

PREVENT & REVERSE THYROID DYSFUNCTION NOW

A Model For Cellular Healing



ATP, Autoimmune, Cell Membranes, Detoxification, Epigenetics,
GMO Foods, Hering (Dr. Constantine) Hyperthyroidism,
Hypothyroidism, Iodine, Goldenseal, Kent (Dr. James Tyler),
Inflammation, Leaky Gut Syndrome, Methylation, Mitochondria,
NO/ONOO Cycle, Radiation, Selenium, Thyroid Hormones

By Dr. Jack Tips (Ph.D., C.C.N.)

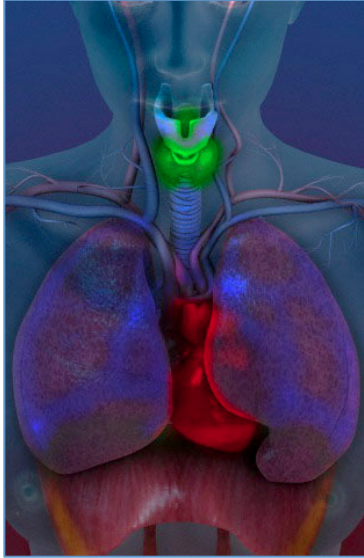


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An information resource for:

Christa Orecchio's
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www.thewholejourney.com

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In the 21st Century, the science of epigenetics (changes in gene expression that occur without changes or mutations to the chromosomes) has established that autoimmune diseases medically labeled with names such as Hashimoto's, Multiple Sclerosis, Crohn's, Graves' Disease, Rheumatoid Arthritis, etc., are reversible and have always been. The Natural Health Model, based on both biochemistry and bioenergetics, has been helping people's bodies reverse chronic-degenerative and autoimmune diseases based on the body's own Natural Laws, and now Modern Medicine is discovering the scientific basis on how natural therapies impact the cells' expressions of health and disease. Food, herbs, acupuncture, thoughts, vibrational frequencies, and homeopathic remedies are now documented as affecting how the cells express health as opposed to symptoms and diseases.

Autoimmune Disease – *any of a large group of diseases characterized by abnormal functioning of the immune system that causes the immune system to produce antibodies against the body's own tissues which results in damage to tissues and metabolic processes.*

Comment: This standard medical definition is due a major overhaul. It has not yet considered that the immune system is responding perfectly to the circumstances encountered which should include environmentally-acquired toxicity, pathogens, electromagnetic frequencies (EMF's), vaccination-toxicities, antibiotics that disturb the gut microbiome, nutritional deficits, and genetically modified foods, all of which can derange the body's biochemical and bioenergetic functions e.g. 1) the immune system, 2) the cell membranes, 3) mitochondrial and cellular DNA.



Nuclear Radiation: Adding Insult & Injury To Thyroid Processes

Today, thyroid dysfunction is at an all time high, and growing every month. It is expected to continue to skyrocket in part because the Fukushima Daiichi Nuclear Disaster continues to spew massive amounts of nuclear fall out (affects the thyroid via Iodine-131, and affecting other cells via other radioactive isotopes) into the atmosphere and Pacific Ocean blanketing a large percentage of the world's food supply. Two considerations: 1) Radiation causes cancer; 2) The body has innate methods (nutritional!) to correct radiation damage. Health hangs in the balance.

In the United States, Fukushima radiation goes into the above- and below- ground water reservoirs as well as onto crops that affect milk, meat as well as fruit and vegetables. People who are not directly contacting radiation from the air are exposed through food and water. Basically the governments, being democratically oriented, decided that it was fair to disperse the radiation in the Pacific Ocean that feeds many people, and through American agriculture; thus they provide equal opportunity for unsuspecting people to filter the radiation through their bodies—and this means that you and I have been selected to be filters¹ when the damaged reactors were not closed (encased in cement) to reduce the spread of the lethal radiation.

Radiation, coupled with pandemic Iodine and Selenium deficiencies, plus the gross lack of phyto-antioxidant nutrients in the diet (unless one eats according to natural health principles taught by today's leading Natural Health experts and the *Pro-Vita! Plan*² method taught to us by Doc A. Wheelwright); the thyroid is bearing

Discourse "*Ionizing Radiation—A Smarter Plan On How To Protect Yourself*" discusses nutritional solution for nuclear radiation and repair of radiation damaged chromosomes.

Pro-Vita Plan For Optimal Nutrition featuring the 5+5 Optimal Meal Plan for Cellular Nutrition, available at www.appleadaypress.com

the brunt of “life in the 21st Century,” and protecting itself by lowering its and the body’s metabolic processes. Regulated by the thyroid’s hormones, lowering metabolic energy production is simply a basic, self-protective function of the body’s Innate Intelligence. Note: a small percentage of people express “hyper-thyroidism” when the thyroid TSH (Thyroid Stimulating Hormone) receptors are over-stimulated by the immune system’s antibodies and its activity becomes “accelerated” or “runaway.”

Several Reasons For Low Thyroid Performance. When the thyroid goes “hypo” it is because: 1) the person does not have enough basic nutrients (iodine, selenium, tyrosine, B-vitamins, fatty acids) dietarily, or 2) the body’s *Innate Intelligence* (self-regulatory mechanism) “lowers the thermostat” in an attempt to protect the thyroid’s mitochondria and cell membranes from oxidative damage, or 3) the body’s various cell membranes are inflamed and the cell membrane receptors unable to perform properly, thus giving the feedback-signal to the hypothalamus that there’s plenty of T4 in circulation, or 4) mercury toxicity depletes selenium and also blocks the conversion of the inactive T4 hormone into the active T3 hormone.

