THYROID

UNDERSTANDING THE THYROID

The thyroid handles about 127 different operations in the body, although the ones we have been told are the effect on weight control and energy.

Normal Body Temperatures:
Mouth: 98.6F (37C) Underarm Temp: 97.6F (36.4C) Rectal: 99.6F (37.6C)
Take your temperature in the armpit before getting out of bed in the morning. If it is lower than normal 97.6F/36.4C you may have a hypothyroid; if above 98.2F/37.6C you may have a hyperthyroid. Chart provided later to help you.

The thyroid gland is situated just below the 'adams' apple (larynx). It produces 3 hormones (T4=thyroxine; T3=thriiodothyronine; and Calcitonin). It's function is to take iodine (from foods) and convert it into thyroid hormones: THYROXINE (T4) so named for its four molecules of iodine and TRIIODOTHYRONINE (T3) named for its 3 molecules of iodine.

These are the only cells in the body that can absorb iodine - they combine the iodine with the amino acid tyrosine to make "T3" and "T4" which are then released into the blood stream and transported throughout the body where they control metabolism (converting oxygen and calories to energy). Every cell in your body depends upon thyroid hormones for regulation of your metabolism. Thyroxine's (T4) principal function is to stimulate the consumption of oxygen and thus the metabolism of all cells and tissues in the body. Thriiodothyronine has 3 iodine molecules attached to its molecular structure and is the most powerful thyroid hormone. Calcitonin is a hormone known to participate in calcium and phosphorus metabolism.

A normal thyroid gland produces about 93% T4 and only 7% T3 - however T3 possesses 4 times the hormone strength as T4. T3 is the most active form the body can use, which means the majority of T4 has to be converted to T3 and most of this happens in the liver (conversions also take place in other cells of the heart, muscle and nerves).

These cells convert T4 to T3 with an enzyme called tetraidothyronine 5' deiodinase which removed one molecule of iodine. Interestingly, of all the T4 the thyroid secretes, the body uses only about 60% of it. Some TG4 is converted into reverse T3 (rT3), a form the body can't use. Another 20% becomes active in the intestines in the presence of a sufficient amount of healthy gut flora or bacteria - so you can see why taking antibiotics which knocks out all gut flora can dampen thyroid function.

The thyroid gland is controlled by the pituitary gland in the brain. If the level of T3 and T4 drops too low, the pituitary produces TSH (thyroid stimulating hormone) to stimulate the thyroid to produce more hormones. You might want to imagine the thyroid gland as a furnace, having the pituitary as the thermostat.

The pituitary gland is regulated by the hypothalamus gland, also in the brain. The hypothalamus produces Thyrotropin Releasing Hormone (TRH) which tells the pituitary gland to stimulate the thyroid gland to release Thyroid Stimulating Hormone (TSH). The thyroid produces T4, then peripherally T4 is converted to T3. Think of the hypothalamus as the person who regulates the thermostat, telling the pituitary at what level the thyroid should be set.

SOOOO, if you have an underactive thyroid, it may be due to a lack of iodine (or any of the things listed below), or due to an under-functioning thyroid, pituitary or hypothalamus gland. Or, it may be an auto-immune disease called Hashimoto's which is discussed later.

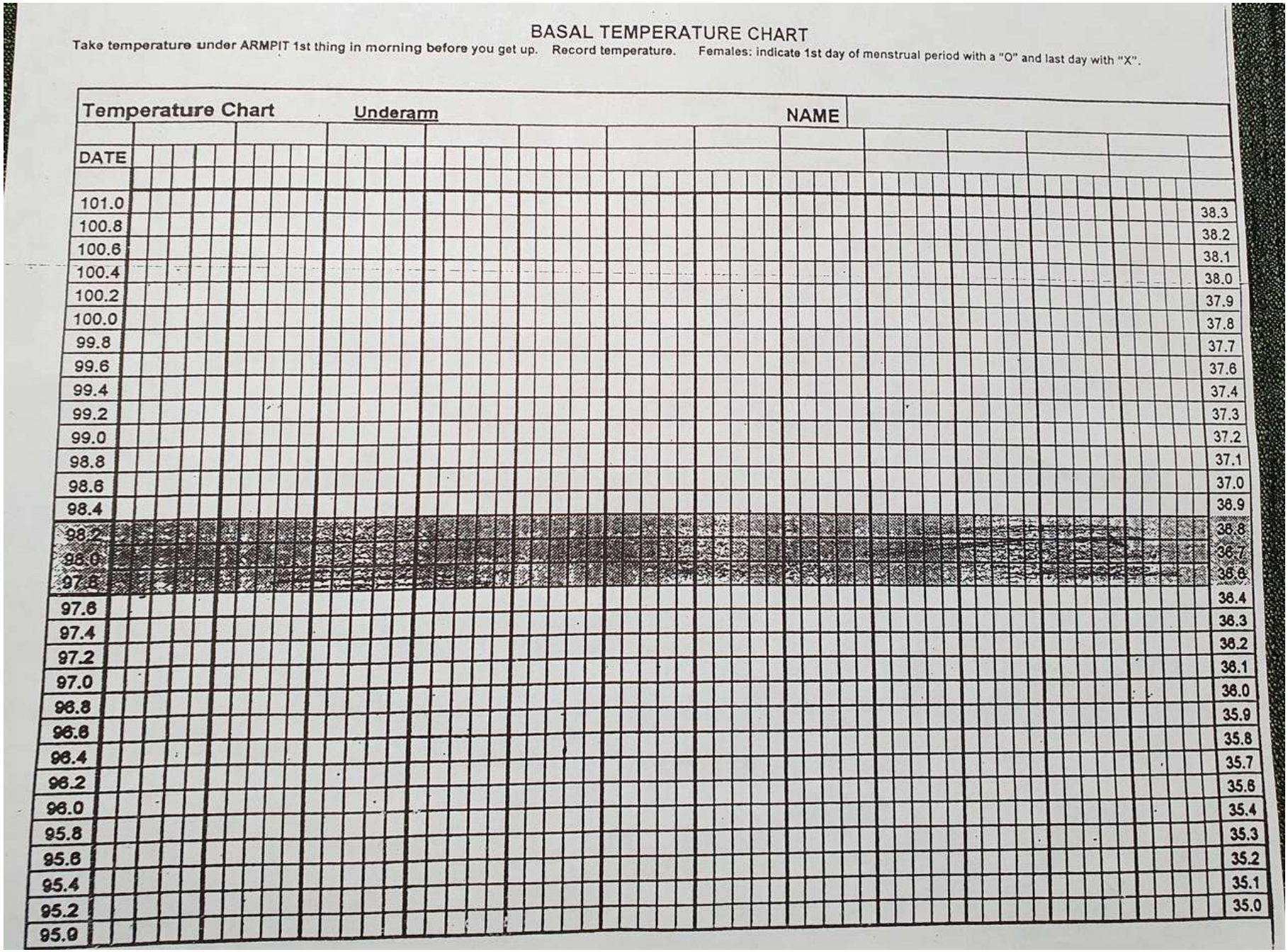
Glutathione is necessary to move the T3 from the cell membrane to the mitrochondria inside the cell. If everything else is fine but you don't have glutathione, your thyroid system can't work at the power station (mitochondria) that needs it. You can't absorb glutathione if you eat it, you must make it from three amino acids. You can't make amino acids if you don't have stomach acid to break your proteins into amino acids. Thus a person without stomach acid will not have a functional thyroid system, because they can't make glutathione. Therefore taking antacids will be counter-effective in absorbing glutathione. Without stomach acid you can't absorb zinc and without zinc you can't make neurochemicals like serotonin, and you can't convert T4 to T3. You therefore may be fat, tired and depressed - and still have normal blood tests!

To wake up the thyroid gland, you can do high intensity exercises, and you can do cayenne pepper (1/8-1/4 tsp) in castor or olive oil compress over the thyroid area (can do overnight).

It is said that 80-90% of the population are now hypothyroid. It is therefore critically important that we understand the whys and wherefores that surround this weakness.

BASAL TEMPERATURE CHART

Take temperature under ARMPIT 1st thing in morning before you get up. Record temperature. Females: indicate 1st day of menstrual period with a "O" and last day with "X".



HYPOTHYROID - UNDERACTIVE

An underactive or low functioning thyroid gives very specific symptoms. Here are some major ones:

- **The most common symptom is that you are tired when you wake up in the morning but pick up a little as the day goes on.**
- **The second most common symptom is that you gain weight and just can't seem to lose it.**
- **You tire easily. You may feel fatigued, sleepy, become tired easily upon exertion.**
- **Hair loss. Head hair becomes coarse and thinning, dry or brittle, falls out. Even arm and leg hair thins. Loss of body hair progresses slowly. Thinning of eyebrows, no longer need plucking - may lose outer part of eyebrow.**
- **Fingernails become thin and broken and more brittle than normal, developing lines and grooves.**
- **Depression is common. The mind slows down.**
- **It is very common to feel cold, perhaps cold hands and feet.**
- **You may be short of breath upon exertion.**
- **Muscles may ache when you move. With slowing of internal muscles there is a tendency towards constipation. With moderate to severe symptoms you can have pins and needles sensation shooting down the hands into the fingers, carpal tunnel, cramping in hands and fingers (doesn't usually affect the pinkie finger). It may mimick arthritis.**
- **Skin can be cold, dry, scaly. Pale with slight yellowish cast. Skin becomes dry and rough like fine sandpaper when severe. Eventually dryness, cracking of skin. Skin may develop thickened feeling and some swelling, esp. Around the eyes, fingers, legs.**
- **Eyes may be puffy. May have puffy face. May bruise easily.**
- **There may be swelling in the neck area if the gland is enlarged.**
- **The voice may be hoarse and the thyroid gland in the neck may become enlarged, feeling firm.**
- **The heart may beat slow (50-60 beats per minute) and the blood pressure may be elevated.**
- **When moderately severe you may have pins & needles sensation feeling like mild electric shock shooting down hands into fingers, carpal tunnel, cramping in hands & fingers (but not the pinkie finger). It may feel like you have arthritis or a muscle disorder. May have prolonged Achilles tendon reflex time.**
- **Menstruation: flow may increase and last longer. Infertility, miscarriage, stillbirth, premature delivery all possible.**
- **The hands and feet may be puffy, swollen. Poor circulation and may havae numbness.**
- **Throat: the thyroid gland may be enlarged, feels very firm.**
- **Voice may be hoarse.**

Symptoms often start with fatigue, sleepiness, then the mind slows down and the weight goes up, usually feel cold, then you feel swollen and bloated

Synthroid is a drug that treats an underfunctioning thyroid. It is one of the biggest selling drugs in the world. It provides the thyroxine that the thyroid is under producing. If the thyroid is completely shut down or you have had it removed or radiated, you will have to take this for the rest of your life, or you will die.

If the thyroid is still functioning, you may be able to help the thyroid heal by feed the body natural iodine and various nutritional supplements. The thyroid needs iodine to be alive and function properly. The greatest source of iodine on our planet is the sea and we get iodine by way of using seaweeds such as kelp, dulse, arami, wakame. This source of iodine is available in liquid form, as capsules and as a seaweed food.

We might question as to why so many on the planet need iodine? We are a water planet, with lots of iodine available. However, in the last 100 years, we have poisoned the planet. A trip to Korea might reveal an answer to the question. They are literally eating kelp sandwiches to get more iodine into their body because of the depletion. Why so depleted? Well, apparently we use iodine to detox radium from our body. Korea got the fallout from Hiroshima when the atom bomb exploded and they still are feeling the after effects. But wait, haven't we be setting atom bomb's in experiments around the planet since that time? We sure have! Perhaps that is why most of us have weak thyroids that need extra iodine - our usual storage of iodine has been used up detoxing any radium from our body.

HYPOTHYROIDISM is known as a condition in which the thyroid produces too little thyroid hormone (T3 and T4). Symptoms of hypothyroidism have been previously mentioned.

