

Metabolic Profiling: A Breakthrough in Nutritional Science

by Mannatech Inc.

Nutritional Controversy

Make no mistake about it, health is a hot issue and millions of Americans know it! Polls have shown that one out of every three people is on some kind of special diet. Over 20 million people take vitamin supplements every day. Unfortunately, however, confusion regarding nutrition pervades the entire health industry. Even physicians and nutritional authorities hold radically different opinions of what is "right"!

As an example, Dr. Robert Atkins and the late Nathan Pritikin, noted American authorities on nutrition, each promoted a celebrated, yet diametrically opposed, dietary regimen. One was generally at the other's throat concerning the correctness of his personal program and the incorrectness of the other's. Atkins promoted a high-protein, low-carbohydrate, moderate-fat diet. Pritikin promoted a low-fat, low-protein, high-carbohydrate diet. While the numerous health proponents may be vastly different in their theories, they are all the same in one respect, and this is their collective critical flaw: They treat each of us as though we were exactly the same.

Roger J. Williams, Ph.D., D.Sc., the noted biochemical researcher from the University of Texas, cut right to the heart of that flaw. In one of his books on the subject of individualizing nutritional requirements he states, "If we continue to try to solve (nutritional) problems on the basis of the average man, we will be continuously in a muddle. Such a man does not exist."

How Do I Choose?

Clearly, a well-balanced diet is important to health...but, what constitutes a well-balanced diet? Evidence is also growing that nutritional supplementation may be a valuable tool for prevention. If so, how much and what kind of supplements should one take? Health food stores are overflowing with books touting this vitamin for this problem and another vitamin for a different problem.

However, one person can take a touted nutrient for a particular problem and get relief. Another may take the same product for the same reason and obtain no effect at all, while a third person may actually feel worse or develop some additional problem from taking the same nutrients! Why is this? Why is it so hard to get the desired result? Why can one eat the best organic foods, have no bad health habits, exercise regularly, get plenty of fluids and sufficient rest, and take hundreds of dollars' worth of the finest nutritional supplements money can buy and still not feel well?

According to Dr. Roger Williams, it is because of our genetic biochemical individuality. Each individual is born with a genetic need for certain types and combinations of foods and therefore, any form of nutritional supplementation must also be formulated

to support that particular diet. Taking the wrong supplement, regardless of the quality of the product, can negatively impact the results of the right diet.

Cultural Differences

Think of the differences that must exist in the metabolism of the Eskimo as compared to that of the vegetarian East Indian. The diet for a traditional Eskimo included up to ten pounds of meat a day plus enormous amounts of fat. Yet, Eskimos show no evidence of cancer or cardiovascular disease in their history. The reason is that their physiologies became perfectly suited to their environment and foodstuffs through natural adaptation and mutation over countless generations. Thus, Eskimos actually developed a genetic need for high protein and high fat in order to survive and be healthy. But, transpose the diet of the Eskimo to that of the East Indian, and you could create significant health problems.

Because North America is such a cultural melting pot, no one genetic blueprint for nutrition can emerge that is as obvious as that of the Eskimo. Nonetheless, to achieve and maintain optimal

health, each of us has very specific genetic requirements for nutrition. Without satisfying those, none of us can be truly healthy.

If that's the case, how would any of us determine these individual nutritional requirements? Through Mannatech's scientifically designed program of metabolic profiling. That's how!

The History of Metabolic Profiling

This idea, by the way, is not new. The roots of the concept of biochemical individuality can be traced to antiquity. In the first century, the Roman philosopher, Lucretius, is credited with saying, "One man's meat is another man's poison."

In 1919, Frances Pottenger, M.D., published his "*Symptoms of Visceral Disease*" in which he established the autonomic nervous system as the basis of metabolic individuality and correlated the influence of various nutrients on the autonomic nervous system.

In the 1950s, Dr. Melvin Page and Dr. Henry Bieler concurrently developed concepts of "endocrine types," e.g., thyroid, adrenal and pituitary types, and their relationship to various foods. Dr. George Watson, also in the '50s, developed the concept of the variable influences of oxidation in different individuals which he classified as either Fast Oxidizers or Slow Oxidizers.

Though he was not the first to champion research into individual differences, Dr. Roger Williams was surely the most prestigious scientist to do so. The discoverer of pantothenic acid (Vitamin B-5) and the first biochemist to be elected president of the American Chemical Society, Williams wrote:

"That malnutrition, unbalanced or inadequate nutrition, at the cellular level should be thought of as a major cause of human disease seems crystal clear to me. It is the inevitable conclusion to be drawn from the facts produced by decades of biochemical research."

Dr. Williams is the originator of the *genetotropic* theory which suggests that every human being has distinct nutritional needs.

Computerized Data

Dr. William D. Kelley, who became world renowned in the 1980s for his work with terminal cancer patients, was the first to utilize computer technology to explore Dr. Williams's concept of nutritional individuality. He developed a computerized system of metabolic profiling based on the genetic influence on the autonomic nervous system. More than 10,000 patients were enlisted into the program which has provided one of the largest collections of data on metabolic profiling and individualized nutrition ever compiled.

