

THYROID DISEASE AND ITS HEALING

from an article by Dr. Lawrence Wilson

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2. Do not take thyroid hormones if a hair mineral test indicates a four lows pattern.

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I. INTRODUCTION

WARNING #1. Taking thyroid replacement hormones is very dangerous when fast oxidation is present.

If a hair mineral analysis reveals a fast oxidation rate, taking replacement thyroid hormones can cause serious health problems, or even death.

The reason is that the hormones speed up the oxidation rate even more, throwing the person's body even more out of balance.

One may ask, why would blood tests indicate a low thyroid condition if a person is in a fast oxidation state? The answer is that in fast oxidation, the cell walls are more permeable. This may cause a more rapid uptake of thyroid hormone into the cells. As a result, the serum T3 and T4 may actually be a little low. This can cause a doctor to prescribe thyroid replacement hormones, even though this is not what the person needs.

I do not advise going against the orders of your doctor. However, anyone who is taking thyroid hormones whose hair mineral analysis reveals a fast oxidation rate should seriously reconsider taking these hormones.

WARNING #2. Thyroid replacement hormones or thyroid supplements are very harmful if a four lows pattern is present

PLEASE do not take thyroid replacement hormones, thyroid glandular nutritional products, or any products that enhance thyroid activity if a hair mineral analysis reveals a four lows mineral pattern. Any of these will worsen the four lows pattern.

WHY ARE THYROID PROBLEMS COMMON TODAY?

Thyroid imbalances are one of the most common conditions in the Western world today. The problems tend to be worse in women, and worse in adults than in children. Reasons for this include:

1. Iodine antagonists in the environment. This is a very serious problem that few talk about. However, the water and food supply are loaded with halogens, which are elements that can replace iodine in the thyroid gland. The chemicals are fluorides, chlorides, and bromides. These elements compete with iodine for absorption and utilization in our bodies. When they replace iodine, the thyroid gland simply stops working properly. To read more about this, read Iodine And Iodine Antagonists on this website.

2. Copper and mercury toxicity in almost everyone. According to the research of Dr. Paul Eck and many others, copper and mercury can easily interfere with the functioning of the thyroid gland. They may do this by antagonizing or opposing the action of zinc, manganese and selenium, or perhaps by other mechanisms.

Unfortunately, copper and mercury toxicity are almost universal today. Mercury gets into our bodies due to mercury in dental fillings, mercury in all fish except perhaps very small fish like sardines, and in some cases other sources of mercury. To read more about this, read Mercury Toxicity on this site.

Copper imbalance is due to many factors. Among the most important are adrenal insufficiency, vegetarian-type diets, zinc deficiency, stress and a few others. To learn about this, read Copper Toxicity Syndrome.

3. Nutrient deficiencies. These include low levels in our food of bioavailable zinc, selenium, iodine,

manganese and other vital minerals that are needed for proper thyroid functioning.

4. Autonomic system imbalances. This cause is related to stress of a certain type. To read about it, read [Autonomic Nervous System Evaluation And Imbalances](#).

5. Other stress. Stress can cause many cases of thyroid imbalance. The stress can be physical, emotional, financial, structural or due to traumas such as rape or beatings. All of these can damage the thyroid gland. To read more about this, read [Stress](#) on this website.

WHY ARE THYROID PROBLEMS MORE COMMON IN WOMEN?

Possible reasons are:

a) Women need more iodine than men, in general. Iodine is critical for breast health and other things in women.

b) Copper and manganese imbalances affect the thyroid, and are more common in women,

c) Selenium may be lower in women, in general, and this is critical for proper thyroid activity.

d) The thyroid is located at the level of the fifth energy center, which has to do with expression. In general, women are more inhibited about expressing themselves than are men. This topic is discussed at the end of this article.

WHAT CAN NUTRITIONAL BALANCING OFFER FOR THYROID PROBLEMS?

A complete nutritional balancing program will usually correct common thyroid problems and enable a person to stop taking thyroid medication. This sounds unusual, but that is my experience over the past 35 years with nutritional balancing science. Common thyroid disorders are discussed in detail later in this article.

II. COMMON THYROID DISORDERS

HYPOTHYROIDISM, HASHIMOTO'S THYROIDITIS and MYXEDEMA

Summary

1. Causes. Hashimoto's disease and hypothyroidism are usually due to the presence of too much copper, mercury, bromine, chlorine and/or fluorine in the thyroid gland. In addition, low levels of vital minerals such as zinc, selenium and iodine contribute, in most cases.

A properly designed nutritional balancing program will slowly remove the toxic metals from the body and renourish the gland, at which time the thyroid gland will again function normally without needing replacement hormones or other drugs.

2. Recommendations of other doctors. Most medical, naturopathic and holistic doctors recommend replacement thyroid hormones in cases of hypothyroidism and Hashimoto's disease because they do not know how to restore the thyroid gland to normal functioning.

3. Hair mineral testing. Nutritional balancing requires a properly performed hair mineral analysis. A doctor who says the hair mineral test is not helpful does not know how to use the test properly. Thyroid imbalances are almost always long-term, chronic conditions that are perfectly suited to the use of mineral analysis.

4. Blood tests. A nutritional balancing program almost always skews blood thyroid tests, making them look abnormal, at times. However, this is not important. A person on a nutritional balancing program is rarely ill. The test results are due to retracing and healing reactions, and these will alter blood and other medical tests.

