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LABORATORY NO.:

1578527

PROFILE NO.:

2

SAMPLE TYPE:

SCALP

PATIENT: NEWMAN, JACKSON

AGE: 6

SEX: M

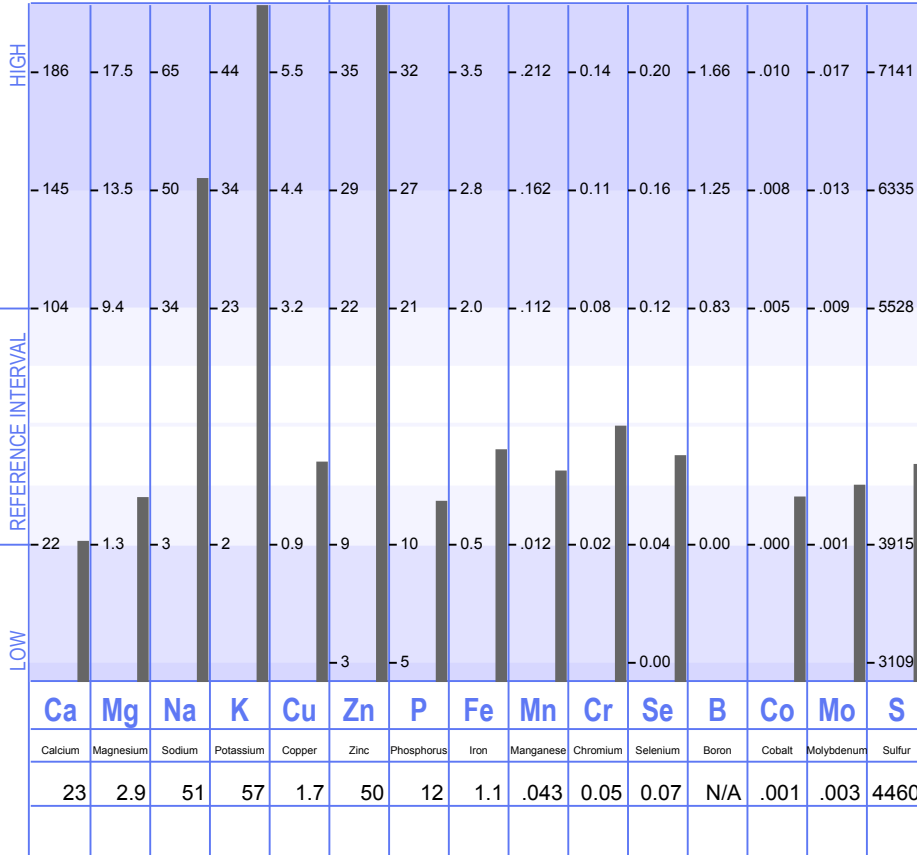
METABOLIC TYPE: FAST 1

REQUESTED BY: MIDDLETON, A

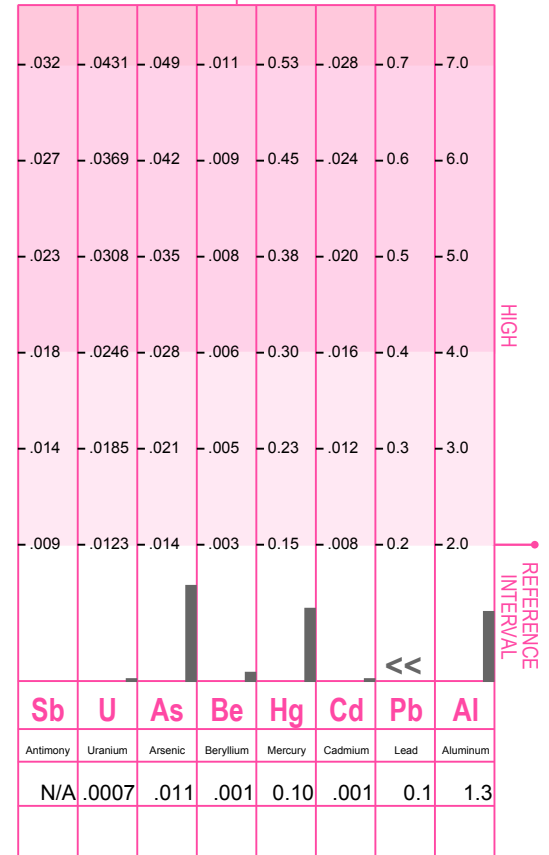
ACCOUNT NO.: 2216

DATE: 2/12/2020

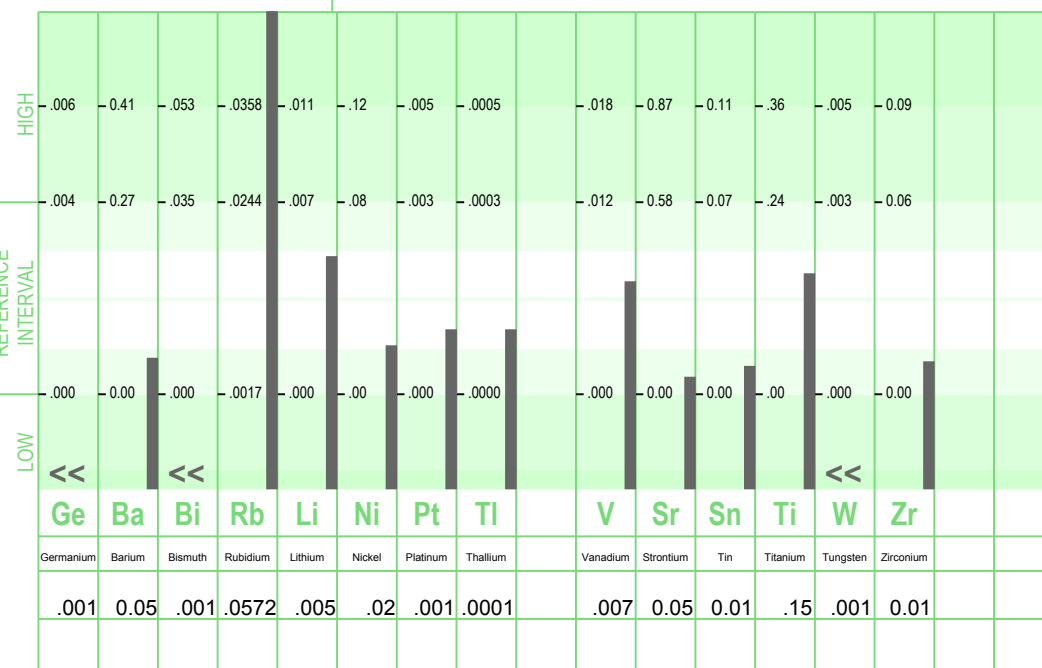
NUTRITIONAL ELEMENTS



TOXIC ELEMENTS



ADDITIONAL ELEMENTS



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

"QNS": Sample Size Was Inadequate For Analysis.

"N/A": Currently Not Available

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

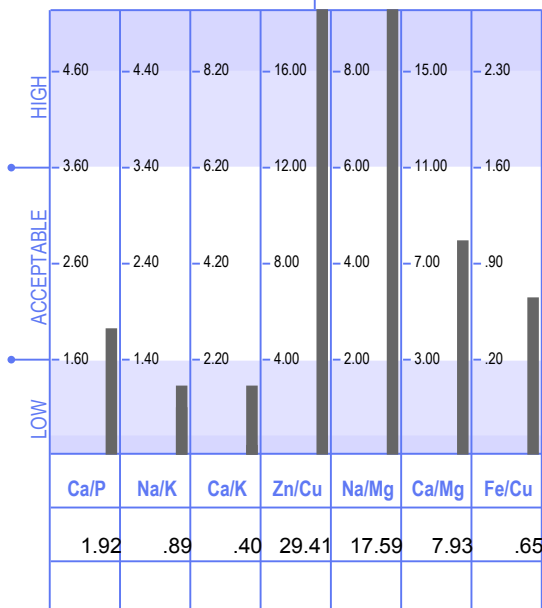
Laboratory Analysis Provided by Trace Elements, Inc.
Dallas, Texas USA an H.H.S. Licensed Clinical Laboratory. No. 45 D0481787

2/12/2020

CURRENT TEST RESULTS

PREVIOUS TEST RESULTS

SIGNIFICANT RATIOS



TOXIC RATIOS



ADDITIONAL RATIOS

RATIO	CALCULATED VALUE		EXPECTED
	Current	Previous	
Ca/Sr	460.00		263/1
Cr/V	7.14		8/1
Cu/Mo	566.67		356/1
Fe/Co	1100.00		615/1
K/Co	57000.00		6350/1
K/Li	11400.00		6350/1
Mg/B	N/A		21/1
S/Cu	2623.53		2668/1
Se/Tl	700.00		370/1
Se/Sn	7.00		3.2/1
Zn/Sn	5000.00		624/1

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 INTERVALS

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

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

THE FOLLOWING RECOMMENDATIONS SHOULD BE TAKEN ONLY WITH MEALS IN ORDER TO INCREASE ABSORPTION AND TO AVOID STOMACH DISCOMFORT. IF DISCOMFORT OCCURS SUPPLEMENTATION CAN BE REDUCED TO A MINIMUM THEN INCREASED GRADUALLY.

