALS...while decreasing the total caloric intake 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, candy, soda pop, 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 elevated fat content and 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 FATS AND OILS...Fats and oil include fried foods, cream, butter, salad dressings, mayonnaise, etc... Fat intake should not exceed 20% of the total daily caloric intake.

* REDUCE FRUIT JUICE INTAKE...until the next evaluation. This includes orange juice, apple juice, grape juice and grapefruit juice. Note: Vegetable juices are acceptable.

* AVOID CALCIUM AND/OR VITAMIN D SUPPLEMENTS...unless recommended by physician.

FOOD ALLERGIES

In some individuals, certain foods can produce a maladaptive or "allergic-like" reaction commonly called "food allergies". Consumption of foods that one is sensitive to can bring about reactions ranging from fatigue or drowsiness to rashes, migraine headaches and arthritic pain.

Sensitivity to foods can develop due to biochemical (nutritional) imbalances, and which can be aggravated by stress, pollution and medications. Nutritional imbalance can further be contributed to by restricting food variety, such as eating only a small group of foods on a daily basis. Often a person will develop a craving for the food they are most sensitive to and may eat the same food or food group more than once a day.

The following section may contain foods that are recommended to be avoided. These foods should be considered as potential "allergy foods" or as foods that may impede a rapid and effective response. Consumption of these foods should be completely avoided for four days. Afterwhich, they should not be eaten more frequently than once every three days during course of therapy.

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:

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

FOODS THAT CONTRIBUTE TO A REDUCTION IN METABOLIC RATE

The following food sources should be reduced significantly during course of therapy, as they may contribute to a further lowering of an already existing low metabolic rate.

Milk
Sardines
Cheddar Cheese
Mustard Greens
Broccoli
Swiss Cheese
Soy Flour
Mozzarella
Kale
Parmesan Cheese

Yogurt
Cream
Dulse
Torula Yeast
Monterey Cheese

THE FOLLOWING FOODS SHOULD BE AVOIDED UNTIL THE NEXT EVALUATION

Sardines
Herring
Enriched Milk
Mushrooms

AVOID DIETARY FATS AND OILS UNLESS NOTIFIED OTHERWISE BY ATTENDING DOCTOR

The handling of fats is difficult during a reduced metabolic state, and can contribute to a further reduction in the metabolic rate. It is suggested that all sources of high dietary fat and oil be avoided until the next evaluation.

Salad Dressings
Cream
Hazelnuts
Margarine
Bockwurst
Salami
Bologna
Corn Chips
Bacon
Duck
Avocado
Cocoa Powder
Sardines (canned)
Avocado Oil
Coconut Oil
Cheese (most)
Butter
Walnuts
Pork
Milk
Peanut Butter
Pork Links
Almonds
Knockwurst
Goose
Braunschweiger
Peanuts
Tuna (canned in oil)
Liverwurst

FOODS ALLERGIES RELATED TO COPPER

Individuals with excessive tissue copper accumulation will often crave foods that are high in copper. The following foods, which are high in copper relative to zinc, should be avoided until the next evaluation:

Chocolate
Crab
Herring
Haddock
Pecans
Almonds
Sesame Seeds
Bakers Yeast
Mushrooms
Avocado
Liver
Walnuts
Lobster
Bran Flakes
Peanut Butter
Shrimp
Trout
Brazil Nuts
Sunflower Seeds
Grapes

REACTIONS ASSOCIATED WITH FOOD ALLERGIES

Excess intake of high copper foods has been associated with several reactions, both physical and emotional. Physical reactions may include frontal headaches, skin rashes, joint stiffness, constipation, insomnia causing morning fatigue, bloating, water retention and cold sensitivity. Emotional reactions may include depression, crying spells, fearfulness, anxiety, irritability, anger, aggressive behavior and withdrawal.

HIGH POTASSIUM FOODS

The following foods may be increased in the diet until the next evaluation. These foods which are high in potassium content in relation to calcium and sodium will help to supplement potassium requirements.

Oranges
Dates
Scallops
Asparagus
Plums
Prunes

Tomatoes
Rhubarb
Peas
Apricots
Chicken
Catfish
Cantaloupe
Bananas
Egg (white)
Turkey
Currants
Lima Beans
Casaba
Raisins
Lentils
Beet Greens
Beef (lean)
Apples
Artichokes
Beets
Summer Squash
Flounder (baked)
Brussels Sprout
Chard

FOODS HIGH IN PHYTIC ACID

The following foods may be increased in the diet at this time as they contain high amounts of phytates. Phytates help in reducing excessive insulin release which contributes to low blood sugar (hypoglycemia). Intake of these foods should not exceed your protein to carbohydrate ratio as outlined in the general dietary guidelines, and should be consumed with adequate protein.

Oatmeal
Rye Bread
Brown Rice
Whole Wheat
Strawberries
Wheat Germ
Blackberries
Rye Crackers

FOODS HIGH IN NIACIN

Niacin (vitamin B3) is known to improve circulation, increase the metabolic rate via enzymes requiring B3, as well as help lower cholesterol and excess copper accumulation. The following foods are rich sources of niacin and may be eaten liberally:

Bran Flakes
Beef
Chicken (light)
Fish (broiled)
Tuna
Peas

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.

CONCLUSION

This report can provide a unique insight into nutritional biochemistry. The recommendations contained within are specifically designed according to metabolic type, mineral status, age, and sex. Additional recommendations may be based upon other supporting clinical data as determined by the attending health-care professional.

OBJECTIVE OF THE PROGRAM

The purpose of this program is to re-establish a normal balance of body chemistry through individually designed dietary and supplement suggestions. Properly followed, this may then enhance the ability of the body to more efficiently utilize the nutrients that are consumed, resulting in improved energy production and health.

WHAT TO EXPECT DURING THE PROGRAM

The mobilization and elimination of certain metals may cause temporary discomfort. As an example, if an excess accumulation of iron or lead is contributing to arthritis, a temporary flare-up of the condition may occur from time to time. This discomfort can be expected until removal of the excess metal is complete.