Members of Kelley's research team later expanded this computerized analysis to look beyond the autonomic influence and into the interrelationship of the body's three main systems responsible for the creation, maintenance and control of energy: the autonomic nervous system, the oxidative system, and the endocrine system.

The Autonomic System controls all involuntary activity in the body: digestion, elimination, heart beat and immune activity, for example. It is comprised of two divisions: Sympathetic and Parasympathetic. The Oxidative System is concerned with the rate at which nutrients are converted to energy in the cells through a process called oxidation. The Endocrine System exerts its influence on cellular metabolism through the secretion of hormones which regulate various activities in the body.

Genetically, each person has inherited various strengths and weaknesses in each of these systems. Some people are more strongly influenced by the Sympathetic part of the Autonomic Nervous System. Others are influenced more strongly by the Parasympathetic. Some people are Fast Oxidizers; others are Slow Oxidizers. These variances provide the basis for all our physiological, psychological and diet-related characteristics.

For example, Sympathetic types tend to have high energy and excellent concentration, yet tend also to have weak digestion and dry skin. Slow Oxidizers tend to burn their foods too slowly and thus can have poor appetites. Pituitary Endocrine types tend to gain weight eating dairy products. Adrenal types tend to lose weight eating dairy products.

Each individual nutrient can have a more pronounced Parasympathetic or Sympathetic influence, affect either Fast or Slow Oxidation, or trigger a particular endocrine gland. So, the key to determining a well-balanced diet or supplement plan is to identify a metabolic profile for the general strengths and weaknesses of your Autonomic Nervous System, your Oxidative System, and your Endocrine glands, and then to eat foods and supplements that are designed to support your strengths while strengthening your weaknesses. This helps balance the body's energy-producing systems, thus promoting homeostasis, the state of optimal cellular balance.

Research has now provided the most scientifically based system of metabolic profiling and nutritional supplementation available. The result of an evolutionary process, the research spans some 25 years and involves the synthesis of extensive empirical research and the clinical experience of approximately 30,000 subjects. In 1996, the first self-scoring metabolic profiling survey was developed from this enormous data base and was subsequently licensed to Mannatech Inc.

Categories of Energy Systems

An individual's physiological, psychological and diet-related characteristics can be categorized according to their relationship to the three main energy-management systems. Through completing and scoring this survey, each person can see how his/her unique personal characteristics form certain patterns which fit into certain metabolic classifications.

Based on the results of this survey, individuals will be categorized into one of three broad metabolic profiles and provided with general dietary recommendations. Also, using the data obtained through years of clinical trials on various metabolic formulations, a distinct nutritional supplement product has been developed for each of these three profiles. Only the highest quality nutrients (FOODSTATE®), are combined with Ambrotose® complex to form Mannatech's new metabolically profiled nutritional supplements.

No other nutritional program or product is comparable. This comprehensive, in-depth approach illustrates once again Mannatech's commitment to remain on the cutting edge of the changing healthcare industry. We believe the combination of Mannatech's metabolically designed nutritional supplements and Mannatech's Ambrotose®-based phytochemical products provide the best natural approach to health-building that can be found anywhere. We have obtained the best of the best and it's time the people of the world were informed and educated as well as intellectually armed with the information absolutely essential to make choices that foster optimal health.

Metabolic Profile Survey and Product Selection Guide

Instructions:

- Place a check (✓) in the square to the left of each choice that best applies to you.
- Make only one selection per category.
- If no choice applies to you, leave that category unchecked.
- **Important:** The choices as written may not describe you exactly. So, it is very important that you choose the answer that best describes your tendencies. The answer doesn't need to be a perfect description, just an indication of your trend.
- Consider letting a close friend or family member check your answers for accuracy.
- Be as honest and accurate as you can. After all, you want to be sure to obtain the right product for your kind of metabolism.
- Some choices in some columns are purposefully left blank.

