

Thyroid Resistance

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By "thyroid resistance" I mean a nutritional difficulty converting T4 (inactive thyroid hormone) to T3 (active thyroid hormone) or difficulty absorbing it. Here is a summary of the major causes:

Stress

Stress of any kind (physical, emotional, mental) will lower thyroid function. Also, the need for thyroid increases during the darkness of winter and during illness.

Thyroid Inhibitors and Toxins

Unsaturated oils

This includes soybean, safflower, fish, sesame, corn, canola, high oleic safflower, flaxseed, borage and Evening Primrose oils. These oils suppress thyroid function, digestion and the immune system, feed cancer cells, and promote diabetes, seizures and heart disease.

Soy products (soybeans, soy protein drinks, tofu, tempeh, etc.)

These have three very potent phytoestrogens (isoflavones) and all estrogens inhibit thyroid function, whether natural, synthetic, plant or environmental. Soy contains a proteolytic enzyme inhibitor which inhibits the absorption of important minerals such as calcium, magnesium and zinc. Soy is so estrogenic that it is a potent promoter of hypothyroidism, cancer and failure to thrive syndrome in infants. Soy inhibits B12 absorption, protein digestion and increases the body's need for vitamin D. For more on soy toxicity see: <http://www.litalee.com/shopexd.asp?id=188>

A low animal protein or vegan diet

By this I mean a diet low in organic animal protein (beef, lamb, turkey, chicken, fish, eggs, and dairy products). Veganism causes an alkaline condition (excess alkaline reserves which are dumped into the urine) because adequate acidity comes from the digestion of animal protein. People who are overly alkaline cannot carry calcium in the blood, either in the salt form or bound to protein. These people can take lots of calcium but it is not retained. This pattern of low calcium and alkaline pH is called the anxiety pattern because it sometimes causes severe anxiety with sighing for which tranquilizers are sometimes taken. This pattern of alkalinity is also observed in people with weak immune systems who are prone to frequent infections and catastrophic illnesses including cancer. One of many results of the lack of protein is hypothyroidism because animal protein is required to make the thyroid hormone and to convert it to its active form in the liver. Low thyroid function leads to (take your pick): diabetes, cancer, heart disease, gallbladder problems, etc. Women especially are vulnerable, because when they have low thyroid function, they become estrogen dominant, cannot make adequate progesterone and develop female problems. In addition, because of estrogen dominance, women have five to six times more osteoporosis, gallbladder disease, diabetes, and Rheumatoid arthritis, etc., than men.

Cysteine-rich meats

All muscle meats contain cysteine which is anti-thyroid unless balanced by gelatin which contains the prothyroid proteins that many people do not consume because they toss the skin and the bones of the

animal, which are the source of gelatin. Great Lakes Gelatin is a pharmaceutical grade of gelatin and is excellent for balancing the anti-thyroid proteins in muscle meats.

Raw (not cooked) cruciferous vegetables (broccoli, cabbage, cauliflower, Brussels sprouts, kale, collard greens, Chinese broccoli, kohlrabi, bok choy, turnip root and greens and rutabaga) contain thyroid inhibitors which must be cooked to be destroyed.

Thyroid Inhibiting Substances

Synthroid (T4)

Synthroid (T4): synthroid is cardiotoxic, shrinks the thyroid gland, suppresses cellular respiration and causes bone loss unless it is combined with T3 (Cytomel) as in a thyroid glandular or the synthetic equivalent (Proloid) or unless it is converted into T3. A healthy male can convert T4 into T3. A hypothyroid woman has greater difficulty converting T4 to T3 than a man because of their estrogen dominance (which inhibits the conversion of T4 to T3). So, it's best to take a thyroid glandular + T3 if needed or T4 (Synthroid) combined with T3 (Cytomel).

PABA (para amino benzoic acid)

This is very anti-thyroid plus it is a severe lachrymator (causes tears to form). It is a precursor to folic acid and is used to make vitamins, but as an isolated supplement, it is extremely anti-thyroid. (Source: Dr. Ray Peat).

Excess iodine

Consuming excess iodine in supplemental form (more than 150 micrograms daily) can inhibit thyroid function. Excessive consumption of sea vegetables (kelp, Nori, seaweed, etc.) can also inhibit thyroid function.

