

# Waters Integrative Health Center



Volume 5, Issue 1

Spring 2013

## Dr. Waters' Lecture Schedule

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Dr. Waters will be giving educational lectures to explain the technologies discussed in this newsletter and answer your questions.

Topic: Food, Oxygen & Life ~ Why we get sick and how to get well

April 25, 2013 ~ 6:30pm

at

**Hotel Mead**  
451 E Grand Ave  
Wisconsin Rapids, WI 54494  
715-423-1500

May 9, 2013 ~ 6:30pm

at

**Crown Plaza**  
4402 E Washington Ave  
Madison, WI 53704  
608-244-4703

Please pass on the information to your family and friends!

You can also discuss our programs with Dr. Waters during an office visit, or for new patients, a consultation.

We are excited about helping you and your loved ones regain and maintain your energy and health.

### Weekly In-Office Hot Topics

Thursday afternoons at 4:30pm

March 14th ~ Pain Management with Prolotherapy

March 21st ~ Paleolithic Nutrition, Metabolic Syndrome & Diabetes

March 28th ~ Chelation Therapy

April 4th ~ Natural Hormone Replacement Therapy

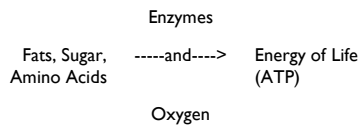
\*\*current patients of Dr. Waters (had an office visit in 2012-2013) will receive a \$50 gift certificate to use at the clinic if you bring a friend who has never been a patient here! \*\*

~ must sign-up in advance ~ limited seating available ~

1-800-200-7178

## It's All About Oxygen ~ The Mighty Mitochondria

Without oxygen, life as we know wouldn't be possible. This equation sums up human metabolism:



92% of this energy is produced in tiny furnaces within all of our cells. These structures represent 10% of our body weight and are called mitochondria – the “powerhouses of the cell.” Each mitochondrion contains the enzymes needed to break down our food components after digestion, absorption and transport of this food to our cells and thence to the mitochondria for burning. Like an acetylene torch, the burning of our fuel occurs with more efficiency in the presence of oxygen within these units.

In order to make enough life-giving energy for maximum health, a number of processes must occur before the mitochondrial engines start humming.

- Oxygen must enter the body through the lungs. This implies two things: the lungs must be healthy and we must breathe enough pure air. Avoiding smoking and exposure to pollutants is key to the first. The second comes from proper exercise and sprinting as interval training.

Long distance aerobics is a mistake. It weakens the lungs. Pulsed exercise three times per week for about 15 minutes is most efficient and doable. See our newsletter on the PACE program for details or go to [www.paceliving.com](http://www.paceliving.com)

- We need to ingest high quality, real foods that contain the proper amounts of essential fats, proteins, vitamins, minerals and plant derived nutrients such as polyphenols and bioflavonoids. In this age of devitalized soil, processed foods and environmental pollution, it is necessary to add nutritional supplements to our diet.
- Even if we have adequate oxygen entry and nutrient intake, our circulation must be adequate to deliver the life giving nutrients to every cell in our bodies and thence to the mitochondria themselves.

With this background, we will get down to the nitty gritty – how to get maximum energy production in our mitochondria – energy needed to support renewal of our cells, repair ongoing damage (aging), keep the immune system vigilant, and fuel the ceaseless activity of the nervous system (the brain uses 30% of the energy production in the

body while representing only about 3% of body weight!).

As discussed above, fatty acids, sugars and amino acids (from fats, carbohydrates and proteins respectively) ingested are delivered by the circulatory system to the mitochondrial furnaces. Here, through the processes of fermentation (low oxygen, inefficient) and Krebs's cycle (oxygen dependent, high energy producing) the protons and electrons in our food molecules are stripped off and sent down a system known as the electron transport chain.

Both the enzymes of the fermentation cycle and the Krebs's cycle require many cofactors with which you are no doubt familiar – vitamins B1, B2, B3, B5, B6, B12, folic acid, lipoic acid, biotin, coenzyme Q10, vitamin K, magnesium, manganese, iron, L-carnitine. In addition, the structure of the mitochondria themselves is dependent on availability of long-chain Omega-3 fatty acids such as EPA and DHA from fish oil, etc. Now you can see how important a proper diet and supplements are to energy production and therefore health! If any one of the above substances are absent or even deficient, the mitochondrial activity is diminished and you don't feel well.



But the energy production processes are dependent on other factors in addition. There must be adequate T3 thyroid hormone, hydrocortisone and other steroids and epinephrine (adrenalin). These hormones regulate the overall functioning of mitochondrial activity. And the biggest player of all in the processing of food into energy is the most widely studied hormone in our body – Insulin. This amazing hormone causes sugars to be loaded from the blood stream across all cell membranes to enter cells. In addition, within the mitochondrion, insulin initiates the conversion of carbohydrates to fats and to storage spots. Insulin is released from the pancreas when that organ senses a rise in blood sugar following meals.

**The interaction of sugar, fats, insulin, caloric burning vs storage and mitochondrial function is at the epicenter of normal body function and, when deranged, is the basis of all disease from diabetes to cancer, from autoimmune disease to dementia and heart disease to psychological disorders.**

Assuming that there are adequate supplies of oxygen and nutrients delivered to the mitochondria, proper levels and balance of endocrine regulating hormones and structural integrity of the mitochondria themselves, a healthy amount of ATP energy is made and the person feels well and generally won't be suffering from any disease. But a secondary phenomenon must also be taken into account. Just as we enjoy light and heat from a fireplace, waste products called ashes are an inevitable byproduct.