DIET SUMMARY PAGE

This page may be removed from the HTMA Report and used as a quick-reference dietary guide. As this is solely a summary page, please refer to the dietary portion of the report to obtain more detailed information on why a particular food item is listed in the "Foods To Avoid" or "Foods That May Be Increased" section. For those foods that are not specifically mentioned below, continued consumption on a moderate basis is acceptable unless recommended otherwise by the attending healthcare professional.

FOODS TO AVOID UNTIL THE NEXT EVALUATION

Alcohol	Almonds	Apple Juice	Avocado oil
Avocados	Bacon	Bologna	Braunschweiger
Brazil Nuts	Bread - White	Broccoli	Butter
Cabbage	Cakes	Candy	Cheese - All
Chocolate	Cocoa	Coconut Oil	Cole Slaw
Corn Chips	Crab	Cream	Duck
Dulse	Goose	Grapes	Grape Juice
Grapefruit Juice	Haddock	Heart	Hazelnuts
Herring	Honey	Horseradish	Kale
Kelp	Kidney	Knockwurst	Liver
Liverwurst	Lobster	Mackerel	Margarine
Milk	Mushrooms	Mustard Greens	Pecans
Peanut Butter	Peanuts	Pork	Pork Links
Rutabagas	Salad Dressing	Salami	Sardines
Sardines - Canned	Sesame Seeds	Shrimp	Soda
Soy Flour	Sugar	Sunflower Seeds	Trout
Tuna - Canned	Turnips	Walnuts	Yeast
Yogurt			

FOODS THAT MAY BE INCREASED IN THE DIET

Apples	Apricots	Artichokes	Asparagus
Bananas	Beans - Green	Beans - Lima	Beans - Pinto
Beef	Beef - Lean	Beet Greens	Beets
Blackberries	Bread - Rye	Bread - Wheat	Brussels Sprouts
Cantaloupe	Casaba	Catfish	Celery
Chard	Chicken	Chicken - Baked	Cornbread
Crackers - Rye	Cucumbers	Currants	Dates
Eggs	Egg -White	Fish - Broiled	Flounder - Baked
Grains - Whole	Ham	Legumes	Lentils
Oatmeal	Oranges	Peas	Perch - Broiled
Plums	Prunes	Raisins	Rhubarb
Rice - Brown	Scallops	Snapper	Strawberries
Summer Squash	Tomatoes	Tuna	Turkey
Vegetable Juice	Wheat Germ	Wheat - Whole	

THE FOLLOWING RECOMMENDATIONS SHOULD BE TAKEN ONLY WITH MEALS IN ORDER TO INCREASE ABSORPTION AND TO AVOID STOMACH DISCOMFORT.

RECOMMENDATION	AM	NOON	PM
PARA-PACK (Metabolic Support)	2	2	2
ADRENAL COMPLEX (Glandular Support)	2	2	2
MIN-PLEX B (Magnesium + Chromium + B6)	2	2	2
NCF (Nutritional Candida Formula)	1	1	1
ZMC PLUS (Zinc + Manganese + Vitamin C)	1	1	2
HCL PLUS (Digestive Support)	2	2	2
VITAMIN E PLUS	1	0	1

THESE RECOMMENDATIONS MAY NOT INCLUDE MINERALS WHICH APPEAR BELOW NORMAL OR IN TURN MAY RECOMMEND MINERALS WHICH APPEAR ABOVE NORMAL ON THE HTMA GRAPH. THIS IS NOT AN OVERSIGHT. SPECIFIC MINERALS WILL INTERACT WITH OTHER MINERALS TO RAISE OR LOWER TISSUE MINERAL LEVELS, AND THIS PROGRAM IS DESIGNED TO BALANCE THE PATIENT'S MINERAL LEVELS THROUGH THESE INTERACTIONS.

THESE RECOMMENDATIONS SHOULD NOT BE TAKEN OVER A PROLONGED PERIOD OF TIME WITHOUT OBTAINING A RE-EVALUATION. THIS IS NECESSARY IN ORDER TO MONITOR PROGRESS AND MAKE THE NECESSARY CHANGES IN THE NUTRITIONAL RECOMMENDATIONS AS REQUIRED.

SPECIAL NOTE: NUTRITIONAL SUPPLEMENTS DO NOT TAKE THE PLACE OF A GOOD DIET. THEY ARE BUT AN ADDITIONAL SOURCE OF NUTRIENTS, AND THEREFORE, MUST NOT BE SUBSTITUTED FOR A BALANCED DIET. ADDITIONALLY, NUTRITIONAL SUPPLEMENTS SHOULD NEVER BE TAKEN AT THE SAME TIME AS MEDICATIONS. MEDICATIONS SHOULD BE TAKEN 2 HOURS PRIOR TO, OR 2 HOURS AFTER NUTRITIONAL SUPPLEMENT INTAKE.

INTRODUCTION

THE FOLLOWING REPORT SHOULD NOT BE CONSIDERED AS DIAGNOSTIC, BUT RATHER AS A SCREENING TOOL THAT PROVIDES AN ADDITIONAL SOURCE OF INFORMATION. THIS REPORT SHOULD ONLY BE USED IN CONJUNCTION WITH OTHER LABORATORY TESTS, HISTORY, PHYSICAL EXAMINATION AND THE CLINICAL EXPERTISE OF THE ATTENDING DOCTOR.

TEST RESULTS WERE OBTAINED BY A LICENSED* CLINICAL LABORATORY ADHERING TO TESTING PROCEDURES THAT COMPLY WITH GOVERNMENTAL PROTOCOL AND STANDARDS ESTABLISHED BY TRACE ELEMENTS, INC., U.S.A. THE FOLLOWING INTERPRETATION IS BASED UPON INTERNATIONAL DATA AND DEFINED BY EXTENSIVE CLINICAL RESEARCH CONDUCTED BY DAVID L. WATTS, PH.D.

