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Metabolic Type Theory Comparisons ©2011  
Metabolic Rate Theory Comparisons

This section is presented to show how creative minds in understanding the complex biochemical nature of the human body can distill it into its essence in a format that is easy to understand. Three men have worked in the realm of the autonomic nervous system extensively; William D. Kelley, DDS, MS, George Watson, Ph.D. (science), and David Watts, Ph.D., DC.

William Donald Kelley, DDS, MS, is best known for having the best track record for treating cancer in the history of modern medicine. Found on this site is his first pamphlet on the self-treatment of cancer, and the seminal work on Dr. Kelley's best 50 cases by Nicholas Gonzales, M.D., and some other very interesting data showing why Kelley succeeded in his treatment of cancer. Dr. Kelly was a *true physician*, incredible intellect. He had a grasp of the autonomic nervous system never seen in modern medicine. He had a brilliant, but stubborn, mind.

Dr. Kelley was the first to reason and compile evidence that diet effects the autonomic nervous system in such a way that it can be manipulated through dietary supplementation. Dr. Kelley had reason and research to prove 12 different variants of metabolic type. To confuse what could have otherwise been a simple classification system, Kelley broke the twelve classifications into three groups: Kelley Type 1, 4, 6 and 11 which he considered to be sympathetic dominant; Kelley Type 2, 5, 7 and 12 which he considered to be parasympathetic dominant and Kelley Type 3, 8, 9 and 10 which he considered to be of balanced metabolic type. He formulated a very complex algorithm to derive these different types and the specific diets to suit each in order to move them to "the" ideal using a dietary questionnaire.

For his treatment of autonomic disorders and cancer Kelley did some clever things. Most noteworthy, he divided the different organs into their primary function in the autonomic system. From a scientific viewpoint most organs will have receptors for both, but to Kelley they function best for their intended use. For instance, any organ having to do with digestion, including the pancreas were classified by Kelley as parasympathetic dominant organs. Kelley believed that people had an innate center to their autonomic nervous system, be it sympathetic, parasympathetic or balanced type and forcing change would cause a decline in health. Nevertheless, for cancer, Kelley found that he must move the very common sympathetic dominant state towards the parasympathetic. To do so, he primarily used organ tissues particularly parasympathetic pancreas! Interestingly enough, a Philippine physician and doctors in China use raw porcine spleen, another parasympathetic organ, to treat cancer successfully. Coincidentally, and I do not understand why, this Filipino physician calls the spleen the pancreas! Sometime later I will tell the story of Mark who saw some profound results from eating raw porcine spleen.

As you will learn later when reading the works of embryologist John Beard, elsewhere on this site, who, decades prior to Kelley, used fresh pancreas extract injected directly into tumors to kill them; but this was not known to Kelley at the time he healed his own cancer and thousands of others. I cover Dr. Kelley in greater detail elsewhere. I am honored to have known him.

Kelley also had separated minerals into the dominant types of either sympathetic or parasympathetic types. Zinc was somewhat an anomaly for Kelley because it served both sides of the autonomic system, so he gave all patients a little zinc.

**TREATMENT VIA WILLIAM DONALD KELLEY, DDS, MS**

**Sympathetic Dominant**

**Kelley Type 1-6**

**Minerals**

Chromium  
Magnesium  
Manganese  
Potassium  
Zinc

**Parasympathetic Dominant**

**Kelley Type 7-12**

**Minerals**

Calcium  
Phosphorus  
Zinc

**Vitamins**

B1 Thiamin  
B10 PABA  
B2 Riboflavin  
B3 Niacin  
B6 Pyridoxine  
Biotin  
Vitamin D  
Vitamin K

**Other**

Amino Acids  
Hydrochloric Acid

**Organs**

Adrenal Cortex  
Bone Marrow  
Brain: Hypothalamus  
Intestine, Duodenum, Small, Large & Appendix  
Liver, Gall Bladder  
Lungs  
Pancreas  
Parotid  
Prostate  
Posterior Pituitary  
Spleen  
Stomach  
Thymus  
Tonsils

**Vitamins**

B12  
B15 Pangamic Acid  
B5 Pantothenic Acid  
Bioflavenoid Complex  
Calcium Ascorbate  
Choline  
Inositol  
Niacinamide  
Sodium Ascorbate (Cancer)  
Vitamin A  
Vitamin E

**Other**

Ribonucleic Acid

**Organs**

Adrenal medulla  
Anterior Pituitary  
Brain Pineal Thalamus  
Heart  
Ligaments, Connective tissue  
Muscular system  
Neuromuscular  
Reproductive: Uterus, Ovary, Testes,  
  