See: *To Your Health* - July 2008, The Iodine Myth: <http://www.litalee.com/shopexd.asp?id=393>

ALL estrogenic substances inhibit thyroid function

These includes natural or synthetic estrogens and herbal or phytoestrogens (such as black cohosh, sage and pennyroyal).

Omega-3 and -6 Oils (PUFA or polyunsaturated fatty acids, called Essential Fatty Acids)

All liquid oils are PUFA except extra virgin olive oil are toxic and can cause hypothyroidism, suppress the immune system, are implicated in heart disease, cancer, diabetes, seizures, cysts, age spots and poor digestion. This includes *all* oils that are liquid at room temperature except extra virgin olive oil. The list includes all seed, nut, bean, grain and fish oils, such as flaxseed, soybean, safflower, canola, fish, sesame, walnut, hemp, corn, Evening Primrose, Borage, black current etc. oils. Beta-carotene (as a supplement or in carrot juice) and lecithin are also PUFAs. Vegetable juice, green juices and their powders, nuts and beans (except green) and grains (especially wheat, rye and barley) are high in PUFA. Safest grains are oats, rice and corn (but not everyone can tolerate even these older grains). Recommended oils: coconut oil (the healthiest), extra virgin olive oil and butter. (Ref. *Coconut Oil, Why It Is Good For You* – free on website plus refs and links).

See *To Your Health* - July 2005: <http://www.litalee.com/shopexd.asp?id=148>;

Unsaturated Fats: <http://www.litalee.com/shopexd.asp?id=192>

Articles by Dr. Ray Peat at www.RayPeat.com

Vegetable juices

It is better to drink fruit juices and eat the whole vegetable than to drink vegetable juices. In fact, all vegetable juices are anti-thyroid because juicing concentrates the toxic polyunsaturated oils (PUFAs) or

omega-3 and -6 oils) and takes away the protection of the fiber. Fruit juices, on the other hand, contain nearly zero unsaturated oils and are high in salicylates (as is aspirin) so they are very anti-inflammatory.

Environmental Thyroid Poisons

Pesticides

These chemicals, mentioned above, are very estrogenic, and all estrogenic substances suppress thyroid function and inhibit the conversion of T4 to T3.

Pesticide-Herbicide Legacy -Toxic Soils: <http://www.litalee.com/shopexd.asp?id=184>

Fluoride

Fluoride causes hypothyroidism, poisons over 100 important enzymes in the body, and causes seizures, bone disease, cancer, and premature aging. It does not prevent cavities. Yet it is mandated in 70% of American cities. Fluoride cannot be removed by carbon filters. It can only be removed by distillation, reverse osmosis or ion exchange resin. Avoid fluoridated toothpaste and reconstituted fruit juices (e.g. from the concentrate which are likely to contain fluoridated tap water. Avoid beer made in fluoridated cities. Green and black teas (especially green) will be high in fluoride if they are watered with fluoridated water, even if labeled organic. I recommend organic Matcha green tea from Japan which is fluoride-free and can be found in Asian markets.

Fluoride, A Modern Toxic Waste: <http://www.litalee.com/shopexd.asp?id=175>

Fluoride Notes: <http://www.litalee.com/shopexd.asp?id=176>

I recommend a fluoride purification system using a special filter made by Friends of Water company.

They are not expensive and are much better than distillation or reverse osmosis.

Call or email Tim Hickey, owner of Friends of Water, 14618 Tyler Foote Road #169, Nevada City, CA 95959; (360) 326-8834; (866) 482-6803; sales@friendsofwater.com

Blogs: http://www.litalee.com/blog/2009_02_01_archive.html

<http://www.litalee.com/blog/2009/02/do-whole-house-water-filters-remove.html>

Mercury

The mercury in silver amalgam fillings or certain fish inhibits the conversion of T4 to T3 in the liver. So, if you have tried everything yet still have a problem, please consider removal of these toxic metals from your mouth. Most heavy metals are thyroid-toxic. Proper removal of mercury fillings must be done by a dentist who understands the special precautions needed to do this safely.