Canary In The Coal Mine. The thyroid is particularly vulnerable to oxidative damage because it manufactures thyroxine (T4) and triiodothyronine (T3) via the oxidative-reductive molecule hydrogen peroxide (H₂O₂). The body’s Innate Intelligence can reduce the use of thyroid hormones by lowering the basal metabolic rate as well as by filling cellular receptors with “reversed T3” (rT3) molecules to decrease the cell’s metabolic activity. Further, environmental toxicity can bind with cell membrane receptors and interfere with the T3 messengers. Antioxidants such as glutathione, superoxide dismutase and catalase help protect the thyroid’s energy processes.

Hypothyroid—A Normal Choice. It’s interesting to note how quickly modern medicine is to diagnose a normal body process as “a disease” when actually the body is performing perfectly to the stimuli given. Such a short-sighted approach

GUIDE TO SIX OF THE THYROID HORMONES

T1. 3-Iodothyronamine, T1(am),

T1 Amine: is a derivative of T4 Thyroxine that counteracts thyroid hormonal activity. Causes hypothermia, low blood pressure, slow pulse, inactive, torpid states. Protects the heart. Amphetamines, Ecstasy turn on T-1 receptors.

T2. 3,3'-Diiodothyronine:

Increases mitochondrial respiration and cytochrome oxidase activity. Stimulates metabolic rate to help in times of cold, over eating. Elevates basal rate. Increases oxidative rates in muscles, brown adipose and liver. Increases fat metabolic enzymes (glucose-6-phosphate dehydrogenase, malic enzymes). Increases GH. Not as suppressive as T3 for TSH.

T3. 3,5,3' Triiodothyronin:

The **active** molecule at the nuclear membrane receptor. Activated two ways: 1) Deiodination = removal of one iodine atom, 2) Sulfation, 3) Glucuronidation

T4. Thyroxine: The major hormone. Called “storage.” 80% of what’s in the body.

rT-3 Reverse T-3: inactive, unable to express, used to clear out excessive T-4. Pesticides in food cause more rT-3, as does stress. Blocks cell receptors causing Thyroid hormone resistance.

Calcitonin: 1) suppresses bone resorption by inhibiting osteoclasts’ = bone loss, 2) prevents Ca & P from being retained in kidneys, thus loss in urine.

Note: Reversed T4 is an Rx drug called Levo-thyroxine. Levo = Left whereas Dextro is “right” in both senses of the word. So the drug is actually a reversed molecule and to work, the body has to sort it out and flip it around.

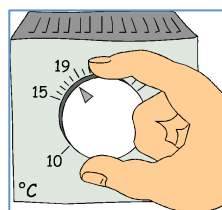
fails to address the **cause**, and instead calls the body's efforts to manage the distress a "disease."

Some Causes To Consider:

- **An increased "set point" of inflammation** from the gut-microbiome/immune-response relationship interferes with thyroid hormone performance via inflammatory processes. This inflammation might be driven by altered grains such as hybridized wheat proteins, e.g. gluten, agglutinin, wheat-germ agglutinin factor, gliadin; or by genetically-modified BT-corn causing the intestinal bacteria to produce pesticide toxins in the body; or by genetically-modified corn disrupting the intestinal bacteria's *shikmate* metabolic pathways. It might be driven by antibiotics (in commercial meats—beef, chicken, fish, lamb, etc.—as well as by prescriptive antibiotics).
- **A process called "mimicry."** The immune system can be fighting pathogenic bacterial biofilm in the intestines (attacking an enzyme called transglutaminase) and errantly attack the thyroid because of similar molecular structures.
- **Oxidative stress** from chemicals and heavy metals such as mercury and aluminum in vaccinations, or from "silver/amalgam" dental fillings increase the body's need for antioxidant-rich foods which are lacking in the so-SAD (Standard American Diet.)

Failing to address the cause and labeling a normal body process a disease is how cholesterol got blamed for arterial plaque when it's actually trying to help the body deal with inflammation. This is how the body's decision to "lower the thermostat" that results in fatigue, a self-protective measure, is blamed as a thyroid disease. The Natural Health disciplines understand that for the body to restore health, "*Remove the Cause*" is absolutely essential.

So the body has several reasons to lower the thermostat (e.g. lower the amount of ATP (adenosine triphosphate) that the cell's energy-producing mitochondria make for the activity and vitality of life), and there are other causes and contributors outside of the thyroid itself including, for example: *stress* causes adrenal hormones, epinephrine, norepinephrine, and cortisol to elevate and all three of those hormones suppress the thyroid's activity and cause an elevation of reversed T3 (rT3) to block and inactivate the thyroid receptors resulting in "lowering the thermostat."



Here we have a secret on why Chronic Fatigue Syndrome has been so illusive to medical-scientific research—it's caused by factors outside the scope of their model and understanding. Specifically, CFS is often a decision by the body's Innate Intelligence to lower the thermostat (based on epigenetic response to the environment) coupled with the chromosomal damage of agricultural pesticides, chemical toxicity and radiations (ionizing and non-ionizing) that interfere with thyroid performance at the cell-receptors throughout the body. Set the stage with nutrient deficiency. Further, confuse the immune system with mercury in dental fillings, antibiotics, and vaccinations. Toss in a good bit of 21st Century stress, and voila! 70% of the USA population is

hypothyroid according to endocrinologist and thyroid researcher, Dr. Broda Barnes.