Skeletal system  
Thyroid, Parathyroid  
Urinary: Kidneys, Ureters, Bladder, Urethra  
Vascular Capillaries, Veins, Arteries

Dr. George Watson

Although Kelley was the pioneer in Metabolic Typing, Dr. Watson was the first, to my knowledge, who actually published a research paper describing how the different metabolic types, Watson Type I - Slow oxidizers and Watson Type II - Fast Oxidizers -- effected people with mental illnesses. Although not mentioned in his book, "*Nutrition And Your Mind - The Psychochemical Response*" by today's terms Type I slow oxidizers would probably include those who were sympathetic dominant. The Type 2 fast oxidizers would include those who were parasympathetic dominant. For the sake of the discussion, we are going to call them Slow and Fast metabolizers, but truthfully the term oxidizer is more scientific. It is my understanding from Kelley that Watson stole his work and cheapened it by not including the entire Kelley paradigm. Kelley is not here to argue his case, but from a clinical standpoint, Watson did have success using a modified Kelley approach. I believe his clinical success actually gives credit to and scientifically verifies Kelley's brilliant conception of the importance of Metabolic Typing in human health.

Dr. Watson found that he could objectively differentiate between Slow and Fast by looking at the pH of the blood. He determined that those with a pH less than or equal to 7.45 were Fast metabolizers,

conversely he determined that those with a pH greater than or equal to 7.47 were Slow metabolizers. He then studied the dietary habits of both and formulated a way to determine Slow and Fast metabolism by a simple diet questionnaire. I have included a slightly altered copy (in form not content) of his original questionnaire on this site. Go take the test and see if you are slow or fast! I have also included a clever aid to help in tallying the results.

In essence, for his study group, he found those who preferred high protein, particularly meat, high fat diets and salty foods, to be Fast metabolizers and those who preferred low meat protein, high vegetable and things sour were Slow metabolizers according to his pH studies.

Dr. Watson then formulated a series of vitamins, minerals and supplements that acted to bring the blood pH to within a narrow range centered around 7.46. By applying his designated supplements to either Type metabolizer, he was able to bring the blood pH back to within his designated range but with the added bonus that the mentally ill subjects actually did extremely well, some of them became by all standards "normal."

Dr. Watson's research was much more complex than we can mention here, but it is included in his book, mentioned above. Watson was a brilliant man with a keen insight and powers of observation. Suffice it to say that every psychiatrist should be applying his findings to every mentally ill patient, particularly those with schizophrenia.

Watson's ingenuity reminds me of Dr. William Philpott, mentioned elsewhere, and his work with the dietary factors that effect mental illness and later his work with simple magnets to cure many different ailments. Also the work of Abram Hoffer, M.D. PhD, who treats mental illness with natural supplements.

#### **TREATMENT VIA GEORGE WATSON, PH.D.**

##### **Watson Type 1 Slow Oxidizers**

**High Blood pH > = 7.47**

**(Sympathetic Dominant)**

##### **Minerals**

Chloride  
Copper Gluconate  
Iron  
Magnesium Chloride  
Manganese Oxide  
Potassium Citrate

##### **Vitamins**

Ascorbic Acid  
B1 Thiamin  
B2 Riboflavin  
B3 Niacin  
B6 Pyridoxine  
Biotin  
Folic Acid  
PABA  
Vitamin D  
Vitamin K

##### **Watson Type 2 Fast Oxidizers**

**Low Blood pH < = 7.45**

**(Parasympathetic Dominant)**

##### **Minerals**

Calcium  
Iodine  
Phosphorus  
Sodium  
Zinc Sulfate

##### **Vitamins**

B12 Cyanocobalamin  
B5 Pantothenic acid  
Bioflavenoids  
Choline  
Inositol  
Niacinamide  
Vitamin A  
Vitamin E

Last, but by no means least, is the brilliant work of David Watts, Ph.D., DC who owns [Trace Elements International](#) and wrote a definitive text on the interrelations of the minerals, nutrition and human health. Watts formulated his view of the autonomic nervous system and human health based on the results of a tissue mineral analysis, mostly hair. He found that the ratio of paired antagonist mineral interactions determined metabolic type. These mineral interactions were further divided into eight distinct types; four classes of Slow (parasympathetic dominant) and four Fast (sympathetic dominant). He does not classify a balanced type. Unlike Kelley and to a lesser extent Watson who used blood pH, Watts did not use a subjective diet questionnaire to make his determination of Metabolic Type. Furthermore, unlike Kelley and Watson (and Reams, below), Watts considers potassium to be cationic mineral. Elsewhere on this site Dr. Watts has provided some informative monographs on nutrient mineral interactions. I have relied upon TEI to provide me accurate and clinically relevant answers to mineral imbalance for over 25 years.