However, very few doctors understand this fact, so they believe you are ill and often want to prescribe hormones or other drugs. This can be especially confusing. Basically, they interpret the blood tests to mean something completely different than we do.

5. Effects on the heart. Some people with thyroid problems worry about their heart. We find that a nutritional balancing program will strengthen your heart and protect it as you heal the thyroid gland.

6. Whom to believe. The dilemma becomes whom to believe. I cannot help you with that except to tell you our experience with many people.

7. What to do. If you are not sure what to do, I suggest:

A. If you are not on thyroid hormones right now, do not start them. Instead, begin a complete nutritional balancing program and, in most cases, you will not need the hormones.

B. If you are on thyroid hormones at this time, continue the medication for a few weeks to a few months, while you begin a nutritional balancing program.

As you heal on your nutritional balancing program, in my experience you will be able to reduce your thyroid medication. Eventually, stopping the drugs is necessary for good results with nutritional balancing, because the drugs always get in the way of the deep healing of the thyroid gland that I desire for you.

HYPOTHYROIDISM

Hypothyroidism is defined medically as a low T4 (thyroxine) and perhaps a low T3 level (triiodothyronine). It is an extremely common health condition, especially in women over the age of about 30.

Symptoms of hypothyroidism. Common symptoms include fatigue, dry skin and hair, brittle hair, hair loss, split ends of the hair, splitting, brittle or broken fingernails, weight gain (though in some cases one is very thin), cold intolerance, a pasty skin color, and often some feelings of apathy or depression.

If the condition persists for years, more serious symptoms can develop. These may include heart palpitations, heart attacks, cancers, diabetes and other health conditions.

Causes. The cause, in most cases, we find, involves low iodine and the buildup of bromine, fluorine and chlorine compounds that damage the functioning of the thyroid gland, perhaps by an oxidant mechanism. Other toxic metals or nutrient deficiencies such as low selenium, low zinc, low manganese and others may also contribute to the problem. In some cases, the thyroid is fine, but the transport, conversion and utilization of thyroid hormone are abnormal.

When viewed this way, one can see why the accepted medical and naturopathic method of just giving replacement thyroid hormones to those with low circulating levels of T3 or T4 is inadequate and often stupid. Replacement hormones may address the symptom, but they do nothing for the cause of the problem. It is at best a partial and artificial solution.

Hashimoto's thyroiditis is another common thyroid condition. We find that it is an opportunistic infection in the thyroid that causes reduced thyroid hormone secretion. It almost always clears up easily when one follows a nutritional balancing program. I do not recommend hormone replacement therapy for this simple disorder, and hormone replacement will slow one's progress, in all cases.

Medical science calls thyroiditis an auto-immune disorder because thyroid antibodies show up in the blood. However, it does not seem to matter what the disease is called. It still clears up quite easily with a properly designed nutritional balancing program. This requires working with one of the Approved Practitioners listed on this website. [Click here to view the practitioner referral page.](#)

Myxedema. This is a more severe form of hypothyroidism. Usually the person is obese, and the skin of the face and the body takes on a dough-like appearance and hangs off the face like pizza dough.

One usually feels tired, depressed, and will develop more serious symptoms if the condition persists, which it usually does for years. Medical treatment with thyroid hormone replacement therapy helps a little, but is not enough by itself to correct the condition. This condition may require more time on a nutritional balancing program, but it, too, can respond very well to this program.

Assessment.

Blood test findings. T3 and/or T4 are low and the level of TSH (thyroid stimulating hormone) is often elevated.

Hair analysis findings:

1. The oxidation rate. A properly performed hair mineral analysis will usually reveal a slow oxidation rate. A slow oxidation rate means the hair calcium and magnesium levels are high in relation to the sodium and potassium levels. For more on this topic, please read [The Oxidation Types](#) on this site.

About 80% or more of the American, European and most Asian populations have a somewhat slow oxidation rate. Many of them, however, have a very slow oxidation rate, indicating hidden thyroid problems.

In a few cases, fast oxidation is present, but this will generally shift to slow oxidation within a few months on a nutritional balancing program. The problem of fast oxidation with hypothyroid symptoms or low T3 and T4 levels is discussed near the end of this article.

2. Sympathetic dominance. This is an autonomic nervous system imbalance. It is commonly seen with hypothyroidism and with Grave's disease as well. Sympathetic dominance is a personality tendency, as well as a pattern that is fed by biochemical imbalances such as copper and mercury toxicity.

Individuals with this autonomic imbalance need to relax more, slow down and rest more...

3. Other patterns. Less commonly, other hair mineral patterns are present. These can include

a three highs, four highs or a four lows pattern.

Correction. Nutritional balancing is usually completely successful in restoring normal thyroid activity in almost all cases of hypothyroidism and Hashimoto's disease. I realize that most doctors say it is incurable, but that is not true with a nutritional balancing program. Correcting myxedema can also be done, but takes longer.

Most people with hypothyroidism start to feel a little better in a few weeks or sooner. However, it can take several months to a few years, or even longer, to remove all of the chlorine, bromine and fluorine compounds from the thyroid gland, replenish a dozen or more nutrients, and balance the body chemistry.

Daily near infrared lamp sauna therapy, and daily coffee enemas, along with the rest of a nutritional balancing program, will speed up this process significantly.