This analysis including levels, ratios, ranges and recommendations are based upon the sample and sampling technique meeting the following requirements:

** Sample obtained from the mid-parietal to the occipital region of scalp.
** Sample is proximal portion of hair length (first 1" to 2" of hair closest to scalp.
** Sufficient sample weight (minimum of 150 mg.)
** High grade stainless steel sampling scissors.
** Untreated virgin hair (no recent perms, bleaching, or coloring agents).

* Clinical Laboratory License
U.S. Department of Health and Human Services, State of Texas Department of Health,
Clinical Laboratories Improvement Act, 1988 No. 45-D0481787

METABOLIC TYPE

SLOW METABOLISM, TYPE #1

This patient is classified as a SLOW METABOLIZER TYPE # 1. Generally speaking, the Slow Metabolizer is experiencing the following endocrine and CNS activity. However, in those cases involving endocrine replacement therapy, such as; thyroid, insulin, adrenal steroids (anti-inflammatory drugs), etc., as well as endocrine antagonists and in extreme cases of surgical removal of a gland, tissue mineral patterns can be significantly affected. In these cases, the following reported indications of endocrine status should not be considered as representative of endocrine activity. Additional clinical tests and patient history should be taken into consideration.

- Para-Sympathetic Nervous System Dominance
- Tissue Alkalinity
- Pancreatic Activity Increased
- Adrenal Medullary Insufficiency
- Parathyroid Activity Increased
- Thyroid Activity Decreased
- Hypochlorhydria

Physical Characteristics May Include:

- Fatigue
- Low Body Temperature
- Low Blood Pressure
- Orthostatic Hypotension
- Pear-Shaped Body Structure
- Cold Extremities

There are several sub-classifications of each metabolic type, ranging from Type #1 to Type #4. This is taken into consideration on their supplement and dietary recommendations. The extent to which the patient is manifesting these metabolic characteristics depends upon the degree and chronicity of the mineral patterns.

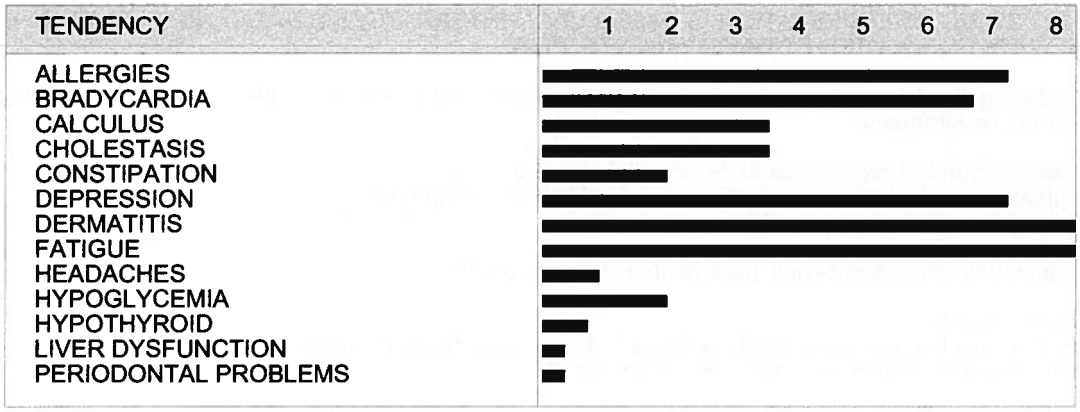
RE-EVALUATION
A re-evaluation is suggested at three months from the beginning of implementation of the TEI supplement program. However, if major symptomatic changes occur (other than from toxic metal removal), a retest can be submitted sooner.

TRENDS

The following trends may or may not be manifesting in the patient at this time. Each trend that is listed is a result of research including statistical and clinical observations. This trend analysis is 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 your own clinical evaluation.

*** SPECIAL NOTE ***
It must be emphasized that the following are only trends of potential health conditions. Realistically, the probability for each trend's occurance is based upon the degree and duration of the specific mineral imbalance. Since this analysis is not capable of determining either the previous degree of imbalance and/or previous duration, the trend analysis should only be used as an indicator to the health-care professional of potential manifestation's, particularly if the biochemical imbalance continues.



COMMENTS

ALLERGIES AND COPPER:
The mineral copper is a constituent of the enzyme histaminase and the protein ceruloplasm, both of which have the ability to destroy histamine. Zinc is required for the storage of histamine. Since the patient's zinc level is low to copper, or the tissue copper level is elevated, a low serum histamine may be present. This may result in histamine depletion if chronic. Low histamine levels have been found in the serum of patients who suffer from allergies to foods and inhalants.

CALCULUS FORMATION:
When the calcium to magnesium ratio is high, a relative magnesium deficiency exists. Magnesium is important for normal calcium metabolism. A magnesium deficiency relative to calcium may cause calcium to precipitate out of solution contributing to calcium deposition in the urinary tract and gall bladder. Vitamin B-6 along with magnesium aids in preventing calculus formation as a result of calcinosis.

CARDIOVASCULAR IRREGULARITIES:
An imbalance between the normal calcium to magnesium relationship can lead to cardiac irregularities such as arrhythmia, bradycardia, or tachycardia. This is especially true if potassium metabolism is disturbed leading to ECG abnormalities.

CHOLESTASIS AND ELEVATED COPPER:
The patient's test results reveal an excess tissue copper level. A history of mononucleosis or hepatitis is frequently noted with this HTMA pattern. Since the mineral copper is normally eliminated via the liver, extrahepatic obstruction (cholestasis) may be present.

DEPRESSION AND HIGH COPPER:
High tissue copper has been associated with an increased incidence of depression, especially in women, often occurring near their menstrual period. The causative role of excess copper in depression may be due to its producing neurotransmitter imbalances in the brain, or its interfering with other nutrient minerals such as iron, zinc and manganese.

DEPRESSION AND HYPOTHYROIDISM:
An elevation of calcium relative to potassium is associated with hypothyroidism. Depression is often seen when a concomitant hypothyroid condition exists.