CHARACTERISTIC	✓ COLUMN 1	✓ COLUMN 2	✓ COLUMN 3
Aging	<input type="checkbox"/> Look older than others my age	<input type="checkbox"/> Look younger than others my age	<input type="checkbox"/>
Aloofness	<input type="checkbox"/> Cool, distant, aloof, loner, slow to make friends, hard to get to know	<input type="checkbox"/> Warm, open, expressive, easily make friends, approachable	<input type="checkbox"/>
Appetite	<input type="checkbox"/> Weak, lacking, diminished	<input type="checkbox"/> Strong, excessive, enhanced	<input type="checkbox"/> Average appetite
Chest Pressure	<input type="checkbox"/>	<input type="checkbox"/> Tend to get	<input type="checkbox"/>
Climate	<input type="checkbox"/> Love warm, hot weather	<input type="checkbox"/> Do well in cold, poor in hot	<input type="checkbox"/> Doesn't matter
Cold Sores and/or Fever Blisters	<input type="checkbox"/>	<input type="checkbox"/> Tend to get	<input type="checkbox"/>
Coughing	<input type="checkbox"/>	<input type="checkbox"/> Tend to cough most every day	<input type="checkbox"/>
Cracking Skin (any weather)	<input type="checkbox"/>	<input type="checkbox"/> Tend to get	<input type="checkbox"/>
Dandruff	<input type="checkbox"/>	<input type="checkbox"/> Tend to get	<input type="checkbox"/>
Desserts	<input type="checkbox"/> Love sweets, need something sweet with meal to feel satisfied	<input type="checkbox"/> Don't really care for sweet desserts, but like something fatty or salty (like cheese, chips or popcorn) for snacks after meals	<input type="checkbox"/> Can take them or leave them
Digestion	<input type="checkbox"/> Poor, weak, slow	<input type="checkbox"/> Good, strong, rapid	<input type="checkbox"/> Average digestion
Eating Before Bed	<input type="checkbox"/> Usually worsens sleep, especially if heavy food	<input type="checkbox"/> Usually improves sleep	<input type="checkbox"/> Doesn't matter, but heavy snacks are not the best
Eating Habits	<input type="checkbox"/> Eat to live - unconcerned with food and eating	<input type="checkbox"/> Live to eat - need to eat often to feel good, be at best	<input type="checkbox"/> Average eating habits and need for food, meal times, etc.
Emotional Expression	<input type="checkbox"/> Hard to express feelings, not naturally demonstrative	<input type="checkbox"/> Easily express feelings	<input type="checkbox"/>
Emotions	<input type="checkbox"/> Beneath surface, under control, non-emotional type, tend to hold feelings inside	<input type="checkbox"/> Wear heart on sleeve, others always know how I feel	<input type="checkbox"/>
Eye Moisture	<input type="checkbox"/> Tend toward dry eyes	<input type="checkbox"/> Tend toward moist or tearing eyes	<input type="checkbox"/>
Facial Coloring	<input type="checkbox"/> Tend toward pale, chalky	<input type="checkbox"/> Tend toward ruddy, rosy, flushed	<input type="checkbox"/>
Facial Complexion	<input type="checkbox"/> Tend toward dull, unclear	<input type="checkbox"/> Tend toward bright, clear	<input type="checkbox"/>
Fatty Food (if you like or dislike, not what you think is good for you)	<input type="checkbox"/> Don't care for it	<input type="checkbox"/> Love it, crave it, would like it often	<input type="checkbox"/> Take it or leave it
Fatty Food Reaction	<input type="checkbox"/> Decreases energy and well-being	<input type="checkbox"/> Increases well-being	<input type="checkbox"/> Average reaction
Fingernails	<input type="checkbox"/> Tend to be thick, hard, strong	<input type="checkbox"/> Tend to be thin, soft, weak	<input type="checkbox"/>
4 Hours Without Eating	<input type="checkbox"/> Doesn't bother	<input type="checkbox"/> Makes irritable, jittery, weak, famished or depressed	<input type="checkbox"/> Feel normal hunger
Gooseflesh	<input type="checkbox"/> Tend to form easily	<input type="checkbox"/>	<input type="checkbox"/>
Gum Bleeding	<input type="checkbox"/>	<input type="checkbox"/> Tend to get after brushing	<input type="checkbox"/>
Gum Color	<input type="checkbox"/> Light, pale	<input type="checkbox"/> Dark, pink, red	<input type="checkbox"/>
Hunger Feelings	<input type="checkbox"/> Rarely get, passes quickly, can go long periods w/o eating easily	<input type="checkbox"/> Often hungry, need to eat regularly and often	<input type="checkbox"/> When late for meals only, not between meals usually

