

Help, My body is Killing Me!

Solving the connections of autoimmune disease to thyroid problems, fibromyalgia, infertility, anxiety, depression, ADD/ADHD and more

By Dr. Kevin Connors

Section 4

It's absolutely necessary to figure out if a person is Th1 or Th2 dominant because it will dictate what type of nutraceutical protocols that will be most effective for dampening their immune activity. We know that typical 'immune stimulants' like Astragalus, Echinacea, Garlic, Glycyrrhizin, Melissa Officinalis, Maitake mushrooms, seem to stimulate the Th1 response. We also know that things like pine bark extract, grape seed extract, green tea extract, Pycnogenol, Resveratrol, and caffeine are things that stimulate the Th2 response. So if a patient's autoimmune attack of their joints in Rheumatoid Arthritis, thyroid in Hashimoto's, myelin sheath in Multiple Sclerosis, etc., is a Th1 dominant response, adding Th1 stimulants will MAKE THEM WORSE! You can effectively aid in balancing a Th1 dominant individual by giving Th2 stimulants and visa, versa.

Vanessa's Story

Thirteen years ago Vanessa was diagnosed with Systemic Lupus Erythematosus (SLE) or Lupus for short. Her problems began long before her diagnosis after the birth of her first child, Ashley, when she was just 18 years old. Lupus is defined as a chronic, inflammatory autoimmune disease. It frequently affects the skin, joints, kidneys, but, like autoimmune diseases do, it affects multiple organs. Symptoms vary from person to person, and may come and go. Since autoimmune diseases are either a hyper-firing Th1 or Th2 response, it is when that system is most active that the person experiences the most symptoms. This is why patient's symptoms seem to wax and wane. The condition

may affect one organ or body system at first and then progress to involve others. Almost all people with SLE have joint pain, arthritis and chronic fatigue. The joint pain is usually in the fluid filled joints like the fingers, knees, and hips. These joints have joint capsules which are sacs made up of essential fatty acids, prone to accept antigens and therefore common attacks of the immune response.

Vanessa's youth was troubled; both her father and mother were alcoholics and Vanessa ran away from home at age 16. She bounced in and out of relationships, got pregnant at age 17 and was unwelcome in an attempt to return home. She had her baby while living at a shelter. Her increased stress, use of experimental drugs, emotional depression and the accompanying fluctuations that pregnancy brings the Th1/Th2 immune response may all have been contributors to the autoimmune 'switch' being turned on. Her symptoms have gradually gotten worse over time and even though God intervened in Vanessa's life when she got saved at a youth rally when Ashley was just 5 months old and she now is happily married, the disease has progressed.

Once an autoimmune disease has turned on, there is no turning it off. Traditional medicine had given Vanessa little hope and just prescriptions to fill. She tried multiple medications with some relief but different side effects. It wasn't until she found care with a functional medicine doctor who understood the autoimmune process that she began to take the upper hand against her disease. "It was the first time I ever understood what Lupus was," she commented, "I thought I was just doomed with a genetic disease that I'd have to live with the rest of my

life. The last 3 months since starting care has been remarkable. I feel like I have a new life.”

Vanessa’s story is commonplace. Autoimmune patients feel helpless and hopeless; they have basically been given a death sentence by modern medicine with no alternative but symptom suppressant drugs. There is hope, and if you just keep digging and asking better and more pointed questions, you can find the answers; but you just might have to ask different people.

Sometimes the patient's history will be obvious as to which dominance they are ‘stuck’ in. If they’ve attempted taking high amounts of Garlic and Echinacea only to feel horribly worse afterward, there’s a pretty good chance they are Th1 dominant autoimmune. If drinking green tea or coffee takes away the pain of your Gout, the possibility exists that you are Th1 dominant; if it made you feel worse, you may be Th2 dominant. But do NOT rely on this; it is always wise to do the testing!

You have to be very careful stimulating a Th1 or Th2 response. People can’t figure out why they still feel terrible even while taking the boatload of vitamins their nutritionist recommended. If you are stimulating the dominant, hyper-firing system, you are literally throwing fuel on the fire. Autoimmune patients CANNOT take supplements that have both Th1 and Th2 stimulants. You are helping the immune system destroy your body! Do the testing!

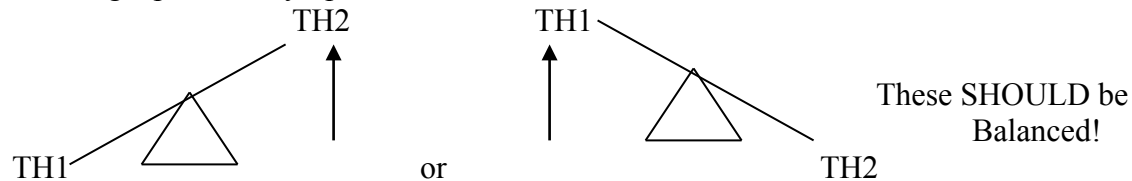
**I BATTLE
AGAINST
MY BODY**

Auto-Immune Disease DIETARY CONTROL

When the body attacks itself

TH1 and TH2 Balancing

There are 2 parts of your immune system, the TH1 and TH2 response. When a person is Auto-Immune, one of these systems is “hyper-firing” or Dominant. Balancing this system goes far in reducing a patient’s symptoms:



TH2 Dominance

TH1 Dominance

There are specific dietary changes and supplements that can help and hinder the above response:
NOTE: ALL AI cases need Vitamin D, Glutathione, and Omega 3 fish oils +

Things that stimulate the TH1 response: (Take these if you are TH2 Dominant)

- Echinacea
- Goldenseal
- Garlic
- Vitamin C
- Any “Immune stimulants”
- Licorice root (Glycyrrhiza)
- Astragalus
- Eleuthero root
- Pau D’Arco
- Cat’s Claw
- Beta-glucans, Maitake, Reishi and most other mushrooms
- Lemon Balm (Melissa officinalis)

Things that stimulate the TH2 response: (Take these if you are TH1 Dominant)

- Caffeine
- Green Tea (though it decreases IL-6 and is therefore beneficial)
- Grape Seed Extract
- Herbal barks (Cramp Bark, Pine Bark, and White Willow Bark)
- Lycopene
- Resveratrol
- Pycnogenol

Therefore, if a patient is TH1 Dominant, they should AVOID TH1 Stimulants and TAKE TH2 Stimulants

**THE STRONGEST
PEOPLE ARE NOT
THOSE WHO SHOW
STRENGTH IN FRONT
OF US BUT THOSE WHO
WIN BATTLES WE
KNOW NOTHING
ABOUT.**

Pregnancy is a common trigger for autoimmune disease. Autoimmune disorders can get triggered with surges of estrogens that take place postpartum. We also know that surges of estrogens like birth control pills can sometimes promote the onset of autoimmune disorders of many types. So, we're always careful screening for these through the patient's history particularly if they have developed symptoms around these life events. It is not uncommon to see a female go on birth control pills gain weight, get depressed, and then when they go off the pill and the symptoms don't change; it was the fluctuations and manipulation of hormones that may have actually triggered the autoimmune response. So, if a person has had abrupt symptom onset around puberty, pregnancy or giving birth, after going on the pill, perimenopause, or stressful life events, check for autoimmune diseases.

Another issue with estrogens besides birth control pills and pregnancy is perimenopause. In perimenopause, females will lose their pituitary-ovarian feedback loop as a consequence of normal aging. There is a surge of estrogens created because the regulation can't be monitored well. These surges of estrogens in perimenopause can then stimulate the expression autoimmune response. Some of these dormant antigens can actually become active in menopause, and all of a sudden, these people have an immune attack against their thyroid, their joints, or other tissues, and when their immune system attacks their tissues, especially involving thyroid, they get a surge of hormones in the blood stream which then flushes their metabolic rate. They get hot flashes; they get insomnia; they get irritability. And, they blame it on a deficiency of estrogen from going through menopause but it's the immune attack that was promoted from the estrogen fluctuations through menopause, NOT an estrogen deficiency! Quite contraire, it's the estrodiol bounces and the autoimmune inflammation that is causing the symptoms; these people don't respond well to estrogens.

So, anytime you see a postmenopausal female that developed hot flashes, insomnia, and irritability but wasn't resolved with estrogens, and especially if they have a history of being hypothyroid, you have to consider over-activity of the autoimmune response. Often the hot flashes will be totally normalized by using protocols like regulatory T cell support, Th1/Th2 modulation, getting off gluten, and clearing the antigens in question.

We know that heavy metals have a great potential to become an antigen in an autoimmune disease since they are by nature an un-killable invader that is ubiquitous in our environment. The problem is we've always theorized this in alternative healthcare models, but there hasn't really been much published on this until recently. In 2006 in the Journal of Neuroendocrinology Letters a paper was published, entitled: "Removal of Dental Amalgams Decreases Anti-TPO and Anti-Thyroglobulin Autoantibodies in Patients with Autoimmune Thyroiditis." The conclusion of the paper was removal of mercury-containing dental

amalgams in patients with mercury hypersensitivity may contribute to successful treatment of autoimmune thyroiditis.

Ed's story

“I’ve watched my wife and her mother both die of cancer in the same year, which was just two years after I sat beside her father’s bed as he passed away from kidney disease prompted by his Type II Diabetes. My wife and her mother both struggled with hypothyroid, Fibromyalgia, and chronic depression before getting cancer that was diagnosed just six months apart. We went the traditional medical approach for everything even though I grew up in a very alternative healthcare family. My father was an osteopath and a naturopath who believed in natural healing whenever possible. My sister and I never went to another doctor. I really regret not being stronger in pushing alternative possibilities but Carla’s family was so engrained in the medical model that they were never open to change. What I know now about autoimmune diseases and the genetic connection with gluten and casein, I think I might have been able to convince my wife that the evidence is too great to ignore. Our children will follow a different way; I’m completely convinced that I will be able help them not follow in the same footsteps thanks to this information. You’ve saved my children even though it’s too late for my wife.”

Another major autoimmune trigger that is commonly overlooked is insulin surges. Insulin is a hormone secreted by the pancreas in the presence of blood glucose. It attaches to the glucose and helps carry it into the cell to make energy. Insulin surges occur when gross

fluctuations in glucose swing into the system; these surges seem to promote the autoimmune response. If a person has either insulin resistance (higher than normal blood glucose) or hypoglycemia, as they get swings in insulin and further tissue destruction. A paper that was published in the European Journal of Endocrinology in 2004, entitled, “High Prevalence of Autoimmune Thyroiditis in Patients with Polycystic Ovarian Syndrome.” Polycystic ovarian syndrome is a condition when a female is producing too much insulin due to a variety of issues; this paper links PCOS with autoimmune disorders at an astounding rate.