DERMATOSIS AND COPPER:
Copper is known to antagonize the metabolic activity of zinc as well as decrease its absorption. This may be a contributing factor to copper-induced dermatitis. Copper toxicity often produces skin rashes that are characterized by red itchy areas occurring on the face, neck, and lower back, on the thighs, and behind the knees.

FATIGUE:
High calcium to potassium is associated with an underactive thyroid. Fatigue is often a common complaint associated with low thyroid function.

HEADACHES AND HIGH TISSUE COPPER:
Elevated copper has been implicated in producing headaches, usually occurring in the frontal region. Copper water pipes may contribute to high tissue copper levels. The patient's water may be sent for analysis to determine if it is a source of copper contamination.

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.

HYPOADRENIA AND EXCESS TISSUE COPPER
Adrenal steroid production effects the regulation of copper excretion. Excess tissue copper levels indicate an adrenal insufficiency, especially in the slow metabolizer. Adrenal insufficiency and hypothyroidism frequently occur simultaneously; therefore, evaluation of thyroid function may be appropriate. Copper toxicity may not be due to excessive exposure, but rather to chronic low exposure and buildup resulting from an inability of elimination.

HYPOGLYCEMIA AND SLOW METABOLISM:
Slow metabolizers are prone to hypoglycemia. This is due to the increased glycogen storage of glucose stimulated by the release of insulin. Other contributing factors are adrenal insufficiency and low thyroid function.

Hypoglycemia can be contributed to in the slow metabolizer by factors other than eating refined carbohydrates or sugar. Dairy products, juices and foods high in fat may also produce hypoglycemic symptoms.

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.

HYPOTHYROIDISM AND COPPER:
The mineral copper appears to have a suppressing effect upon the thyroid gland. Excess copper can cause a potassium loss and elevation of tissue calcium.

HYPOTHYROIDISM AND ZINC:
The mineral zinc influences the secretion of thyroid stimulating hormone (TSH). Therefore, a low zinc or low zinc/copper ratio may be associated with decreased thyroid activity.

LIVER DYSFUNCTION:
High tissue copper levels are associated with decreased liver function. Copper is stored in the liver and eliminated via the gall bladder. Excessive accumulation of copper or its removal contributes to liver and gall bladder sluggishness. This can result in constipation and biliary stone formation due to incomplete emptying of the gall bladder.

PERIODONTAL PROBLEMS AND ELEVATED COPPER:
Excess copper by contributing to the rapid oxidation of vitamin C can contribute to swollen and bleeding gums.

PREMATURE AGING OF THE SKIN AND CALCIUM:
Excess calcium deposition into soft tissue can reduce the normal fluid content of cells. This can then produce dryness, thickening and wrinkling of the skin, which is related to signs of premature aging.

IMPORTANT NOTE ON TOXIC METAL ELIMINATION:
As toxic metals are mobilized from storage tissues for removal from the body, the patient may experience an exacerbation of his/her present symptoms or new symptoms associated with a particular mineral. If this occurs, or if the symptoms become too uncomfortable have the patient discontinue supplementation for three days, during which symptoms should be relieved. Have the patient then resume the program at one-third the recommended dosage, usually the PM portion, then gradually build up to twice per day and back to the full program. This may be done over a one to two-week period. If symptoms again arise, have the patient continue on only the PM portion for one week before increasing.

CONTRAINDICATIONS

It is suggested that additional supplementation and/or intake of the following nutrients and food substitutes should be avoided by the patient until re-evaluation.

* VITAMIN D *
Vitamin D and PABA are known to antagonize thyroid function and increase the absorption and retention of calcium. Excessive vitamin D supplementation can contribute to a loss of potassium and suppress thyroid expression. The patient should avoid sources of extra vitamin D and PABA, especially if a hypo-thyroid condition is present.

* BORON *
The element boron increases the retention of calcium by having an apparent estrogenic effect. At this time, supplementation of boron should not be considered until the biochemical pattern of this patient changes.

* THYMUS *
The thymus has an opposing effect on the adrenal glands. As long as an adrenal insufficiency is indicated, thymus supplementation should be avoided.

* COD LIVER OIL *
Cod liver oil will contribute to an adverse reduction in the metabolic rate, which can result in increased fatigue and depression. It is suggested that cod liver oil be avoided until the biochemical pattern improves.

DIETARY SUGGESTIONS

The following dietary suggestions are defined by several factors: the individual's metabolic type, mineral levels, mineral ratios, as well as the nutrient content of each food including protein, carbohydrate, fat, vitamins and minerals. Based upon these determinations, it may be suggested that foods be avoided or increased temporarily to aid in the improvement of the patient's chemistry.

GENERAL DIETARY PRINCIPLES FOR THE SLOW METABOLIZER:

A low protein, high carbohydrate, and high fat diet in addition to increased consumption of refined sugars and dairy products have a slowing-down effect upon metabolism and energy production.

* EAT A HIGH PROTEIN FOOD AT EACH MEAL...Lean protein is recommended and which should constitute at least 40% of the total caloric value of each meal. Recommended sources are lean beef, fish and fowl. Other good sources of protein include bean and grain combinations and eggs. Increased protein intake is necessary in order to increase the metabolic rate

and energy production.

* INCREASE FREQUENCY OF MEALS...while decreasing the total caloric intake 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, candy, soda pop, cake, pastries, alcohol and white bread.

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

* REDUCE INTAKE OF FATS AND OILS...Fats and oil include fried foods, cream, butter, salad dressings, mayonnaise, etc... Fat intake should not exceed 20% of the total daily caloric intake.

* REDUCE OR AVOID MILK AND MILK PRODUCTS...such as cheese, yogurt, cream, etc... These foods should be reduced to no more than once every three to four days.

* REDUCE FRUIT JUICE INTAKE...until the next evaluation. This includes orange juice, apple juice, grape juice and grapefruit juice. Vegetable juices are acceptable.

