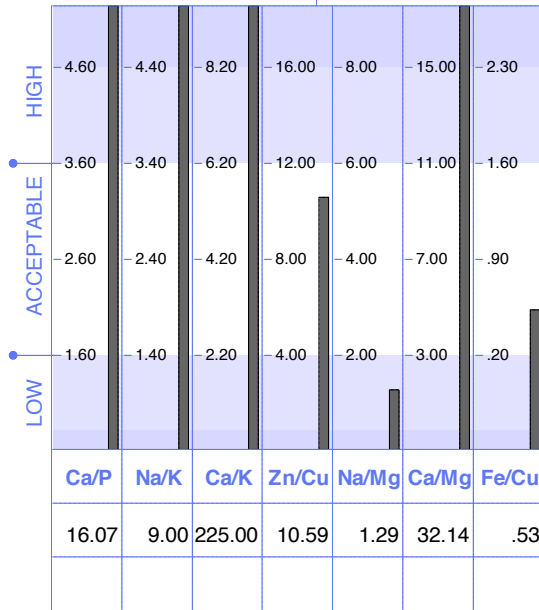
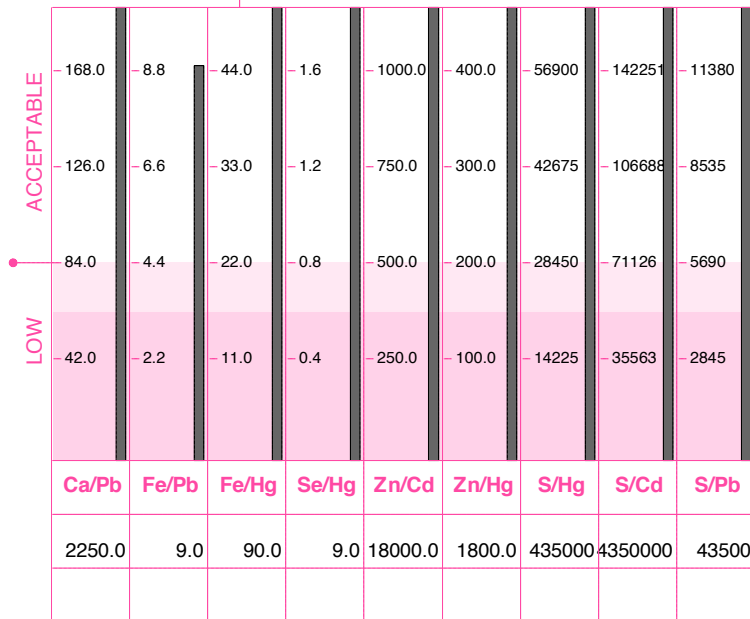


SIGNIFICANT RATIOS



TOXIC RATIOS



ADDITIONAL RATIOS

RATIO	CALCULATED VALUE		EXPECTED
	Current	Previous	
Ca/Sr	164.23		131/1
Cr/V	6.67		13/1
Cu/Mo	1700.00		625/1
Fe/Co	150.00		440/1
K/Co	166.67		2000/1
K/Li	1000.00		2500/1
Mg/B	116.67		40/1
S/Cu	2558.82		1138/1
Se/Tl	180.00		37/1
Se/Sn	1.29		0.67/1
Zn/Sn	257.14		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 health care 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 obtained from 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 suppressing effect on the metabolic rate.

* Endocrine Function - Low thyroid activity as well as low adrenal gland function will contribute to a lowering of 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 significantly reduced metabolic rate, such as indicated in these test results, has been correlated with the following characteristics:

Fatigue	Dry Skin
Lethargy	Water Retention
Depression	Cold Hands
Cold Feet	Weight Gain in Thighs and Hips
Tendencies Toward Recurring Viral Infections	

It should be noted that even though this patient may not be overweight at this time, she 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)

The tissue calcium level is significantly higher than normal. This does not necessarily indicate that there is too much calcium, but rather the calcium is not being utilized properly.