Blood sugar issues can be categorized into insulin resistance patterns or hypoglycemia patterns. People with insulin resistance typically complain of fatigue after meals, craving sugar after meals, the desire to nap especially after eating a high amount of carbohydrates. Insulin resistant patients eat carbohydrates that quickly break down to circulating glucose, insulin surges to accompany glucose into the cell but, as they attempt to try to get across the cell membrane into the cell, the receptor sites don't work. So, the glucose goes into body fat, that's why they get so tired because the lipogenesis process takes place causing the characteristic fatigue after meal.

We'll talk more about this later but one of the things you always want to make sure with any autoimmune patient is to nutritionally support them with compounds that enhance the activity of these receptor sites.

Cindy's Story

To All of You Incredible People!!!

I have been coming to The Upper Room for over two years now, at first 4 days a week, then 3 and then 2 days. Every time, and I mean EVERY time I have been there I have been greeted and treated with such a warm and caring manner. You are all very

special people and together make a great team. I am so incredibly grateful to have had my "angel" encounter with Sarah on the path that brought me to you and is without a doubt part of God's plan. My healing has been physical, emotional and spiritual and you consistently provide what I need to get better.

Dr. Conners, you are an amazing person. You have taken a risk on me and I will never forget that. I will never know for sure what has got me to this point, what supplement, whether it's the adjustment, the LBG, light beam, foot bath or just having someone join you in the belief in something that others tell you is impossible. I don't know exactly what has worked to get me to today, but I do know for a fact that I have had unconditional support from you and that has been the most important. You never promised me anything, but you also never told me it was impossible. You have provided an environment in which I could believe in a miracle without any hesitation or doubt. Thank you for supporting me to freely shoot for the stars! You know me, I will continue to expect improvement until I'm driving cars, running marathons all without the use of toxic (elephant bait) seizure medications. I would fully expect you to support me with all those dreams.

I'm looking forward to 2010. My hope is that there are a few more layers to shed. We will see what God has in store this next year.

You are not only giving my life back to me, you are giving two kids a chance to have their mother, Rob his wife, a few parents

their daughter and several people a sister. You take a personal risk to treat me the way you do but in my opinion, it's worth it!

I am so grateful to have all of you on this incredible journey back to health. It takes patience, courage and strength that only God can provide and that along with your support I am going to get through this so that I provide an example of what those crazy natural healing people can do. I will proudly shout that message out to the world!

Have a great week and a very nice Thanksgiving.

Your forever-grateful patient, Cindy

Infertility

We treat infertility problems by looking as holistically at the body as possible. There may be four main classifications of issues surrounding fertility:

1. Hormonal

Our job is to locate and identify the cause of your infertility, and treat it effectively and naturally. In order to accomplish this, we use specialized lab testing to completely reveal the nature of the soil...your internal environment. It is the condition of the soil that allows bountiful crops, and the same is true of your internal environment. Any internal stressor that affects the regulation of reproduction can and will interfere with your ability to conceive and deliver. So, not only are we creating an ideal internal environment for your baby, we are ensuring your future health as a mother.

We will evaluate all **SEVEN CRITICAL HORMONAL**

REQUIREMENTS of a successful pregnancy:

1. Following menstruation, a gradual rise in FSH to stimulate production of estrogen
2. The FSH release initiates a surge of estrogen.
3. The estrogen "peak" stimulates ovulation.
4. The release of an egg causes a surge of LH.
5. The surge of LH initiates a gentle release of progesterone.
6. Intercourse or alternative insemination results in fertilization.
7. The progesterone release readies the uterus for implantation.

If this cycle is altered in any way...not enough estrogen, small surge of FSH, etc., etc., then there will be no pregnancy. Often infertility medications and IVF are overlooking the need for fertile soil. This is probably why this forcing of pregnancy is only effective from 30-50% of the time; and it does nothing to address the health of the Mother and baby.

2. Neurological

From a Neurological point of view, the Brain and nervous system play an integral part of the fertility process. Besides the obvious Brain connections and its firings to produce hormonal release, the Brain, particularly the Frontal Lobes and Midbrain, must function in balance to allow the pregnancy to 'hold'.

Neurological Disconnection Syndrome and its subsequent treatment with Brain Based Therapy is best described as altered firing pathways in the Brain. These pathways are like roads, and the more frequent the roads are used, it's as if they become paved for easier travel. This is what we call Neural Plasticity; the more a pathway is fired, the stronger it becomes. Neural Plasticity is a double edged sword, but we use it to our advantage when we design specific Brain Based Therapies to correct aberrant pathways. This is perhaps the most commonly missed component in treating infertility!

3. Autoimmune/Metabolic imbalance

If Neuronal Plasticity is the most commonly overlooked piece in treating infertility, then the Immune System ranks a close second. The autoimmune response is present in many infertility cases and if not corrected, the women may be destroying their own fetus.