* AVOID CALCIUM AND/OR VITAMIN D SUPPLEMENTS

FOOD ALLERGIES

In some individuals, certain foods can produce a maladaptive or "allergic-like" reaction commonly called "food allergies". Consumption of foods that one is sensitive to can bring about reactions ranging from fatigue or drowsiness to rashes, migraine headaches and arthritic pain.

Sensitivity to foods can develop due to biochemical (nutritional) imbalances, and which can be aggravated by stress, pollution and medications. Nutritional imbalance can further be contributed to by restricting food variety, such as eating only a small group of foods on a daily basis. Often a person will develop a craving for the food they are most sensitive to and may eat the same food or food group more than once a day.

The following section may contain foods that are recommended to be avoided. These foods should be considered as potential "allergy foods" or as foods that may impede a rapid and effective response. Consumption of these foods should be completely avoided for four days. Afterwhich, they should not be eaten more frequently than once every three days during course of therapy.

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:

- Cabbage
- Rutabagas
- Cole Slaw
- Sauerkraut
- Soybeans
- Mustard
- Kale
- White Turnips
- Flourides
- Horseradish
- Chlorinated Water
- Walnuts

FOODS THAT CONTRIBUTE TO A REDUCTION IN METABOLIC RATE

The following food sources should be reduced significantly during course of therapy, as they may contribute to a further lowering of an already existing low metabolic rate.

- Milk
- Sardines
- Cheddar Cheese
- Mustard Greens
- Broccoli
- Swiss Cheese
- Soy Flour
- Mozzarella
- Kale
- Parmesan Cheese

Yogurt
Cream
Dulse
Torula Yeast
Monterey Cheese

THE FOLLOWING FOODS SHOULD BE AVOIDED UNTIL THE NEXT EVALUATION

Sardines
Herring
Enriched Milk
Mushrooms

AVOID DIETARY FATS AND OILS UNLESS NOTIFIED OTHERWISE BY ATTENDING DOCTOR

The handling of fats is difficult during a reduced metabolic state, and can contribute to a further reduction in the metabolic rate. It is suggested that all sources of high dietary fat and oil be avoided until the next evaluation.

Salad Dressings
Cream
Hazelnuts
Margarine
Bockwurst
Salami
Bologna
Corn Chips
Bacon
Duck
Avocado
Cocoa Powder
Sardines (canned)
Avocado Oil
Coconut Oil
Cheese (most)
Butter
Walnuts
Pork
Milk
Peanut Butter
Pork Links
Almonds
Knockwurst
Goose
Braunschweiger
Peanuts
Tuna (canned in oil)
Liverwurst

FOODS ALLERGIES RELATED TO COPPER

Individuals with excessive tissue copper accumulation will often crave foods that are high in copper. The following foods, which are high in copper relative to zinc, should be avoided until the next evaluation:

Chocolate
Crab
Herring
Haddock
Pecans
Almonds
Sesame Seeds
Bakers Yeast
Mushrooms
Avocado
Liver
Walnuts
Lobster
Bran Flakes
Peanut Butter
Shrimp
Trout
Brazil Nuts
Sunflower Seeds
Grapes

REACTIONS ASSOCIATED WITH FOOD ALLERGIES

Excess intake of high copper foods has been associated with several reactions, both physical and emotional. Physical reactions may include frontal headaches, skin rashes, joint stiffness, constipation, insomnia causing morning fatigue, bloating, water retention and cold sensitivity. Emotional reactions may include depression, crying spells, fearfulness, anxiety, irritability, anger, aggressive behavior and withdrawal.

HIGH POTASSIUM FOODS

The following foods may be increased in the diet until the next evaluation. These foods which are high in potassium content in relation to calcium and sodium will help to supplement potassium requirements.

Oranges
Dates
Scallops
Tomatoes
Rhubarb
Peas
Apricots
Asparagus
Plums
Prunes
Casaba
Raisins
Lentils
Beet Greens

Chicken
Catfish
Cantaloupe
Bananas
Egg (white)
Turkey
Currants
Lima Beans
Beef (lean)
Apples
Artichokes
Beets
Summer Squash
Flounder (baked)
Brussels Sprout
Chard

FOODS HIGH IN PHYTIC ACID
The following foods may be increased in the diet at this time as they contain high amounts of phytates. Phytates help in reducing excessive insulin release which contributes to low blood sugar (hypoglycemia). Intake of these foods should not exceed your protein to carbohydrate ratio as outlined in the general dietary guidelines, and should be consumed with adequate protein.

Oatmeal
Rye Bread
Brown Rice
Whole Wheat
Strawberries
Wheat Germ
Blackberries
Rye Crackers

FOODS HIGH IN NIACIN
Niacin (vitamin B3) is known to improve circulation, increase the metabolic rate via enzymes requiring B3, as well as help lower cholesterol and excess copper accumulation. The following foods are rich sources of niacin and may be eaten liberally:

Bran Flakes
Beef
Chicken (light)
Fish (broiled)
Tuna
Peas

This analysis will list only a limited number of dietary foods to avoid or to increase in the diet. For those foods not specifically mentioned in this section, continued consumption on a moderate basis may be considered appropriate unless recommended otherwise.

CONCLUSION

This report can provide a unique insight into nutritional biochemistry. The recommendations contained within are specifically designed according to metabolic type, mineral status, age, and sex. Additional recommendations may be based upon other supporting clinical data as determined by the attending health-care professional.