CHARACTERISTIC	COLUMN 1	COLUMN 2	COLUMN 3
Insect Bite/Sting	<input type="checkbox"/> Weak reaction, disappears fast	<input type="checkbox"/> Strong, lasting reaction	<input type="checkbox"/>
Itching Eyes	<input type="checkbox"/>	<input type="checkbox"/> Tend to get	<input type="checkbox"/>
Itching Skin	<input type="checkbox"/>	<input type="checkbox"/> Tend to get	<input type="checkbox"/> Average reaction
Juice or Water Fasting	<input type="checkbox"/> Can handle very well, feels good	<input type="checkbox"/> Fasting makes me feel awful	<input type="checkbox"/> React O.K., can fast if necessary
Meal Portions	<input type="checkbox"/> Prefer small	<input type="checkbox"/> Prefer large, or if not large, need it often	<input type="checkbox"/> Average
Orange Juice Alone	<input type="checkbox"/> Energizes, satisfies me	<input type="checkbox"/> Can make me light-headed, hungry, jittery, shaky, or nauseated	<input type="checkbox"/> No ill effects
Potatoes	<input type="checkbox"/> Not real fond of them	<input type="checkbox"/> Could eat them almost everyday, love them	<input type="checkbox"/> Take them or leave them
Red Meat, like a steak or roast beef meal	<input type="checkbox"/> Decreases energy and well-being	<input type="checkbox"/> Increases well-being, energy	<input type="checkbox"/> Average reaction
Saliva Amount	<input type="checkbox"/> Tend toward dry mouth	<input type="checkbox"/> Excessive saliva	<input type="checkbox"/>
Saliva Texture	<input type="checkbox"/> Tends to be thick, ropy	<input type="checkbox"/> Tends to be thin, watery	<input type="checkbox"/>
Salty Foods	<input type="checkbox"/> Foods often taste too salty	<input type="checkbox"/> Really love or crave salt on foods	<input type="checkbox"/> Average like for
Skin Healing	<input type="checkbox"/> Cuts heal slowly	<input type="checkbox"/> Cuts heal quickly	<input type="checkbox"/> Average healing time
Skin Moisture	<input type="checkbox"/> Tend toward dry skin	<input type="checkbox"/> Tend toward oily/moist skin	<input type="checkbox"/> Average skin moisture
Skipping Meals	<input type="checkbox"/> Can skip with no ill effects	<input type="checkbox"/> Must eat regularly (or often)	<input type="checkbox"/> Can get by w/o eating but really feel best eating 3 meals per day
Snacking	<input type="checkbox"/> Rarely or never want snacks	<input type="checkbox"/> Want to eat between meals	<input type="checkbox"/>
Sneezing (any time)	<input type="checkbox"/>	<input type="checkbox"/> Tend to sneeze every day	<input type="checkbox"/>
Sour Foods (vinegar or pickles or lemons or sauerkraut or yogurt)	<input type="checkbox"/> Don't care for, want or crave	<input type="checkbox"/> Really like	<input type="checkbox"/> Sometimes like
Sweets	<input type="checkbox"/> Can do fairly well on	<input type="checkbox"/> Don't do well on, sweet foods can seem too sweet	<input type="checkbox"/> No noticeable bad effect
Vegetarian Meal	<input type="checkbox"/> Is satisfying	<input type="checkbox"/> Not satisfying, or bad result, become hungry soon after or feel unsatisfied	<input type="checkbox"/> O.K., but not really satisfying
Wheezing	<input type="checkbox"/>	<input type="checkbox"/> Tend to get	<input type="checkbox"/>
If I eat MEAT for BREAKFAST like ham, bacon, sausage, steak, or salmon...	<input type="checkbox"/> I get tired, sleepy, lethargic and/or very thirsty by midmorning	<input type="checkbox"/> I feel great, energetic, have good stamina, keeps me going without getting hungry before lunch	<input type="checkbox"/> It's o.k., but not in large proportions
If I eat MEAT for LUNCH like hamburger, steak, roast beef or salmon...	<input type="checkbox"/> I get tired, sleepy lethargic and/or lose my energy in the afternoon	<input type="checkbox"/> I feel great, energetic, have good stamina, keeps me going without getting hungry before dinner	<input type="checkbox"/> It's o.k., but not in large proportions
If I feel low on energy...	<input type="checkbox"/> Fruit, pastry, or candy restores and gives me lasting energy; meat or fatty food makes me more tired	<input type="checkbox"/> Meat or fatty food restores my energy, fruit, pastry or candy makes me worse... quick lift followed by a crash	<input type="checkbox"/> Pretty much any food restores my energy
In a social setting I'm...	<input type="checkbox"/> Introverted, shy, quiet, non-talkative	<input type="checkbox"/> Extroverted, social, expressive, easily make conversation	<input type="checkbox"/>
TOTALS	<input type="checkbox"/> COLUMN 1	<input type="checkbox"/> COLUMN 2	<input type="checkbox"/> COLUMN 3

Steps for Product Selection

Great. That was easy, right? Now, on to finding out which product to order...Just follow these steps:

1. Add up the total choices made in each column and enter your total score in the space provided at the end of each column
2. If your highest score in one column is 5 points or more higher than both of the other two columns, and ...
if you made the most choices in column 1, Profile #1 is the product for you.
...if you made the most choices in column 2, Profile #2 is the product for you.
...if you made the most choices in column 3, Profile #3 is the product for you.

If the column with your highest score is not 6 points higher than both of the other two columns, find your results below:

3. If column 1 and column 2 are tied or have less than 5 points difference, Profile #3 is for you.
4. If column 1 and column 3 are tied or have less than 5 points difference, Profile #1 is for you.
5. If column 2 and column 3 are tied or have less than 5 points difference, Profile #2 is for you.
6. If all three columns are tied or have scores with 5 points or less difference (e.g. 13, 18, 16), Profile #3 is the product for you.

It's quite possible that due to various factors such as time, age, stress and activity levels, etc., your nutritional needs could change. Whenever you feel that a change may have taken place, answer again the questions above and re-do the steps for product selection.

Good luck and enjoy.

Metabolic Profiles

Remember, your diet is far more important and powerful than your supplements. Supplements should be — and in reality are — a “supplement” to your diet. If you eat the wrong foods for your type and take the right supplements for your type, the best you can hope for is that your supplements will offset, to some extent, the effects of your wrong diet. That would be a waste of money and potential benefit. But, if you eat the right foods for your type AND take the right supplements for your type, **then** you have a potentially powerful combination for impacting your performance, health and well-being!