CONDITIONS ASSOCIATED WITH ELEVATED TISSUE CALCIUM

Over 90% of the calcium in the body is stored in the bones and teeth. This reserve of calcium can be drawn upon by the body as the need arises. However, if the calcium is not being properly utilized, it may accumulate in tissue other than the bones and teeth. If this metabolic pattern has been present over a long period of time excess accumulation may contribute to:

- * Joint Stiffness - If calcium accumulates in ligamentous structures surrounding the joints, stiffness may develop. This may be noticed especially in the mornings or after being in one position for an extended period. Stiffness may also be aggravated by cold weather. This type of stiffness will often improve after exercise or a warming-up movement.

- * Changes in Skin and Hair Texture - Calcium accumulation in soft tissues such as the skin will have a dehydrating effect. This can contribute to dry skin and wrinkling. Changes in hair texture as well as brittle nails may also develop.

- * Low Energy Levels - Calcium is considered a sedative mineral and when found to be excessive in the body is usually associated with decreased metabolism and energy levels.

Other conditions for a woman of this age group with this calcium profile may include fatigue, muscle cramps, insomnia, depression and anemia.

SOME FACTORS THAT MAY CONTRIBUTE TO HIGH CALCIUM LEVELS

There are a number of factors that are related to improper calcium utilization and which may lead to elevated tissue levels, even if dietary calcium intake is low.

- * Endocrine - Low thyroid and adrenal activity in conjunction with a relative increase in parathyroid function can contribute to an excessive deposition of tissue calcium.

- * Nutritional - Inadequate protein intake, excessive sugar and refined carbohydrate intake, high vitamin D intake, and increased requirements of other vitamins and minerals, such as; vitamin E and phosphorus.

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 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 AND PREMENSTRUAL SYNDROME (PMS)

Studies have reported the beneficial effects of magnesium supplementation in controlling symptoms of PMS. Your magnesium level is low relative to calcium indicating an increased requirement for magnesium. Supplementation of magnesium and its' cofactors may aid in reducing PMS manifestations.

POTASSIUM (K)

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

COBALT (Co)

Although your cobalt level is elevated above the normal reference range, this level should not be considered as clinically significant at this time. However, if a disturbance between this element and another mineral exists, clinical significance may be noted in the appropriate ratio section of this report.

MOLYBDENUM (Mo)

Your molybdenum level of 0.001 mg% is below the established reference range for this element. Molybdenum is known to activate some enzymes and is involved in purine metabolism and iron utilization through the enzyme, xanthine oxidase. Deficiency is known to increase the incidence of dental caries. Molybdenum is found in all foods but the highest sources are found in milk, legumes, and cereals.

GERMANIUM (Ge)

Your germanium level of 0.004 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.

TIN (Sn)

Your tin level of 0.07 mg% is above the established reference range. It has been reported

that an excessive level of tin can interfere with iron metabolism and will produce heme breakdown. Elevated tin also increases the excretion of selenium and zinc from the body.

SOME SOURCES OF TIN

Canned Foods	Dental Fillings
Herbs	PVC
Fungicides	Stannous Fluoride
Dental Treatments	Marine Paints
Toothpaste	Collapsible Metal Containers
Cooking Utensils	Mining
Solders	

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).

PHOSPHORUS (P) AND PROTEIN INTAKE

Phosphorus is involved in all of the cellular energy production cycles within the body. Adequate protein intake is essential in providing needed phosphorus for increased energy production, and reducing excess tissue calcium retention (see high Ca/P ratio). It is suggested that protein intake be evaluated. Protein should make up at least 40 percent of total daily caloric intake.