Types of Hypothyroidism:

1. **Primary (problem with Thyroid gland). Any condition or factor that affects the thyroid directly for example Hashimoto's disease, radioactive iodine therapy, iodine deficiency.**
2. **Secondary (problem with Pituitary gland). This is where Hypothyroidism arises from the pituitary glands inability or lack of producing enough TSH to stimulate the thyroid to produce its hormones eg. damage to the pituitary gland by a tumor, radiation or surgery.**
3. **Tertiary (problem with Hypothalamus). The Hypothalamus produces TRH which in turn stimulates the release of TSH. Hence maybe also termed hypothalamic-pituitary-axis hypothyroidism. Damage to the hypothalamus can be caused by a tumor, radiation, surgery or stress.**

We have also seen the thyroid weakness from a problem related to stress, making the adrenal glands drain the energy of the thyroid. When the person manages to de-stress or change their circumstances that created the stress, the thyroid has returned to a normal state.

Goiter is an enlargement of the thyroid gland and is easily seen, looks like the person swallowed a baseball and is stuck in the throat. Goiter is usually easily corrected by adding iodine foods or supplements to the diet. It used to be very common in the middle section of Canada and the U.S. Where there is a lack of iodine in the soils and people were developing goiters. The government's answer was to iodonize table salt that you were using every day. And it worked, however, you can only take so much salt in the body and it becomes a problem. Most people are therefore taking iodine supplements in the midwest and prairies.

Goitrogens are naturally occurring substances that can interfere with the function of the thyroid. If the thyroid is having difficulty making thyroid hormone, it may enlarge as a way of trying to compensate for this inadequate hormone production. Goitrogens like circumstances that cause goiter, cause difficulty for the thyroid in making its hormone. There are foods that have been know to disrupt the thyroid hormone production:

1. **Gluten (wheat, rye, spelt, kamut barley) Gluten sensitivity contributes to a wide range of autoimmune responses incl. autoimmune thyroid disease. If you have autoimmune hypothyroidism limit your intake of gluten, especially the wheat)**
2. **Soy isoflavones (tofu, tempeh, textured vegetable protein - TVP)**
3. **Raw cruciferous vegetables (eg. broccoli, kale, cabbage, mustard, rutabagas, kohlrabi, turnips, brussel sprouts, kale, cauliflower) Isoflavones in these foods appear to reduce thyroid hormone output by blocking activity of an enzyme called thyroid peroxidase. This enzyme is responsible for adding iodine onto the thyroid hormones. Thyroid hormones must typically have 3 or 4 iodine atoms added on to their structure to function properly.**
   NOTE: It should be noted that the cruciferous vegetables eaten raw only become a problem if there is low iodine levels in the body. The answer is: if you have low iodine levels and can't take iodine, cook cruciferous vegetables, otherwise take iodine supplements which are beneficial anyway for hypothyroid, and you can eat the cruciferous vegetables raw. Eating these raw is a benefit for cancer prevention so taking iodine is the way to go. It should also be noted that not all doctors and scientists agree with these findings.

   Other potential goitrogenic compounds: peaches, strawberries, millet, pine nuts, radishes, spinach, cassava root, peanuts, spinach
   Isothiocyanates are the category of substances in crucifers that have been associated with decreased thyroid function. Like the isoflavones, isothiocyanates appear to reduce thyroid function by blocking thyroid peroxidase and also disrupting messages that are sent across the membranes of thyroid cells.
   Cooking the food, seems to deactivate the goitrogenic compounds as much as one-third.
   There is a lot of controversy on this subject. It is based on a study done in 1983 regarding animal feed. When raw cabbage was given to rabbits, some became hypothyroid and developed a goiter. However when there was enough available iodine in the body, it did not develop any problems. Since that time there is a big push to cook these foods, killing the enzymes.

These foods will not be a problem if your thyroid is healthy (with the exception of having an allergy to a food listed) but if your thyroid is hypo, make sure you are taking iodine supplements if you want to eat these foods.

Fluoride and Hypothyroidism

Iodine is a halogen. Halogens are a series of non-metal elements from the periodic table. They are: fluorine, chlorine, bromine, iodine, astatine. The problem with fluoride is that when it is introduced into your body, it will displace any other halogen in the same vicinity.

Thyroxin is a tyrosine atom that is attached to four iodine atoms. Fluoride, and to a certain extent Chloride, will displace the iodine and produce a fake thyroid hormone molecule.

Medical blood tests can't differentiate between real T4 and false T4, thus the blood tests look normal, but your body is really deficient in functional thyroxin. This is called type 2 hypothyroidism. Dr. Jerry Tennant says "when a person has been exposed to fluoride for an extended time period, just stopping the consumption of fluoride and increasing iodine levels will not normalize the thyroid'.

Dr. Tennant does not feel Hashimoto's is an autoimmune disorder, he believes it is caused by long term intake of sodium fluoride which is used in toothpaste and drinking water to prevent tooth decay. We are directed to a website: http://poisonfluoride.com/pfpc/index.html which points out that the symptoms of hypothyroidism and fluoride poisoning are the same.
Anthony Williams also does not believe Hashimoto's is an autoimmune disorder but for a different reason, as mentioned later.

Other Contributors to Hypothyroidism

1. **Iodine Deficiency. The most common held belief until recent years is that Iodine Deficiency is most common cause. The thyroid feeds off the stored iodine in the thyroid. It is so important that iodine has been added to table salt, but this is not the best source because too much salt can cause hypertension. Seaweeds are very high in iodine.**

   The following is taken from Dr. Tennant's literature:

   Dr. Tennant (and many other doctors) feel that iodine may be a protection against cancer because Japan eats more seaweed that contains iodine that any other race and they have the least amount of cancer. However, iodine is inactivated by nitrates (found in processed meats like bologna, hot dogs, processed meats) and because the nitrates inactivate iodine, it allows helicobacter pylori to grow in the stomach and cause stomach ulcers/cancer. The only cancer the Japanese seem to get is stomach cancer.

   Iodine is known to kill all single-celled organisms like viruses, bacteria, fungi and

protozoa. (Anthony William says iodine is a disinfectant, effective at killing both viruses and bacteria therefore if you have an iodine deficiency you are more vulnerable to infections).

Large foreign proteins ingested are inactivated by iodine prevent them from becoming allergens. Iodine is necessary to make stomach acid. A human should never absorb proteins, they must only absorb amino acids to make their own proteins. When we don't have stomach acid because they are deficient in iodine, zinc and Vit. B1, we absorb whole proteins. The immune system recognizes that the body didn't make these proteins and assumes they are invadaers, making antibodies to attack them. Having enough iodine to make stomach acid thus helps prevent food allergies.

Dr. Jean Lugol in 1829 discovered that iodine is more soluble in water that contains potassium iodide. This is the basis for "Lugol's Solution". Lugol's solution implies that it is water based. Drinking Lugol's is a treatment for food poisoning as it kills the bacteria. It will even inactivate snake venom.

"Tincture of Iodine" means that it is in an alcohol base; Lugol's Solution is water based.

Iodine is bactericidal even at dilutions of 1/170,000. Microorganisms do not develop resistance to iodine.

Iodine is so important in brain development that iodine deficiency is the leading cause of intellectual impairment in the world (ADD/ADHD?). Fetal iodine is five times the level in the mother. Low maternal iodine can lead to miscarriage, birth defects, failure to thrive, mental retardation etc.

Hypothyroidism is one of the leading causes of violent behavior in the world.

There are only micrograms of iodine in iodinized table salt and some companies are using bromine instead of iodine because it is cheaper (and toxic). Sea salt contains almost no iodine! Adults need 12-15 milligrams of iodine a day. The thyroid gland needs 70ug/day to synthesize the needed amounts of T4 and T3 however higher amounts are needed to help function of a number of body systems including lactating breast, gastric mucosa, salivary glands, oral mucosa and arterial walls.

Because of our farming practices, there is very little iodine in our soils in Canada and the U.S. The only people in the U.S. with normal levels of iodine are those who eat seaweed frequently. Most of the iodine that is available on the market comes from the soils of India and Chili."

2. **Glutathione. As mentioned previously, glutathione is necessary for the thyroid to work but we can't eat it, we must make it from amino acids. However if we don't have enough stomach acid, we can't make the glutathione. Taking antacids then to block stomach acid will prevent our body from making the needed glutatione.**
3. **Excess iodine. Excess iodine is a powerful inhibitor. It is added to commercial salt, used as a dough condition in baked goods and resent in many supplements such as kelp. However, insufficient iodine is more likely the case with most**

people.

4. **AutoImmune. Hashimoto's Disease is felt by many doctors to be an auto-immune disease where the body starts attacking its own thyroid gland. Thyroid antibodies are produced to achieve the body's desired outcome: to kill off the thyroid gland.**

   Dr. Tennant says that the description of Hashimoto's Disease is the same as damage from fluoride and thinks it is possible that Hashimoto's is simply fluoride damage. Hashimoto's is treated differently than regular hypothyroidism, for instance, you would not take iodine - see later in these notes for specifics regarding Hashimoto's if this is your problem.

   Anthony William believes the body cannot attack itself, therefore there is no such thing as an auto-immune disease, but that the symptoms are the body's actions trying to fight off an invading virus.

5. **Post-partum Thyroiditis: 5-10% of women are affected within the first year after giving birth. Most are transient. Post-partum thyroiditis is an inflammatory condition of the thyroid. For those who are less fortunate, this inflammation continues well past the birth of their child, leading to lifelong hypothyroidism. This is felt to be the result of an auto-immune disorder.**

6. **Radio-Active Iodine is used to treat people with Hyperthroidism (overactive), by killing off the thyroid gland. After this treatment, the thyroid gland is dead and you need medication for the rest of your life.**

7. **Estrogen dominance (excess estrogen in relation to progesterone) inhibits thyroid function and can result from taking birth control pills, estrogen replacement therapy or herbal estrogens such as black cohosh or sage, or even exposure to environmental estrogens such as pesticides which mimic estrogen.**

8. **Synthetic and genetically engineered hormones (estrogen and others) in meat, dairy products, poultry and eggs.**

9. **Excess intake of unsaturated fats (oils liquid at room temperature excluding extra virgin olive oil), such as soybean, safflower, canola, corn, fish, flaxseed, borage, evening primrose. Yes some of these oils such as flaxseed, borage, and evening primrose are good oils, but just not in excess.**

10. **Fluoride, as mentioned above, is common in water, foods and toothpaste, dental procedures.**

11. **Mercury, a toxic heavy metal comprises up to 50% of 'silver' amalgam fillings. It poisons an enzyme critical in converting the inactive form of thyroid hormone T4 into the active form T3.**

12. **Eating liver may be a problem because it contains thyroid inhibitors. Very few people eat liver these days because our animals are so toxic and toxins are stored in the liver for processing.**

13. **Soy products. This is still controversial, but there is some evidence that soy shuts down the entire endocrine system, including the thyroid.**

14. **Endurance exercise. Exercise accelerates the breakdown of thyroid hormones**

which result in a protective slowing of metabolism. This is why endurance athletes such as long distance runners, have a slow pulse rate and lower than average body temperature. The condition self-corrects when exercise is lessened.

15. **External Beam Radiation is a technique used to kill cancer in the thyroid gland, usually killing the thyroid gland completely in the process.**
16. **Infection - bacterial or viral.**
17. **Inflammation**
18. **Congenital birth defect.**
19. **Pituitary or Hypothalamus Tumor**
20. **Drugs side effects.**
21. **A high number of x-rays can knock down the thyroid gland. This may happen when you take a battery of x-rays for teeth problems, bone problems etc.**
22. **Irregular immune function, poor blood sugar metabolism, gut infections, adrenal problems, and hormonal imbalances can all significantly depress thyroid function. Prescription thyroid hormones might bring their levels in the blood into a normal range, but they do not address what caused the thyroid to falter in the first place. You may find that supplementing with thyroid hormone returns the thyroid stimulating hormone (TSH) level to normal, but the thyroid might remain swollen, sore, and side effects of racing heart, insomnia, and listless fatigue is still present.**
23. **Nitrates inactivate iodine. If you live in the country, have your well water tested, if there are any intensive livestock operations within your vicinity, your well water might have elevated nitrates. Processed foods and certain pharmaceutical supplements (some heart medications) have high nitrate levels.**
24. **Some have used Magnets to heal an underactive thyroid. Use the north pole of a small magnet on the thyroid gland for stimulation. Some say to use for 30 minutes 4-5 times a day; others say to put on at night when you go to sleep.**

NOTES FROM DR. JERRY TENNANT REGARDING HYPOTHYROID:

Thyroid cascade starts in the brain, in the hypothalamus which is under control of adrenaline which is missing in those having PTSD or emotional issues and therefore the hypothalamus often doesn't work well. The hypothalamus makes thyroid or thyroidtropic releasing hormone which causes the pituitary to make thyroid stimulating hormone which uses an enzyme called Type 11 deiodinase, then the TH causes the thyroid to make the thyroid hormone T4 which then must be converted to active form of T3 using iodine, selenium, zinc, iron, cortisol, progesterone and glutathione and this involves using the Type 1 deiodinase enzyme.