1. Your diet plan allowable foods are believed to be the most conducive to supporting your type of metabolism. As such they should help balance your body chemistry. Try to eat just these foods as much as possible. It's OK to eat foods not from this list from time to time, but remember, the effect of nutrition is cumulative. That means, the closer you stick to your allowable foods, as time goes by, the more powerful will be the positive changes.
2. You do not have to think in terms of restricting calories. You should eat when you are hungry. In fact, skipping meals is not a good idea because your body might think you're starving. When this happens, your body's self-preservation mechanism might kick in which can lower your body's set point, thereby slowing down your metabolic rate, resulting in an increased tendency of your body to store food intake as fat instead of burning it up for energy.
3. Not only is the kind of food important (your allowable foods list), but also the ratio of proteins to carbohydrates **at each food intake** is extremely important as well. Think of it as your “fuel mix” (your food) for your “engines of metabolism” (your cells). The right fuel mix can provide you with the optimum energy production from your food intake. The wrong fuel mix can result in lowered energy production, sub-optimal performance and a decreased sense of well-being. The general optimal fuel mix for your type is divided into three categories: proteins, carbohydrates and oils/natural fats.

Proteins = meat, fowl, seafood, dairy
Carbohydrates = fruits, vegetables, grains
Fats = butter, oils, fatty foods
(nuts, seeds, cheese, other fatty foods)

Use the pie charts below to better understand these percentages. The exact percentage is not important. Note that we are not talking about grams or weighing your food. The idea here is to get the right proportions of proteins to carbohydrates, no matter how much you eat. Whether you eat just a few bites or a very large meal, you still need to think in terms of proportions of proteins to carbohydrates!

4. Note any reactions from 30 minutes to three hours after eating. If your reactions were positive, great! Go on to test the next meal, following the same procedure. If your reaction was poor, the next day, eat the same foods at the same meal, but adjust the proportion of proteins to carbohydrates. With some trial and error, you'll find the right fuel mix for your body for each fuel intake of the day.
5. Each profile page shows the formula for the recommended supplements developed for each metabolic profile.
6. The recommended nutrients in both Profile 1 and Profile 2 support two different dominant systems. Though the outward characteristics of any two dominant systems may be different, the same nutrients are needed to help restore balance. Therefore certain individuals may have opposing characteristics, yet have the same recommended nutrients.
7. Vegetarianism is first and foremost a philosophic choice. Genetic needs, which are the basis for Mannatech's Metabolic Profiling and for optimal nutrition, dictate the selection of specific foods. These genetic needs suggest that a strictly vegetarian diet may not produce the best result for Profile 2. Nevertheless, vegetarian protein in the form of legumes, nuts, seeds and dairy products, especially combined to provide complete proteins, may certainly be a choice.

SIGNS OF CHANGE:

What to Look For

The ideal reaction is a marked feeling of well-being. You'll have energy that lasts longer throughout the day, with plenty left over in the evening. You may start rising earlier in the morning and feeling more refreshed. Psychologically and emotionally the little things will probably bother you a lot less, and your whole outlook will be much brighter.

What To Do

This is the ideal reaction; however, you may be one of those individuals who experience some uncomfortable reactions due to the changing chemistry within you. This should not concern you, as it is a sign of good things starting to happen. These experiences are

referred to as “toxic reactions.” Your body is actually detoxifying or cleansing itself of impurities with the help of the proper nutrients. During this brief period you may develop headaches, loss of appetite, or blemishes. These symptoms can be alleviated by discontinuing use of the supplements for a day or two and drinking several glasses of water per day. You then may want to try taking one supplement each day, increasing the number until you're once again up to the recommended dose of three per day.

If your systems are extremely exhausted or out of balance, you may experience shortness of breath, a skin rash or an overall feeling that is just not right. If these symptoms occur, follow the same guidelines as mentioned above.

Recommended Foods – Profile #1

MEAT/FOWL	SEAFOOD	VEGETABLE	FRUIT	DAIRY	NUT/SEED	GRAIN	FAT/OIL																						
Chicken, breast	(Light fish)	Bean sprouts	Apple	Low-fat only	Springly	All OK	Minimize																						
Turkey, breast	Cod	Beet	Apricot	Cheese																									
Pork, lean	Flounder	Broccoli	Berries	Cottage Cheese	<table border="1"> <thead> <tr> <th>DESSERT</th> <th>BEVERAGE</th> <th>MISC.</th> </tr> </thead> <tbody> <tr> <td>Low-fat</td> <td>Fruit juice</td> <td>Chicken broth</td> </tr> <tr> <td></td> <td>Vegetable juice</td> <td>Horseradish</td> </tr> <tr> <td></td> <td></td> <td>Hot sauce</td> </tr> <tr> <td></td> <td></td> <td>Catsup</td> </tr> <tr> <td></td> <td></td> <td>Mustard</td> </tr> <tr> <td></td> <td></td> <td>Tomato sauce</td> </tr> <tr> <td></td> <td></td> <td>Tomato soup</td> </tr> </tbody> </table>	DESSERT	BEVERAGE	MISC.	Low-fat	Fruit juice	Chicken broth		Vegetable juice	Horseradish			Hot sauce			Catsup			Mustard			Tomato sauce			Tomato soup
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Eggs	Perch	Cabbage	Grape	Yogurt																									
	Scrod	Carrot	Grapefruit																										
	Sole	Celery	Lemon																										
	Tuna, white	Cucumber	Lime																										
	Turbot	Eggplant	Melon																										
		Garlic	Orange																										
		Horseradish	Peach																										
		Kale	Pear																										
		Leek	Pineapple																										
		Lettuce	Plum																										
		Mustard greens	Tangerine																										
		Onion																											
		Pepper																											
		Potato																											
		Scallion																											
		Spaghetti squash																											
		Sweet potato																											
		Tomato																											
		Yam																											
		Zucchini																											