HIGH SODIUM/POTASSIUM (Na/K)

Your sodium-potassium profile is elevated above the normal range. When sodium is high relative to potassium (see high Na/K ratio), it is indicative of a relative sodium excess. This mineral profile, if chronic, may eventually lead to fluid retention and subsequent weight gain. Weight gain contributed to by this pattern is often only water retention. At this time, it is not necessary to reduce sodium intake, but it is recommended rather that dietary potassium intake be increased relative to sodium intake.

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	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

HIGH CALCIUM/MAGNESIUM (Ca/Mg) RATIO

Calcium and magnesium should always be in a proper balance to one another. If this normal equilibrium is upset, one mineral will become dominant relative to the other. In this case, calcium is high relative to magnesium (see high Ca/Mg ratio), which may be indicative of abnormal calcium metabolism, resulting in excessive deposition of calcium into the soft tissues. In addition, even though the magnesium level is not low at this time, excess calcium relative to magnesium will suppress magnesium function within the body.

MUSCULAR TENSION

Calcium and magnesium are important elements whose roles include involvement in muscular response. When not in a normal balance, an excess of tissue calcium relative to magnesium will frequently lead to constant muscular tension and contraction. If the muscles surrounding the urinary bladder are in a state of tension due to this error in mineral metabolism, the volume capacity within the bladder will be reduced. This condition may contribute to an increased frequency of urination due to the restricted size of the bladder.

CALCULUS

A deficiency of magnesium relative to calcium (see high Ca/Mg ratio) may allow calcium to precipitate out of solution, which can contribute to calcium deposition into the urinary tract and gallbladder. Over an extended period of time, this profile has been correlated with increased tendencies toward kidney and gallstones.

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. After which, 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	Kale
Rutabagas	White Turnips
Cole Slaw	Flourides
Sauerkraut	Horseradish
Soybeans	Chlorinated Water
Mustard	Walnuts

FOODS THAT CONTRIBUTE TO A REDUCTION IN METABOLIC RATE

The following foods should be temporarily avoided or reduced until the next evaluation. They may contribute to a further lowering of an already low metabolic rate. Unlimited intake can contribute to fatigue, headaches, joint stiffness, water retention, and weight gain.

Swiss Cheese	Turnip Greens
Kale	Blue Cheese
Monterey Cheese	Soybean Flour
Mustard Greens	Yogurt
Mozzarella Cheese	American Cheese
Tortilla Roll	Brewers Yeast
Almonds	Cheddar Cheese
Sardines	Kelp
Hazelnuts	Carob Powder
Torula Yeast	Pancake Mix
Parmesan Cheese	Cream
Dulse	Collards
Dandelion Greens	Broccoli

THE FOLLOWING FOODS SHOULD BE AVOIDED UNTIL THE NEXT EVALUATION

Sardines	Mushrooms
Herring	
Enriched Milk	

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	Cheese (most)
Cream	Butter
Hazelnuts	Walnuts
Margarine	Pork
Bockwurst	Milk
Salami	Peanut Butter

Bologna
Corn Chips
Bacon
Duck
Avocado
Cocoa Powder
Sardines (canned)
Avocado Oil
Coconut Oil

Pork Links
Almonds
Knockwurst
Goose
Braunschweiger
Peanuts
Tuna (canned in oil)
Liverwurst

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
Chicken
Catfish
Cantaloupe
Bananas
Egg (white)
Turkey
Currants
Lima Beans

Asparagus
Plums
Prunes
Casaba
Raisins
Lentils
Beet Greens
Beef (lean)
Apples
Artichokes
Beets
Summer Squash
Flounder (baked)
Brussels Sprout
Chard

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
Pinto Beans
Pike (broiled)

Rice Bran
Lobster

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

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 may be consumed liberally during course of therapy:

Bass
Trout
Cod
Turkey
Flounder

Mackerel
Short Ribs
Perch
Sirloin
Pumpkin Seeds

Round Steak

The above list of foods are also high in glutamic and aspartic acid. These amino acid proteins help to improve tissue alkalinity.