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TMA Recommended Supplement Price List

Patient: Ouellette, Fernand
Date: May 17, 2012

DIPPA RONI @ YAHOO.COM

SKU #	Description	Unit Price	30 Day Total	60 Day Total	90 Day Total
5011	Adrenal Complex 180 Caps	$ 29.45	$29.45/ 1 bottle	$58.90/2 bottles	$88.35/3 bottles
5010	Adrenal Complex 90 Caps	$ 16.00			
5020	Calcium Plus 90 Caps	$ 9.60			
5030	Copper Plus 90 Tabs	$ 9.00			
5041	Digest-Zyme 180 Tabs	$ 26.40			
5040	Digest-Zyme 90 Tabs	$ 14.50			
5051	GT Formula 180 Tabs	$ 16.80			
5050	GT Formula 90 Tabs	$ 9.80			
5061	HCl Plus 180 Tabs	$ 24.50	$24.50/ 1 bottle	$49.00/2 bottles	$73.50/3 bottles
5060	HCl Plus 90 Tabs	$ 13.20			
5070	Iron Plus 60 Tabs	$ 6.70			
5080	Magnesium Plus 90 Tabs	$ 9.45			
5090	Manganese Plus 90 Tabs	$ 9.45			
5101	Min-Plex B 180 Tabs	$ 34.95	$34.95/ 1 bottle	$69.90/2 bottles	$104.85/3 bottles
5100	Min-Plex B 90 Tabs	$ 18.60			
5110	NCF Plus 90 Tabs	$ 20.90	$20.90/1 bottle	$41.80/2 bottles	$62.70/3 bottles
5120	Omega-3 Plus 45 Softgel	$ 9.45			
5131	Para Pack 180 Tabs	$ 34.50	$34.50/ 1 bottle	$69.00/2 bottles	$103.50/3 bottles
5130	Para Pack 90 Tabs	$ 18.50			
5140	Potassium Plus 90 Tabs	$ 9.45			
5150	Pyridox Plus 90 Tabs	$ 11.65			
5161	Sym-Pack 180 Tabs	$ 33.00			
5160	Sym-Pack 90 Tabs	$ 17.85			
5170	Thymus Complex 90 Caps	$ 14.80			
5180	Vitamin C Plus 90 Tabs	$ 12.00			
5191	Vitamin E Plus 120 Caps	$ 26.50		$26.50/ 1 bottle	$26.50/1 bottle
5190	Vitamin E Plus 60 Caps	$ 14.50	$14.50/1 bottle		$14.50/ 1 bottle
5200	Zinc Plus 90 Caps	$ 9.75			
5211	ZMC Plus 180 Tabs	$ 38.90	$38.90/ 1 bottle	$38.90/1 bottle	$77.80/2 bottles
5210	ZMC Plus 90 Tabs	$ 21.60		$21.60/1 bottle	
		Totals	$197.70	$375.60	$551.70

Uni Key Health Systems, Inc.
Please call (800) 888-4353 to order the recommended quantity of supplements for a 30, 60, or 90 day supply per your test results. These supplements are listed in the UNIKEY Catalog (not available online).

TMA Recommended Supplement Facts

METABOLIC PACKS

PARA-PACK
HYPO-ALLERGENIC

EACH TABLET CONTAINS:

Vitamin A (as palmitate and 50% as beta carotene)	2000 IU
Vitamin C (as ascorbic acid)	60 mg
Vitamin E (as d-alpha tocopheryl)	30 IU
Thiamine (as thiamine hydrochloride)	1.5 mg
Niacin (as niacinamide and 33% as nicotinic acid)	20 mg
Vitamin B6 (as pyridoxine hydrochloride)	2 mg
Folic Acid	100 mcg
Biotin	75 mcg
Pantothenic Acid (as d-calcium pantothenate)	10 mg
Phosphorus (from calcium phosphate, amino acid complex)	10 mg
Iodine (from sea kelp)	100 mcg
Zinc (as oxide, from amino acid chelate)	1 mg
Selenium (as selenate, from amino acid chelate)	20 mcg
Manganese (as sulfate, from amino acid chelate)	1 mg
Potassium (as gluconate, from amino acid chelate)	10 mg
Adrenal Concentrate (bovine)	5 mg
Pituitary Concentrate (bovine)	5 mg
Parotid Concentrate (bovine)	5 mg
Citrus Bioflavonoids	50 mg
Unsaturated Fatty Acids (from safflower oil)	100 mg
Inositol	75 mg
Betaine (as betaine hydrochloride)	20 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

PARA-VEGE
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Vitamin A (as palmitate and 50% as beta carotene)	1000 IU
Vitamin C (as ascorbic acid)	60 mg
Vitamin E (d-alpha tocopheryl)	30 IU
Thiamine (as thiamine hydrochloride)	1.5 mg
Niacin (as niacinamide and 33% as nicotinic acid)	20 mg
Vitamin B6 (as pyridoxine hydrochloride)	2 mg
Folic Acid	100 mcg
Biotin	75 mcg
Pantothenic Acid (as d-calcium pantothenate)	10 mg
Zinc (as oxide, from amino acid chelate)	2 mg
Selenium (as selenate, from amino acid chelate)	20 mcg
Manganese (as sulfate, from amino acid chelate)	1 mg
Potassium (as gluconate, from amino acid chelate)	50 mg
Citrus Bioflavonoids	50 mg
Inositol	75 mg
Unsaturated Fatty Acids (from safflower oil)	100 mg
Alanine (as L-alanine)	10 mg
Cystine (as L-cystine)	5 mg
Aspartic Acid (as L-aspartic acid)	10 mg
Glutamic Acid (as L-glutamic acid)	15 mg
Methionine (as L-methionine)	5 mg
Serine (as L-serine)	10 mg
Tyrosine (as L-tyrosine)	10 mg
Pyruvate (calcium pyruvate)	5 mg
Cranberry (fruit)	100 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

SYM-PACK
HYPO-ALLERGENIC

EACH TABLET CONTAINS:

Vitamin D (as cholecalciferol)	75 IU
Riboflavin (Vitamin B2)	1.7 mg
Vitamin B6 (as pyridoxine hydrochloride)	2 mg
Vitamin B12 (as cyanocobalamine)	6 mcg
Pantothenic Acid (as d-calcium pantothenate)	10 mg
Calcium (as carbonate, from amino acid chelate)	100 mg
Magnesium (as oxide, from amino acid chelate)	50 mg
Copper (as carbonate, from amino acid chelate)	500 mcg
Thymus Concentrate (bovine)	25 mg
Pancreas Concentrate (bovine)	25 mg
PABA (Para-aminobenzoic acid)	5 mg
Choline Bitartrate	75 mg
Methionine (as L-methionine)	75 mg
Co-Enzyme Q10	500 mcg
Superoxide Dismutase	2 mg