#### TREATMENT VIA DAVID WATTS, PH.D., DC

##### **Sympathetic Dominant**

###### **Fast 1-4**

###### **Minerals**

Barium  
Boron  
Calcium  
Cobalt  
Copper  
Magnesium  
Silicon  
Tungsten  
Vanadium  
Zinc

###### **Vitamins**

B12 Cyanocobalamin  
B2 Riboflavin  
Choline  
Vitamin D

###### **Transitional**

Copper  
Lithium  
Selenium  
Vanadium  
Zinc

###### **Organs**

Adrenal cortex (anabolic steroids)  
Pancreas  
Parathyroid  
Posterior pituitary  
Thymus

##### **Parasympathetic Dominant**

###### **Slow 1-4**

###### **Minerals**

Chromium  
Iron  
Lithium  
Manganese  
Molybdenum  
Phosphorus  
Potassium  
Selenium  
Sodium  
Sulfur  
Zinc

###### **Vitamins**

B1 Thiamin  
B3 Niacin  
B5 Pantothenic  
B6 Pyridoxine  
B10 (PABA)  
Bioflavenoids (rutin)  
Inositol  
Vitamin A  
Vitamin C  
Vitamin E

###### **Organs**

Adrenal Medulla  
Anterior Pituitary  
Thyroid

Watts' determination of metabolic type objectively, mirrors the results of Watson and Kelley through their subjective dietary questionnaire and Reams (below) through objective pH testing of the urine and saliva. Dr. Watts includes in his report some suggestions for correction using glandular and mineral material, which to me, are in effect minimalist especially for those who are sympathetic dominant. My clinical experience shows that those who are sympathetic dominant are actually losing vital minerals that desperately need to be replaced while those who are parasympathetic dominant have a difficulty in using the minerals they already possess. I am a mineral manipulator going to greater extremes than those suggested by Watts. There are scientific reasons for doing this, the least of which is that most minerals are derived from the food we eat.

There is an old saying, "You are what you eat." This is wrong. You are what you digest, absorb and assimilate. More on my approach elsewhere on this site.

One final word and we'll end the subject for now. Carey Reams, Ph.D., also worked with the autonomic nervous system but looked at it from an energy perspective. He did specify a few vitamins and minerals like did Kelley, Watson and Watts, but he wrote a dietary algorithm to balance the body between an acid and alkaline condition primarily using calcium of different types. Being an agronomist by training and understanding the role of different agricultural forms of calcium, his theory of balance was centered around knowledge of the importance of calcium in plant health as well in the bones and blood for human health. He knew that inorganic calcium was very difficult for humans to absorb, but he managed find a few forms of anionic calcium, one neutral and one slightly cationic form that worked as such in the body. He also had a firm grasp on the function of both anionic and cationic energy states.

With this knowledge, Reams eventually found a source of easily tested samples we all have available: urine and saliva. He tested the pH of both and the urine only for ammonia and nitrate nitrogen, conductance, Brix (specific gravity / dissolved solutes on a different scale than normal urine specific gravity) and particulate matter. Using these, he classified people as cationic (acid) or anionic (alkaline) and determined the proper calcium to take. Douglas, my husband, uses these tests in the office and he also wrote a computer program to convert the results into a report of dietary changes necessary to move the body back to normal. Then, we put our heads together and created a way for patients to use this system without having to use the dangerous chemicals and expensive equipment Douglas uses in his laboratory. Clinically, we have modified the Reams correct calcium concept to include vitamins A, B12, C, D and Iodine based on pH of the Urine and Saliva. Interestingly, other than calcium, Reams classified only potassium and chlorine as being anionic, the rest he believed to be cationic. We have found this method to be clinically relevant and reproducible.

Because of our clinical success using the modified Reams mixed calcium method, this has become our preferred choice for teaching patients. Patient compliance is high because it is simple and effective for home use to control body autonomic balance in both acute and chronic illnesses.

Looking at the broad spectrum of definitions we can see the following relationships.

**Sympathetic Dominant**  
**Type 1 Slow Oxidizers**  
**High Blood pH > = 7.47**  
**Catabolic (breaking down)**  
**Acid**  
**Cationic**

**Parasympathetic Dominant**  
**Type 2 Fast Oxidizers**  
**Low Blood pH < = 7.45**  
**Anabolic (building up)**  
**Alkaline (Base)**  
**Anionic**

These words are pictures of the same thing - the autonomic nervous system. Each genius had their own method of measuring and treating and manipulating the autonomic nervous system to improve quality of life and maintain health.