Using your recommended foods listed above, try to eat according to the following ratios:

15%–20% Protein*

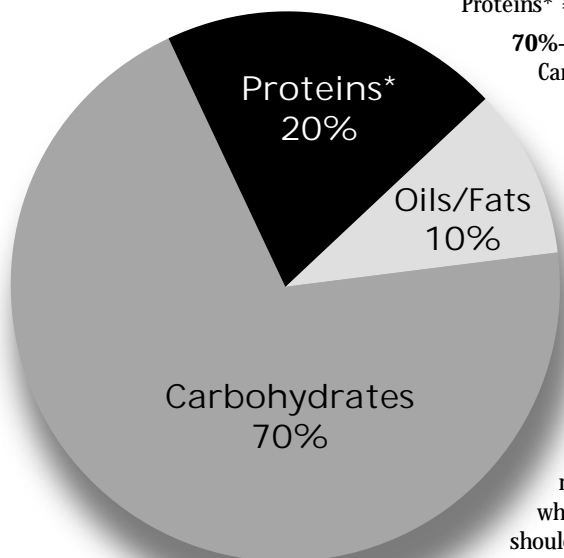
Proteins* = Meat, Fowl, Seafood, Dairy

70%–80% Carbohydrates

Carbohydrates = Fruits, Vegetables, Grains

5%–10% Oils/Natural Fats

Fats = Butter, Oils, Fatty Foods (nuts, seeds, cheese, other fatty foods)



You don't have to be exact. Just think in terms of proportions of the foods on your plate. Your metabolic type should do better with an overall higher percentage of carbohydrates relative to proteins and fats/oils. So, no matter how much food you put on your plate, whether it's a lot or a little, your plate should look something like this.

Three Profile #1 tablets contain: (Adults)

VITAMINS	POTENCY	% U.S. RDI*
A	2,500 I.U.	50
B1	27 mg.	1,800
B12	18 mcg.	300
B2	24 mg.	1,412
B6	26 mg.	1,300
Beta Carotene	1,000 I.U.	20
Bioflavonoids	95 mg.	**
Biotin	36 mcg.	12
C	187 mg.	312
Choline	19 mg.	**
D	400 I.U.	100
E	30 I.U.	100
Folic Acid	400 mcg.	100
Inositol	11 mg.	**
K	90 mcg.	113
Niacinamide	30 mg.	150
P.A.B.A.	5 mg.	**
Pantothenic Acid	5 mg.	50

*U.S. RDI – % of U.S. Reference Daily Intake.

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Three Profile #1 tablets contain: (Adults)

MINERALS	POTENCY	% U.S. RDI*
Boron	150 mcg.	**
Calcium	10 mg.	1
Copper	20 mcg.	1
GTF Chromium	150 mcg.	125
Iodine	3 mcg.	2
Iron	5 mg.	28
Magnesium	50 mg.	12
Manganese	12 mg.	600
Molybdenum	70 mcg.	93
Potassium	75 mg.	**
Selenium	15 mcg.	21
Silicon	500 mcg.	**
Vanadium	10 mcg.	**
Zinc	7 mg.	47
Ambrotose® complex***	75 mg.	**

**Nutritional needs not established as U.S. RDI.

***Ambrotose® complex (patent pending) – Naturally occurring plant polysaccharides including freeze-dried aloe vera gel extract—Manapol®.