Many people are deficient in one or more of these items. In addition, many doctors are trained to look at the TsH test and sometimes the T4 test. If those tests look normal, you are told the thyroid is fine. But, if you can't convert to the active form of T3 you still have a problem down at the cell membrane. Also, T2 controls mitochondria. The only hormone to be prescribed has both T3 and T2 in it, is dessicated thyroid. Unfortunately

there is pressure for physicians to prescribe levo-thyroxine which is T4 which is worthless if you can't convert it to T3 and it takes up more and more receptor sites and causes you to make more and more of Reverse T3. So taking too much T4 may actually be harmful when the patient is still hypothyroid because they can't convert it to T3 and T2.

So you actually want to know how much free T3 you have and if you have depression, you want to get Reverse T3 because most people that are depressed or have bipolar, have a high level of Reverse T3 taking up the receptor sites and it is often better if you correct that problem.

SYMPTOMS OF HYPOTHYROID (UNDERACTIVE)

There is a long list of symptoms, but the most common ones are:

- **Weight you can't seem to lose.**
- **Insomnia**
- **Poor memory**
- **Bouts of anger**
- **Constipation**
- **Hair loss. Head hair becomes coarse and thinning, dry or brittle, falls out. Loss of body hair progresses slowly. Thinning of eyebrows, no longer need plucking - may lose outer part of eyebrow.**
- **Energy: fatigue, sleepiness, become tired easily upon exertion. Usually wake up tired in morning.**
- **Skin: cold, dry, scaly. Pale with slight yellowish cast. Skin becomes dry and rough like fine sandpaper when severe. Eventually dryness, cracking of skin. Skin may develop thickened feeling and some swelling especially around the eyes, fingers, legs. May have puffy face. May bruise easily.**
- **Nails: thin and broken. More brittle than normal and you develop lines and grooves.**
- **Eyes: puffy**
- **Hands/Feet: puffy, swollen. Poor circulation and may have numbness.**
- **Throat: thyroid gland enlarged, feels very firm**
- **Voice: may be hoarse**
- **Breathing: shortness of breath upon exertion**
- **Headaches, brain fog. May have headache in morning.**
- **Mood: may have depression**
- **Heart: beats slow (50-60 beats per minute). Above normal blood pressure.**
- **Muscles: ache when move. With slowing of internal muscles a tendency towards constipation.**
- **When moderately severe you may have pins & needles sensation feeling like mild electric shock shooting down hands into fingers, carpal tunnel, cramping in hands & fingers (but not the pinkie finger). It may feel like you have arthritis or a muscle disorder. May have prolonged Achilles tendon reflex time.**
- **Menstruation: flow may increase and last longer. Infertility, miscarriage, stillbirth, premature delivery all possible.**

Symptoms often start with fatigue, sleepiness, then the mind slows down and the weight goes up, usually feel cold, then you feel swollen and bloated

HYPERTHYROIDISM - OVERACTIVE THYROID

This is a rare condition in which the thyroid gland produces too much thyroid hormone therefore we say it is overactive. Graves disease is the most common form of hyperthyroidism. A chronically inflamed thyroid (thyroiditis) can also be the cause.

Hyperthyroidism may be caused by Graves Disease which has until recently been called an autoimmune illness in which the immune system begins to attack parts of it's body (eg. the thyroid gland).

Several factors such as intestinal dysbiosis*, common food and environmental allergens, nutritional habits, vitamin D levels and heavy metal toxicity should be addressed with any inflammatory or auto-immune disorder.

Dysbiosis is an overpopulation of antagonistic organisms in the gut that damage the intestinal wall allowing food particles to easily pass over and end up in the bloodstream. When undigested food particles are recognized by the immune system and tagged as foreign invaders in the body, the immune system then unleashes an assault of inflammation causing a systemic allergic reaction.

Hyperthyroid is characterized by high blood levels of calcium, low phosphorus levels, abnormal bone metabolism. Kidney stones and loss of bone mass may occur. Kidney stones can be prevented with vegan diet, high fiber and complex carbos, green leafy veggies (except spinach). Decrease simple carbs, meat, fish, poultry, yeast, tea, cocoa, beets, rhubarb, parsley, cranberries, nuts. Avoid dairy. Avoid MSG in all foods, it helps cause overactive thyroid. You may notice that you fall asleep during or after meals. Supplement with magnesium, potassium, glutaminic acid, Vit. K, B6. Coconut oil has shown to help the thyroid.

Treatment with desiccated thyroid may be used when supervised. Alternative to using thyroid hormone is to supplementation with zinc, Vit. B6, tyrosine, iodine. This doesn't always work and thyroid hormone (L-thyroxin) may be necessary. Some companies make a glandular thyroid extract without the L-thyroxin although there are trace amounts of this active hormone. In some cases they work as well as the hormone tablet.

If you have a goiter, taking thyroid extract and/or a little iodine (seaweed if food grade iodine is not available), usually will eliminate symptoms in 6 weeks.

A hyper-metabolic state requires greater intake of vitamins, minerals and more iodine. however there are occasions when an overactive thyroid must avoid iodine. A "hyper" state, it may result from excessive secretion of parathyroid hormone (PTH) which is

sometimes caused by kidney disease or tumors that secrete PTH.

Dessicated thyroid is often used successfully. Alternatively you can supplement with zinc, vitamin B6, tyrosine, natural iodine. You must avoid MSG in all foods, it can cause an overactive thyroid.

SYMPTOMS FOR HYPERTHYROID (OVERACTIVE)

- **The most common symptom is loss of weight and you just can't seem to gain an ounce**
- **The second most common symptom is bulging eyes. They may be dry, ache or feel like you have sand in them, may have blurred or double vision. Tendency to constant stare or blinking.**
- **Hair: soft, fine, trouble holding a permanent, hair loss**
- **Skin: smooth with patches of different pigmentation, may have red itchy rash, may have increased perspiration, heat intolerance**
- **Nails: grow too fast, become soft and tear**
- **Throat: may have enlarged thyroid, may not be sore and usually no trouble swallowing. May have nodules, goiter.**
- **Energy: increase in energy, wired, running on empty, fatigue also**
- **Mood: irritable, nervousness, hyperactivity, anxiety, restless**
- **Heart: may have heart palpitations, irregular heart beat**
- **Muscles: weak around hips and shoulders. Thigh muscles may burn a little or be weak or soft, may have difficulty getting up out of a chair. May have increased bowel movements.**
- **Appetite: increased**
- **Sleep: may have insomnia**
- **Breathing: breathlessness**
- **High blood pressure**
- **Increased perspiration**
- **Increased bowel movements**
- **Swelling at the base of the neck (front of body)**

TESTING YOUR OWN THYROID

Here is a method of testing the Thyroid. It is also listed in Self Testing Methods.

1. First thing in the morning before your feet touch the floor (while still in bed), put a thermometer under your armpit for 10 minutes. That is when the thyroid is at its lowest point. You want to get a good 'mean' reading by doing the same test consistently each morning.
Use the chart provided here if you wish. If the morning temperature is in the squares 98.4F / 36.9C or above, it is saying the thyroid is overactive. If it is in the shaded area, it is normal. If it registers below the shaded area, it is underactive/hypo. You will see

that it changes from day to day and perhaps this might shed light on things that are affecting your thyroid. If it is consistently low, it indicates probable lowered thyroid activity (underactive). If it is consistently higher, it indicates fever or possible increased overactive thyroid activity.

2. Apply tincture of iodine (2%) to skin (get at drug store). This is for topical use only, do not ingest. Observe how long a faint brown stain remains. Normal is 24 hours. Less than 24 hours and the iodine is not sufficient to normalize thyroid hormone production. To treat, apply 3" patch of iodine to abdomen or upper thigh. When stain lasts 24 hours, stop for 1 month. Repeat the test. Add kelp or dulse if needed. The goal is to raise iodine levels quickly and keep there with food intake.

3. If your palms and soles are orange color, it is because the active thyroid hormone is needed to convert carotene from the diet into Vitamin A. To help this you need to keep cholesterol blood levels low.

4. If you have normal thyroid function tests but show multiple hypothyroid symptoms you may occasionally show high levels of anti-thyroid antibodies and anti-microsomal antibodies. High doses of PABA, Vit. E and Evening Primrose Oil or other essential fatty acids may help reverse the condition. If not, you may try low doses of thyroid hormone found in desiccated thyroid, glandular thyroid extract or homeopathic thyroid drops.

5. There is another scenario that is affecting the thyroid. The pituitary gland in the brain controls the thyroid. Sometimes the thyroid isn't the actual problem, it is the pituitary. Our clients who test weak in the pituitary say they feel sort of ho hum, not really happy, just kind of existing.

6. And finally the adrenal glands might be the culprit. If you are stressed constantly, the adrenal glands that sit on top of the kidneys, take the hit. We have seen many people with hypothyroid for years, that after changing their stress levels, the thyroid returns to normal.

DIET FOR THE THYROID:

- **For the thyroid the most important minerals are Calcium, Magnesium and Potassium.**
- **Calcium: bok choy, broccoli, dark leafy veg., cabbage, sesame seeds, oats, navy beans, almonds, walnuts, bone meal, sunflower seeds**
- **Magnesium: nuts, soybeans, raw/cooked green leafy veg. esp. kale, endive, chard, celery, beet tops, alfalfa, apples, lemons, peaches, almonds, whole grains, brown rice, sesame seeds.**
- **Potassium: all veg. esp. green leafy, oranges, whole grains, sunflower seeds, nuts, milk, potatoes/skins, bananas.**
- **Seaweeds, seafoods are especially good.**
- **Using pure organic coconut oil has been helping many thyroid problems. Most are taking 1-2 Tbsp daily.**

DAILY SUPPLEMENTS:

Trace Minerals
Calcium-Magnesium-Potassium
Check deficiencies: protein, zinc, selenium, silicon, iodine, Vit. A, B complex, biotin, inositol, essential fatty acids, Vit. C and E
Food grade iodine
May need tyrosine, thyroid glandular (dessicated thyroid)

NEW INFORMATION ABOUT THE THYROID FROM ANTHONY WILLIAM

Anthony William is a Medical Medium and before you think what he says is of no consequence, the government and many medical doctors are sitting up and listening to what he has to say. It is now common to go onto internet sites such as WebMD and Pub Med to see this new information is being taken very seriously.

A. William believes that chronic fatigue, thyroid problems, fibromyalgia etc. are not auto-immune diseases where the body is attacking itself. He feels the body can not attack itself, it is contrary to what it is designed to do. It is not our own immune system that is responsible for hypothyroidism or hyperthyroidism, thyroiditis (inflammation of thyroid), or nodules, tumors, cysts, and tissue damage to the thyroid gland. It is the Epstein Barr Virus operating at an advanced stage. It is not your own immune system system causing the autoimmune-labeled Hashimoto's thyroiditis or Graves' disease. It is the virus that is responsible. The immune system is on your side, and knowing this helps your ability to heal.

He feels everything boils down to people contracting the Epstein Barr Virus (EBV). This virus is a virus in the herpes family. The virus has been traced back to the late 1700's where it was a beneficial bug, scavenging for toxins throughout the body which at that time was a benefit to us. It is suspected that 100% of our population has this virus resident within it.

What happens to all these viruses that enter our system: rotavirus, epstein-barr virus, chicken pox virus etc? Well, a virus is extremely tiny so it can easily escape detection unless the body is making a lot of anti-bodies against it. It therefore remains dormant residing in the body until circumstances allow it to emerge and proliferate. Chickenpox virus lies dormant in the spine until there is an emotional upset and the person is sufficiently weakened, then it re-emerges as Shingles, an attack on the nerves in particular areas, with symptoms of pain and skin rash. The residues and imprints of these virus are passed on down to the children so you don't get a clean slate when you are born. In homeopathic medicine it is referred to as Miasm.