The biochemical waste of human metabolism are known as free radicals. Every molecule which exists in the human system has a purpose, including these. You might have had the impression that they are somehow bad or dangerous. They are, but only in excess and only if our ability to neutralize them is deficient. In fact, they are very necessary for good health. They are regulatory signals. They function to both kill invading microorganisms and to eradicate neoplastic cells (cancers). It is all about balance.

If our mitochondria are functioning efficiently they make maximum energy and heat and the free radicals generated in the process exist at a level which serves their regulatory role but are not excessive to the point of damaging the structures in the mitochondria themselves –

their fatty membranes, their protein enzymes and their computer program (their DNA).

This balance between the ability to make maximum energy and the ability to eliminate the waste products created (the free radicals), represents the very core of whether we are healthy or ill and whether we age rapidly or gracefully. Whether we spend much of our time in life's enjoyments or in the hands of doctors and, finally, in a "nursing home."

The question now arises: **How do we achieve maximum energy and health and minimize damage and the resultant aging/disease?**

This is now clearly known by science. We need:

1. Proper diet and nutrients so as to deliver the necessary fuels for efficient mitochondrial activity.
2. Balanced oxidative free radical defense systems to minimize the effects of free radicals generated by energy production.

The first is achieved through eating a wholesome diet, low in carbohydrates (especially from processed cereal grain sources) and high in plant

foods, quality proteins and essential omega-3 fats.

The second is partially achieved via ingesting the antioxidants contained in a healthful diet and also by our ability to manufacture antioxidant enzymes in our cells. We must get enough vitamin C, vitamin E, beta carotene and the 100's of plant derived antioxidant pigments, etc. from our food and also the raw materials such as copper, manganese, zinc, selenium, B vitamins and many other substances in order to produce these intracellular protective substances.

And we must manage our little furnaces. How?

### EXERCISE

Yes, exercise is a nutrient. It delivers life giving oxygen, the rate-limiting nutrient for energy production. When we exercise, we destroy and recycle mitochondria that have been damaged and are both inefficient in making energy and as a result are spinning off excess numbers of toxic radicals.

Thankfully, exercise also results in triggering a process known as mitochondrial biogenesis (mitogenesis) – in simple

terms, making new, youthful, highly efficient furnaces.

Besides exercise, caloric restriction and a number of plant-derived nutrients also trigger mitogenesis. (more on this in another newsletter).

In summary, to regain and maintain your health, you need to:

1. Go back to the ancestral diet
2. Supply your mitochondrial furnaces with needed components for energy production and free radical neutralization
3. Maintain the health and number of mitochondria through body movement ("exercise") and dietary restrictions.

Waters Integrative Health Center can guide you in implementing all of the forgoing actions on your road to health. Laboratory and lifestyle analyses are the basis of our program as well as the traditional medical history and physical exam.

We also offer treatments that can, along with diet, nutritional supplements and lifestyle interventions, activate your energy production and antioxidant systems. These can be categorized under the general heading of Oxidative Therapies.

We will devote a future issue to these treatments.

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# Waters Integrative Health Center

*A Private Medical Membership Association*

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[www.watershealthcenter.com](http://www.watershealthcenter.com)

## Pain Management

We all have some pain at times. It is always a signal our body is giving us that something is wrong. Torn ligaments, inflammation due to infection, autoimmune disease or food allergies, arthritic conditions, structural imbalances and possibly other, occult causes that need to be investigated.

Our Center is very interested in helping people with pain. Pain is suffering and beyond its obvious effects, it **DRAINS ENERGY**. Very chronic pain in particular is often misdiagnosed and no effective treatment employed. Too often only drugs, the statement "learn to live with it" or worse, "it's all in your head" have been given to the sufferer resulting in no hope and continued misery.

Dr. Waters has spent the past 30 years studying innovative treatments for the diagnosis and treatment of pain starting with two years as an orthopedic surgery resident and continuing over those years in his study of German Neuro Therapy, Prolotherapy, NeuralProlo Therapy, food reactivity and new oxidation techniques.

You deserve a new look at diagnosis and possible treatment of your pain. Get your x-rays, MRI's, etc. along with the readings of these studies and make an appointment for evaluation by Dr. Waters and his Naprapath associate Dr. Richard Moran.

**We will be conducting a seminar on Pain Management in our office on March 14<sup>th</sup>—see page 1 for details**

## It works! ~ Testimonial

I have been active my entire life in athletics and various outdoor activities. One of the sports in which I have routinely participated since my youth is golf. By my mid-40's I developed elbow pain on the inside of my right elbow near the point of the funny bone. I learned this condition is commonly referred to as golfer's elbow or medial epicondylitis.

The pain first occurred late in the golf season. I sought guidance from UW Madison health clinic's sports medicine doctors. I was advised to pursue physical therapy over the winter months and rest the elbow from similar activity to let it heal. I did so as prescribed for 4-5 months, after that I also tried a cortisone shot which worked for about 6 weeks before the pain came back.

Soon thereafter, I went to Dr. Waters for an annual physical and explained the problem with my elbow. He advised me about prolotherapy treatment. I did my own research on prolotherapy subsequent to our conversation and decided to give it a try.

I received approximately 3-4 rounds of treatment over two to three months. Each treatment consisted of multiple injections around the affected area. The end of treatment happened to coincide with the start of golf season in April. I eased into resuming normal activity and am thrilled to report that the pain was gone and has been gone for the last three years. I felt minor discomfort for the first few months after resuming golf but that disappeared over time. The results were fantastic and I highly recommend prolo for any similar soft tissue injuries. This proves to me that Dr. Waters' basic fundamental approach to health makes sense and works. ~Tom Blackburn