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*(Vegetarians – see #7 under *Metabolic Profiles*, page 5)

Recommended Foods – Profile #2

MEAT/FOWL	SEAFOOD	VEGETABLE	FRUIT	DAIRY	NUT/SEED	GRAIN	FAT/OIL
Bacon	Abalone	Artichoke	Avocado	(Whole)	All OK	All OK	All OK
Beef	Caviar	Asparagus	Banana	Cheese			
Brains	Clam	Beans	Olive	Cottage cheese			
Duck	Crab	Carrot (some)	Apple (some)	Cream			
Goose	Crayfish	Cauliflower	Pear (some)	Eggs			
Kidney	Herring	Celery		Milk			
Lamb	Lobster	Corn		Yogurt			
Liver	Mackerel	Lentils					
Pork rib	Mussel	Mushroom					
Fowl, drumstick	Octopus	Peas					
Fowl, thigh	Oyster	Potato (some)					
Fowl, wing	Salmon	Spinach					
Red meat	Sardine	Squash					
Sweetbread	Scallop	Peanuts					
Veal	Shrimp						
Venison	Squid						
Heart	Tuna, dark						
	Anchovy						

DESSERT	BEVERAGE	MISC.
Butter-based pastries	Diluted fruit juice	Cream soup
Cheesecake	Vegetable juice	Sauces
Ice cream		Gravies
		Meat stock
		Salt, miso
		Soy sauce
		Tamari
		Yeast

Three Profile #2 tablets contain: (Adults)

VITAMINS	POTENCY	% U.S. RDI*
A	15,000 I.U.	300
B1	2 mg.	133
B12	125 mcg.	2,083
B2	5 mg.	294
B6	2 mg.	100
Beta Carotene	5,000 I.U.	100
Bioflavonoids	56 mg.	**
Biotin	57 mcg.	19
C	130 mg.	217
Choline	55 mg.	**
D	170 I.U.	43
E	62 I.U.	207
Folic Acid	200 mcg.	50
Inositol	25 mg.	**
K	50 mcg.	63
Niacinamide	38 mg.	190
P.A.B.A.	7 mg.	**
Pantothenic Acid	29 mg.	290

*U.S. RDI – % of U.S. Reference Daily Intake.
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Three Profile #2 tablets contain: (Adults)

MINERALS	POTENCY	% U.S. RDI*
Boron	500 mcg.	**
Calcium	75 mg.	8
Copper	700 mcg.	35
GTF Chromium	50 mcg.	42
Iodine	100 mcg.	67
Iron	2 mg.	11
Magnesium	10 mg.	3
Manganese	2 mg.	100
Molybdenum	70 mcg.	93
Potassium	7 mg.	**
Selenium	15 mcg.	21
Silicon	2.5 mg.	**
Vanadium	10 mcg.	**
Zinc	15 mg.	100
Ambrotose® complex***	75 mg.	**

**Nutritional needs not established as U.S. RDI.
***Ambrotose® complex (patent pending) – Naturally occurring plant polysaccharides including freeze-dried aloe vera gel extract—Manapol®.
Mannatech™ and Ambrotose® are trademarks of Mannatech, Inc. Manapol® is a trademark of Carrington Labs Inc.

Using your recommended foods listed above, try to eat according to the following ratios:

45%–50% Protein*

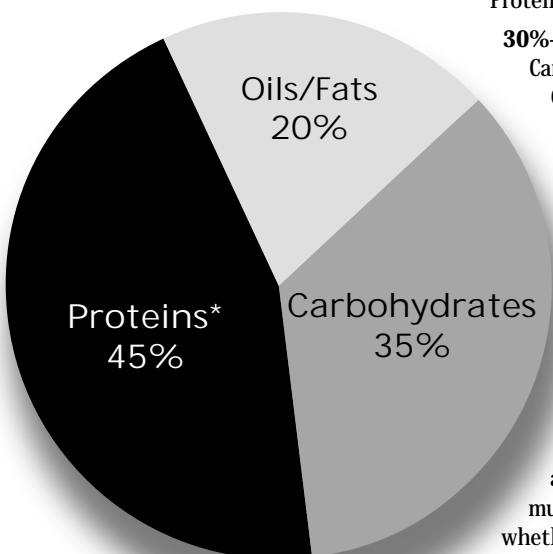
Proteins = Meat, Fowl, Seafood, Dairy

30%–35% Carbohydrates

Carbohydrates = Fruits, Vegetables, Grains

20% Oils/Natural Fats

Fats = Butter, Oils, Fatty Foods (nuts, seeds, cheese, other fatty foods)



You don't have to be exact. Just think in terms of proportions of the foods on your plate. Your metabolic type should do better with an overall higher percentage of proteins relative to carbohydrates and fats/oils. So, no matter how much food you put on your plate, whether it's a lot or a little, your plate should look something like this.

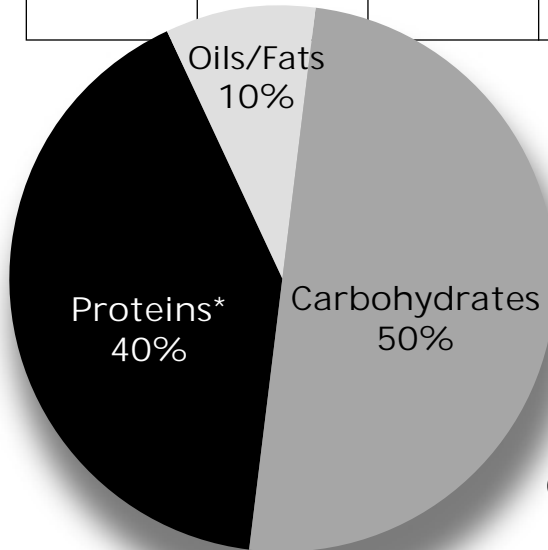
* (Vegetarians – see #7 under Metabolic Profiles, page 5)

Recommended Foods – Profile #3

MEAT/FOWL	SEAFOOD	VEGETABLE	FRUIT	DAIRY	NUT/SEED	GRAIN	FAT/OIL
All OK	All OK	All OK	All OK	All OK	All OK	All OK	All OK

Eat as much variety as possible from day to day.