It is important to understand that an autoimmune disorder is a 'state' that the immune system is in. It is NOT a disease of an organ; and even though it is given a multitude of names depending on the tissue currently affected, it is a STATE of the immune system attacking the tissue it was meant to protect.

Other things that are found with autoimmune processes are decreased hepatic (liver) and biliary (gallbladder and bile ducts) clearance. When we look at the detoxification processes of the body we understand there exists Phase I and Phase II pathways. Both these phases are highly nutrient dependant and the Gastro-Intestinal disturbances, decreased gut motility, and decreased absorption rates autoimmune processes decreases the ability for the patient to do the very thing they NEED to do – Detoxify!

These toxins can become Antigens that may settle anywhere along critical pathways necessary for fertilization and implantation. Where the Antigen exists is the site of greatest inflammation. We test every patient for autoimmune disorders regardless of their past conditions!

4. Structural Interference

If a woman has ever taken exogenous hormones, including the pill or progesterone creams, has ever had any pelvic trauma, has had any inflammatory response in the pelvic area or abdomen, or has any history of PID, Endometriosis or PCOS, structure must be addressed.

These and other issues may cause adhesions near the ovaries and fallopian tubes that may physically interfere with the timing and motion of egg and sperm flow and severely affect both fertilization and implantation.

We use specific physical techniques and special tools to reduce this inflammation and detoxify the pelvic area.

Perhaps the most common cause of infertility in the United States today is polycystic ovary syndrome (PCOS). Tied to number three above, PCOS is a metabolic condition driven by metabolic disruptions of dysglycemia. Higher levels of insulin as well as estrogen/testosterone ratios literally shut down the hypothalamus-pituitary link. If this metabolic imbalance is not addressed, you are fighting a losing battle to achieve pregnancy and health.

Complicating Factors

The first obvious step in treating autoimmune diseases is to find out what the mechanism is. Asking the question, “Why?” is what we're going through in this book. But it becomes more complicated the more longstanding the disease has been because other systems of the body become affected. One seldom has solely an autoimmune attack on their thyroid; they also may have dysglycemia issues, lipid handling issues, cardio/heart issues, liver issues, adrenal issues, or pituitary issues. Commonly, an autoimmune individual has digestive issues, gallbladder problems, and kidney, prostate and hormonal issues as well. Simply, one cannot separate the systems and if something is not working right, all the dominoes begin to fall.

I want to go through some of these individually though we have to talk a little bit about your blood chemistry to do so. Most people that have autoimmune diseases have been to numerous different doctors and many

times have been told that the blood work that was done was normal or there were just a few things out of normal, and those things were treated as individual conditions. And typically, especially if the person went to a traditional medical doctor, they were treated with medications simply to alter the blood test that was abnormal, and they were told that all was okay when the blood tests came back within lab ranges.

It's important to understand that there's a difference between lab range normals and functional range normals. When we talk about functional medicine, we're discussing that we see the body a little bit differently and that the ranges on lab values are much narrower. Lab range 'abnormals' are looking for what may be referred as pathological abnormalities within blood markers. What we want to see are the functional abnormalities. So if we look at the markers that examine them within functional ranges, we see a lot of abnormalities and that can point to different disease processes that are taking place from a functional standpoint and how an autoimmune disease ends up progressing and attacking different organs. From both a hormonal and neurological standpoint, your body is a holistic organism that you can't separate. One cannot treat the kidney without affecting numerous other organs. Likewise, when an autoimmune disease attacks the thyroid, the pituitary, brain, heart, or gut, it's going to affect every other organ in the body in some way. Your lab markers could reveal a lot of the areas of attack that we need to address.

Let's go through some of the different blood tests that you most likely have had done, and I want to give you a better understanding of what those blood tests actually look like. First of all, I want to mention that functional blood testing can be very predictable. It can help us balance the person's dysfunctional systems, and it should be a course of action taken by every practitioner to make sure they get as much lab work done as possible. It gives us a glimpse at the primary, secondary, and tertiary systems that we want to treat. When you're dealing with an autoimmune disease, you need to treat all of it at once. It is futile to try to correct an autoimmune disorder by trying to be systematic about treating one

system at a time. Because of the interconnection and the interrelationships that are there, you have to hit it pretty hard and heavy from the start or you're not going to have a whole lot of success.

If you've done your discovery process and find out what the antigen is, let's say it is heavy metal toxicity, and you attempt to detoxify through chelation without investigating the other systems, you are destined for complications. The autoimmune process has damaged so many other systems that if you don't support and correct those at the same time, the detoxification of the heavy metal could actually make the person worse, meaning that in chelation of a heavy metal, you're going to have some of it being dropped back into the blood. If it settles in another organ system that is currently dysfunctional because of the longstanding autoimmune disease, it can greatly increase the possibility of another autoimmune attack or, worse, that organ shutting down. So, you really don't want to play with correction of an autoimmune disorder without doing a thorough assessment of the body so that you know other organ systems that you need to support at the same time.