Cellulose, Stearic Acid, Magnesium Stearate, Vanilla Bean Extract, Silica

SYM-VEGE
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Vitamin D (as cholecalciferol)	75 IU
Riboflavin (Vitamin B2)	1.7 mg
Vitamin B6 (as pyridoxine hydrochloride)	2 mg
Vitamin B12 (as cyanocobalamine)	6 mcg
Pantothenic Acid (as d-calcium pantothenate)	10 mg
Calcium (as carbonate, from amino acid chelate)	100 mg
Magnesium (as oxide, from amino acid chelate)	50 mg
Copper (as carbonate, from amino acid chelate)	500 mcg
Choline Bitartrate	75 mg
Co-Enzyme Q10	1 mg
Superoxide Dismutase	2 mg
Arginine (as L-arginine)	15 mg
Histidine (as L-Histidine)	5 mg
Glutathione (as L-glutathione)	5 mg
Leucine (as L-Leucine)	5 mg
Lysine (as L-Lysine)	10 mg
Malic Acid	5 mg
Taurine (as L-Taurine)	5 mg
F.O.S. (Fructooligosaccharides, sugar cane)	25 mg
Cabbage Powder (leaf)	20 mg
Broccoli Powder (leaf)	20 mg
Chicory Powder (leaf)	20 mg
Artichoke Powder (shoot)	20 mg
Asparagus Powder (leaf)	20 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

GLANDULARS

ADRENAL COMPLEX
HYPO-ALLERGENIC

EACH TABLET CONTAINS:

Vitamin A (as palmitate)	50 IU
Vitamin C (as ascorbic acid)	60 mg
Thiamine (as thiamine hydrochloride)	1 mg
Vitamin B6 (as pyridoxine hydrochloride)	1 mg
Pantothenic Acid (as d-calcium pantothenate)	10 mg
Phosphorus (from calcium phosphate, amino acid complex)	20 mg
Zinc (as oxide, from amino acid chelate)	2 mg
Potassium (as gluconate, from amino acid chelate)	20 mg
Adrenal Concentrate (bovine)	80 mg
Betaine (as betaine hydrochloride)	20 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

THYMUS COMPLEX
HYPO-ALLERGENIC

EACH TABLET CONTAINS:

Vitamin B12 (as cyanocobalamine)	3 mcg
Pantothenic Acid (as d-calcium pantothenate)	10 mg
Magnesium (as oxide, from amino acid chelate)	10 mg
Copper (as carbonate, from amino acid chelate)	500 mcg
Thymus Concentrate (bovine)	100 mg

Cellulose, Stearic Acid, Magnesium Stearate, Vanilla Bean Extract, Silica

MINERALS

CALCIUM PLUS
HYPO-ALLERGENIC

EACH CAPSULE CONTAINS:

Vitamin D (as cholecalciferol)	50 IU
Calcium (as carbonate, from amino acid chelate)	250 mg

Magnesium Stearate

MAGNESIUM PLUS
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Vitamin B6 (as pyridoxine hydrochloride)	2 mg
Magnesium (as oxide, from amino acid chelate)	100 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

POTASSIUM PLUS
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Vitamin A (as palmitate)	100 IU
Potassium (as gluconate, from amino acid chelate)	99 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

IRON PLUS
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Vitamin C (as ascorbyl palmitate)	10 mg
Iron (as sulfate, from amino acid chelate)	14 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

COPPER PLUS
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Riboflavin (Vitamin B2)	500 mcg
Copper (as carbonate, from amino acid chelate)	2 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

MANGANESE PLUS
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Thiamine (as thiamine hydrochloride)	1 mg
Manganese (as sulfate, from amino acid chelate)	15 mg

Cellulose, Magnesium Stearate

ZINC PLUS
HYPO-ALLERGENIC

EACH CAPSULE CONTAINS:

Zinc (as oxide, from amino acid chelate)	25 mg
Methionine (as L-methionine)	5 mg

Cellulose, Magnesium Stearate

GT-FORMULA
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Niacin	1 mg
Chromium (as chloride, from amino acid chelate)	200 mcg
Glycine (as L-glycine HCL)	5 mg
Glutamic Acid (as L-glutamic acid HCL)	5 mg
Cysteine (as L-cysteine HCL)	3 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

DIGESTIVE AIDS

DIGEST-ZYME
HYPO-ALLERGENIC

EACH TABLET CONTAINS:

Zinc (as oxide, from amino acid chelate)	1 mg
Glutamic Acid (as L-glutamic acid)	10 mg
Pancreatin (4x)	75 mg
Lipase	50 mg
Rennin	15 mg
Malt Diastase	7.5 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

HCL-PLUS
HYPO-ALLERGENIC

EACH TABLET CONTAINS:

Betaine (as betaine hydrochloride)	324 mg
Pepsin (1:3000)	130 mg
Ox Bile Extract	50 mg

Cellulose, Stearic Acid, Vanilla Bean Extract, Magnesium Stearate, Silica

VITAMINS

VITAMIN C PLUS
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Vitamin C (as ascorbic acid)	500 mg
Manganese (as sulfate, from amino acid chelate)	1 mg
Bioflavonoids (citrus/rosehips complex)	100 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

VITAMIN E PLUS
HYPO-ALLERGENIC

EACH CAPSULE CONTAINS:

Vitamin E (as d-alpha tocopheryl)	200 IU
Selenium (as selenate, from amino acid chelate)	50 mcg

Silica, Magnesium Stearate, Magnesium Silicate

PYRIDOX PLUS
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Thiamine (as thiamine hydrochloride)	1.5 mg
Vitamin B6 (as pyridoxine hydrochloride)	100 mg
Manganese (as sulfate, from amino acid chelate)	1 mg
P5P (Pyridoxal-5-Phosphate)	1 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

SPECIALTY

LIPO-GEST MCT
HYPO-ALLERGENIC

THREE SOFTGELS CONTAIN:

100% Structured Lipids, Medium Chain Triglycerides	3 g
GLC:	
Caprylic acid	65.4%
Capric acid	30.8%
Caproic acid	3.5%
Lauric acid	0.3%

Gelatin and Water

OMEGA-3 PLUS
HYPO-ALLERGENIC

EACH SOFTGEL CONTAINS:

Calories	10.5
Calories from Fat	9
Total Fat	1 g
Saturated Fat	0 g
Polyunsaturated Fat	0.5 g
Cholesterol	6 mg
Vitamin E	1 IU
Natural Triglyceride Marine Lipid Concentrate Providing:	1000 mg
Eicosapentaenoic Acid (EPA) (18%)	180 mg
Docosahexaenoic Acid (DHA) (12%)	120 mg
Total Omega-3 Fatty Acids	300 mg

Gelatin, Natural Glycerine and Purified Water

NCF
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Vitamin C (as ascorbic acid)	25 mg
Vitamin E (as vitamin E succinate)	10 IU
Biotin	300 mcg
Calcium (from calcium caprylic acid complex)	60 mg
Magnesium (from aspartate complex)	30 mg
Zinc (from aspartate complex)	5 mg
Potassium (from potassium sorbate)	65 mg
Caprylic Acid	100 mg

Cellulose, Vegetable Stearate, Silica

ACIDOPHILUS PLUS
HYPO-ALLERGENIC

TWO CAPSULES CONTAIN:

Citrus Pectin	200 mg
Propriety Blend	1000 mg
Lactobacilli Acidophilus	
Lactobacilli Bulgaricus Complex	

Cellulose, Magnesium Vegetable Stearate

NUTRI-BAC
HYPO-ALLERGENIC

EACH CAPSULE CONTAINS:

Vitamin D (as cholecalciferol)	50 IU
Vitamin E (as d-alpha tocopheryl)	50 IU
Thiamine (as thiamine hydrochloride)	2 mg
Vitamin B6 (as pyridoxine hydrochloride)	10 mg
Vitamin B12 (as cyanocobalamine)	6 mcg
Calcium (from calcium lactate)	50 mg
Copper (as carbonate, from amino acid chelate)	1 mg
Juniper Berries (fruit)	5 mg
Willow Bark (bark)	40 mg
Bac-Complex	175 mg
Liver Concentrate	
Lymph Concentrate	
Thymus Concentrate	

Cellulose, Magnesium Stearate

NUTRI-VI
HYPO-ALLERGENIC

EACH CAPSULE CONTAINS:

Vitamin A (as palmitate)	200 IU
Vitamin C (as ascorbic acid)	50 mg
Niacin	1 mg
Pantothenic Acid (as d-calcium pantothenate)	10 mg
Phosphorus (from calcium phosphate, amino acid complex)	1 mg
Magnesium (as oxide, from amino acid chelate)	20 mg
Zinc (as oxide, from amino acid chelate)	5 mg
Potassium (as gluconate, from amino acid chelate)	10 mg
Quercetin	10 mg
Echinacea (root)	10 mg
Willow Bark (bark)	10 mg
Vi-Complex	200 mg
Oat Bran	
Barley Green	
Spleen Concentrate (bovine)	
Adrenal Concentrate (bovine)	
Lymph Concentrate (bovine)	

Cellulose, Magnesium Stearate, Silica

COMBINATION FORMULAS

ULTRA-PAR
HYPO-ALLERGENIC

EACH TABLET CONTAINS:

Vitamin A (as palmitate, 49% as beta carotene)	2050 IU
Vitamin C (as ascorbic acid)	120 mg
Vitamin E (as d-alpha tocopheryl)	30 IU
Thiamine (as thiamine hydrochloride)	2.5 mg
Niacin (as niacinamide and 33% as nicotinic acid)	20 mg
Vitamin B6 (as pyridoxine hydrochloride)	3 mg
Folic Acid	100 mcg
Biotin	75 mcg
Pantothenic Acid (as d-calcium pantothenate)	20 mg
Phosphorus (from calcium phosphate, amino acid complex)	10 mg
Iodine (from sea kelp)	100 mcg
Zinc (as oxide, from amino acid chelate)	3 mg
Selenium (as selenate, from amino acid chelate)	20 mcg
Manganese (as sulfate, from amino acid chelate)	1 mg
Potassium (as gluconate, from amino acid chelate)	30 mg
Adrenal Concentrate (bovine)	85 mg
Pituitary Concentrate (bovine)	5 mg
Parotid Concentrate (bovine)	5 mg
Citrus Bioflavonoids	50 mg
Unsaturated Fatty Acids (from safflower oil)	100 mg
Inositol	75 mg
Betaine (as betaine hydrochloride)	40 mg
Licorice Extract (root) (Deglycyrrhizinated)	35 mg
Korean Ginseng (root)	25 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

MIN-PLEX B
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Thiamine (as thiamine hydrochloride)	1.5 mg
Niacin	2 mg
Vitamin B6 (as pyridoxine hydrochloride)	25 mg
Magnesium (as oxide, from amino acid chelate)	100 mg
Manganese (as sulfate, from amino acid chelate)	1 mg
Chromium (as chloride, from amino acid chelate)	200 mcg
Glycine (as L-glycine HCL)	10 mg
Glutamic Acid (as L-glutamic acid HCL)	5 mg
Cysteine (as L-cysteine HCL)	3 mg
P5P (pyridoxal-5-phosphate)	0.5 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica

ZMC PLUS
HYPO-ALLERGENIC

VEGETARIAN FORMULA

EACH TABLET CONTAINS:

Vitamin C (as ascorbic acid)	500 mg
Thiamine (as thiamine hydrochloride)	1 mg
Niacin (as niacinamide)	5 mg
Zinc (as oxide, from amino acid chelate)	25 mg
Manganese (as sulfate, from amino acid chelate)	15 mg
Methionine (as L-methionine)	5 mg
Citrus Bioflavonoids	100 mg

Cellulose, Stearic Acid, Magnesium Stearate, Silica