Reducing replacement thyroid hormones. Progress will be faster if one is not taking synthetic or natural replacement thyroid hormones. Stopping medication is up to the individual and the prescribing physician, but I let people know that staying on one's thyroid replacement hormones any longer than necessary is not helpful.

Most often, one does not need to remain on thyroid hormones forever if one follows a nutritional balancing program, unless the thyroid gland has been removed surgically or destroyed by radioactive iodine (RAI) therapy.

Quitting thyroid hormones after one has been on a nutritional balancing program for several months to one year can be a simple matter of reducing them slowly. Problems do arise, however, of two general types:

1. Fear. Due to advice from one's physician, or from reading on the internet, some people are terrified to stop their thyroid medication. We attempt to explain that the advice from the doctors is aimed at the general public, not at those people who are following a complete nutritional balancing program.

2. Physical symptoms. These are caused by two mechanisms:

A. Some people try to stop their thyroid hormones before the body is ready to do so. This can cause severe fatigue, depression, swelling of the thyroid, hair falling out, or other symptoms related to low thyroid hormone activity.

In this case, one must go back on thyroid hormones, and reduce them slowly and gently as one is able to do so. Usually, this can be done within a few months, but it depends how well a person follows their nutritional balancing program.

B. There may be a drug rebound effect when one stops thyroid medication. This can cause fatigue, irritability and other symptoms for a few days to a few weeks.

To avoid this, do not go off thyroid hormones all at once. Taper off slowly and gently. Also, wait at least one or two months after starting a nutritional balancing program before you begin to taper off thyroid hormones.

If one is having rebound symptoms, they can sometimes be handled by temporarily increasing the

amount of thyroid glandular, B-complex vitamins, selenium and other supportive nutrients for a few days to a few weeks until the symptoms pass. For more on this important topic, please read [Quitting Thyroid Hormones](#) on this website.

For a shorter article about elevated TSH and the correction of hypothyroidism, read [High TSH And Its Correction](#) on this site.

HYPERTHYROIDISM OR GRAVE'S DISEASE

An overactive thyroid is quite common today, and seen more in younger adult women, and in some men as well. It is rare in children. Serum levels of T3 and T4 are often elevated. TSH is often low, but not necessarily.

Symptoms. Mild cases may show few symptoms except elevated serum T3 and T4 levels. More severe symptoms may include anxiety, irritability, trouble sleeping, excessive hunger or thirst, heart palpitations, tachycardia and extreme nervousness.

In some cases, the eyes bulge out, a condition called exophthalmos. Along with these symptoms, the person is often easily fatigued.

A very serious and fortunately rare complication is called a thyroid storm. The heart races out of control and shock or death may occur.

Causes. These include:

1. A toxin in the pituitary gland. This appears to be the most common cause of Grave's disease. Correction will occur with a complete nutritional balancing program. If severe, anti-thyroid medication is required for a while until the poison is eliminated from the body, which can take up to a few years on a program. So far, all cases have resolved and the clients no longer require medication.

2. Stress. This is the other common cause that we encounter. This cause of hyperthyroidism often resolves quickly with a nutritional balancing program – within six months or so. It is also important to reduce stress. Common types of stressors that can cause this condition are too much exercise, working too hard or other stressors.

3. Copper or mercury toxicity. This is often found on hair mineral analyses in cases of Grave's disease. It is known that copper and mercury can stimulate thyroid hormone production in some circumstances.

4. The following causes below are much more rare:

- a. A TSH-secreting pituitary tumor.

- b. A hormone-secreting thyroid tumor.

Assessment.

Blood tests. By definition, T4 and T3 will be elevated. Symptoms may or may not be present with these test results.

Hair mineral analysis.

Slow oxidation. In many cases of Grave's disease, a slow oxidation pattern is present on a hair mineral test. This is confusing for clients. The reason seems to be that slow oxidation is the underlying condition in many of these cases.

Elevated hair calcium may be seen with hyperthyroidism because it is associated with:

- 1) Reduced cell permeability. If thyroid hormone passage through the cell membranes is impaired, the body may compensate, especially when under a lot of stress, by secreting more thyroid hormones. It is an attempt to force more thyroid hormones into the cells. This would account for the odd symptom picture often seen in Grave's disease of a combination of excessive thyroid hormones and fatigue.
- 2) Hidden copper toxicity. Copper imbalance is present in many cases of hyperthyroidism.
- 3) Adrenal exhaustion. This is also seen on most hair analyses in cases of Grave's disease. Reasons why adrenal insufficiency or burnout may contribute to hyperthyroidism include:
 - a. A low tissue potassium level may impair the sensitivity of the tissues to thyroid hormone. In response, the body may elevate T4 and/or T3 production as a compensation.
 - b. Hyperthyroidism can be a type of failed stress response. The thyroid gland tries to respond, but the adrenal glands do not join in, so to speak, and the result is a failed response and the symptoms of hyperthyroidism.

Other common hair mineral patterns in cases of hyperthyroidism:

1. Sympathetic dominance pattern is often present. This is an autonomic nervous system imbalance in which a person places much more stress on the thyroid and adrenal glands. It can be due to a personality tendency to push oneself, in some cases.
2. Often the sodium and potassium levels are low.
3. The sodium/potassium ratio is often normal or even elevated.
4. Copper and/or mercury may be elevated above their ideal levels. Alternatively, indicators for hidden copper and/or mercury toxicity may be present such as poor eliminator patterns (copper less than 1.5 mg% or mercury less than about 0.3 mg%).