So let's go through some of the standard blood chemistry markers that those people would get if they went into their doctor and got a blood work up. Typically, they would get glucose, cholesterol, the fats, triglycerides, LDL, HDL, iron, total iron binding capacity, ferritin, hemoglobin, hematocrit, RBCs, MCVs, MCH, MCHC, RDW, platelets, white blood cells, neutrophils, lymphocytes, monocytes, eosinophils, basophils, and then the thyroid markers of TSH and T4 are typically done. But it's important to do a more thorough thyroid assessment, and we'll talk about that in just a bit. Also, one wants alkaline phosphate, liver tests like AST, ALT, GGTP, total bilirubin, total protein breakdown into the albumin and globulin portions, the A/G ratio, sodium, potassium, chloride levels, carbon dioxide, blood, urea, nitrogen, creatinine, calcium, magnesium, phosphorus, uric acid. These are standard tests that are run on people, but I can't over-emphasize the difference between a pathological range and a functional range because

that could tell us a world of a difference regarding the health of, and functional damage to other organ systems.



Dysglycemia

Blood markers can reveal functionally compromised systems; we will review a few of the more common ones in autoimmune disorders. First, let's start with glucose since it is a system that must be addressed in all autoimmune conditions. Glucose is a simple sugar that your body needs in order to create ATP. Glucose goes into the bloodstream, and then it's bound by insulin which is actually a hormone produced in the pancreas; insulin helps carry glucose across the cell membrane and each cell needs glucose in order to survive. Glucose is our major form of energy in the body because glucose, once brought across the cell membrane, is brought into the mitochondria of the cell, a little organelle that produces

bundles of energy called ATP with which our body can do the functions that it needs to do. So glucose is a very important sugar that we need in our system, but it needs to be in a correct balance.

Pathological ranges of glucose tend to be 65 to 125 and, historically, anything over 125 mg/dl of glucose for a 12-hour fasting individual, the person is diagnosed with diabetes. But we tend to look at a functional range between 85 and 100; we don't want to see people over 100 nor do we want to see them under 85. Many times, people will go to their doctor and have a glucose of 75, and they're told that their blood sugar is doing great, you're not pre-diabetic, and they see that as a success. But from a functional standpoint, that person is experiencing a dysglycemic state, meaning that they're actually hypoglycemic, and they may be having symptoms that are going along with that.

It's very important to do fasting blood tests. I can't tell you how many patients I have come into our office that bring blood work with them, and my first question is always, "Did you have a 12-hour fast before you had the blood drawn?" And most of the time, they say, "no, I wasn't instructed to". It's always better to have a fast where there's no food or drink other than water before the blood is drawn.

Blood glucose, if not needed to produce immediate energy, is stored as a glycogen in the liver. The problem that we have with consumption of too many carbohydrates is that we have too much circulating glucose. When you have an overabundance of circulating glucose, your pancreas is working overtime producing insulin to bind to these glucose molecules in an attempt to break it into the cell that doesn't need it. So if a person is sedentary, their cells are not demanding glucose to produce energy because no more energy is necessary in that cell, and glucose plus insulin comes knocking at the cell door. At the cell membrane there is an enzyme called a receptor site that accepts the glucose across its wall like a doorway with a lock and key mechanism. The key is the insulin that's inserted into the receptor site, which is the lock; it unlocks the door thereby letting glucose into the cell. But when the cell doesn't

need glucose, and there is an overabundance of circulating glucose from an over consumption of carbohydrates, the lock can be constantly 'stripped', you could say. And over time, where the person is consuming high amounts of carbohydrates, not exercising, and the cells do not need the excess glucose, the cell membranes and their receptor sites fail to work, or become down-regulated. This is what we call 'insulin resistance'; the receptor sites in the cell membranes become less receptive to the insulin, and to the degree that that takes place is the degree that you'll have a higher circulating glucose in the blood. And the higher circulating glucose brings us to a diagnosis of diabetes.

But, again, we're not so concerned with the diagnosis; we're concerned about the mechanism. And so, what we see from a functional standpoint of a fasting glucose over 100, we already know what mechanism is taking place. We don't wait until the glucose is over a certain point; we want to be able to treat the mechanism before it becomes a pathological condition.

Again, I just try to emphasize the difference between a pathological range and a functional range. We want to treat high glucose that's over 100 and get the person on a different diet, correct cortisol levels, and balance hormones that are going to help stimulate and normalize glucose levels before or at least during the elimination of antigens. If this is not done, the person will crash! Failure to address the big picture is the reason why we see so many patients who have been to six other doctors who attempted correction with no success. It's like trying to put a puzzle together without all the pieces

Cholesterols

Cholesterol is another test that is in the news all the time. This is really the only test in the book that the pathological range and the functional range are pretty much equal. It's funny that it is and the only reason why, is that there are statin drugs on the market that are very successful

at lowering cholesterol levels. So they have lowered the pathological range so that the diagnosis may be made more readily in order to justify the prescription of the statin medication. We're not going to go into the dangers of statin medications, but I implore you to Google it for yourselves. When a patient has cholesterol of something over 200, we want to look at the reason why the cholesterol is that high and correct the cause, the faulty mechanisms that are causing the high cholesterol. We don't want to artificially lower the cholesterol by giving the person another toxin that their body has to get rid of and could theoretically become an antigen in an autoimmune condition as well.