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
Bread - White	Broccoli	Butter	Cabbage
Cakes	Candy	Cheese - All	Cocoa
Coconut Oil	Cole Slaw	Collards	Corn Chips
Cream	Dandelion Greens	Duck	Dulse
Goose	Grape Juice	Grapefruit Juice	Heart
Hazelnuts	Herring	Honey	Horseradish
Kale	Kelp	Kidney	Knockwurst
Liver	Liverwurst	Mackerel	Margarine
Milk	Mushrooms	Mustard Greens	Peanut Butter
Peanuts	Pork	Pork Links	Rutabagas
Salad Dressing	Salami	Sardines	Sardines - Canned
Soda	Soy Flour	Sugar	Tortilla Roll
Tuna - Canned	Turnips	Turnip Greens	Walnuts
Yeast	Yogurt		

FOODS THAT MAY BE INCREASED IN THE DIET

Apples	Apricots	Artichokes	Asparagus
Bananas	Bass	Beans - Green	Beans - Lima
Beans - Pinto	Beef - Lean	Beet Greens	Beets
Blackberries	Brazil Nuts	Bread - Rye	Bread - Wheat
Brussels Sprouts	Cantaloupe	Casaba	Catfish
Celery	Chard	Chicken	Chicken - Baked
Cod	Cornbread	Crackers - Rye	Cucumbers
Currants	Dates	Eggs	Egg - White
Fish - Broiled	Flounder	Flounder - Baked	Grains - Whole
Ham	Legumes	Lentils	Lobster
Oatmeal	Oranges	Perch	Perch - Broiled
Pike - Broiled	Plums	Prunes	Pumpkin Seeds
Raisins	Rhubarb	Ribs	Rice - Bran
Rice - Brown	Scallops	Snapper	Steak - Round
Steak - Sirloin	Strawberries	Summer Squash	Swordfish
Tomatoes	Trout	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
POTASSIUM PLUS	1	1	1
HCL PLUS (Digestive Support)	2	2	2
VITAMIN E PLUS	1	1	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	Parathyroid Activity Increased
Tissue Alkalinity	Thyroid Activity Decreased
Pancreatic Activity Increased	Hypochlorhydria
Adrenal Medullary Insufficiency	

Physical Characteristics May Include:

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

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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 occurrence 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.

TENDENCY	1	2	3	4	5	6	7	8
ANEMIA	██████████							
ARTERIOSCLEROSIS	████████████████████							
ARTHRITIS-OSTEO	██████████████							
ATHEROSCLEROSIS	██████████████							
BRADYCARDIA	██████████████████							
CALCULUS	██████████████████							
COLITIS	██████████████							
DEPRESSION	██████████████████							
DERMATITIS	██████							
DIVERTICULOSIS	██							
FATIGUE	██████████████████							
GASTRITIS	██							
INSOMNIA	██████████████							
OSTEOPOROSIS	██████████							
PREMENSTRUAL SYNDROME	██████████████							

COMMENTS

ANEMIA AND COBALT:

Cobalt is antagonistic to the mineral iron. Therefore, an elevated tissue cobalt or low iron/cobalt ratio may be indicative of a contributing factor to anemia.

ARTERIOSCLEROSIS AND MAGNESIUM DEFICIENCY:

Studies have found that dietary magnesium intake is frequently found to be low in individuals with blood sugar disturbances and arteriosclerosis compared to control groups not having these conditions.

Magnesium deficiency relative to calcium indicates poor calcium metabolism. This patient's pattern indicates that a tendency exists for calcium deposition into the soft tissues including the arteries.

OSTEOARTHRITIS:

High calcium to magnesium indicates a trend toward soft tissue deposition of calcium. This can result in hypertrophic osteoarthritic development.

ATHEROSCLEROSIS:

A magnesium deficiency relative to calcium indicates atheromatous development. The patient has a high calcium to magnesium ratio, which may be a predisposing factor toward atherosclerosis.

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

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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.