Unfortunately, people in a hypothyroid metabolism often express fatigue and many are diagnosed as having Chronic Fatigue Syndrome. When the metabolism is “turned down,” the body does not digest food as well nor detoxify as well. Liver function slows down, and the liver is the lifeline! The immune system often goes “hyper and hypo” in that it tries to compensate, but struggles to keep up with the increased workload of pathogens that occur when the liver doesn’t detoxify adequately.

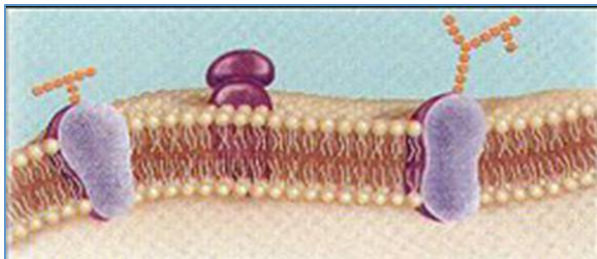
This is why thyroid function is so important as a prerequisite to set the stage for all healing throughout the body. Simply put, the body needs its metabolic processes (cellular energy, transcription of DNA, hormone communications, neurotransmitter function, immune activity, and detoxification) to cure itself of its symptoms and disease processes. Hypothyroidism is not only an early warning of more symptoms and diseases to come, it’s an *obstacle to cure*. If the natural health practitioner fails to address the thyroid, there will not be a lasting cure for the patient.

Key Reasons For Autoimmune Diseases In The 21st Century:

The following nine topics could well be both causes and contributors to the meteoric rise in autoimmune diseases.

1. Chronic Cellular Inflammation. Free radical damage to mitochondrial and nuclear DNA, environmental toxicity (heavy metals), processed food (trans fats, sugar, high fructose corn sweetener, etc.), Electromagnetic fields (EMFs), biotoxins (mold), sugar & aspartame (NutraSweet™) consumption, genetically-modified foods. Such exposures activate excessive immunological activity and impede healthy cell performance.

2. Leaky Gut/Leaky Brain Syndrome. Enteric Nervous Systemic activation of cytokines throughout the body that raise the immune system’s activity level (set point) allowing more collateral damage from immune dysregulation (caused by overconsumption of grains, dysbiosis (too many pathogenic bacteria and not enough of probiotic bacteria in the intestines), use of antibiotics by people and in agriculture, impaired neuroendocrine regulation and neurotransmitters due to *zonulin* opening the door—both the intestinal barrier as well as the blood/brain barrier. This allows inflammation and disrupted cell membranes with the brain’s regulatory processes, specifically the hypothalamic regulation of hormones as well as a neurotransmitter processes.



3. Cell Membrane Degradation.

From inflammatory process, heavy metals, chemicals, plastics, trans-fats (margarine), pathogens, and biotoxins (mold, candida, etc.) The damaged cell membranes become inflamed by the immune system, and fail to receive

hormonal messengers, and struggle with free radical damage.

4. Pathogen Proliferation. Pathogens proliferate in a toxic environment. Their metabolic wastes are becoming more toxic due to their adaptations to electromagnetic frequencies (EMFs – cell phones, wifi, microwave transmitters, radar, Smart Meters, etc.), as well as from the increasing global nuclear radiation. Pathogenic wastes cause epigenetic transcription of defensive processes instead of optimal processes. Science has now documented 20 ways that pathogenic microbes in the intestinal tract can cause inflammation throughout the body often causing antigen or super-antigen inflammatory responses that drive chronic degenerative and autoimmune diseases.

5. GM Foods. Quote from GM (Genetically Modified) opponents: “Genetically Modified, RoundUp Ready® foods such as corn, soy, and beets, alfalfa, and other GM foods such as Hawaiian papaya, or eating meat fed these products, can cause your intestinal probiotics to produce insecticides or virucides that inflame cell membranes and disrupt both the epigenetic transcription of health from DNA, as well as the DNA itself³. They contribute to Leaky Gut processes by negatively impacting the enterocytes.”



6. Glucose Metabolism Dysregulation. Overconsumption of inflammation-driving sugar and high fructose corn products (GM) causes insulin resistance (a cell membrane issue). Glucose dysregulation is linked with heart disease, obesity, Alzheimer's, and diabetes. Overconsumption of starchy, processed foods and sugar alters the gut-microbiome favoring pathogenic species and loss of biodiversity in our health's strongest ally—the bacteria that live in our intestines.

7. Limited Food Variations. Modern culture eats the same few things over and over (wheat, milk, corn, starch) causing increased allergenic reactivity. The human body requires a huge variety of phyto-molecular input from plants and herbs to maintain proper epigenetic expressions of optimal health. The body requires a “full and varied diet” and “information” from spices to maintain optimal health.

8. Low Thyroid Function (e.g. Effectiveness of Thyroid Hormone at the Target Cell Membranes. Lower basal metabolism as a self-defense mechanism retards optimal body functions. Cellular toxicity increases. Liver function decreases. Immune system increases vigilance. Low thyroid function is often the effect of the toxic environment coupled with inadequate iodine, selenium, fatty acids, and anti-oxidant nutrients.

³ Chemical Research in Toxicology 2010; 23(10):1586–1595

9. Confused Immune Systems. The body's two immune systems are not without involvement in autoimmune diseases. Intestinal inflammation causes the immune system to be more active, more aggressive. Leaky gut molecules that enter the bloodstream demand immediate immune response from the leukocytes to digest them⁴. Combination-vaccinations unnaturally contain multiple diseases that demand wide immunological action. Altered cell membranes that contain heavy metals and trans-fats cause leukotriene-mediated immune activity against the cells themselves. Free radical damages to cell membranes raise a warning flag for the immune system. Antibiotics (rightly or wrongly) interrupt the normal cascade of immunological response to pathogens. Biofilms hide pathogens. Allergies and environmental toxins overwork the immune system.