What happened to the Epstein-Barr Virus? EBV feeds off chemicals, hormones, nutritional deficiencies, heavy metals, emotional trauma, and many other things. It did not become a problem until modernization and manipulation of chemical compounds,

usage of toxic heavy metals, pollution of our air and waterways, which turned the EBV into what it is today. As those pollutants entered our systems, it slightly poisoned the virus and in order to survive it excrete them in a more toxic form.

In the 1900's the use of fungicides, herbicides, and antibiotics were created which contained arsenic, copper, lead, petroleum. Fungus and mold were grown on petroleum waste, just the right fuel the EBV needed.

At the turn of this century, Synthroid was the #2 selling drug in the world for thyroid problems. Considering this is a water planet and the thyroid feeds off iodine (as in seaweeds, seafish), it is ludicrous that we have thyroid problems. But with the advent in the 1900's of nuclear testing of over 2,000 bombs, which started in 1945, and ended in 1999 (see https://www.youtube.com/watch?v=LLCF7vPanrY), we were introduced to a whole new chemical attack on the body. Iodine detoxes radioactive material from the body so our body's have been using up the iodine that is critically needed by the thyroid just to keep us alive from the fallout around the world.

Around the same time, in the early 1950's that we were getting hit by radiation, we also started to use vaccines indiscriminately on babies, and we used antibiotics for just about every illness we had, thinking it would cure everything. Many of us in the 1950's and 1960's received the Polio shot - unfortunately they used the African Rhesus monkey's kidneys as an incubator, not knowing that that monkey carried rotavirus, which was then injected into millions of children, further endangering our bodies.
http://www.sv40foundation.org/cpv-link.html.
https://academic.oup.com/jid/article/187/5/791/2191410
It was in 1960 that scientist Bernice Eddy discovered that rhesus monkey kidney cells used to make the Salk polio vaccine and experimental oral polio vaccines could cause cancer. Later that year the cancer-causing virus in the rhesus monkey kidney cells was identified as SV40 or simian virus 40, the 40th monkey virus to be discovered. The SV40 contaminated stocks of Salk polio vaccine were never withdrawn from the market but continued to be given to American children until early 1963 with full knowledge of federal health agencies. Between 1955 and early 1963, nearly 100 million American children had been given polio vaccine contaminated with the monkey virus, SV40 That particular vaccine was halted when it was found the children receiving the vaccine were actually contracting polio and dying. Many however received the vaccine and it just became part of the constitution of the body, to be passed on to their children, and children's children.

DDT (dichloro-diphenyl-trichloroethane) was developed as the first of the modern synthetic insecticides in the 1940s. It was initially used with great effect to combat malaria, typhus, and the other insect-borne human diseases among both military and civilian populations. Around the world it was used by farmers to kill off any pesticides and it took many years to find out the damaging results it caused to our populations. It was outlawed in Britain in 1986, and worldwide in 2001.

Lately, we have been hearing about the "ROUNDUP" damage the poison has done to our soils and of course our bodies. It appears, we just adopt the next poison that looks

like a solution to pests that attack our crops rather than learning good husbandry and farming procedures to strengthen the plants against predators.

The EBV is wide spread and often can be detected as antibodies through blood tests when it is in the bloodstream, usually travelling to a favourite gland or organ, but often not found when it covertly hides within the gland or organ. Although we most likely have the imprint of the virus in our constitution, it is easily transmitted through many ways from person to person. Anthony William says EBV is responsible for an overwhelming number of autoimmune conditions including: CFS (Chronic Fatigue Syndrome), aka ME (Myalgic Encephalomyelitis) or SEID (Systemic exertion Intolerance Disease, Fibromyalgia, Eczema and Psoriasis, Psoriatic Arthritis; Hepatitis A, B, C and D; MS(Multiple Sclerosis); RA (rheumatoid arthritis) and Lupus.

In some cases, the virus prompts the thyroid to overproduce hormones, those people receive a tag of "Graves' disease" and are told it is an autoimmune disease. When the virus is more aggressive is causes an assault on the thyroid, prompting the gland to overcompensate by rapidly creating new cells and tissue which produces extra thyroid hormones resulting in bulging eyes, enlarged thyroid, swelling in the throat, some fatigue and temperature fluctuations. Most symptoms associated with Graves like sweating, high blood pressure and nervousness, are virus related and not a direct result of an overactive thyroid. William says if you have had larger thyroid tumors that are cancerous, they are caused by rare strains of the EBV, and their formation usually indicates that a person also has toxins such as elevated heavy metals and pesticides in their organs.

If a person with a thyroid nodule or cyst doesn't have enough calcium in the bloodstream because they aren't eating enough calcium-rich foods, the immune system will extract calcium from the bones, which leads to osteoporosis.

Here is a list of the triggers that he says activates the virus:

- **Mold (prolonged exposure, wears away at the immune system)**
- **Mercury based dental amalgam fillings – especially when having them removed. Have them taken out one at a time.**
- **Mercury in other forms – as in foods such as tuna and swordfish.**
- **Zinc deficiency – this can be inherited also.**
- **B12 deficiency – even if blood tests say they are normal, you may not be absorbing it into the body. Use spray B12 to get into the system.**
- **Pesticides and herbicides (incl. DDT) exposure and these can be passed on from generation to generation.**
- **Insecticides in the home such as flying bug spray, ant spray, roach spray etc. Toxins can build up in the organs, contributing to depression and fuel the thyroid virus.**

- **Death in the family: emotional trauma can weaken the immune system, can cause adrenals to release hormones associates with 'negative' emotions that can feed viruses.**
- **Broken heart or betrayal – difficult divorce, breakup etc.**
- **Taking care of a sick loved one which burden's the person and weakens the immune system, strengthening the thyroid virus.**
- **Virus friendly prescription medications. Such as antibiotics, benzodiazeprines that weaken the immune.**
- **Over-prescribed medications, especially if taken at high doses.**
- **Hormonal changes during puberty, pregnancy, childbirth.**
- **Recreational drug abuse – contains toxins that can throw off the immune, giving fuel for thyroid virus infection.**
- **Financial strain – worry, fears, weakens the immune etc.**
- **Physical injuries – these are traumas to the body and the virus sees an opportunity to come out of dormancy and make the move to infection.**
- **Professional carpet cleaning – contains many toxins. Opt for 'green' type carpets, organic cleaning solutions.**
- **Fresh paint – toxic fumes. Select no or low VOC paints.**
- **Summer swimming – if red algae is in lakes or along ocean shore in warm weather, encourages bacteria growth, weakening the immune. Keep your eye out for red tide warnings.**
- **Runoff from old land dumps and other toxic sources can contain heavy metals etc.**
- **Insomnia – any prolonged sleep issue disrupts the body, and over time gives the virus an opportunity to spring to life.**
- **Insect bites and stings such as spider bite, bee sting, tick bite etc. leaves behind venom or a piece of the insect in the skin which can get infected which in turn can weaken the immune.**

There are many strains of the virus, A. William has grouped them as follows:

Group 1

- **Oldest, mildest.**
- **Takes years, even decades to transition from one stage to another.**
- **Effects might not be noticeable until you are in your 70's or 80's and then result in little more than back pain.**
- **Might remain in your organs and never reach Stage 3 or 4.**

Group 2

- **Moves from stage to stage quicker than Group 1 therefore you might notice symptoms in your 50's or 60's.**
- **May partially linger in the thyroid and send only some of their virus cells out to inflame nerves, resulting in relatively mild nerve inflammation.**

Group 3

- **Transitions between stages faster than Group 2, symptoms might be noticeable around age 40.**
- **These viruses fully complete Stage 4, that is they entirely leave the thyroid to latch onto nerves.**
- **Viruses in this group can cause variety of ills including joint pain or fibromyalgia, fatigue, heart palpitations, tinnitus, vertigo(dizziness), low level chronic sore throat, brain fog.**

Group 4

- **Creates noticeable problems as early as age 30. Its aggressive action on nerves can result in symptoms associated with fibromyalgia, chronic fatigue syndrome, brain fog, confusion, anxiety, moodiness, and everything caused by Groups 1 to 3.**
- **This group can also create symptoms of post traumatic stress disorder, even if a person never underwent any trauma beyond getting inflamed by the virus.**

Group 5

- **Will create noticeable issues as early as age 20.**
- **Includes all the problems of Group 4, plus it feeds off negative emotions such as fear and worry.**
- **Especially nasty form because is strikes just when a young person is setting out to start an independent life.**

Group 6

- **Worst type, can strike hard in young children**
- **In addition to everything Group 5 does, Group 6 can create symptoms so severe that they are misdiagnosed as leukemia, viral meningitis, lupus etc.**
- **It suppresses the immune system which can lead to a variety of symptoms including rashes, weakness in the limbs, and severe nerve pain.**

These various strains of EBV explain why the virus presents so differently in different people and why the wide range of thyroid issues out there. Goiters for example, develop as a result of the first viral strain in Group 1. Hyperthyroidism and Graves' disease are caused specifically by those varieties in Groups 4 and 5. These are aggressive strains that prompt the thyroid to product extra thyroid tissue in self-defense, in turn causing the over production of thyroid hormones. EBV strains in Groups 4 and 5 also account for thyroid cancer. Benign tumors, nodules and cysts can be caused by varieties from Groups 2 through 6 and Hashimoto's thyroiditis and hypothyroidism can be caused by any strain of EBV in any group.

By-product of the Virus

As the virus consumes its favorite foods (toxic heavy metals, excess adrenaline, and even eggs), it excretes toxic waste matter. The more virus cells develop, the more byproduct excreted and more problems it causes like gumming up the mitral valve and creating heart palpitations.

Virus cells have about a 6 week life cycle which means the cells are often dying off. These viral dead cells are toxic as well and as the EBV grows in the body, there are more and more of them. They accumulate in the liver and lymph system which creates sluggishness and can contribute to fatigue, weight gain, fluid retention, constipation, bloating, hot flashes, heart flutters, brain fog and peri-menopause or menopause symptoms.

In later stages of the virus it produces neurotoxins that disrupt nerve function, causing pain and when unleashed through the body as the viral cell dies, it acts like a poison against the immune system as seen in Stage 3 and 4.

If there is copper or pesticides like DDT (even from generations past) present in the liver, the EBV excretes dermatoxins, causing pain, itching and/or rashes and can resemble psoriasis, eczema, or psoriatic arthritis.

Stages of Epstein Barr Virus

Stage One – Baby Stage – Stealth Mode

- **if a person catches or is born with it, it usually remains dormant**
- **worst symptoms might be listlessness, very mild fatigue, more susceptibility to colds, flus, sore throats and earaches.**
- **If person has good immune system it can remain in the blood stream forever causing very little discomfort.**
- **If the strain you catch is more forceful it can eventually cause thyroid problems and more and in the beginning it is just quietly replicating in the blood, building its numbers, waiting for the right triggers so it can develop into Stage two: mononucleosis, followed by infection in the organs such as liver and spleen.**
- **In Stage One the virus is vulnerable and the virus easier to keep in check**

Stage Two – War Stage

- **Begins with mononucleosis when the person is run down, affecting about 70% of college/university students at some point.**
- **In babies and young children, mono is usually referred to as rheumatic fever or glandular fever.**
- **As an adult mono can be a mild scratchy throat and some fatigue for a week, then seems to pass without someone realizing it was mono.**
- **This phase is when virus is infectious – if you have EBV and it wasn't passed down from your family line at birth, then you caught it from someone in your daily life who had mono. Some doctors notice the antibodies that show up in the**

blood.