Other hidden copper indicators are a calcium level above about 60 mg%, a potassium level less than 4 mg%, a sodium/potassium ratio less than 2.5, a zinc level less than 14 mg%, or a mercury level above 0.35 mg%.

5. Rarely, a fast oxidation or a four highs pattern is present, and rarely the sodium/potassium ratio is low.

Correction. Grave's disease responds excellently to nutritional balancing, in most cases. In difficult cases, anti-thyroid drugs may be needed for a few months to control symptoms, and then they can be discontinued as the condition goes away.

Surgery and RAI (radioactive iodine treatment to destroy the thyroid gland) are never needed, in my experience so far, with probably over 100 cases. These are both barbaric treatments for a disorder that the medical doctors simply do not understand.

Cautions with hyperthyroidism.

1. Reduce stress. This may be critical for success. Then metabolic correction often works well and rapidly to correct this imbalance. Avoid all extra stress, including even exercise until the condition stabilizes.

2. One must modify the nutritional balancing program. Most people with hyperthyroidism cannot take any, or only very little Megapan, Thyro-complex, Endo-dren or kelp.

Also, one may need more Paramin (calcium and magnesium) to relax. The other supplements are usually okay. The person should drink 3 quarts of spring water daily, and loads of rest and sleep are most important.

Sauna therapy with a near infrared lamp sauna only appears to be safe, and an excellent therapy. Perhaps it is because it can reduce the stress response of the autonomic nervous system that is driving the thyroid. It also helps to remove toxic metals such as copper, mercury, chlorine and others. It is also just very relaxing. Rubbing the feet daily (foot reflexology) Coffee Enemas, and the Pushing Down Exercise are excellent, and perhaps essential.

For more on this condition, read Grave's Disease and Hyperthyroid Interview With Dr. Wilson.

GOITER, CYSTS, AND TUMORS

Goiter. Goiter is an older medical term that simply means an enlarged or hypertrophied thyroid gland. This used to be common in certain parts of America and elsewhere in the world, usually due to iodine deficiency in the diet.

Today it is less common, but may occur due to a problem with the absorption or utilization of iodine, and rarely for other reasons such as an infection in the thyroid gland. I do not see the condition very often. However, it usually responds well to a nutritional balancing program.

Cysts, nodules, infections and tumors. Thyroid cysts and nodules may be cancerous and should be checked.

Non-cancerous lesions often respond well to a nutritional balancing program. Cancerous lesions will usually respond well to a natural cancer therapy, and surgical removal of the entire thyroid should not be needed. For more on natural cancer alternatives, read Introduction To Cancer on this website.

Cretinism. Low levels of thyroid hormones during gestation or the development of a fetus cause a type of mental slowness or retardation called cretinism. This is the origin of the slang expression calling a person who appears dull a "cretin".

I do not have experience in correcting this condition in a baby or child. I am sure we can improve it, but I don't know if it can be completely reversed (November 2015).

III. THYROID PHYSIOLOGY

Location. The thyroid gland is a butterfly-shaped gland that sits in the throat area at the level of the Adam's apple. It is a very unique gland that is absolutely required for life.

THE THYROID HORMONES

The thyroid gland produces several very important hormones. The major one is called thyroxine. Other names for the same hormone are tetra-iodothyronine or T4. The thyroid also seems to produce a little tri-iodothyronine or T3. Most of this hormone, however, is made elsewhere in the body. It also produces a hormone called calcitonin that helps regulate calcium in the body. It tends to reduce serum calcium levels.

Functions of the thyroid hormones. My mentor, Dr. Paul Eck, used to say that the thyroid hormones are like the spark plugs of the body. They ignite the "fuel" in the mitochondria of each cell and this is necessary to produce biochemical energy with which the body performs all of its functions. For this reason, any problem with the thyroid gland causes energy problems and usually fatigue, at the very least.

These amazing hormones increase the metabolic rate, also speeding up the oxidation rate, a slightly different concept used in nutritional balancing science.

The metabolic rate, in turn, impacts every area of body functioning. This includes digestion, cardiovascular health, and the metabolism of fats, carbohydrates and proteins. It affects DNA and protein synthesis, body weight, heart rate, blood pressure, respiration, muscle strength, sleep and sexual functioning, among other things.

THYROID HORMONE METABOLISM

Adequate thyroid gland metabolism involves many steps, all of which must work properly. Most doctors ignore most of the following steps, which is the reason their therapies do not work as well as they could. Here are the steps of thyroid hormone metabolism:

1. The hypothalamus must signal the pituitary gland to produce TSH. The hypothalamus produces a substance called TRH (thyroid releasing hormone), that in turn signals the pituitary gland to produce TSH or thyroid-stimulating hormone.

At times, there is a problem with the hypothalamus that affects pituitary production of TSH.

2. The pituitary gland must secrete the right amount of TSH or thyroid stimulating hormone. TSH causes the thyroid to secrete thyroxine. Anything that upsets the delicate feedback system of the body, such as taking thyroid replacement medication, for example, or some other drugs, perhaps, can upset the hypothalamic and pituitary regulation of thyroid activity.

3. The thyroid gland must produce adequate T4. T4, also called tetraiodothyronine or thyroxine, is the main hormone made in the thyroid gland. To make it requires manganese, iodine, selenium,

tyrosine, cyclic AMP, vitamins C and B-complex, and many other micronutrients.

What blocks hormone production?