We want to look at other markers as well and determine why the liver is overproducing cholesterol. Often, we find the person has a fatty liver condition. That's where there's fat infiltration in the liver cells and the cholesterol is being overproduced as an attempt to self-lubricate. LDL is typically considered bad cholesterol but with autoimmune conditions, it's important to note that LDL will be increased as part of the inflammatory response; it's a marker to look at that could point to an early autoimmune condition. HDL's are considered the good cholesterol, but high HDL levels can point to functional disease processes as well. It's also important to know that, as we previously discussed about insulin resistance, insulin resistance is going to decrease the HDL production as well and increase the total elevated cholesterol. Again, pointing to the fact that we don't want to look at just one marker, we have to look at all of them in conjunction, in relationship, with each other.

Anemia

The iron that we look at is also important because iron is a component of the hemoglobin group. It carries iron and transports oxygen to the body's tissue. So, we look at iron in relationship to the total iron-binding capacity or the TIBC, the ferritin levels, the transferrin levels, and the hemoglobin. The hemoglobin is really the vehicle that carries oxygen

and carbon dioxide to the tissues. Cells need fuel in order to function; the main fuel that's needed by cells is glucose and oxygen. If there's a deficiency in the carrying capacity and the transport of oxygen and glucose to the cell, and a problem with the cell membrane, so that glucose and oxygen are unable to enter the cell, the person is going to have dysfunction within that system that is having that transportation problem.

As was stated previously, it's very common for people that are autoimmune to have anemias. Iron anemia is just one of those, but we can't just take a person that has low iron and put them on an iron supplement. It's very important to look at everything else in a person. Iron is a heavy metal on the periodic table, and it can be one of the greatest sources of heavy metal toxicity, from taking wrong sources of iron. Don't just look at a snapshot; take the whole movie. It's like taking a verse of the Bible out of context and creating an entire, aberrant theology; it's wrong and dangerous.

Other tests we run are red blood cells, hematocrit, the MCV or the mean corpuscular volume, the mean corpuscular hemoglobin concentration, the MCHC, the red cell size distribution width, that's the RDW. This could change in iron deficiency anemia, but can help with the differential diagnosis whether the decreased iron is due to true iron deficiency anemia, in that case, the RDW would be increased, or is the deficiency due to a degenerative disease or an autoimmune disease, in that case, the RDW might be within normal ranges, again, making a point to do all the tests.

Immune agents

The white blood cell system is assessed looking at neutrophils, lymphocytes, monocytes, eosinophils, and basophils. Remember, in autoimmune disease, we break down the lymphocytes into all their subcomponents. Again, the Th1 lymphocytes are the T cells that are the

immediate-response killer cells, the cytotoxic cells that are the police force of your immune system. So they are the ones that are sent out immediately to attack the incoming invader antigen, and if they can't do their job right away, then the B cells or the Th2 system is put into action in order to create antibodies and will tag the antigen so that the Th1 system can eventually kill it. This is what we look for in autoimmune disease testing, what we described earlier as a breakdown of the Th1/Th2 markers. The cytokine testing reveals if the person is Th1 or Th2 dominant, which part of this system is hyper-firing, very important in order to be able to calm the person's symptoms down while you're getting rid of the antigen that is stimulating the Th1 or Th2 dominance in the first place.

Thyroid panels

As we look at the thyroid panels, most commonly, a patient may come in with just a TSH done, maybe a TSH and a T4, both inadequate to properly assess the thyroid gland. Commonly a person has been placed on replacement thyroid hormones simply by looking at the TSH. The TSH is a thyroid-stimulating hormone; the old name for it was thyrotropin, which is released by the pituitary. Part of the brain called the hypothalamus speaks to the pituitary through another hormone called thyrotropin-releasing hormone (TRH) and tells the pituitary to release TSH hormone. TSH hormone then goes down and communicates to the thyroid, and then, with the stimulation of the thyroid by the TSH, the thyroid releases both T3 which is the active form of the thyroid and T4 which is the inactive form which must then be converted through a process in the liver, in the gut, and some of the other organs into the active form of T3. Actually, the thyroid makes T4 to T3 at about a ratio of 93% to 7%. So the thyroid is only releasing the 7% of the active form of the thyroid hormone; some have speculated that this may be due to the fact that the thyroid's job is to produce a majority of the inactive form so when needed, the liver could convert it into the active form. There could be other thyroid problems present in this chain of events

like thyroid hormone 'underconversion'. This is the inability of T4 to convert to T3 in the liver, gut, or other organs causing a decreased active thyroid hormone and hypothyroid symptoms, really not a thyroid problem whatsoever. That's why it's important to do all the testing of the thyroid so you could really get a good idea of what is causing the thyroid dysfunction.

But like we said before, most commonly, the problem is really not a thyroid problem whatsoever; it's an autoimmune problem that's attacked the thyroid. So, in a sense, it's something outside of the thyroid that needs to be treated, but the attack is on the thyroid cells themselves, causing the decreased production of T4 and T3.

So in review, an autoimmune disease may leave a person Th1 dominant, the part of the immune system that is the police force, not the part that makes antibodies. If that is the case, then they won't readily show antibodies against their tissue even though the body has destroyed that tissue through that autoimmune response. Therefore don't rely on thyroid antibody testing to reveal an autoimmune attack on the thyroid! If the person is Th2 dominant, then it's easy to see the antibodies for that tissue, and they'll readily show up positive, an easy diagnosis. But that's why we want to get the interleukin tests, the other cytokine tests, so we can see the balance of whether they're firing a Th1 response or a Th2 response with the autoimmune disease.