COLITIS:

Calcium and magnesium are necessary in a proper balance for normal muscular function. An elevation of calcium to magnesium is associated with a colitis-like condition. If calcium is elevated relative to magnesium, it may contribute to muscular tension.

DEPRESSION AND HYPOTHYROIDISM:

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

DIVERTICULOSIS:

A disturbance in the normal balance of calcium and magnesium can result in abnormal muscular contraction and relaxation. The present pattern indicates a possible disturbance in intestinal motility, and inflammation. This may be associated with some form of intestinal disturbance, such as, diverticulosis.

DRY SKIN AND ELEVATED CALCIUM:

Moisture of the skin is dependent upon adequate fluid retention in the cells. Excess calcium can cause a loss of cell fluid content or dehydration, thereby contributing to dry skin.

FATIGUE:

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

GASTRITIS:

High sodium relative to potassium has been associated with a gastritis-like condition.

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.

INSOMNIA:

Two types of insomnia should be distinguished in order to determine effective treatment.

INSOMNIA AND MAGNESIUM:

Insomnia characterized by going to sleep but awakening frequently is associated with an increased magnesium requirement. The person who tosses and turns at night, even though he may be unaware of it, could be suffering from an increased need for magnesium.

OSTEOPOROSIS AND CALCIUM:

Even though high tissue calcium is present in the slow metabolizer, an osteoporotic condition can still be a potential risk. Increased parathyroid activity will increase bone resorption and decrease calcium solubility. Therefore, calcium that is removed from the bone may not be entirely eliminated, resulting in a trend toward osteoporosis and calcinosis of soft

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tissues.

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.

PREMENSTRUAL SYNDROME AND MAGNESIUM:

The magnesium level is low relative to calcium indicating an increased requirement for magnesium. Studies have reported the beneficial effects of magnesium supplementation in controlling symptoms of PMS.

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 B12 *

Both vitamin B12 and its constituent cobalt, antagonize thyroid activity and disrupt the sodium/potassium relationship. Vitamin B12 should therefore be avoided at this time, especially if the patient is experiencing hypo-thyroidism or taking a thyroid support.

* 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

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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. After which, 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	Kale
Rutabagas	White Turnips
Cole Slaw	Fluorides
Sauerkraut	Horseradish
Soybeans	Chlorinated Water
Mustard	Walnuts

FOODS THAT CONTRIBUTE TO A REDUCTION IN METABOLIC RATE

The following foods should be temporarily avoided or reduced until the next evaluation. They may contribute to a further lowering of an already low metabolic rate. Unlimited intake can contribute to fatigue, headaches, joint stiffness, water retention, and weight gain.

Swiss Cheese	Turnip Greens
Kale	Blue Cheese

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Monterey Cheese
Mustard Greens
Mozzarella Cheese
Tortilla Roll
Almonds
Sardines
Hazelnuts
Torula Yeast
Parmesan Cheese
Dulse
Dandelion Greens

Soybean Flour
Yogurt
American Cheese
Brewers Yeast
Cheddar Cheese
Kelp
Carob Powder
Pancake Mix
Cream
Collards
Broccoli

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

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
Chicken
Catfish
Cantaloupe
Bananas
Egg (white)
Turkey
Currants
Lima Beans

Asparagus
Plums
Prunes
Casaba
Raisins
Lentils
Beet Greens
Beef (lean)
Apples
Artichokes
Beets
Summer Squash
Flounder (baked)
Brussels Sprout
Chard

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

Rice Bran

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Pinto Beans
Pike (broiled)

Lobster

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

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 may be consumed liberally during course of therapy:

Bass
Trout
Cod
Tuna
Flounder
Round Steak
Turkey

Mackerel
Short Ribs
Perch
Sirloin
Pumpkin Seeds
Swordfish

The above list of foods are also high in glutamic and aspartic acid. These amino acid proteins help to improve tissue alkalinity.

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.

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.