These are but a few reasons involved in immune system distress that can lead to the immune system's actions damaging tissue. Collateral damage (e.g. damage to self) has always been an acceptable part of the immune system's directives to help the body survive.

Involved in all of those reasons, either as cause or effect, is hypothyroidism because when the metabolism is slow, detoxification is slowed down, the cells become hormone resistant both by choice and by damage to the three membranes (cell wall plasma, mitochondrial, nuclear).

Because human epigenetic expressions of DNA evolved over the past thousands of years by adapting to the Earth's environment (air, water, plants, foods, toxins, climate); plus interpretations of that environment (thoughts, beliefs, emotions, attitudes) which include encounters with other human beings (peace, war, love, trust, mistrust, calm, strife, stress, etc.); this all adds up to the gestalt of human adaptability which is the basis of survival. The human body can adapt very quickly to environmental stimuli. This is one reason why human beings have survived to become a dominant species (along with rodents, roaches, bacteria, saurians, and algae.)

Over the millennia, cellular DNA was arranged (folded) by *histones* to more easily express the most relevant and useable genetic information.

Such genetic arrangement is not accustomed to pesticides, food additives, EMF resonances, chemicals in the water and air, "genetically modified for pesticides" crops, and so forth. Herein is the essence of the Holistic Model—that human beings are all affected by each other, by the Earth, by actions and thoughts, as well as by every cell in the body.

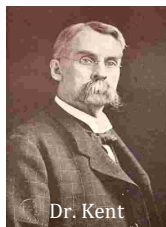
Epigenetics -- the study of heritable changes in gene expression or cellular phenotype caused by mechanisms other than changes in the underlying DNA sequence hence the name *e*pi- (Greek: *ἐπί*- over, above, outer) -*genetics*. It refers to functionally relevant modifications to the genome that do not involve a change in the nucleotide sequence. Examples of such changes are DNA methylation and histone modification, both of which serve to regulate gene expression without altering the underlying DNA sequence.

⁴ The Influence of Cooking Food on the Blood Formula of Man. Proceeding; First International Congress of Microbiology, Dr.Paul Kouchakoff, Paris; 1930

The *Central Dogma of Medicine & Biology* (the immutable pathways by which RNA transcribes DNA to create the proteins that operate cellular metabolism) was erroneously and shortsightedly interpreted to support Medicine's ignorance of Natural Law with the litany of "no known cause, no known cure" for everything that could not be blamed on a pathogen, or solved with a chemical drug or the surgeon's blade.

Epigenetics To The Rescue! Blessedly, Modern Medicine's position is being rewritten in light of the blossoming science of *Epigenetics*. Biology's new understanding of how the cells' energy-producing organelles, *mitochondria*, are suffering both an energy crisis as well as free radical damage due to a lack of plant nutrition is bringing new perspectives to the forefront as the deeper research is revealing the validity of Natural Laws that govern life and health. The deeper the research, the more the truth of the Natural Health Model is made manifest – that within each person is an *Innate Intelligence* that serves to help the body adapt, survive, and live in the most optimal health possible; and that communication with the Innate Intelligence is accomplished by energy frequencies as well as food (mostly plant) molecules.

While the "old guard" struggles to pervert the truth and maintain their strongholds with "dollars, lawyers, and guns" pointed at proponents of natural health, Science and Medicine are struggling to continue to ignore the "elephant in the room"—that plants, herbs, and natural-kingdom substances are the true medicines that the body requires to heal itself rather than a drug-poison that suppresses symptoms and causes collateral damage. This certainly makes for interesting times.



Further, Science is also encountering the long-established laws of the Innate Intelligence—particularly the 2nd Natural Law of Cure called the "Direction of Cure"—that the body moves to heal itself from the inside out, from the top down, from organs of greater importance to lesser importance, and in reverse order that suppression or



compensation occurred. Dr. Constantine Hering taught these laws in 1845. The great American physician, Dr. James Tyler Kent, codified these laws in 1911, validated them, and labeled them "Hering's Laws of Cure."

The reason for the 100-year delay is that the medical model became preoccupied with suppression of symptoms and partnered with a system of pharmacy that is focused on sales and profits from drugs instead of serving the body to cure itself with the body's chosen methods. It shortsightedly chose to work with "opposites," meaning "this drug will suppress that symptom" thus opposing the 1st Natural Law of Cure which is, "*similia similibus curantur*" or, "Like Cures Like."

For an example of this first law, we might cite the herb Golden Seal (*Hydrastis Canadensis*) to help the body overcome a sinus infection or respiratory infection marked by yellowish or greenish, stringy mucous. Yet if a healthy person repeatedly



took large amounts of Golden Seal, that person would express side effects, predominately yellow, stringy mucus from the sinus and lungs. So we find that an herb that will cause yellow stringy mucus will help the ill body cure itself of the same-such issue. This is what is known in herbology as the body “*reacting against the herbal influence*”⁵ to elicit the healing response, and this is the domain of “therapeutic herbs”⁶. Science is also discovering that the effectiveness of herbs is linked to their impact on the gut-bacteria—that it’s the bacterial responses that hasten the herbal influence throughout the body.