A. A poor diet. If one eats poor quality food, refined foods, a vegetarian diet or perhaps too much raw food, the diet will not provide enough nutrients to supply the thyroid with all its nutritional needs.

B. Tension in the neck. Tension in the neck can overstimulate or irritate the nerves going to the thyroid gland. This leads to excessive hormone production for a short while, and then the gland begins to 'burn out' of nutrients, eventually causing sluggish thyroid hormone production.

Just giving nutrients does not really fix this problem, though it will help. One must also release the tension on the nerves leading to the thyroid that are in the neck and cervical spine area. Otherwise, the gland will not function properly. This is a chiropractic issue, in many cases. Body work such as Rolfing may be needed, at times.

C. Inadequate circulation. This is needed so that all the required nutrients and enough TSH can find their way to the thyroid gland. Impaired blood circulation to the thyroid gland is possible.

D. Toxic metals or toxic chemicals. These are common, and can definitely block hormone synthesis.

Among the worst offenders are fluorides, chlorine compounds and bromides found in many commercial breads and in some soda pop. These directly antagonize or compete with iodine uptake, preventing proper hormone synthesis. This is a terrible problem today because we are all exposed to these chemicals.

Copper and/or mercury toxicity can also impair hormone synthesis in the thyroid gland.

4. Hormone release or secretion. Once produced, thyroid hormones must be released into the general blood circulation. Secretion of thyroid hormones requires some sympathetic nervous stimulation.

Some people have imbalances affecting the autonomic nervous system that reduces the secretion of thyroid hormone.

5. Absorption into the cells. Once released into the blood, T4 must be absorbed into the body cells. For this to occur, the cell membranes must function properly. Too little or too much cell membrane permeability will affect the uptake of T4 into the cells. This is a very common problem.

Problems with cell permeability can be due to accumulation of bioavailable calcium and magnesium in the cell membranes. This excessively stabilizes the cell membranes and reduces cell permeability. Deficient calcium and magnesium cause excessive cell permeability.

Oxidant stress, impaired fatty acid metabolism such as a deficiency of omega-3 fatty acids, or other damage to cell membranes can also block the absorption of thyroxine.

Copper affects absorption by altering calcium and potassium levels. Cadmium or nickel toxicity affect hormone absorption by affecting the levels of calcium, sodium and other critical minerals.

6. Conversion to T3. Once inside the cells, thyroxine must be converted to T3 or triiodothyronine,

the more active form of the hormone. This conversion requires selenium, magnesium and other nutrients. Fully 60% of this conversion occurs in the liver, so problems in the liver can interfere with the conversion of T4 to T3.

Some people produce a hormone called reverse T3, which has a blocking effect on T3. In my experience, this is due to toxic metal poisoning. I find that if a person eats correctly on the oxidation type diets described on this website, and removes his toxic metals, especially mercury, this is not a concern and goes away on its own.

7. Thyroid receptor problems inside the cells. According to my mentor, Dr. Paul Eck, adequate bioavailable potassium helps sensitize the cells to thyroid hormone. An excellent source of this is cooked vegetables.

However, many people have too much toxic potassium in their bodies. This comes from eating fruit, and the widespread use of superphosphate fertilizers, which are even used on organic food. This, or other imbalances, may interfere with thyroid hormone utilization. To read more about this problem, please read Toxic Potassium on this website.

8. Utilization in the mitochondria to make ATP. The mitochondria are the body's little energy factories, comparable to an oil refinery. The mitochondria must respond to T3 by making ATP or adenosine triphosphate in the glycolysis and carboxylic acid cycles.

This amazing chemical is our body's refined gasoline, as opposed to glucose, which may be compared to crude oil. ATP is the actual molecule that our bodies use to power its many activities.

ATP production requires many nutrients such as B-complex vitamins, iron, copper and others. So one could have normal thyroid hormone levels, but the body's mitochondria may not be able to respond to the hormones by producing enough ATP. This appears to be common, and is sometimes called a mitochondrial defect.

10. Utilization of ATP. Once ATP is formed in the mitochondria, the body cells must use it properly. Basically, the ATP is converted to another chemical called ADP or adenosine diphosphate. In this process tremendous energy is released that the body uses to power all of its activities. This is comparable to burning the gasoline in the car engine. The fuel is useless if it cannot be burned properly.

In addition, after it is "burned" or converted to ADP, this chemical must then be recycled back to ATP. Here again, many nutrients are needed to utilize ATP properly and recycle it properly. If any of the nutritional factors are deficient, or if any toxins block these critical steps in the energy pathways, thyroid hormones will be ineffective in increasing energy production.

9. Elimination of excess T3 by the kidneys. Finally, T3 must be eliminated from the cells and be removed by the kidneys from the body. Otherwise, it will build up and cause a type of thyrotoxicosis.

For this to occur properly, T3 must be able to pass out of the cell nuclei, then out of the cell through the cell membrane, and one must also have adequate kidney activity. Cell membrane problems and weakness of the kidneys are very common, especially in older people.

Resulting thyroid imbalances. Problems can occur at any stage of the production, release, conversion, utilization or elimination of thyroid hormone. Current medical and naturopathic concepts of hypothyroidism and hyperthyroidism are incomplete and often misleading as they only relate to hormone production and release.

For example, one person may have inadequate hormone production due to radiation damage. Another person may produce enough hormone, but has an autonomic imbalance preventing its release.