Liver/GI tests

The typical liver tests that are run are AST and ALT previously called SGOT and SGPT, respectively. These are enzymes that are present in tissues that have a very high metabolic activity such as the liver, the heart, skeletal muscle, and the brain. These markers are released after that tissue has normal cell death, giving us a functional range for AST and ALT. When they are high, there may be an abnormally high amount

of cell death or injury to the organ, and we want to investigate it a little further.

ALT is also an enzyme in high concentrations in the liver; therefore, it's considered a liver function test. If there's damage to the liver from an exogenous source, the AST and the ALT will rise. We have to remember that, very commonly, since the liver is one of our major organs of detoxification, any stress on the liver due to necessary detoxification can raise these two enzyme levels. Unfortunately, one of the most common reasons we see a rise in liver enzymes is where the patient is detoxifying a prescription medication that they're on.

Bilirubin should be separated into indirect and direct. It's a measurement of breakdown of red blood cells; total protein should also be separated into albumin and globulin levels. The albumin acts to regulate the movement of water between the tissues and the bloodstream, very important as far as the body being able to detoxify cellular debris and waste products. Globulin is a group of different fats broken down into alpha, beta, and gamma globulins. The ratio between albumin and globulin (called the A/G ratio) is a marker that when decreased, may indicate the beginning of liver dysfunction, a dysfunction in the stomach cells, or a decreased production of hydrochloric acid, and a disruption in digestion.

While we can't discuss dysglycemia without discussing a blood test known as hemoglobin A1c, the best blood test to help diagnose diabetic states. The functional range of hemoglobin A1C is, of course, tighter than the pathological range. We look for it to be not greater than 5.7. It is truly measuring the amount of glucose in the blood that is tied to the glyconated hemoglobin. So, 90% of the hemoglobin in your blood is hemoglobin A and that stands for the adult type or mature type of hemoglobin. One of these components is hemoglobin A1C, and it is the glucose-bound hemoglobin. It's really the most accurate measurement of insulin resistance because it's not as sensitive to daily fluctuations. Whether you ate some ice cream today and didn't eat it the next day, and

therefore, my glucose levels changed over the course of the day, it's not a test that is, at least at this point, a test that can be measured at home with a home measuring device like glucose is; therefore, glucose is easier to monitor on a regular basis for a patient with insulin resistance or diabetes. Hemoglobin A1C is really the appropriate test to make a diagnosis as far as how you're going to treat the patient.

Jim's Story

“I've been diabetic for about 12 years and have pretty much controlled it with diet and Metformin medication that my doctor prescribed. My health had been getting worse since I retired. My hands and wrists have bad arthritis and I think that my knees are pretty shot. Before I was told that this was part of an autoimmune disease, I was taking about 6-9 Advil each day and at least 2 Aleve for the joint pain. My shoulders, all the way down to my fingers, were so stiff in the morning I had to soak them in hot and cold water alternating just to get some motion in my wrists. I never heard of autoimmune disease but I was willing to trust the idea since nothing else was working. After 3 months of detoxifying and changing my diet (even though I'm not perfect), I can safely say that I'm getting my life back.”

When dysglycemia is present with autoimmune patients, we need to help regulate it. And again, I can't overemphasize that you have to do this at the same time that you're clearing the antigens and balancing the immune system or you're going to be disappointed in your results. The way we regulate glucose is not through medication. Medication will artificially decrease the glucose levels, cause disruption in our ability to detoxify other antigens, and just create another antigen that the liver has to deal with. We compromise the detoxification pathways of the liver with the more medications we use to try to balance the patient. In our

office, we like to use nutraceuticals, herbal formulas, diet and exercise that have been proven to help balance the dysglycemic state. If the patient will not comply with the diet, we don't even accept them as a patient; it's important to be serious about this. And as much as I understand that addictive states with food are extremely common, it's really a life or death situation with this individual.

When we speak of the gastrointestinal system, we're speaking of everything from the type of food you choose, you chewing your food, your ability to make saliva, the ability of your stomach cells to make hydrochloric acid and your intestines to secrete the necessary enzymes, the bile that's made in the liver that's going to breakdown your fats, and the intestines to move the food through the gut, and the intestinal villi to be free enough to absorb the nutrients, the capillary bed in the intestinal wall to be healthy enough to absorb the nutrients, the large intestine to absorb water and to create the feces that will be ultimately deposited in the toilet in a timely fashion so that we don't reabsorb all the toxins that our body is trying to get rid of. If that isn't a run-on sentence, I don't know what is.

The most common gastrointestinal disorder is a condition of decreased stomach acid production called hypochlorhydria. Most gastric reflux issues and symptoms of hyperacidemia causing most people to reach for Tums, Roloids, or Prilosec are really problems of a decreased hydrochloric acid production. That seems silly to someone who has these stomach issues with increased acid and burping up acid. They will tell you that, "You must be crazy. I don't have decreased hydrochloric acid production. I must have an increased hydrochloric acid production because I'm burping up acid into my gut and my doctor is telling me it's damaging the lower part of my esophagus. Therefore, I need to get on a medication that's going to be a proton-pump inhibitor and block the acid production of my stomach cells." Well, this is completely counterproductive if you understand the mechanism and it's just downright malpractice for doctors to continue to prescribe this type of medication because it's leading to malabsorption, maldigestion, inability

to use proteins, and all sorts of problems for the patient. This is just an absolute vicious cycle that you have to break, and it's difficult for patients that have been on these medications for years for their body to go through some changes to get their hydrochloric acid stomach levels back to normal.