- **The war is between your immune system and the Epstein Barr virus. It releases a chemical announcing to the immune system that an invader is present, its goal being to take down the lymph system because that's the body's defense mechanism. The immune system tag's the virus cells with a hormone that marks them as invaders, then it sends soldier cells to seek out and kill the tagged virus cells. This battle brings on mono symptoms like sore throat, fever, headache, rash – these aren't signs of your body rebelling against you, they are signs of the power of your immune system coming to your defense.**
- **Some symptoms can come and go as the battle goes to and fro, as it lies in wait for more triggers. Unless a person is doing an anti-viral program, the virus ends up in the liver during this nesting phase because the liver is a filter for the body, so toxins like mercury, unhealthy fats, poisons passed down their hereditary and other waste matter accumulate there and are favourite foods of the Epstein Barr Virus. Unexplained weight gain, changes in energy levels and mental clarity can happen in this phase. Testing is only done on the blood system, so it will go undetected in the liver as it moves deeper into the body.**

Stage 3 - The Thyroid Stage

- **You might experience mono, but won't show up in blood testing because you have had it before.**
- **Becomes very active, fills liver with toxins that release into the lymph and blood which confuse the lymphocytes that protect the thyroid. The thyroid eventually sends out its own lymphocytes to help, and the virus moves into the thyroid as the lymphocytes are distracted elsewhere. The deeper it hides in the thyroid, the harder for the immune system to tag the virus for destruction. Hypothyroidism becomes just one more symptom of the EBV. Hashimoto's is a more severely inflamed damaged thyroid. The illness may also go in the other direction, toward hyperthyroidism or Graves' disease.**
- **You may experience fatigue, brain fog, heart flutters, bloating, confusion, hot flashes, anxiety, sleeping issues, aches, pains, chronic sore throat, mild fever, tingles, numbness, thinning hair, brittle nails, dry skin, dizziness.**

Stage 4 Mystery Illness Stage

- **The viral neurotoxins flood the bloodstream, travel to the brain where they short-out neurotransmitters plus the virus inflames or goes after the nerves throughout the body making them sensitive and even allergic to the neurotoxins. As a result the person experiences heavier brain fog, memory loss, confusion, depression, anxiety, migraines, joint pain, nerve pain, heart palpitations, eye floaters, restless legs, ringing in the ears, insomnia, difficulty healing from injuries etc.**
- **The virus senses hormones releases to help repair nerves and rush into latch onto the damaged nerves, making itself at home around the central nervous system, inflaming nerves, slowing down the body so the vascular system can't deliver proper oxygen to the organs and nervous system.**
- **The virus feeds off the surge of stress hormones fueled by the adrenals in any fight or flight fear factor type reaction like receiving bad news, going through divorce or other traumatic event, giving birth, being in a car accident etc. Stage Four can be mistaken for adrenal fatigue. For instance after a trauma of an**

argument, you can go through a period of despair, grief, and depression that you can't shake off, and you just can't seem to move on like a normal person – the virus makes it worst, being in the bloodstream and nervous system, and now you traumatize about those symptoms.

DIET

Say NO to the following:

- **Avoid beef, pork, chicken, fish, coffee, eggs, sugar in foods, pop, dairy(milk, cheese, butter, yogurt, cream, kefir, corn, gluten, canola oil, soy, GMO foods, preservatives and chemicals in foods. Also avoid chemicals in cosmetics, lotions, soaps, toothpaste etc. that enter the body through the skin, nails, or mouth.**
- **Have citrus fruits or juice, tomato juice, lightly steamed vegetables and salads keep the body alkaline which the viruses have difficulty surviving in.**
- **Drink lots of fluids to keep from dehydrating, especially if diarrhea is happening if the stomach isn't upset have a nice hot soup - everyone's favorite is old fashioned chicken soup. There is usually very little chicken in the soup and it doesn't interfere with healing, it helps it.**
- **Food Allies: aloe vera(fresh if possible); apples, argula, asparagus, dulse, kelp, avocados, bananas, basil, berries, cauliflower, celery, cilantro, coconut, cruciferous veggies, cucumbers, dates, fennel, figs, garlic, ginger, hemp seeds, kale, lemons and limes, lettuce, mangoes, maple syrup, nuts, onions, scallions, oranges and tangerines, papayas, parsley, pears, pomegranates, potatoes, radishes, raw honey, sesame seeds, spinach, sprouts and microgreens, squash, sweet potatoes, thyme, tomatoes, turmeric, watercress, wild blueberries.**
- **Coconut oil has shown to help thyroid.**
- **Nightshade family of tomatoes, potatoes, peppers and eggplant may be a problem. Certain nuts may not be tolerated**

HERBAL ASSISTANCE:

- **Kelp, sea vegetables, dulse (contains iodine, magnesium and potassium). Especially good if tired type of person. These all contain high levels of iodine needed for the thyroid and especially the hypothyroid. New thinking doctors feel that even with Hashimoto's you don't want to be iodine deficient, because it translates to greater susceptibility. When iodine reaches the thyroid, it kills off virus cells at an accelerated rate, which can in turn temporarily elevate inflammation. Therefore if you have a mild case of Hypothyroid, you do well on iodine, but if it is advanced like Hashimoto's or if you have a high level of throiditis, too much iodine can be overwhelming when I starts killing off so many virus cells so quickly that the inflammatory response can be quite high and uncomfortable. This inflammation is often mistaken as an autoimmune response.**
- **Irish Moss (Chondrus crispus) is high in natural iodine, good for impaired immunity, muscle wasting, lung disease. Don't take if you are on blood thinners (anti-coagulants) or if bleeding disorder.**
- **Spirulina or Chlorella (fresh water algae) helps build the immune and get rid of**

toxins.

- **Bladderwrack (fucus versiculosus) is a seaweed that stimulates the thyroid, often used for weight loss, edema and helping balance blood fats. This is not to be used for hyperthyroidism (overactive thyroid) or during pregnancy or breast feeding.**
- **Licorice root helps destroy the EBV cells in the thyroid, liver, spleen and reproductive system. If you have high blood pressure, use the deglycerrized licorice root.**
- **Ashwagandha (Withania) is a herb, especially powerful if combined with Bladderwrack. It also helps with environmental stress, benefits the immune system. This herb can be used for children also. Withania boosts the thyroid hormone T3 (18%) and T4 (111%). It reduces elevated cortisol levels associated with hypothyroidism to help minimize adrenal surges that can feed EBV. Need 3-6g a day. No known side effects.**
- **Lemon balm for <u>overactive</u> thyroid (Graves) to help soothe, relief anxiety and insomnia. Also works against EBV and its cofactor strep to kill off and repel viral and bacterial cells in the thyroid.**
- **Motherwort to soothe heart palpitations, irregular menstrual cycle, anxiety.**
- **Cat's claw helps destroy all viruses and bacteria that cause inflammation.**
- **Bugleweed to help normalize overactive thyroid. helping to decrease certain hormones in the body incl. TSH and T4. Bugleweed helps with increased heart rate and palpitations. It therefore helps normalize <u>overactive thyroid.</u>**
- **Guggul (commiphora mukul). The whole plant is used as a thyroid stimulant. It boosts T4 and increases the conversion of T4 to T3. It is a tonic for the endocrine system and the nervous system. Helps weight reduction, prevents blood clots, lowers cholesterol, prevents arteriosclerosis. Need 1.5g a day. Don't take during pregnancy and not for longer than 3 months or it may irritate stomach lining.**
- **Irish Moss (Chondrus crispus) is high in natural iodine, good for impaired immunity, muscle wasting, lung disease. Don't take if you are on blood thinners (anti-coagulants) or if bleeding disorder.**
- **Bacopa (bacopa monniera). The leaves and stems are used to boost T4 (41%), also acts as a brain tonic, cognition enhancer, nerve tonic, stress and anxiety reliever. Need 3-10g a day. This herb may cause or aggravate reflux.**
- **Coleus (coleus forskohlii). The root stimulates the thyroid, helps obesity, lowers blood pressure, is used as a heart tonic, helps the platelets not to stick, helps the muscles relax and is a vasodilator. Need 3-11g a day. Don't take if you have low blood pressure or a gastric ulcer. Don't use together with blood pressure drugs and blood thinning drugs like warfarin.**
- **Goji Berry (lycium barbarum). Also known as Wolfberry or lycii berry. The berries are an energy tonic, anti-oxidant, immune system regulator, liver tonic, tonic for the cardio and lowers blood sugar. Take 30-60ml a day (5-15g). Avoid if you have diarrhea or 'loose' stools.**
- **Bupleurum (bupleurum falcatum). The root is used as a liver tonic and protector. It assists the synthesis of thyroid transport hormones and the conversion of T4 to T3. Need 1.2 - 2.8g a day. This may cause or aggravate reflux. Don't take if**

pregnant.

- **Echinacea. The root is most often the part used to clean the blood and tone the lymph, for the immune modulating properties. Need 2.5- 5g a day.**
- **Schisandra (Schisandra chinensis) stimulates the thyroid, tones the liver, is energy producing and anti-depressant, a nervous system tonic. Not if pregnant.**
- **Siberian Ginseng (Eleuthero) does not affect the thyroid directly but many people with hypothyroid have weak adrenals caused by long term stress and this herb can help with the adrenals and helping the person adapt to stress. It also boosts the immune system. Long term usage of at least 3 months is necessary.**
- **Chaga mushroom kills of EBV, driving it out of the liver and thyroid while stimulating the liver and bringing it out of stagnation.**
- **Barley grass juice extract. Blocks EBV and helps prevent thyroid from atrophying.**
- **Red marine algae is a powerful antiviral helping remove heavy metals.**
- **Nettle leaf contains micro-nutrients for the blood and central nervous system, esp. the brain, also an anti-inflammatory for those organs infected with EBV.**
- **Red clover to cleanse and purify the liver, lymph and spleen of neurotoxins.**
- **Star anise is antiviral spice to help destroy EBV in the liver.**
- **Elderberry strengthens the immune system.**
- **Curcumin strengthens nervous system, acts as an anti-inflammatory, reduces nerve swelling.**

NUTRITIONAL SUPPLEMENTS:

If your palms and soles are orange color, it is because the active thyroid hormone is required to convert carotene from the diet into Vitamin A. To help this you need to keep cholesterol blood levels low.

If you have normal thyroid function tests but show multiple hypothyroid symptoms you may occasionally show high levels of anti-thyroid antibodies and anti-microsomal antibodies. High doses of PABA, Vit. E and Evening Primrose oil or other essential fatty acids may help reverse the condition. If not, low doses of prescribed thyroid hormone (desiccated thyroid) slow release lio-thyronine (T3), glandular thyroid extract or homeopathic thyroid drops may help.
Here is a list of vitamins and minerals that the body requires to produce thyroid hormones. Deficiency of any of these inhibits the body from producing thyroid hormones.

- **CHLOROPHYLL neutralizes toxins in the blood.**

- **COPPER 2-5 mg daily along with selenium and zinc are necessary for the iodothyronine iodinase enzyme to convert T4 into the more potent T3. (tomato paste, chestnuts, almonds, cashews, olives, beef, mushrooms, Copper is found in liver and other organ meats, eggs, yeast, legumes, nuts, raisins, chocolate, shellfish, oysters. It is said that copper and zinc compete for absorption**

therefore consuming too much of one will create a deficient in the other. See information under Zinc.