Another person cannot transport enough hormones into the cells due to low cell permeability. Still another person might have adequate hormone production but be unable to utilize the hormones in the cells due to manganese deficiency or fluoride toxicity.

Another may have excess hormone production due to copper or mercury toxicity, and at the same time have inadequate cell permeability, causing a mixture of hypo- and hyperthyroid symptoms.

A nutritional balancing program addresses all of these problems, and perhaps others. Regular medical and holistic approaches do not address these many causes of thyroid problems.

IV. OTHER TOPICS

PROBLEMS WITH HORMONE REPLACEMENT THERAPY

We find that thyroid replacement hormones are rarely needed unless the gland has been removed surgically or destroyed with radioactive iodine therapy. Except in these cases, hormone replacement therapy is generally harmful, even when it provides relief of symptoms.

Problems with taking thyroid replacement hormones of any kind, natural or synthetic, include:

1. Hormone replacement does nothing to improve the conversion of T4 to T3. One can give T3, and this is better for this reason.
2. Hormone replacement does nothing to assist passage of thyroid hormone through the cell membranes.
3. Hormone replacement does nothing to assist the absorption of T3 into the mitochondria.
4. Hormone replacement does nothing to assist the normal production of ATP in the mitochondria, which requires many nutrients.
5. Hormone replacement does nothing to assist the body to "burn" or utilize the ATP, convert it to ADP, and then recycle it back to ATP.
6. Hormone replacement completely mixes up the delicate feedback system that normally regulates hypothalamic, pituitary, and glandular thyroid hormone production.

COMMENTS ABOUT THYROID TESTS

Medical thyroid testing. Thyroid physiology is very complex, as explained above. Just measuring the serum levels of T3, T4 and TSH, and perhaps reverse T3 and thyroid antibodies, which is what most endocrinologists and doctors do, is inadequate, in my experience. It does not tell the doctor enough about the cause of the problem and how to remedy it.

I recommend the method of thyroid assessment developed by Dr. Paul C. Eck as a far better way to

evaluate and correct all thyroid problems. How this is done is explained below.

Blood tests during a nutritional balancing program. Serum thyroid hormone levels (T4 and T3), as well as the level of TSH and other serum thyroid indicators, will vary up and down during a nutritional balancing program. This is very disconcerting for doctors and patients alike. However, it is nothing to worry about, and not a reason to stop the nutritional balancing program or to take thyroid hormones.

Doctors, however, are trained to react with concern to abnormal blood thyroid tests. They often scare our clients into taking thyroid hormones or something else, when, in fact, large variations in the serum hormone levels and the TSH are common and completely normal when one follows a nutritional balancing program...

Temperature testing. Dr. Broda Barnes, MD suggested taking one's morning temperature to assess thyroid activity. If the temperature is low, he suggests that thyroid activity is often low.

This method of assessing the thyroid gland is crude, and not too accurate. Other factors can cause a low body temperature, especially reduced adrenal glandular activity, and even low blood sugar. So I do not recommend it.

HAIR MINERAL TESTING

Dr. Paul C. Eck found a way to assess the thyroid using a properly performed hair analysis in which the hair is not washed at the laboratory. Unfortunately, only two labs in America and none around the world that I know of do not wash the hair at the lab.

Hair analysis assessment very different than serum hormone testing. Hair mineral assessment of the thyroid by the method of Dr. Paul Eck is totally different from serum hormone testing, often causing confusion. The hair analysis measures a metabolic or cellular effect of the thyroid hormones upon the metabolic or oxidation rate. It can also measure the levels of certain trace minerals and toxic metals that affect the thyroid. It does not measure the levels of circulating serum hormones.

For this reason, hair and blood tests for thyroid activity often do not match. I find that that hair assessment is often far more accurate, though not always.

Here are some of the most important thyroid assessment indicators found on a hair mineral analysis:

1. Hair calcium. The higher the level of hair calcium, in general, the lower the effective activity of the thyroid gland. This occurs because one of the effects of T3 and T4 is to lower calcium levels in the tissues and, at times, in the blood. For example, it is known that hyperthyroidism can cause tetany, or muscle contractions that are due to low serum calcium.

Lower calcium is also associated with increased cell permeability. This may allow more thyroid hormone to enter the cells, increasing the cellular effect of the same amount of circulating serum thyroid hormones.

2. Hair potassium. A lower hair potassium is associated with reduced cellular effects of thyroid hormones. Dr. Eck felt this occurs because it is known that low potassium is associated with reduced sensitivity of the mitochondrial receptors to thyroid hormone. Also, low potassium and sodium are associated with reduced cell permeability to thyroid hormones.

This means that even if the serum thyroid hormone levels are normal, when tissue potassium is low they may not be utilized, resulting in a low thyroid effect. This commonly contributes to thyroid problems in slow oxidizers.

The presence of toxic potassium may also worsen the ability of the thyroid hormones to be utilized. For more on this topic, please read Toxic Potassium on this site.

3. The calcium/potassium ratio is called the thyroid ratio. Dr. Eck found that hair mineral ratios are often better ways to assess body functioning than mineral levels. For the reasons given in 1 and 2 above, Dr. Eck decided upon the calcium/potassium ratio as the thyroid ratio. It is the primary method he used to assess overall thyroid activity.

Dr. Eck may have taken this idea from the fascinating work of Dr. C. Louis Kervran, author of Biological Transmutations, Beekman Publishers, NY, 1980 and 1998. Dr. Kervran also found that the thyroid hormones impact the ratio of calcium to potassium in the body.