Modern biological research is rapidly discovering the critically important role of the cell membranes and how inflammation from pesticides, food additives, trans fats, plastics, electro-magnetic frequencies (wifi, cell phones, microwaves, airport scanners, Smart Meters, First Alert® etc.) and the toxic environment are interfering with the most critical aspects of innate health expressions—human hormonal balance, ATP energy production, nutrient uptake, detoxification, cellular communications, and immunological regulation of health.

How The Gut-Thrive In 5™ Program Supports Thyroid Health

	TASK	SOLUTION
1	Detoxification	Protocols and Diet
2	Membrane Repair	Fatty Acid Nutrition
3	ATP Restoration	Nutrition that supports ATP
4	Quench Free Radicals	Supply intracellular antioxidants
5	Replenish Se + I	Proper implementation of Selenium & Mineral Rich Foods/Supplements
6	Support Thyroid Tissue	Nutrition for Thyroid Tissue Integrity
7	Methylation	Provide methyl donors (B-Vitamins)
8	Stress Hormone Reduction	Support adrenal glands, reduce stress
9	Correct Leaky Gut	Leaky Gut Repair Program
10	Support Epigenetic Health	Herbs / Spices / Foods Elicit Health
11	Repair Damaged Thyroid DNA	Nutrition for repair processes
12	Support Other Applicable Tissues	Pituitary, Hypothalamus, Gonads

This same research is showing that thyroid concerns are reversible⁷ when: 1) the cause is removed (detoxification), 2) the membranes repair from oxidative damage and trans-fats disruption, 3) ATP processes are restored, 4) free radicals are quickly quenched based on nutrients that support the antioxidants *glutathione*, *catalase*, and *superoxide dismutase*, and the nitric-oxide processes normalize to end the free radical cascade called the “no/onoo cycle,” 5) adequate selenium

⁵ “*Reacting against the herbal influence*” – This concept is discussed further in the book, “New Dimensions In Herbal Healing, available at www.appleadaypress.com

⁶ Therapeutic herbs: Doc Wheelwright’s insights on the four categories of herbs—potherbs, tonics, therapeutic, and drastic—is presented in the book, *The Healing Triad: Your Liver—Your Lifeline* available at www.appleadaypress.com

⁷ More information on reversing autoimmune processes is presented in the article: *Thyroid Autoimmunity—A Natural Health Model for Reversing Self-destructive Immunological Activity* available at www.appleadaypress.com

and iodine/iodide are present, 6) the tissue integrity of the thyroid is restored, 7) methylation processes function correctly, 8) stress hormones are reduced, and 9) Leaky Gut inflammatory responses are corrected, 10) the cells epigenetics elicit health-building proteins from the genome, 11) Repair damaged genetics, and 12) support other tissues if so determined.

Of course nutritional health rests on proper diet, rest, and exercise – all the fundamentals!



“Hypothyroidism”—The Hidden Diagnosis.

Researchers often refer to thyroid issues as “the hidden diagnosis” meaning that they underlie numerous other diseases, but modern medicine commonly fails to consider the thyroid as being a critically important facet of the symptoms’ causal chains. Part of the oversight is based on the medical model’s adherence to the limited scope of blood lab tests that do not identify ailing thyroids until people are very deep into a disease process.

Specifically, the reliance on the Thyroid Stimulating Hormone (TSH) test as something definitive to thyroid health totally misses the inner cellular thyroid hormone processes—the only place where it really matters. Basically, the standard, medical thyroid tests have been tantamount to useless because they assay information that does not reveal what’s really going on in the cells where the hormonal messengers stimulate activity of vital life processes. Time and again, doctors will tell people that their thyroid is fine despite the obvious hypothyroid symptoms being portrayed and low basal metabolic rate because the pituitary’s stimulation of the thyroid to produce T4 (and some T3) hormones is within the laboratory range.

Basing thyroid function on TSH is tantamount to a cypher expert who’s using the wrong codebook to interpret the secret message. TSH increases when the hypothalamus perceives that there’s not enough T4 (Thyroxine) hormone in circulation and instructs the pituitary to stimulate the thyroid via the hormone TSH. But the real issue with thyroid hormones is the cellular conversion of T4 to T3 (triiodothyronine) and the cell membranes’ abilities to receive the T3 message. Cells with inflamed membranes have difficulty allowing the T3 hormone to dock with its receptors, and inflamed cells may “decide” to be resistant to T3 in an effort to reduce inflammatory free radical production by the mitochondria as they produce ATP (Adenosine Triphosphate) energy.



Another reason that modern diagnostic methods miss the majority of thyroid dysfunctions is because modern medicine is a system of specialization which is estranged from the body’s holistic aspects. So unlike the holistic model, the

thyroid doctor only focuses on the thyroid and the heart doctor only looks at the heart. Doctors who range outside the narrow scope of their specialization are chastised by their medical boards if they "think outside the tight little box that governs what the insurance companies allow them to do.

Due to this fragmented approach to disease, they often fail to understand what is fundamental to the natural health practitioners—that hypo-thyroidism is both a cause and contributor to diabetes, cancer, heart, cardiovascular, obesity, chronic fatigue syndrome, fibromyalgia, and liver diseases, to name a few. Thus low thyroid hormone activity at the cellular level is a fundamental and critically important factor in autoimmune diseases and chronic degenerative diseases, but the specialists are not focusing on this.