Your stomach is the only place in your body that needs to be highly acidic. A pH of 1.0 is really much needed in your stomach and any imbalances that are going to cause maldigestion. Hydrochloric acid helps with the breakdown of fats and carbohydrates, and it's your primary digestive factor for protein. So, when proteins go into the stomach, hydrochloric acid needs to be there to break that protein down. When a person has a diet high in additives, colorings, flavorings, and toxins that block the beta cells of the stomach to secrete hydrochloric acid, the cycle begins. This leads to a decrease in the hydrochloric acid and a decrease mucus formation, which is a precursor to H. pylori infections and stomach ulcer formation.

But primarily, a decreased HCl production will lead to a decreased digestion of proteins. When you have a bolus of food that's improperly digested not entering into the small intestine in a timely factor, it sits in the stomach and pushes the little acid that is there up through the cardiac sphincter into the esophagus; you get reflux that irritates the diaphragm and the lower esophagus. While antacids will take the pain away, they perpetuate the negative cycle. What the patient needs to do is heal the stomach lining and the stomach cells so they can start producing the right amount of hydrochloric acid, so the protein can get digested, so the bolus could move through the stomach and into the small intestine and get properly digested and absorbed. The reflux will stop when the mechanism is corrected.

If we're just going to treat the symptoms, not only are we not helping the patient, we're actually propagating the disease process itself, and we're creating a sicker patient in the end. Antacids create a state where the stomach is more alkaline, destroying our first line of defense against

opportunistic organisms. Virus, bacteria, parasites, molds, fungus, and living biological toxins that we consume and are exposed to on a daily basis are not supposed to live beyond the normal acid slurry in the stomach.

There are numerous tests to assess the gastrointestinal system, typically, a traditional medical doctor will do some sort of scope in order to look for gross damage in the intestinal wall; they look to see if a person has any ulceration, damage, or tumor growth, and of course, that's necessary to rule out. Testing for parasites and H. pylori infections is a must. Digestive blood markers include triglycerides, lipid panels with cholesterol, HDL, LDL testing.

When we work on clearing the digestive system out, there's traditionally an alternative health care model called the 4-R program. The 4-R program stands for removing toxins, re-inoculation of the gut, replacing missing nutrients and good symbiotic bacteria in the gut, and repairing any damage to the gut, so it can properly function.

So removing includes destroying any parasitology, bacteria, and yeast overgrowths. Treating some of these conditions may need drug intervention, that's where traditional medicine works very well in dealing with quick-kill measures for these bowel toxins. However, a person can use different nutrients and an herbal approach as well. It tends to be very effective in dealing with these things without side effects of the medication.

The re-inoculation phase involves replenishing the GI tract with the symbiotic bacteria such as Lactobacillus acidophilus, and bifidobacterium. It also includes adding digestive enzymes and hydrochloric acid. Sometimes, a person needs to be on these things for a very long time, even for life, especially if there has been severe damage to the gut wall and the stomach cells. Typically, it takes anywhere between 6-12 months before the stomach can balance out its own HCl production and start dealing with breaking down protein on its own.

The repair phase includes proper nutritional support to heal the gastrointestinal mucosal lining. In repairing the mucosal lining, we used different supplements and herbals that have history and research behind it that will help mucus production in the gut so that it can hold the good bacteria. Malabsorption is often from damage to the mucosal lining that needs to be healed.

What to do?

(This list builds through this book)

1. Get proper testing. Antibody testing is essential to diagnose an autoimmune disorder but can be expensive. You do NOT need to test for antibodies to multiple organs of attack; having ANY antibodies to self-tissue is a diagnosis of autoimmune.
2. Identify other, correlated organ dysfunctions:
 - a. Anemia – a simple blood test
 - 1) B12 Anemia
 - 2) Iron deficiency Anemia
 - 3) Folate Anemia
 - 4) Anemia of chronic disease
 - b. Brain and Neurotransmitters
 - 1) Stress reduction techniques
 - 2) Importance of sleep
 - 3) Testing for Melatonin levels
 - 4) Neurotransmitter testing
 - c. Test for Liver Detoxification Health
 - 1) Detox metabolite testing
 - 2) MTHF defect testing
 - 3) Testing for methylation support
 - d. Test for dysglycemia
 - e. Test for HCl deficiency

3. Find a doctor who is knowledgeable enough to follow these RULES:
- 1) What is the initial ANTIGEN that sparked this disease?
 - 2) How am I going to get RID of the antigen?
 - 3) Am I TH1 or TH2 dominant?



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Final Remarks

Regardless of what you choose about healthcare, I pray that you make wise, rational decisions based on facts (though often hidden) and not fear. You need to take responsibility and not hand it over to any practitioner, conventional or alternative. Get advice from many, weigh it all against their biases, and pray for peace about your decisions.

Kevin Connors, Pastoral Medical Association, Fellowship in Integrative Cancer Therapy and Fellowship in Anti-Aging, Regenerative and Functional Medicine, both through the American Academy of Anti-Aging Medicine.

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