- **IODINE. Your thyroid hormones are iodine and your body breaks down iodine into its simplest form (iodide), oxidizes it, then joints it into the amino acid Tyrosine, and then you get a thyroid hormone. When we talk about taking iodine supplementation, we are talking about food grade iodine, not the kind of anti-bacterial you paint on your skin to kill infections. If you have hyperthyroidism, it is assumed you have an excess of iodine, and we have seen that is not necessary true. Food Sources of Iodine: kelp, dulse, arame, wakame, hijiki, nori (all seaweeds); haddock, mackerel, cod, clams, lobsters, oysters, sardines, lima beans, sunflower seeds, mushrooms. Avoid regular iodonized table salt because it usually contains aluminum. If you have a goiter, take thyroid extract and/or iodine, usually will eliminate symptoms in 6 weeks.**

- **MANGANESE is needed for T4 production, allows body to access thyroid hormones within cells for use. Oatbran, wheatgerms, wholegrain flour, raisins, bulghur, brown rice, pineapple, barley, buckwheat, blackberries, raspberries, lima beans, hazelnuts, brazil nuts. It is estimated that approx. 40% of the population is manganese deficient.**

- **SELENIUM - In order for the conversion of T4 to T3, Selenium is needed. Check and make sure you aren't deficient in this mineral. Along with selenium, copper and zinc are necessary for iodothyronine iodinase enzyme to smoothly convert T4 into the more potent T3. Brazil nuts, poultry, wholegrains, shellfish, fish, molasses, cashews, eggs, organic onion. Brazil nuts contain a lot of selenium so careful not to overdo it.. Supplementation of selenium over a period of 3 months decreases the level of thyroid antibodies (one of the key causes of hypothyroidism), by an average of 36%. Selenium improves thyroid antibodies commonly found in Hashimoto's disease Tyrosine is an amino acid called phenolenaline. It stimulates the thyroid gland like iodine.**

- **TYROSINE. Thyroid hormones are literally components of tyrosine. Tyrosine also helps form three important neurotransmitters: serotonin, dopamine and norepinephrine which are responsible for functions like memory, mood, appetite, muscle co-ordination. Naturally found in almonds, tofu, tempeh, eggs, fish, beef, chicken, wild game. Don't just take tyrosine willy-nilly, but for some it may help, especially if there is dopamine deficiency (the amino acid precursor to dopamine is tyrosine). A healthy helping of dark greens 4 times a week will help the body get tyrosine. Taking the amino acid Tyrosine often helps and you will find it in many formulas for hypothyroid.**

- **ZINC deficiency is one of the triggers of the Epstein Barr Virus. It assists enzymes to convert T4 into T3 and is involved in the transcription of thyroid hormone. Oysters, shellfish, fish, red meat, popcorn, pumpkin seeds, sesame seeds, sunflower seeds, almonds, muesli, dhal, wheat germ, whole grains, tomato**

sauce and paste, oatmeal, chicken, seafood (esp. oysters), liver, dried beans, bran, tuna, spinach, seeds as in pumpkin seeds, and nuts. There is concern that taking supplemental zinc will deplete all the copper in the body however, the world is zinc deficient right now which gives EBV the edge it needs. When you are zinc deficient, you are much more vulnerable to the symptoms and conditions. The best type of supplement is liquid zinc sulfate which doesn't remove essential trace mineral copper, it only removes any toxic copper. Even if you take a different type of zinc supplement, trace mineral copper is one of the most assimilable and available from everyday food sources so it should not be of concern.

- **CHROMIUM supports adrenals, thyroid and the rest of the endocrine system.**

- **EPA and DHA omega 3 fatty acids fortify the endocrine system, strengthen the central nervous system. When taken on an empty stomach they can help inflammation.**

Vitamins are also needed:

- **Vitamin A - assists in the health of the pituitary gland and adequate production of TSH. Is involved in formation of thyroid hormone receptors and the binding of thyroid hormones to cellular receptors. Liver, cod liver oil, pate, poultry, cornmeal, egg yolk, apricots, carrots, green leafy vegetables.**
- **Vitamin B1 to help with making stomach acid for the body to use glutathione.**
- **Vitamin B2 - helps regulate thyroid function, production and metabolism. Beef, poultry, wild rice, brewer's yeast, liver.**
- **Vitamin B3 - helps regulate thyroid function, production and metabolism. fish, poultry, pork, wheat germ, peanuts, legumes, brewer's yeast, liver, red meat. Using commercial ethylene oxide to ripen fruit results in 50% loss in Vit. B3.**
- **Vitamin B6 helps regulate thyroid function, production and metabolism. Muesli, whole grains, fortified cereals, liver, tuna, sunflower seeds, lentils, kidney beans, avocado, peas, nuts, banana.**
- **Vitamin B12 - helps slow down damage caused by Hashimoto's disease. Poultry, crustaceans, fish, eggs, liver, mollusks. It is critical to get enough B12.**
- **Vitamin C - facilitates tyrosine metabolism and thyroid hormone synthesis by donating an electron. Vitamin C helps reduce harmful effects of free radicals (oxidation). Guava, cayenne pepper, citrus juice concentrate, papayas, kiwi fruit, blackcurrants, mango, strawberries, lychees, oranges, sprouts.**
- **Vitamin D - a deficiency of this vitamin has been linked to hypothyroidism and many other problems.**
- **Vitamin E - helps regulate thyroid function, production and metabolism. Helps reduce harmful effects of free radicals. Wheatgerm, wheatgerm oil, soybean oil, almonds, sunflower seeds, cashews, avocado, brown rice (if the supplement is dl-alpha-Tocopheryl acid succinate it is synthetic) (natural Vit. E is d-alpha-Tocopheryl acid succinate.**

The cellular or nuclear membrane need to have appropriate fluidity and if your Omega 3 or Omega 6 ratio is off you are not going to get the movement of the T3 into the cell. It has to bind to the response element on the DNA so there is a thyroid hormone receptor for the T3 within the nucleus of the cell. Vitamin A needs to bind to its receptor and it forms template for Vit. D to bind to its receptor and then you end up with D and its receptor break off, they bind the thyroid receptor and then they bind T3 and that whole piece binds to the promoting site and they can only bind to the promoting site for the genes that thyroid turns on for increased metabolism in the presence of zinc and rosmarinic acid.

Is the thyroid dysfunction from the fact thyroid insufficient from the pituitary or thyroid to make enough or hormone - or is it resistance: the failure of the cells to respond?

Synthroid is the most popular drug for treating the thyroid. It doesn't cure anything and you will need it for the rest of your life. Levothyroxine is synthetic thyroid hormone T4 (has many side effects) Liothyronine is synthetic thyroid hormone T3 (needs application many times throughout the day because it doesn't last long in the body). See more information later in this handout.

SOY AND THE THYROID

This is in controversy at the moment. There are some people that have a negative effect when they eat soy foods and/or supplements. Soy protein is very estrogenic and is said to suppress thyroid function. Research is not conclusive either way. Japan has a low rate of thyroid problems and they eat a lots of iodine rich foods, and they also eat soy.

Stress

The thyroid gland is very susceptible to all forms of stress, but in this day and age it is not physical stress that we are under it is emotional and mental stress. Stress is not just all in someone's head, it is very physiological, and this can be seen by the effects that it exerts on the thyroid gland. In hypothyroidism, the adrenergic receptors (specific sites on the body that respond to chemical stimulus e.g. the chemical adrenaline) become lazy and unresponsive to the body's own energy chemicals, therefore people no longer are able to have that 'get up and go' feeling anymore.

Excess cortisol production (a by-product from stress), decreases the activity of T3, increases the risk of an autoimmune disease (such as Hashimoto's disease) and decreases the conversion of T4 into T3 in the body's peripheral tissues, and organs. Stress also 'messes up the hypothalamic-pituitary-adrenal axis which is a self-regulating system for the body; this greatly affects the thyroid on all levels of function. And as a result, to treat the cause, it is imperative to treat the nervous system as well.

Estrogen Excess(Estrogen dominance):

Estrogen excess is a condition where the body produces too much estrogen than is required, but more importantly in relationship to progesterone. Progesterone and estrogen directly oppose and balance each other. When estrogen is left unchecked -

and sways to excess levels – estrogen inhibits the production of thyroid hormone T3, along with causing many other undesirable affects to the body.

Thyroid Resistance (Reverse T3): Thyroid resistance (high Reverse T3 levels) is a condition where your body becomes 'resistant' to the effects of thyroid hormone. Or another way of looking at it:

> **When you have optimal thyroid hormones levels circulating throughout your body, and they are not 'recognized', your body believes that there are insufficient levels. Your body then needs to produce even more TSH and therefore more T3 and T4 to correct what it believes to be a decline in hormones.**

Reverse T3, a hormone produced by the metabolism and conversion of T4 into T3 normally happens in a balanced ratio. When this ratio is unbalanced, it can be one of the exacerbating factors in hypothyroidism. This is due for two reasons: Firstly Reverse T3 essentially blocks and 'muscles in' on any and all action of T3 as they both compete for the same 'docking stations' within the body. And secondly Reverse T3 is virtually inactive, having only 1% the activity of T3, so when it docks to a site it virtually has no effect.

Reverse T3 is caused by the following: High levels of stress, immune imbalances, viruses, bacteria, yeast, toxins, plastics, fire retardants, inflammation, pesticides, poor liver function, nutrient deficiencies, and excess estrogen.

Adrenal fatigue:

Adrenal fatigue is a state of exhaustion caused by long-term physical, mental or emotional stress. The main hormone adrenal fatigue patients are low on is 'cortisol', the anti-stress hormone.
Adrenaline also features as a diminished hormone due to adrenal fatigue. Cortisol has an interesting relationship with the thyroid gland and the thyroid hormones; cortisol plays an essential role in metabolizing thyroid hormone for its use throughout the body, but on the flipside, excess cortisol can inhibit the metabolism of thyroid hormones. Balance is the key. Ponder if the Epstein Barr Virus is the bottom line cause.

Liver Function:

An organ that probably doesn't jump to peoples mind when exploring the causes of hypothyroidism is the liver. The liver is responsible for the synthesis of thyroid hormone transport proteins, and like the name suggests these transport proteins 'taxi' the hormones around to various parts of the body. These hormones will be then used for energy production and metabolism. 80% of T3 production is produced outside of the thyroid gland in other tissues of the body, the liver being the most predominant of all tissues.

Oxidation:

The thyroid is its own worst enemy; In order for the thyroid gland to produce thyroid hormones it must oxidize the thyroid hormones to turn them on (catalyze). The dangers of oxidative damage are well known, and we are now told that we need plenty of anti-

oxidants daily to minimize this, yet seeing that the thyroid requires oxidation to work, this process needs to be finely monitored by the body. To little oxidation, and not enough thyroid hormones are produced, but too much oxidation, and not only does it inhibit the production of thyroid hormones, but it also creates oxidative damage.

SYNTHROID or DESICCATED THYROID HORMONE TREATMENTS?

Natural Thyroid Hormone (Desiccated Thyroid Hormone) comes from the thyroid tissue of cow or pig.

The synthetic thyroid hormone (Synthroid) provides thyroxin (T3) and that may be short lived. Once the thyroid has been removed or killed by radiation, everyone is given a prescription for Synthroid. If you take enough of it to correct your needs for hormones, you may have spells during the day in which you feel hyper and jittery and other times when you are exhausted.

One of the advantages of desiccated thyroid hormone is that it can slowly convert T1, T2 and T4 into T3 as needed and the person usually feels much better. However, some say that the natural desiccated thyroid hormone has inconsistent hormone amounts, whereas synthetics are always the same. Dr. Tennant informs us there have been recalls for the synthetics because they contain wrong amounts of hormones. Synthroid has been recalled by the FDA multiple times for containing an amount of thyroid hormone that differs from the label. The FDA has posted that it cannot recommend Synthroid since it has never been tested!

All thyroid medication is taken first thing in the morning when the thyroid is at its lowest point. Desiccated Thyroid Hormone is taken with food, about 2 hr away from medications. So if you take your medications in the early morning, eat breakfast 2 hr later and take your desiccated thyroid with your breakfast.

When you start to use Desiccated Thyroid, take your temperature in the morning under the armpit, then take 15 mg in the morning, perhaps another 15 mg in the afternoon. If your pulse goes over 100 or you feel jittery, reduce the dosage for 2 weeks and try and increase it again. Do not be impatient to get rid of your fatigue and extra pounds, increase the dose only 1/2 grain (30mg) a day each month (1/4 grain = 15 mg every two weeks). Take your time, if you overdose it can be dangerous, even fatal. Continue to monitor your temperature for 2 months, and about that time you should start to notice you have more energy. It takes about 6 months to achieve the correct dose by increasing and decreasing until you get it just right. It is not uncommon for people to require up to 300mg (5 grains) a day to achieve a normal temperature and feel good, but all the other factors need to be examined before going to such a large dose.

The common symptoms that you are taking too much thyroid hormone are:

1. **Anxiety**
2. **Confusion or disorientation**
3. **Heart palpitations**

4. **An irregular heart rhythm (arrhythmia)**
5. **High blood pressure (hypertension)**
6. **Rapid heart rate (tachycardia)**
7. **Seizures**
8. **Strokes**
9. **Coma**
10. **Death**

If you develop any of these symptoms while you are taking thyroid hormone, reduce your dose or stop taking it until you can talk to your doctor or see an emergency room doctor. You can have problems if you must stop taking it altogether as well. Let your doctor help you adjust the dosage.

Alternative to the use of thyroid hormone is supplementation with zinc, Vit. B6, Tyrosine, Iodine. This doesn't always work and thyroid hormone (L-thyroxin) may be necessary. Some companies make a glandular thyroid extract without the L-thyroxin although there are trace amounts of this active hormone. In some cases they work as well as the hormone tablet. Desiccated thyroid gland is not a cure. It is derived from pigs and is a 'complete' thyroid medication in that it provides the body with all the hormones produced by the thyroid of pigs. If you are taking Desiccated Thyroid medication, you should not neglect to feed the thyroid the nutrition it needs as noted previously. There are nutritional preparations that we can test on you to see what is most favourable.