Why do the Natural Health practitioners understand so easily that thyroid performance is integrated into the fabric of so many other seemingly unrelated symptom expressions? Because it sets the metabolic rate upon which the other tissue's processes are based. There is no leap in logic for the Natural Health practitioners to grasp that the body functions as a whole unit, so if the thyroid function is hypo, then all the body's innate life process become sluggish, the liver fails to detoxify effectively and cellular inflammation increases, and therein is an important cause of heart disease, Alzheimer's, and pancreatic beta cell damage (Diabetes). Modern science is now calling practically all chronic-degenerative and autoimmune disease "*Mitochondrial Diseases*," but still, that's not the true cause. It's just a deeper look that the body's struggle to adapt and survive. The obvious question being begged is "What's causing the mitochondrial damage?" That question leads us back to the toxic environment and nutrition.

Such ubiquitous prevalence of the body's "master metabolic regulator" disorders means that it is imperative that natural health practitioners be proficient in helping the body correct the true cause of thyroid malfunction in order to gain leverage

Thyroid Hormones One Of The Body's Master Regulators

- Controls the rate that the cells use oxygen to make ATP energy
- Makes proteins that operate cell and tissue function
- Governs sensitivity of the cells to other hormones via cell membrane receptors
- Participates as a feedback mechanism involving other glands: ovaries/testes, adrenals, thymus, hypothalamus, pituitary, pancreas as well as lesser known endocrine cells in the heart, skin, placenta, kidneys, etc.
- Promotes glucose conversion to pyruvate in the liver
- Makes glucose from fat
- Controls volume of digestive enzymes
- Maintains nervous system function
- Promotes the female body's ability to become pregnant
- Controls hair growth
- Facilitates skin hydration
- Promotes bone growth and maintains strong bones
- Maintains muscle tone including heart muscle integrity
- Controls rate that the liver releases cholesterol
- Controls rate of pancreatic enzyme and insulin production.

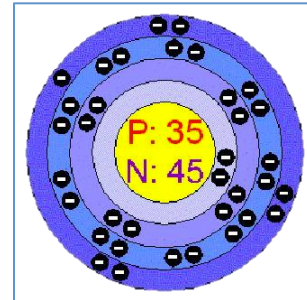
over many other health concerns. When 70% of a population is hypothyroid, there are huge ramifications for health, the cost of health care, and the quality of life.

More specifically, low or abnormal thyroid function presents an “obstacle to cure” that can block the body’s effort to correct other health issues. Further, according to medical literature, thyroid dysfunction and autoimmunity often leads directly to other autoimmune diseases including: Addison’s disease, Alopecia, Celiac disease, Diabetes mellitus, Lupus erythematosus, Pernicious anemia, Primary biliary cirrhosis, Rheumatoid arthritis, Sjögren’s, and Vitiligo, to name a few⁸.

For this reason, thyroid concerns are considered a “canary in the coalmine” – an early warning that if not corrected, health will decline further over time. The thyroid is a tissue that is more susceptible than most other tissues because: 1) it is very active and thus subject to wear and tear, 2) it uses reactive oxygen species (ROS – free radicals) to manufacture the metabolic messenger hormones, thus is susceptible to both mitochondrial and cellular DNA damage.

Iodine Supplementation Requires Nutritional Metabolic Insight

Until leading medical doctors discovered that a nutritional issue, iodine deficiency, is the leading cause of thyroid dysfunction, medicine’s position was to avoid iodine supplementation because of the risk of aggravating autoimmune diseases by ramping up the production of converting *iodide* to *iodine* which requires free radicals from hydrogen peroxide. Years ago, hypothyroid conditions were medically treated by iodine with good effect. But with the advent of the drug therapies, the inexpensive nutritional solution was abandoned. Then as that deficiency increased along with autoimmune thyroid disease, iodine supplementation was labeled “dangerous” because it can aggravate the autoimmune processes by ramping up the processes that require free radicals (the conversion of iodide to iodine.)



So, for a person with Hashimoto’s or Graves’ Disease, they often cite that taking high amounts of iodine is like throwing gasoline on a fire. The diseases are associated with a deficiency of iodine, but iodine can exacerbate the condition when autoimmune processes are in effect because the thyroid really needs more iodine in conjunction with a foundational base of selenium that supports safe and proper conversion of iodide to iodine.

Research has shown that another nutrient-element in short supply is the key—*selenium*. It is selenium that helps make the enzyme that quenches the dangerous free radicals of the hydrogen peroxide “iodide to iodine” process. That enzyme is

⁸ Note: diagnosing and labeling of diseases is restricted to the practice of drug-medicine and these terms are cited as being in the public domain and are examples of diseases medically labeled as autoimmune.

glutathione peroxidase. So clinicians have learned to support selenium and thus the antioxidant, glutathione peroxidase, when using generous amounts of iodine.

Practitioners test the body's selenium levels through hair/nail and blood-serum tests. When adequate selenium is present, supplementing iodine in levels much higher than the recommended daily allowance helps restore thyroid health. The Recommended Daily Allowance (RDA) for iodine is established as the barest minimal to prevent overt goiter—an enlargement of the thyroid gland. It is far too low for optimal thyroid function, far too low to help the body prevent bone, breast, and prostate cancer. For this reason, savvy doctors often recommend iodine in amounts that are 100 times greater than the RDA.

Clinical Applications. So let's apply this exciting and cutting edge information to the thyroid gland and the two most common thyroid autoimmune diseases – Hashimoto's Thyroiditis and Graves' Disease both of which are cited by Dr. David Brownstein (M.D.) as being reversible. Fundamentally, thyroid diseases are a simple announcement that occurs when the free-radical, cell membrane destructive processes have reached an unacceptable level resulting in genetic damage to the mitochondria and thyroid nuclear DNA.