4. Other hair mineral indicators.

1. Copper. Copper imbalance can stimulate the thyroid. Copper toxicity may play a role in hypothyroidism and in Grave's disease or hyperthyroidism.

Copper assessment is tricky using hair mineral analysis. One must not use the copper level, as it is often unreliable. Instead, one must look for hidden copper indicators. For more on this, read Copper Toxicity Syndrome on this site. However, copper imbalance appears to be very important in some thyroid conditions.

2. Selenium. Selenium is required to produce thyroid hormone and to convert T4 to T3. It is also required to detoxify and remove most heavy metals and toxic chemicals from the body. Hair analysis can provide some information about selenium status. Most people, however, need more selenium today.

3. Mercury. Mercury can accumulate in the thyroid gland, altering thyroid activity. Mercury toxicity is common in many areas of the world due to elevated mercury in most fish and seafood, use of mercury-silver dental fillings, and other exposures to mercury in medical drugs, contact lens solution, and elsewhere.

The hair mercury level should be 0.03-0.035 mg%. Anything higher or lower usually indicates toxicity. Lower levels indicate a Poor Eliminator tendency, explained in another article on this site.

NATURAL AND SYNTHETIC THYROID PRODUCTS

Thyroid glandular nutritional products. These are made from cow or pig thyroid glands. The hormones have been removed, leaving just the thyroid tissue. Most are freeze-dried products,

although other preparations are available, too, including liquids, homeopathics, herbal blends and salt-extracted products.

I use a freeze-dried whole thyroid glandular product on most people with underactive thyroid activity or slow oxidation with wonderful success.

Exactly how or why the glandular products work is not well understood, but they are quite effective to help rebuild their target organ or gland. They definitely contain many micro-nutrients for the gland, some of which have not been identified. They also seem to have a resonance effect, meaning that they vibrate or resonate at a frequency that somehow encourages the restoration of the target gland.

Natural thyroid replacement hormones. These are usually made of the thyroid gland of cows or pigs. However, they contain some hormones.

If one must take thyroid hormones, the naturally-derived ones should work better. This is not always the case, but often they are less toxic and basically more nutritious. The natural products contain many other nutrients that may be needed for the thyroid.

For example, they all contain some iodine, selenium and other minerals vital for thyroid activity. They may also have a resonance or energetic effect that may increase their potency. This is the same as with the thyroid glandular nutritional products discussed above.

I find that taking any thyroid hormones at all of any type generally slows the healing of the thyroid gland at the deepest level. This may be because all hormone products upset the delicate feedback loop system of thyroid regulation. They all tend to "fixate" the system, preventing the normal ebb and flow of hormone secretion that takes place moment by moment, day and night, in all of us. They are thus all toxic to varying degrees.

Armour brand of thyroid hormones is the most potent of the natural products, while Naturethroid, Westhroid and others tend to be a little less potent. (More potent usually means worse.)

DIET AND THYROID HEALTH

Today, a very important cause of thyroid problems is the diet. This cannot be overstated or repeated often enough. There is much confusion on this subject, but we find consistently that some foods help the thyroid while others inhibit or damage it.

The best food for the thyroid gland. Among the best foods for the thyroid gland are any that contain iodine. The problem of the iodine antagonists has been explained earlier in this article and in the article entitled The Iodine Antagonists. Iodine-rich that I recommend are sardines, kelp and some brands of natural sea salt such as Real Salt.

Sardines are an excellent source of bioavailable iodine, along with omega-3 fatty acids, selenium and vitamin D. Adults may eat 3 or 4 cans of sardines per week. All brands are okay. Do not eat more unless they are boneless, or you will get too much mercury from them. For more on this amazing food, read Sardines on this site.

Kelp is another good source of iodine. Kelp is a natural food, has a very good balance of trace minerals, and is quite yang in macrobiotic terminology due to its higher salt content.

Objections to kelp. Some doctors do not like kelp because the iodine content varies

somewhat. However, I find kelp to be very safe, and because it is a natural product, the body seems able to take the amount of iodine it requires from the kelp.

Some doctors do not recommend kelp because it contains some mercury and other toxic metals. However, kelp has the highest alginate content of all the sea vegetables. This helps bind and remove toxic metals that are in all products from the sea.

The brand of kelp matters. Kelp is often sold in capsules. I only recommend Nature's Way, Solaray, Endomet, Norwegian Kelp, and perhaps a few other brands. Many other brands are not as good and in fact, are toxic. They are often different species of kelp that have a higher mercury content or perhaps a lower alginate content. For more on this subject, read Kelp on this website.

Sea salt. Some brands of natural sea salt contain a fair amount of iodine. I do not recommend iodized table salt, as the form of iodine it contains is not as good as that in the natural sea salt.

High-iodine products to avoid. Fish and sea food are high in iodine, but all of it except tiny fish such as sardines contains too much mercury to eat it, today. We find that anyone who eats fish regularly has an elevated mercury level on their hair mineral analysis.

All sea vegetables contain iodine, but they contain too much mercury or not enough alginates to be eaten regularly. These include dulse, nori, hijiki, wakame and others.

We also find that products such as Iodorol, Lugol's solution, Prolamine Iodine and others are somewhat toxic and, for this reason, best avoided.