RECOMMENDATION	AM	NOON	PM
SYM-PACK VEGAN	1	1	1
MAGNESIUM PLUS	1	0	1
COPPER PLUS	1	0	1

THESE RECOMMENDATIONS ARE BASED UPON THE MINERAL LEVELS FOUND IN THE HAIR TISSUE MINERAL ANALYSIS AND MAY AT TIMES NEED MODIFICATION AS PER SPECIFIC NEED AND/OR INDIVIDUAL CIRCUMSTANCES. THESE RECOMMENDATIONS ARE PROVIDED ONLY AS A PROFESSIONAL GUIDE TO SUPPLEMENTAL ASSISTANCE.

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.

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 HEALTHCARE PROFESSIONAL.

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

FAST METABOLISM, TYPE #1

This patient is classified as a FAST METABOLIZER TYPE # 1. Generally speaking, the Fast 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.

Sympathetic Nervous System Dominance
Adrenal Activity Increased
Para-Thyroid Decreased
Tissue Acidity

Thyroid Activity Increased
Pancreatic Activity Decreased
Hyperchlorhydria

Physical Characteristics May Include:

Warm Body Temperature
Perspires Easily
Small Extremities, with Large Torso

Elevated Blood Pressure
Hyperexcitable

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 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 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
DEPRESSION								

COMMENTS

ALLERGIES:

High histamine levels are frequently found in fast metabolizing individuals. Calcium is required for the reduction of histamine in the serum. Low calcium is associated with excess serum histamine.

DEPRESSION, SODIUM AND POTASSIUM:

A low tissue sodium to potassium ratio is related to many emotional changes including depression. A low sodium to potassium ratio may also be related to phobias, withdrawal, repression and indecision.

CONTRAINDICATIONS

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

* VITAMIN A *

Vitamin A has a stimulating effect upon the thyroid gland and therefore may contribute to a concomitant increase in the metabolic rate. Vitamin A's action increases the tissue retention of the mineral potassium and antagonizes the effect of vitamin D, which can contribute to calcium loss or a lack of retention. At this time extra vitamin A supplementation should be avoided by the patient unless an inborn error of metabolism exists.

* ZINC *

An elevated zinc/copper ratio is known to lower the HDL/LDL ratio and thereby contribute to increased cholesterol levels. The patient should not be taking a zinc supplement exclusively as this may contribute to a worsening of the zinc/copper balance.

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 in the diet to aid in the improvement of the patient's chemistry.

GENERAL DIETARY GUIDELINES FOR THE FAST METABOLIZER

* INCREASE INTAKE OF HIGH PURINE PROTEIN FOODS...high purine protein sources include liver, kidney and heart. Other good sources include sardines, tuna, clams, crab, lobster and oysters. Unless notified otherwise, high purine and moderate purine protein intake should constitute approximately 33% of total daily caloric intake.

* INCREASE INTAKE OF MILK AND MILK PRODUCTS...such as cheese, yogurt, cream, butter (unsalted). Increase intake of nuts and seeds such as almonds, walnuts, peanuts, peanut butter and sunflower seeds. Foods high in fat unless notified otherwise should constitute approximately 33% of total daily caloric intake.

* REDUCE CARBOHYDRATE INTAKE...including unrefined carbohydrates. Sources such as cereals, whole grains and whole grain products are contraindicated for frequent consumption until the next evaluation. Carbohydrate intake in the form of unrefined carbohydrates should be approximately 33% of total daily caloric intake.

* AVOID ALL SUGARS AND REFINED CARBOHYDRATES...this includes white and brown sugar, honey, candy, soda pop, cake, pastries, alcohol and white bread.

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 drowsiness to hyperactivity in children, itching and rashes, headaches, high-blood pressure and arthritic pain.

Sensitivity to foods can develop due to biochemical (nutritional) imbalances, and which stress, pollution, and medications can aggravate. 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 avoid. 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 avoided completely for four days. After which, they should not be eaten more frequently than once every three days during course of therapy.

CANNED FOODS - (CONTRAINDICATED):

Canned foods should be eliminated from the diet. Most canned foods are high in salt and as such will contribute to excessive sodium levels and disturbed calcium metabolism.