The key difference between the autoimmune thyroid disorders, Hashimoto's and Grave's Disease lies in the action of the autoantibodies produced by the immune system. The cause is basically the same issue: often a lack of iodine coupled with free radical damage of the mitochondrial and nuclear DNA and epigenetic expression of damaged chromosomes.

Hashimoto's VS Grave's Disease



The two primary expressions of thyroid autoimmunity are flipsides of the same issue where the immune system's antibodies attack key components of the thyroid gland. Hashimoto's thyroiditis is an autoimmune thyroid disorder that may be associated with a goiter (thyroid lump) or in late stages of the disease with minimal residual thyroid tissue (called atrophic thyroiditis).

The autoimmune process of Hashimoto's thyroiditis causes reduced thyroid function—thus it is mostly a hypothyroid concern. The body reacts by initiating a compensatory phase in which the pituitary's Thyroid Stimulating Hormone (TSH) rises to compel the thyroid to work harder and release the thyroidal hormones. The condition of elevated

TSH with normal thyroid hormone levels is called subclinical hypothyroidism and is usually asymptomatic or associated with only minor symptoms.

Eventually, the T4 hormone levels will fall despite very high TSH levels (over 10mU/L). People with Hashimoto's will then become symptomatic. The condition of high TSH with low T4 levels is known as clinical hypothyroidism or overt hypothyroidism.

The asymptomatic compensatory phase of Hashimoto's thyroiditis can last for quite some time such that many people initially present to their physicians with a "thyroid mass" or "lump" rather than symptoms of hypothyroidism.

The thyroid lump of Hashimoto's Thyroiditis is better known as a goiter. A goiter is an irregular, firm nodule in the thyroid area (either side of the trachea or "wind pipe" near the bottom of the throat). Goiters can become large enough to produce a visible asymmetry of the neck.

Graves' disease is another autoimmune thyroid disorder that can cause goiter formation. It is common for students of health sciences to forget the differences between Grave's disease and Hashimoto's thyroiditis.

However, these two autoimmune thyroid conditions result in drastically different clinical pictures, require different treatments and have different outcomes.

Hashimoto's Hypothyroidism results from the production of antibodies that destroy thyroglobulin and/or the enzyme thyroid peroxidase. Thyroglobulin is a protein used by the thyroid gland to produce the thyroid hormones T3 and T4. Thyroid peroxidase is an enzyme in the thyroid that assists in the production of T3 and T4.

Graves' Disease, on the other hand, causes an autoimmune hyperthyroidism. Grave's disease is actually the most common cause of hyperthyroidism. The excessive thyroid activity of Grave's disease is the result of autoantibodies to the TSH (thyroid stimulating hormone) receptor. The TSH receptor antibodies activate the TSH receptors and stimulate the thyroid to produce excessive amounts of thyroid hormone. This puts the thyroid into to hyper-drive and the person's metabolism into overdrive.

Thus, the key difference between the autoimmune thyroid disorders Hashimoto's and Grave's disease lies in the action of the autoantibodies that are produced.

- **Hashimoto's** autoantibodies decrease precursors necessary for thyroid hormone production, thereby causing *hypothyroidism*.
- **Grave's Disease** autoantibodies stimulate TSH receptors, thereby increasing thyroid hormone production and causing *hyperthyroidism*.

How does a person contract Hashimoto's versus Graves' Disease? It's an individual matter based on a variety of factors and predispositions, and probably an element of "luck of the draw" regarding where the cell damage occurs. Such

factors include how the person's histones have folded their DNA, antioxidant nutrition, level of immune-driven inflammation (leaky gut, environmental toxins, trans-fats) and how their epigenetics express the chromosomal information.

By understanding the universal, fundamental causes, we find the common underlying root cause, and like all of the body's disease symptom-expressions, the body's own chosen remedy is the same – harness the innate vitality to effect cure, support that directive with nutrition that accomplishes the following:

12 Essential Factors To Help The Body's *Innate Vitality* Correct Thyroid Dysfunctions

Here's some information resources and citations of the components that point to nutritional support for a healthy thyroid gland. You can look further at what natural health practitioners are doing to help the body correct thyroid concerns. We'll use our list of 12 key factors cited before.

Here's what many clinicians are doing to address the 12 Essential Factors:

1. Detoxify. The Detoxification Guidelines known as *Detox Done Right* reveal safe, effective and comprehensive detox strategies that 1) build and support the liver function as a prerequisite in that improved liver function automatically engenders better whole-body detoxification, 2) help guide the body to remove stored toxins from the extracellular matrix (collagen and fat cells), 3) facilitate intracellular detoxification. More information on its principles can be found in the article "A New Model For Detoxification" at www.appleadaypress.com or view a video presentation at: <https://vimeo.com/97004852>



2. Repair Cell Membranes. Nutritional supplements are available that employ rare nutrients such as *cardiolipin* as well as *phosphatidyl choline*, and other phospholipid nutrients and essential fats necessary for many healing processes. Such formulas, available from your natural health professional, set a new standard for nutritionally supporting damaged cell membranes.

3. Support ATP Energy Production. Nutrients and supplements support mitochondrial production of ATP energy, both from the *citric acid cycle* and from *beta oxidation*. More information on this subject is in the discourses, *ATP—The Energy of Life*, and *ATP & Mitochondrial Biogenesis* at www.appleadaypress.com.