The worst foods for the thyroid. For thyroid health, it is most helpful to avoid certain foods. Among these are:

1. Sugars, including even fruit sugars, fruit juices and many others. The reason is that sugars often cause a sympathetic nervous system reaction in the body. This is not helpful for the thyroid and adrenal glands at all.

2. Most soy products. These often contain thyroid inhibitors. Especially avoid all unfermented soy such as soy milk, protein powders, Hamburger Helper, and others. Tofu and tempeh are not quite as bad, but not highly recommended foods, either. They are lower quality protein foods that are fine once in a while, but not as staples.

3. Unfiltered tap water. This will increase your intake of toxic fluorides and chlorine. These interfere with iodine metabolism. Carbon filtering will remove most chlorine, but not fluoride. Fluoride filters tend to damage drinking water and are not recommended.

Do not drink reverse osmosis water in your effort to obtain clean water. Reverse osmosis water does not seem to hydrate the body well in most cases, and makes the body more yin. It is also very deficient in trace minerals. For a much more complete discussion on water, read Water For Drinking on this site.

4. Foods made with tap water. These tend to contain chlorine and perhaps fluorides that are iodine antagonists. They include hundreds of prepared items such as breads, beverages like teas and coffees in restaurants, soda pop and many other prepared foods.

5. Commercial breads. These may contain bromides, which are iodine antagonists. Pepperidge Farm claims not to use bromine in their flour.

White flour is usually bleached with chlorine compounds, some of which remains in the bread. They are also often made with water that contains chlorine and often fluorides.

Breads have many other problems as well, such as added iron, and that most contain wheat. Today, wheat is an irritating food. For more on this subject, read [Bread And Why Avoid Most Of It](#).

6. All refined and processed foods. These are low in many vital nutrients needed by the thyroid gland.

7. Raw cabbage, cauliflower, Brussels sprouts and broccoli. These have a mild thyroid inhibitor in them. However, cooking these foods destroys this chemical and then they are superb foods. I recommend cooking most vegetables for many reasons that are explained in an article entitled [Raw Foods](#).

8. All soda pop, but especially ones that have a citrus taste. These include Mountain Dew, Crystal Light, Seven-up, Sprite and a few others. They contain brominated vegetable oil, another source of toxic bromides.

OTHER NATURAL THYROID THERAPIES

1. Iodine therapy. This has become very popular. Most holistic doctors are using Iodoral, Lugol's solution, or other iodine preparations. I think they are on the right track giving iodine to many clients.

However, we observe that these products build up in the liver. In other words, they are slightly toxic. I have never seen this with kelp, however, which is a vegetable that has been eaten by human beings for thousands of years. This is why I much prefer kelp to provide extra iodine.

2. Relaxation therapies such as meditation. This can help the thyroid. An important part of all nutritional balancing programs is the Pushing Down Exercise. It is relaxing and very healing when done properly. For more on this, read [The Pushing Down Exercise](#) on this site.

3. Chiropractic and perhaps other body work such as Rolfing. This can be very helpful to relieve tension in the neck area that can put pressure on the cervical spinal nerves leading to the thyroid gland. For more, read [Chiropractic](#) on this site.

4. Foot and hand reflexology. This is also excellent to relax the body and mind, and for helpful for all thyroid imbalances. It is very simple and should be done daily at home by yourself or by a friend. For more, read [Reflexology](#) on this site.

5. Yoga. Some yoga practices for the thyroid involve twisting the neck or bending the head forward to put pressure on the thyroid area. While they may help, I would avoid yoga.

We find that yoga often causes soft tissue injuries, spins the third energy center backwards, and does not move energy downward enough. For more on this topic, please read [Yoga, Its Benefits And Problems](#).

6. Acupuncture and herbal cures. Acupuncture needling may be helpful in some cases. However, please avoid all Oriental herbal therapies. Oriental herbs are too toxic today for long-term use. This is very unfortunate, but is reflected on hair mineral tests.

Herbal approaches for the thyroid do not work well enough, or are too yin, and often contain stimulant or other toxic herbs or supplements. The only "herb" for the thyroid that I recommend is kelp for everyone. More about these sciences is found in the articles entitled Acupuncture and Herbs.

ENERGETIC ASPECTS OF THYROID CONDITIONS

Expression and creativity. Thyroid hormones are concerned with creativity and expression in the world. They are needed to reach out to the world and participate in it.

Those with very low thyroid functioning are often withdrawn and depressed, for this reason. In contrast, many famous people who are "out in the world" have higher levels of thyroid hormones.

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THE THYROID BODY TYPE

Some doctors recognize a "thyroid glandular body type". These individuals generally have stronger thyroid glands and weaker adrenal glands. They are generally tall, slender and have a more linear or wiry build.

They are often mentally sharp, often in a "heady" and intellectual or "brainy" way. The women have smaller breasts and appear somewhat wispy, at times, although they are strong mentally and emotionally.

Some with the thyroid body type have been traumatized emotionally and are not as comfortable in their bodies, so they tend to go "up and out". This means they are "up in their heads" too much. They have a great need for grounding, centering, and relaxation. When they burn out, they go into sympathetic dominance pattern and develop weaker digestion and constipation, in many cases.

In contrast, the adrenal body type is shorter, stockier or heavier, and often more earthy and grounded. They are often not as intellectual, though they can be very smart. They are often physically stronger have a faster oxidation rate, and often have better digestion if they are at all healthy. These body types are generalizations, but they may help us understand some effects of the thyroid and the adrenal glands upon the body.