NOTE: Canned foods frequently contain higher levels of toxic metals.

FOODS THAT STIMULATE HISTAMINES:

Consumption of the following foods can stimulate histamine release in certain metabolic types and may contribute to respiratory-type allergy reactions. These foods are to be avoided until the next evaluation or until notified otherwise by attending doctor.

Beet Greens	Rhubarb
Apples	Chocolate
Spinach	Black Tea
Eggplant	Strawberries
Sweet Potatoes	Peanuts
Blueberries	Green Beans
Pecans	Chard
Wheat Germ	Concord Grapes
Cocoa	Collards
Parsley	Blackberries

Beets

PHYTIC ACID AND REDUCED CALCIUM ABSORPTION:

The following foods contain high amounts of phytic acid. Phytic acid will combine with dietary calcium to form an insoluble calcium phytate that will reduce absorption. These sources should be avoided until calcium utilization has improved.

Strawberries	Oatmeal
Rye Bread	Wheat Bran
Wheat Germ	Rye Crackers
Whole Wheat	Blackberries
Cereals	Spinach
Brown Rice	Whole Rye
Figs	White Rice
Wheat Breads	

CALCIUM AND ALLERGIES:

A low calcium level is often associated with an increase in histamine levels. Excessive intake of the following foods can decrease calcium absorption and utilization, thereby contributing to a histamine-type allergic response when consumed. These sources should be reduced or eliminated from the diet until the next evaluation.

Whole Wheat	Turnip Greens
Cereals	Spinach
Sodium	Soft Water
Colas	Chard
Oatmeal	

FOODS THAT CONTRIBUTE TO A CALCIUM/POTASSIUM IMBALANCE:

The following foods should be avoided until the next evaluation or until notified otherwise by attending doctor:

Apricots	Apples
Peas	Chestnuts
Rye Crackers	Blackberries
Clams	Oranges
Cantaloupe	Brewers Yeast
Tomatoes	Kelp
Cucumbers	Potatoes
Coffee	Peaches

THE FOLLOWING HIGH SODIUM FOODS SHOULD BE REDUCED UNTIL THE NEXT EVALUATION:

Table Salt	Corn Chips
White Bread	Snack Dips
Potato Chips	Ritz Crackers
Canned Foods	Pickles
Margarine	Butter (salted)
Biscuit Mix	Baking Powder
Frankfurter	Ham (cured)
Bacon	Chipped Beef
Soups (most)	Corned Beef

TISSUE CATABOLISM AND LOW CALCIUM TO POTASSIUM:

Low calcium-to-potassium and low sodium-to-potassium is frequently indicative of excessive tissue protein breakdown (catabolism), which may result in a negative protein (nitrogen) balance. Complex carbohydrates are known to spare protein, and in conjunction with dietary fats, the sparing effects of carbohydrates are further enhanced. Due to the current metabolic profile, the previous carbohydrate, fat and protein intake suggestions found in the "GENERAL DIETARY GUIDELINES" should

not be followed at this time. Temporarily, carbohydrate intake should be increased to approximately 50%, fats approximately 25% and proteins 25% of the daily caloric intake.

DIETARY CONSIDERATIONS:

Magnesium is required in higher amounts in the presence of increased dietary sodium intake or retention. Sodium is currently high relative to magnesium.

- 1). Reduce sodium intake until magnesium status has improved.
- 2). Increase selection of calcium and magnesium foods.
- 3). Use mineral water for drinking.
- 4). Avoid distilled or softened water for drinking.
- 5). Reduce alcohol intake.
- 6). Limit excessive protein consumption (should not exceed 30%).

AMINO ACIDS THAT IMPROVE CALCIUM ABSORPTION:

Calcium absorption is greatly enhanced when the diet is high in the amino acids, lysine, arginine and histadine. These proteins also help to reduce acidity of the tissues. Both effects are favorable for the fast metabolizer, therefore addition of any of the following foods to the diet is recommended at this time:

Lima Beans	Salami
Garbanzo Beans	Sausage (lean)
Rumproast	Lamb
Skim Milk	Smelt
Beef Stew	Vegetable Stew
Cottage Cheese	Canadian bacon
Spare Ribs	Peanuts
Lentils	Bass
Flounder	Heart
Cod	Chuck Roast
Ham	Liverwurst

SPECIAL NOTE:

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.

NO PART OF THIS INTERPRETIVE REPORT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR ANY INFORMATION STORAGE OR RETRIEVAL SYSTEM WITHOUT PERMISSION IN WRITING FROM TRACE ELEMENTS, INC., U.S.A.

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