

## An Introduction to Metabolic Typing

Metabolic Typing is a fusion of two systems: (George Watson's work with the Oxidative system, and William Donald Kelley's work with the Autonomic system.) One or the other of these two systems (the Oxidative or the Autonomic) is more dominant in controlling your metabolism. We will identify: 1) which system is your dominant; and 2) which sub-type within that system characterizes the individual (Fast or Slow Oxidizer within the Oxidative system, and Sympathetic or Parasympathetic within the Autonomic system).

It is important to know both the systems because foods have opposite pH effects depending on which group you are in (Group I or Group II) of the two dominance systems. Foods that acidify the two Oxidizers (Fast or Slow Oxidizers) will alkalize the two Autonomics (Sympathetic or Parasympathetic) and vice versa. Acidifying the Oxidizers is desirable for the overly alkaline Slow Oxidizer, but contraindicated for the overly acid Fast Oxidizer & Alkalizing the Autonomics is desirable for the overly acid Sympathetic, but undesirable for the overly alkaline Parasympathetic. Because each one of these pairs is from opposite dominance systems, the same foods affect them oppositely, thereby helping each one to recover metabolic balance: the overly alkaline person is acidified, and the overly acidic person is alkalized. Identifying your Metabolic Type, allows us to choose the foods that work best for your particular metabolism. It permanently ends the guessing game & confusion over conflicting dietary recommendations.

The Group I types (Slow Oxidizers and Sympathetic) do best on a diet that is lower in protein and fat, and higher in complex carbohydrates. The Group II types (Fast Oxidizers and Parasympathetics) do best on a diet that is higher in protein and fat, and lower in complex carbohydrates.

## Understanding the Testing Procedures of Metabolic Typing

When you arrive for your appointment, I will review the Questionnaire and Medical History Form, while you provide urine and saliva samples. Next, we will determine your weight and body fat. I will take a series of blood pressure and pulse readings, and check your respiration rate and breath holding capacity, followed by the first in a series of four, timed blood glucose readings. Then I will give you a glucose challenge drink. All of the data collected up to this point serves as a series of baseline readings against which the results of all the subsequent tests are compared.

When you drink the glucose challenge drink you will have been fasting for 6-12 hours, generally not having eaten or drunk anything (except plain water) since dinner the night before. The drink itself is a modified version of the much more invasive glucose challenge drink given to test for diabetes; our "mini glucose challenge" contains approximately 44 grams of glucose (less than half of what is used in the medical glucose challenge drink) and 10 grams of cream of tartar, which yields approximately 1 gram (1000 mg) of potassium, diluted in 12 ounces of water. Many people find, to their surprise, that this drink is not especially sweet, but rather has a pleasant lemony tartness or "tanginess" to it, with an undercurrent of sweetness. Both of its ingredients will affect the metabolism, with the glucose primarily targeted at the Oxidative system (the system that generates energy in the body) and the potassium primarily targeted at the Autonomic system (the system that processed the energy).

As its name implies, the glucose challenge drink is designed to challenge your metabolism, to nudge it one way or the other. How your body handles this drink gives me valuable information that is crucial in determining their Metabolic Type.

This drink, which has been used since 1988 and was modified from the writings of George Watson Ph.D., the father of the Oxidative system, who describes it in his groundbreaking ( and sadly out –of-print) book *Nutrition and your Mind*. The inclusion of the potassium was drawn from the work of William Donald Kelley D.D.S., who built on the earlier research of Francis Pottenger M.D. to develop the Autonomic system. In addition to affecting all subsequent readings (saliva and urine pH, blood pressure and pulse, respiration rate and breath holding capacity), the glucose challenge drink is also used to infer the pH (or relative acidity or alkalinity) of the blood. Directly testing blood pH is impractical, invasive and costly and involves drawing blood intravenously four times over a fourteen-hour period. This test has been done over several hundred times and it was discovered that it is much simpler to infer the blood pH from the readings given by the glucometer (glucose meter) designed for monitoring blood sugar readings.

Using a small drop of blood drawn from a fingertip with a spring-loaded lancet, the initial blood glucose reading is taken immediately before the glucose challenge is administered. This is used as a baseline against which to compare the following three readings, taken at subsequent 30, 45 and 20 minute intervals. How quickly or slowly the glucose is metabolized, or cleared from the bloodstream, allows me to infer, respectively, the relative acidity or alkalinity of the blood. (Note: **all blood is somewhat alkaline**, never varying much more than two tenths of a percent on either side of the idea level of 7.46; I use the terms acid or alkaline only to indicate whether the blood is on the acid or alkaline side of this ideal). This information does not directly tell me if an individual is an Oxidative type (Fast or Slow Oxidizer) or an Autonomic type (Sympathetic or Parasympathetic), but, once we have determined that from the other markers, it does narrow down which sub-type within that system characterizes the individual. (Fast Oxidizers and Sympathetics have relatively acid blood; Slow Oxidizers and Parasympathetic have relatively alkaline blood).

Whether an individual is Oxidative or Autonomic is primarily determined by how the glucose challenge drink affects the second round of readings: whether the saliva and urine have become more acid or alkaline and whether the blood pressure, pulse, respiration rate and breath holding capacity increase or decrease. I also factor in the client's subjective responses: Group I types ( Slow Oxidizers and Sympathetics ) tend to maintain their sense of well-being and physical energy, and do not get particularly hungry during the testing period; whereas, the Group II types ( Fast Oxidizers and Parasympathetics) tend to experience decreased levels of well-being and energy, and increased hunger.

The information pulled from the client's Questionnaire provides further clues to their Metabolic Type: Group I types tend primarily to circle the False column, while Group II types tend primarily to circle the True column. The Medical History form alerts me to the client's individual health concerns, as well as providing further metabolic clues, as particular diseases systems tend to be more characteristic of certain Metabolic Types. I also look for secondary imbalances: various urine tests scan for chemical pathologies; electrolyte stress or insufficiency relates to cardiovascular function; respiratory acidosis or alkalosis involves lung and kidney function; and anabolic/catabolic balance reflects energy production. Based on all these data I am able to recommend a diet and supplement plan to bring the metabolism back into balance. Imbalances result from improper diet, lack of exercise, stress, and toxicity, and are the underlying causes behind most diseases. Correcting them will enable the individual to enjoy the healthy productive life that is our birthright.

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