Synthroid and L-Thyroxine are also not cures, you will be told to take them for the rest of your life.

What about the Parathyroid?

The parathyroid glands are four small glands that are attached to the thyroid. They are responsible for calcium levels in the body. They produce a hormone called the Parathyroid Hormone (PTH) which acts as a fail-safe to ensure that calcium levels never fall too low. The body can't work without proper muscle movement, proper muscle movement doesn't happen without calcium. PTH is released into the blood (endocrine gland) which travels to the bones and stimulates them to dismantle and release the required levels of calcium into the blood stream.
PTH also directs the kidneys to reabsorb calcium ions and leads to the activation of Vit. D to increase calcium absorption. The thyroid controls the production of a hormone called calcitonin.
If calcium levels in the blood become too high, the thyroid will release calcitonin which stimulates calcium deposits in the bones.
In hypothyroidism it is not only T4, T3 levels that are affected, but calcitonin and PTH levels as well as 8 plus other thyroid hormones. Natural Thyroid hormone supplements contain calcitonin and PTH, all the thyroid hormones, however synthetics don't. This is one of the reasons that a side effect of taking synthetic thyroid hormones will result in osteoarthritis. Synthetics also require excellent nutrition, a healthy live, low stress levels, adequate selenium, Vit. A, Vit B/D, magnesium, certain EFA's, balance Cortisol levels, etc. for your body to be able to utilize them. All the things need to be balanced

that caused the thyroid to become dysfunctional to begin with. A person develops hypothyroidism and takes a synthetic thyroid hormone (eg. synthroid) to treat it. The bones begin to degenerate and the body degeneration is then treated with hormone replacement therapy which, suppresses thyroid hormone levels, and results in greater bone degeneration.

Using Magnets for Healing

If you are overweight and under-active apply the north-pointing pole of a small magnet to the thyroid glands for stimulation; if overactive use the south-pointing pole to slow the metabolism

CHOOSE YOUR TREATMENT

Remember to eat enough other food so you don't go hungry.

CHOICE A (Starter Model): Liver, Lymph and Gut Release Month

- **Drink 2 cups fresh celery juice on an empty stomach in the morning. If 2 cups is too much, start smaller and work up.**
- **Sip roughly 2 cups lemon or lime water midday or early afternoon. (juice from ½ lemon or lime per 16 oz water).**
- **Repeat the lemon or lime water late afternoon.**
- **In the evening drink 16 oz aloe water or cucumber juice.**
- **Avoid eggs, dairy, gluten, canola, corn, soy and pork.**

CHOICE B (Upgrade): Heavy Metal Detox Month

- **Every morning drink 2 cups (16 oz) fresh celery juice on empty stomach.**
- **A Heavy Metal detox smoothie for breakfast.**
- **16 oz lemon or lime water at midday or early afternoon.**
- **16 oz ginger water in late afternoon.**
- **16 oz aloe water or cucumber juice every evening.**
- **Avoid eggs, dairy, gluten, canola, corn, soy an pork. Also avoid tuna, swordfish and bass.**

CHOICE C (Deluxe): Thyroid Virus Cleanse Month

- **These are added to your other meals and snacks. The smoothie can be a meal or a snack and a full bowl of antiviral broth with its veggies can form the basis of another meal if you wish.**
- **Drink 2 cups fresh celery juice on an empty stomach in the morning. If 2 cups is too much, start smaller and work up.**
- **Drink the Thyroid Healing Smoothie. If you don't like it as a blended drink, consume the smoothie ingredients separately over the course of the day.**
- **Sip roughly 2 cups lemon or lime water midday or early afternoon. (juice from ½ lemon or lime per 16 oz water).**
- **Sip 1 cup ginger water some time during the day.**
- **Sip 1 cup thyroid healing tea at any point during the day.**

- **In the evening sip a minimum of one cup thyroid healing broth or have the broth and eat the chunky veggies or blend both together as a pureed soup.**
- **Every day drink 2 cups thyroid healing juice.**
- **Avoid eggs, dairy, gluten, canola, corn, soy and pork, tuna, swordfish, bass.**
- **Lower your fat intake by 25% or more. If you eat animal proteins, you will need to cup back on your portions.**

Thyroid Healing Juice

1 bunch celery
2 apples, sliced
1 bunch cilantro
2-4" fresh ginger
Run through a juicer and drink immediately on an empty stomach for best results. Alternatively roughly chop celery and apples. Add all of the ingredients to high speed blended and blend smooth, then strain, drinking the resulting juice immediately.

Thyroid Healing Tea

2 cups water
1 tsp thyme
1 tsp fennel seed
1 tsp lemon balm
2 tsp raw honey (optional)
Bring 2 cups water to a boil, add thyme, fennel, lemon balm. Turn off heat, allow to steep 15 minutes or more. Strain and pour into a mug. Stir in honey if desired just before drinking.

Lemon or Lime Water

½ lemon or lime
2 cups water. Squeeze juice from ½ freshly cut lemon or lime into the water. Sip.

Ginger Water

1-2" fresh ginger root
2 cups water
½ lemon (optional)
2 tsp raw honey (optional)
Grate ginger into 2 cups water and add juice of ½ lemon. Steep at least 15 minutes, Strain. Add lemon and honey if desired. Drink warm or cold.

Aloe Water

2" piece fresh aloe leaf
2 cups water
Scoop gel from inside fresh aloe leaf and place I into a blender alongside water. Blend for 10-20 seconds until combined. Drink immediately on empty stomach for best results.

Thyroid Healing Broth

2 sweet potatoes, cubed
2 celery stalks, diced
2 onions, diced

6 garlic cloves
1 inch turmeric root, peeled and minced
1 cup finely chopped parsley
4 sprigs thyme
2 Tbsp Atlantic dulse flakes
1 Tbsp kelp powder
8 cups water
Place ingredients in large pot. Bring mixture to a boil, then reduce heat to low simmer for 1 hr. Strain and enjoy as a healing broth throughout the day. If you wish to leave the vegetables in chunky, you may do so, or you may wish to puree the recipe in a blender or use an immersion blender until smooth. Leftovers can be frozen to use throughout the week. To make the broth a little special, splash a little coconut oil into the individual serving bowl and add a pinch of salt just before serving.

HEAVY METAL DETOX SMOOTHIE

2 bananas
2 cups wild blueberries
1 cup cilantro
1 tsp barley grass juice powder
1 tsp spirulina or chlorella
1 Tbsp dulse
1 orange
1 cup water

THYROID HEALING SMOOTHIE

2 cups mango (fresh or frozen)
1 banana
1 cup water
Other possibles:
2 cup spinach and/or ½ cup aloe gel
½ cup arugula and/or ½ cup cilantro
1 tsp kelp powder
½ inch ginger, peeled
Juice of 1 orange and/or ½ cup raspberries

BREAKFAST IDEAS:

Fruit: papaya, banana, berries, apples, raisins, dried apricots
Nuts: walnuts, coconut
Spice: cinnamon
Pancakes made with almond flour and potato starch
Coconut oil
Pure Maple Syrup

LUNCH IDEAS:

Zucchini made into noodles, tossed with pesto, and cherry tomatoes. (Pesto: grind together: 2 cups basil, ¼ cup hemp seeds, and ¼ cup walnuts, 1 tsp olive oil, ½ date, 2 garlic cloves, ¼ tsp seasalt, juice of 1 lemon, ¼ cup water). You can use cucumber instead of zucchini if you prefer.

PHASE 1 TO HELP RESTORE THE THYROID

The 9 Day Cleansing Diet

- **It is best to start this program on a weekend or when you have 2 days at home in a row. This is because you may need lots of sleep, rest and relaxation during the initial few days.**
- **Eat plenty of the foods suggested, however do not over eat.**

- **Try to use organic produce, however if you can't, please wash thoroughly the skins of fruits and vegetables before consuming.**
- **Because of the nature of this diet some people can feel quite hungry during various stages of the day. Taking two teaspoons of psyllium husks in a large glass of water between, or 30 mins prior to a meal (each day) can help. This gives a sense of fullness without food, yet provides necessary fibre to 'sweep' clean your bowel, allowing greater detoxification.**
- **Note: Also please be aware, if you have never completed a cleanse (detox) before, or you are quite 'toxic' to begin with, you may experience some symptoms of discomfort (e.g. foggy head, fatigue, digestive disturbance, headaches, etc). These signs and symptoms are perfectly normal and are an expression that all your good work is working. The symptoms will ease over time (the first two to three days usually being the worst), and increasing your water intake will also help a lot. Be gentle with yourself if these symptoms occur, and if they become too much, then please stop the cleanse at once. There is no need for heroics. But remember this only occurs in a small number of people.**

Days 1-9 (go 14 days for even better results):

<u>Breakfast (before 12 noon)</u>
Eat at least 3 large pieces of fruit OR 2 soft boiled eggs (if adrenal exhaustion, choose the eggs)

<u>Lunch (choose 1 or 2 of the following)</u>
Raw salad with 5-7 vegetables
Canned fish or organic chicken or turkey without the skin
1 cup of potassium broth (recipe follows)

<u>Mid Afternoon (choose 1 or 2 of the following)</u>
2 pieces of fruit, fruit juice or vegetable juice
1 cup potassium broth
5-7 steamed vegetables

<u>Dinner</u>
<u>2-3 cups</u> of steamed vegetables consisting of 5-7 vegetables OR
Raw salad with 5-7 vegetables.
You can use a small amount of sea salt, lemon, tamari, cracked pepper, cold pressed olive oil or flaxseed oil.
PLUS one serving of a protein source:
- fish (only deep sea fish, no fresh water fish)
- 2 eggs (boiled or poached, use organic or free range
- organic chicken or turkey
- soy bean products like miso, tofu, soy burgers
- lentils, chickpeas, other legumes
- vegetable patties or frittatas with tofu or chickpeas
- fish or chicken soup

Avoid:

- **all grains (wheat, oats, rice, noodles etc)**
- **wheat and gluten products (bread, muffins, cakes, biscuits)**
- **chemical preservatives, colourings, flavorings, white flour, sugar, coffee, alcohol, dairy, nuts, tea, junk food.**
- **aluminum deodorants.**

Potassium Broth:

Combine chopped carrots, celery, parsley, spinach, silver beet, onions, ginger, tomato, unpeeled potato, into a litre of water.
Add Miso to taste.
Simmer with the lid on for 1/2 hour.
Strain and drink the broth (discarding the vegetables).
If you like you can heat this up in the morning and place one cup within a thermos for easy access during lunch time.

Epsom Salt Bath

Use 1 Tablespoon of Epsom salts or sea salt in a hot bath every second night. Add an essential oil of your choice for relaxation (eg. lavender). As an alternative you can chop fresh or dry ginger powder (1 dessertspoon) and add it to the bath.

Parasite Cleanse

Micro organisms are often disrupting our healing, undermining all our good work. We have several good formulas to use. If you wish to do this yourself, use any of: Black walnut, Wormwood, Oregano, Thyme, Cloves, Barberry, Citrus seed extract. Do along with the cleansing diet. Take the formula for 4 weeks, then you can break for a few weeks and start again (to get any eggs). When finished do a bottle of Probiotic to heal the gut.

Nutrition: do for 4-18 months

Iodine at breakfast (liquid or capsules)
Multivitamin containing selenium at breakfast
2,000 mg Vitamin C per meal, plus another 2,000mg at bedtime with Calcium-Magnesium
10- 30 drops Vit. D (1,000 IU per drop)
400-6000 mg Tyrosine
30-50 mg Zinc
Optional: Vit. A,E,Selenium, Copper, Manganese

PHASE 2

1. **Adrenal Fatigue Treat for up to 12 weeks**
   Nutrition: Magnesium, B vitamins, Vit. C, Q10, L-Carnitine.
   Herbal help: Withania, Licorice, Rehmannia, Sib. Ginseng, Rhodiola, Astragalus, Codonopsis, Schisandra, Cordyceps
   Lifestyle: sleep, rest, exercise, relaxation, yoga

Diet: increase low glycemic foods, protein, fruit and vegetables. Avoid sugar, alcohol, coffee and stimulants.