DESSERT	BEVERAGE	MISC.
All OK	All OK	All OK



Using your recommended foods listed above, try to eat according to the following ratios:

40%–45% Protein*

Proteins = Meat, Fowl, Seafood, Dairy

50%–55% Carbohydrates

Carbohydrates = Fruits, Vegetables, Grains

10%–15% Oils/Natural Fats

Fats = Butter, Oils, Fatty Foods (nuts, seeds, cheese, other fatty foods)

You don't have to be exact. Just think in terms of proportions of the foods on your plate.

Your metabolic type should do better with an overall higher percentage of carbohydrates relative to proteins and fats/oils. So, no matter how much food you put on your plate, whether it's a lot or a little, your plate should look something like this.

Why is there no blood work done in metabolic typing?

The purpose of metabolic evaluation is to determine what we refer to as an overall metabolic style of functioning. We are looking for patterns which can be placed into different classifications or profiles, not specific individual problems or characteristics. We are looking for patterns because nutrients have been correlated to these different patterns. We know how individual nutrients influence body systems such as the Autonomic Nervous System, the Oxidative System and the Endocrine System. Metabolic profiling looks at the body as a whole, starting at the systemic level and going backward to the organs and glands, the tissue level, the cellular level, and beyond that, to the nuclear and subnuclear levels.

Blood analysis, however, only focuses on one particular level of the body. It is like tunnel vision. It's the difference illustrated in viewing a forest from an airplane, seeing how the land lies in the forest, seeing the overall patterns from the air, as opposed to being on the ground in the forest, looking at one individual tree. When you take a blood test, it is like looking at a tree. It is not like looking at the forest from the air and observing a pattern.

Furthermore, blood is quite misleading when it comes to nutritional status. The blood can give you information about an organ dysfunction, but it does not reveal the basis for its dysfunction. In other words, from a blood test we could see that you have liver disease, but could not tell you its cause. Because a blood test doesn't show us what is needed, it is of very little value to us in terms of designing a nutritional program.

Furthermore, blood tests can even be deceiving. That happens because the blood is a homeostatic mechanism, which means the blood is designed to balance or maintain normal levels

of nutrients at all times and at all costs. If the blood does not maintain a normal level of a nutrient required by the body, the human organism dies. For instance, you may find a normal level of calcium in the blood; however, that does not tell you what the blood or the body is doing to maintain the normal calcium level. The body may be pulling calcium out of the bones, teeth or hair. This is not a normal situation, yet it produces a normal level of calcium in the blood. It is not uncommon to see blood nutrient levels within relatively normal ranges even in terminally ill cancer patients.

From the standpoint of designing nutritional programs to support individual nutritional requirements, you can see that the blood is not a useful parameter to use. It is like looking for the right answers but asking the wrong questions. We would be looking for the right information - nutritional status - but we would be using the wrong viewpoint to obtain that nutritional status if we examine the blood by itself.

Three Profile #3 tablets contain: (Adults)

VITAMINS	POTENCY	% U.S. RDI*
A	7,500 I.U.	150
B1	7 mg.	467
B12	68 mcg.	1,133
B2	8 mg.	471
B6	10 mg.	500
Beta Carotene	2,500 I.U.	50
Bioflavonoids	75 mg.	**
Biotin	52 mcg.	17
C	170 mg.	283
Choline	40 mg.	**
D	210 I.U.	53
E	50 I.U.	167
Folic Acid	300 mcg.	75
Inositol	20 mg.	**
K	90 mcg.	113
Niacinamide	32 mg.	160
P.A.B.A.	6 mg.	**
Pantothenic Acid	23 mg.	230

*U.S. RDI – % of U.S. Reference Daily Intake.
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Three Profile #3 tablets contain: (Adults)

MINERALS	POTENCY	% U.S. RDI*
Boron	300 mcg.	**
Calcium	60 mg.	6
Copper	300 mcg.	15
GTF Chromium	80 mcg.	67
Iodine	30 mcg.	20
Iron	3.5 mg.	19
Magnesium	25 mg.	6
Manganese	8 mg.	400
Molybdenum	70 mcg.	93
Potassium	12 mg.	**
Selenium	15 mcg.	21
Silicon	2 mg.	**
Vanadium	10 mcg.	**
Zinc	10 mg.	67
Ambrotose® complex***	75 mg.	**

**Nutritional needs not established as U.S. RDI.

***Ambrotose® complex (patent pending) – Naturally occurring plant polysaccharides including freeze-dried aloe vera gel extract—Manapol®.

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*(Vegetarians – see #7 under *Metabolic Profiles*, page 5)