4. Quench Intracellular Free Radical Damage. This refers to both broad blanket anti-oxidant support and most importantly, the specific intracellular antioxidants (glutathione and others) that quench the vicious NO/ONOO free radical cascade. Supportive discourses are: *Inflammation: The Fire Within* and *No! Oh No! Free Radicals in My Cells!* www.appleadaypress.com

5. Replenish Selenium & Iodine. Natural Health Practitioners have their own methods of testing and building selenium and iodide/iodine. Pioneering work by Dr. Broda Barnes, Dr. G.E. Abraham, and Dr. David Brownstein have brought focus about how critically important iodide/iodine and iodine-supportive foods are, and developed techniques about how to restore iodine levels despite the deterring and worrying “knee-jerk” reaction of iodine increasing autoimmune activity by stimulating increased thyroid action. People without thyroid autoimmune concerns should include seaweeds in the diet. People with autoimmune concerns should seek advice of health professionals that advocate the body’s ability to self-correct.

6. Support Thyroid Tissue Integrity. Many supplement companies offer botanical and nutritional thyroid support formulas. Thirty years ago, Doc Wheelwright designed a simple thyroid formula, unsurpassed even today, that uses Amazonian herbs as well as select fatty acids (*curcubito pepo*) and cellular identity factors. Since that time, hundreds of helpful formulas have entered the marketplace to help people nourish their thyroid glands.

7. Provide Methyl Donors – Natural Health Practitioners often use specific forms of B vitamins and synergistic herbal influences to address methylation deficits. Further, adequate methylation nutrition supports glutathione production by conserving methyl groups thus allowing *homocysteine* to convert to *glutathione*. More information about this subject is in the discourse, *Methylation & The Molecule That Unlocks The Body’s Healing Response*. www.appleadaypress.com

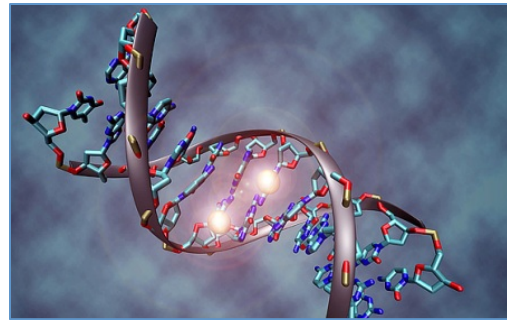
8. Stress Hormone Reduction. The adrenals produce stress hormones that reduce thyroid hormone output. Stress-reduction techniques (meditation, contemplation, spa-day) are essential therapies for correcting elevated rT3 hormonal activity.



9. Correct Leaky Gut. Often avoiding gluten grains (wheat, barley, etc.) and in fact, all grains as well as commercial dairy products can be important to lowering inflammation throughout the body. Further, specific leaky gut programs often

include probiotics, prebiotic fiber, aloe extracts, anti-microbial herbs, anti-inflammatory herbs and nutrients, and pathogen elimination. Leaky gut programs are often prerequisites to solving thyroid issues as well as depression and anxiety which can stem from a poor blood/brain barrier. Natural Health Professionals have expertise in this endeavor. See www.thewholejourney.com for innovative programs to help the body restore optimal G.I. tract health.

10. Support epigenetic expression of health. Foods and herbs contain molecules that cause the cells to transcribe better health from the information contained in the DNA chromosomes. This is why herbal and nutritional products are cited as helping the body regulate itself. They contain Nature's secret healing factors that elicit the best from the human genome.



11. Help Repair the Thyroid's Damaged DNA. The body has methods to repair DNA damaged by free radicals, radiation, and by cell division processes. Tocotrienols (a neglected fraction of the Vitamin E molecule) help the DNA repair processes. DNA repair is discussed further in the Discourse: *Radiation! Protect Yourself*. www.appleadaypress.com

12. Support Other Applicable Tissues. Address other applicable tissues and metabolic processes. Natural Health Practitioners can ascertain and determine if additional support is needed for the Hypothalamus, Pituitary, Gonads, and Thymus. And of course, health enriching diet such as *The Pro-Vita! Plan For Optimal Nutrition* provides a foundation for the entire body. www.appleadaypress.com

Core, Comprehensive Thyroid Program

Hand in hand with the comprehensive core-nutrition program is the fundamental need to support detoxification in the 21st Century. Many practitioners implement thyroid support during systemic detoxification, some implement it as a prerequisite, some implement it after detoxification. It all depends on how the practitioner perceives the needs of the individual patient.

One really terrific aspect of working with comprehensive nutritional support is that to cover all twelve of our outlined "essential factors" only requires a few nutritional formulas to enrich the body with a host of nutrients and herbal directives to help it address more optimal thyroid health according to its own innate processes. Check with your natural health practitioner about how to do this.

The more we understand the causes and contributors to thyroid concerns, the more we see that the true solution is found in the natural health model of natural therapies that provide the body the directives and nutrients for the body to correct itself. Symptoms represent the body's struggle and are the body's perfect

response to the situation (real and perceived.) Nature's true and unmodified foods, plants and herbs hold the keys to the body correcting errant conditions and maintaining its most optimal health possible.

Best wishes in your natural health endeavors! – WellnessWiz Jack Tips

ABOUT THE AUTHOR

WellnessWiz Jack Tips (N.D., Ph.D., C.Hom., C.C.N.) earned a Ph.D. in Nutrition Science from the Dr. Roger Williams School of Nutrition Science, Clayton, MO (dissertation: *Conquer Candida and Restore Your Immune System*). He earned the C.Hom. credential from the Hahnemann Academy of North America and has practiced classical homeopathy for over 25 years. He is the author of 16 books including: *"The Art & Science of Sclerology"*, *"The Healing Power Within,"* *"The Pro-Vita! Plan For Optimal Nutrition,"* *"The Weight is Over,"* *"Your Liver, Your Lifeline,"* and *"Passion Play."*

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