2. **Insomnia. Do until resolved, at least 6 weeks.**
   Nutrition: Magnesium, Vitamin B's, 5 HTP, Melatonin, Calcium. Core Level Adrenal at bedtime.
   Herbal help: Passionflower, Valerian, St. Johns Wort.
   Lifestyle: Try gentle exercise, relaxation, yoga.
   Diet: Increase eating turkey, raw cacao, protein. No coffee, stimulants, sugar, spices, MSG, food additives/colorings.
3. **Stress do until resolved, generally 8 weeks**
   Nutrition: Magnesium, Vit. B's, Theanine, GABA,
   Herbs: Exhilarin, Withania, Sib. Ginseng, Rhodiola, St. John's Wort, Astragalus, Bacopa, Skullcap, Valerian, Passionflower, Damiana, Oats, Lavender.
   Lifestyle: meditation, yoga, relaxation techniques, emotional freedom technique..
   Diet: Avoid coffee, stimulant, sugar, alcohol.
4. **Depression do for about 6 months.**
   Nutrition: SAMe, 5HTP, Tryptophan, Fish oil in high doses.
   Herbal help: St. John's Wort, Damiana, Oats, Siberian Ginseng, Schisandra, Skullcap, Lavender.
   Lifestyle: Counseling, Meditation, Exercise, Yoga, Journal writing.
   Diet: Increase turkey, fish, oats, raw cacao, honey, brown rice, green vegetables, nuts.
   Avoid coffee, stimulants, sugar, food additives/colorings and MSG.
5. **Anxiety. Do until resolved but should see some improvement within 6 weeks.**
   Nutrition: Magnesium, Vitamin B's, Theanine, GABA.
   Herbs: Holy Basil, St. John's Wort, Skullcap, Valerian, Passionflower, Bacopa, Damiana, Oats, Lavender.
   Lifestyle: Meditation, Exercise, Yoga, Relaxation.
   Diet: Increase low glycemic foods. Avoid coffee, stimulants, sugar, chocolate, food additives/colorings, spices, MSG.

If you have had blood testing done and know certain problems, here's some natural helpers:

1. **Reduce Reverse T3 (rT3). will take up to 6 months, confirm with blood testing.**
   Nutritionally use Quercetin, Vit. C, Fish oil, Bromelain
   Herbally use: turmeric, Boswellia, ginger, Rehmannia, Bupleurum, Hops, Hemidesmus
   Do a cleanse twice a year.

2. **To reduce Thyroid Antibodies: will take up to 6 months**
   Nutritionally use Selenium, Vit. D, Vit. A, Vit. C, Bromelain enzymes, Vit. E, Zinc.
   Herbally use Echinacea, Astragalus, St. John's Wort, Rehmania, Hemidesmus, Bupleurum, Reishi, Shiitake, Cat's Claw.
   Reduce stress, avoid using heavy metals, pesticides, chemicals.
   Adhere to Gluten free diet.

3. **To reduce Estrogen Dominance if you are a woman, will take up to 3 months**

Nutrition: Indole-3-Carbinol, Resveratrol, Vitamin d, Vit. a, Vit. B6, Vit. B12, Vit. E
Herbally: turmerc, Rosemary, Chaste Tree, Peony, Kudzu, Milk Thistle, Schisandra, Ground Flaxseeds.
Exercise, avoid cooking or reheating food in plastic containers or covered by plastic wrap.

PHASE 3

If you have any of these issues, fix them now:

1. **Diabetes/Blood Glucose Imbalance; takes at least 18 months**
   Nutrition; Chromium, Alpha Lipoic Acid, Magnesium, Vit B's
   Herbal: Gymnema, Goat's Rue, Fenugreek, Bitter Melon, Cinnamon, Codonopsis
   Exercise
   Avoid sugar, alcohol, saturated fats, high glycemic foods.
   You may want to follow 'There is a Cure for Diabetes' protocol.

2. **Inflammation, will take about 16 weeks**
   Nutrition: Quercetin, Vit. A, Vit. C, Fish Oil, Bromelain enzymes, Vit. E, Zinc.
   Herbal: Turmeric Boswellia, Ginger, Rehmannia, Hops, Cat's Claw.
   We do have specific formulas for inflammatory situations if you need.

3. **Unhealthy Liver, will take at least 3 months**
   Nutrition: Vit. B1,B2,B3, & B12, folic acid, Inositol, Methionine, Glycine, Taurine, Magnesium, Iron, Zinc, Choline bitartrate, Calcium.
   Herbal: Milk Thistle, Dandelion Rt, Burdock Rt, Globe Artichoke, Schisandra, Bupleurum, Turmeric.
   Exercise
   Squeeze 1/2 lemon in 1/2 glass warm water and drink before breakfast for one month.
   Add more bitter greens to your diet: endive, escarole, radicchio, chicory, dandelion greens.

HASHIMOTO'S - treat it differently

If you suffer from the symptoms listed previously and have pernicious anemia, a gluten intolerance or celiac disease, Hashimoto's may be responsible for your thyroid condition.

Some other signs that can indicate Hashimoto's:

Heart palpitations
Inward trembling
Increased pulse rate, even at rest
Feelings of nervousness and emotional distress
Insomnia
Night sweats
Difficulty gaining weight

Pernicious anemia is an autoimmune disease in which the person's body attacks its own intrinsic factor, a substance necessary to absorb B12 that is secreted in the stomach. This appears as B12 anemia. Gluten intolerance and celiac disease are an immune response to gluten that numerous studies link to Hashimoto's.

A test for thyroid peroxidase antibodies (TPO Ab) will confirm if you have Hashimoto's which most commonly occurs when the immune system attacks TPO (an enzyme in the thyroid responsible for of thyroid hormone production). Sometimes a thyroglobulin antibodies (TGB Ab) test is necessary since Hashimoto's can follow a TGB attack. TGB is produced in the thyroid and is used by the gland to produce thyroid hormones. A test for thyroid stimulant hormone antibodies (TSH Ab) can identify Graves' disease (hyperthyroidism), although TSH can also be elevated in Hashimoto's. On lab tests, the TSH marker is common referred to as thyroid-stimulating immunoglobulin (TSI). In severe autoimmune thyroid diseases, antibodies to T4 and T3 can develop. This pattern may be found in polyglandular autoimmune syndrome, systemic lupus erythematosus and other autoimmune diseases that affect multiple organs. Clinically, people with those conditions do worse and experience more inflammation with bio-identical hormones than synthetic hormones.

Because the immune system fluctuates, it is possible for a person with Hashimoto's to have negative antibody test result because when the autoimmune condition is dormant, and the immune system is not attacking the thyroid gland, an antibody test will be negative. Numerous studies link gluten to Hashimoto's. If the person is already on a gluten-free diet, if they consume wheat for 2 weeks, then repeat the test (providing gluten doesn't cause other severe symptoms) A positive antibody test confirms an autoimmune thyroid condition and indicates that the immune system, not the thyroid gland is the target for therapy.

Iodine is vital to thyroid function, as it s a major co-factor and stimulator for the enzyme TPO, but for the person with Hashimoto's, supplementing with iodine is like throwing gasoline onto the fire because iodine stimulates production of TOP which in turn increases the levels of TPO antibodies, indicating an autoimmune flare-up. Some people develop symptoms of an overactive thyroid while others will have no symptoms despite tests showing an elevated level of TPO antibodies.

Although iodine deficiency is the most common cause of hypothyroidism in the world, in the U.S. and other westernized countries, Hashimoto's accounts for the majority of cases of hypothyroidism. Some books recommend large doses of iodine for Hashimoto's because taking mega-doses will shut down the production of TPO and inhibit thyroid hormone formation, making the thyroid less active, suppressing the hyperthyroid symptoms. However if you are using iodine, have the tests done to rule out Hashimoto's as a precaution.

There are no hard and fast rules in regard to what causes an autoimmune disease but there do seem to be certain physiological conditions that can set the stages:

Gluten intolerance

Estrogen surges
Insulin Resistance
Polycystic Ovary Syndrome
Vit. D deficiency
Environmental toxicity
Chronic infections and inflammation and genetic susceptibility to the condition.

The biggest factor is stress when looking at the underlying factors causing an autoimmune disease. If you have Hashimoto's, you should create a less stressful lifestyle or find ways to lessen stress in order to better modulate the disease. Stress does many things to upset immune regulation: suppressing immune function, promoting immune imbalances, weakening and atrophying the thymus gland, thinning the battier of the gut, lungs and brain.

One of the main functions of the immune system is to protect the body from foreign invaders. Sometimes it begins to recognize a frequently eaten food as a dangerous invader (often because of your intestinal health), keeping the immune system engaged in constant battle. In time the overactive immune system can start to behave erratically and begin attacking body tissue. The most common example involves gluten. Numerous studies show a strong link between gluten intolerance and Hashimoto's. Because the molecular structure of gluten so closely resembles that of the thyroid gland, the problem may be one of mistaken identity.

Every time undigested gluten mistakenly slips into the bloodstream, the immune system responds by destroying it for removal. That's because gluten doesn't belong in the bloodstream, but gets there through overly permeable intestinal walls, or a 'leaky gut'. When immune antibodies tag gluten for removal, they stimulate the production of antibodies against the thyroid gland. The immune response to gluten can last up to 6 months each time it is ingested. Celiac disease affects up to 1% Americans, although only 1 in 8 are estimated to be aware of their condition.
Gluten intolerance however affects about 35% of Americans based in Dr. Kenneth Fine's research, with that number jumping to more than 50% if they are at high risk or show symptoms. Most think gluten intolerance is a gut issue, for often it causes inflammation in the joints, skin, respiratory tract or brain. There are tests to see if you have a genetic predisposition for gluten intolerance.
Once these genes are triggered, gluten must be avoided throughout life. (EnteroLab offers a HLA DQ gene test using a cotton tipped swab of the mouth).

Note: It is possible to produce gluten antibodies and for it to simply be from a leaky gut and the person may be able to safely eat gluten again after repairing the digestive system. Be aware that a negative biopsy of the small intestine does not rule out celiac disease, since false negative results are possible - but a positive biopsy is conclusive.

If you have Hashimoto's even a tiny bit of gluten can cause irreversible thyroid tissue death. Avoid cross contamination in restaurants, packaged foods etc. It is not uncommon to see major resolution of hypothyroid symptoms just by following a gluten free diet, however avoiding gluten does not 'cure' the disease, it simply helps tame the

immune system so it stops attacking the thyroid.

Many find removing casein, the protein molecule in all forms of dairy, is integral to thyroid health. It is suggested that having a dairy-free diet will give the best results.

Hashimoto's Disease - treat 6-18 months.

1. **Detox. for 4 weeks. see above.**
   Nutrition: Vit. A,C,E, Copper, Zinc, Manganese.
   Herbal: citrus seed extract, Black Walnut, Echinacea, Wormwood, Oregano, Thyme, Barberry, Cloves.

2. **Support Thyroid Gland 6-18 months.**
   Nutrition: Iodine, multi vitamin, selenium, tyrosine.
   Herbal: do 2 of the following herbs.
   Withania (3-6g), Guggul (1.5g), Bladderwrack (2-6g), Bacopa (3-10g).
   Other options: Coleus, Gotu Kola

3. **Reduce Thyroid Antibodies - (3-6 months)**
   Nutrition: Selenium, Vit. D, Vit. A, Vit. C, Bromelain (enzymes), Vit. E, Zinc.
   Herbal: Echinacea, astragalus, St. John's Wort, Rehmannia Hemidesmus, Bupleurum, Reishi,
   Shiitake, Cat's Claw
   Lifestyle: reduce stress, clean living avoiding heavy metals, pesticides, chemicals.
   Diet: Gluten free

4. **Reduce Inflammation (1-3 months)**
   Nutrition: Quercetin, Vit. A, Vit. C, Fish Oil, Bromelain enzyme, Vit. E, Zinc.
   Herbal: Echinacea, Turmeric, Boswelia, Ginger, Rehmannia, Bupleurum, Hops, Cat's Claw

5. **Begin with the 9 day cleansing diet mentioned above. After completed, follow the hypothyroidism diet.**
   Exercise, begin gradually.
   Lifestyle: meditation, stress reduction, avoid heavy metals, pesticides, chemicals.