Excess Inorganic Iron: Iron (synthetic or not from whole foods such as ferrous fumarate, ferrous succinate, ferrous sulfate, hemocyte

Inorganic iron is toxic and can have serious side effects. This is a summary of the adverse health effects of iron overload: liver dysfunction (elevated liver enzymes); increased risk of colon, esophageal and bladder cancer; infections; diabetes and pancreatic disorders; Alzheimer's disease, Parkinson's disease, multiple sclerosis and cystic fibrosis; and mental disorders (anxiety, panic attacks, some forms of dementia) often mistaken for mental illness and exacerbation of inflammatory disorders such as arthritis. Other adverse effects: chronic disabling fatigue (from hypothyroidism); abdominal pain of undetermined origin; gastric problems such as ulcer, gastritis; bouts of diarrhea or constipation and/or nausea and vomiting not due to any known cause; black stool (from blood loss); hair loss, sometimes total head and body; skin may look gray white or slate gray or may turn a deep bronze hue and look like a suntan; headaches including migraines; progressive hearing loss; memory loss and confusion; inability to concentrate or to think clearly and difficulty making decisions; dizziness and loss of balance and coordination; weakness and shortness of breath upon exertion; edema (fluid retention); weight changes; visual disturbances such as blurred or failing vision, difficulty focusing and eye pain; hypothyroidism;

heart disease; increase in infections. If you need iron, take an herbal or food form such as Spl (Therazyme) or raisins or other foods high in iron. There is also evidence that iron overload is involved in gout. Reference: To Your Health – July 2009: <http://www.litalee.com/shopexd.asp?id=411>

Radiation

Radiation, whether ionizing or non-ionizing cause damage to the thyroid. You should minimize any type of radiation, whether from your computer, your cell phone or your environment.

The Pro-Thyroid Diet

Hypothyroidism leads to low blood sugar, estrogen dominance, increased adrenalin and cortisol and increased prolactin. Excess adrenalin can cause a racing pulse, irregular, or fast heart beat, anxiety and panic attacks, hypertension and cardiovascular problems. Adequate thyroid function is necessary to control adrenalin at normal levels. Hypothyroid people make between 10% to 40% excess adrenalin. As thyroid glandular is slowly increased, adrenalin slowly decreases to normal.

Eat at least 4 oz (about 25 grams) of organic animal protein daily: eggs, organic cheese, yogurt, cottage cheese, organic grass fed meat or poultry and fish. Protein is required to make the thyroid hormone and for the liver to convert T4 to T3.

Great Lakes Gelatin (cooked collagen) is the only protein powder I recommend. It is pharmaceutical grade and contains prothyroid amino acids which balance the anti-thyroid amino acids in muscle meats.

Adequate sea salt (non-iodized) is nature's diuretic and is necessary to mobilize glucose, keep adrenalin levels to normal and prevent all the symptoms of high adrenalin (hypertension, irregular heart beat, panic attacks, etc.). Eat white sea salt to taste on all of your food and also in your fruit juice. Do not eat colored sea salt. The color is dirt or an impurity. For example Himalayan salt is pink or orange and the orange color is iron which is toxic in excess.

Fruits and fruit juices, in particular orange juice and tropical juices are helpful in keeping blood sugar stable and decreasing adrenalin. Frequent fruit juice and salty snacks can help relieve a yo-yo blood sugar and the fruits juice provides a source of calcium and magnesium. Avoid grapefruit/grapefruit juice (high in estrogenic bioflavonoids) and apple juice (high in pectin which feeds bowel bacteria). Be sure that the starchy fruits (bananas, pears, peaches, nectarines, plums, etc.) are ripe so that the starch is converted into healthy sugars. Salty fruit juice, by raising glucose to normal, lowers adrenalin, helps convert T4 to T3 and this is very helpful in preventing and relieving the "jitters" (a racing pulse which comes from adrenalin dominance).

Avoid vegetable juices - when you juice a vegetable, it concentrates the toxic PUFA by removing them from the protective mother fiber. The only exception to this is to juice in a Vita Mix juicer which juices the entire vegetable, including the fiber. However, fruit juices are healthier than vegetable juices because they contain almost zero PUFA and are high in anti-inflammatory salicylates.

Coconut water can be consumed alone or mixed with fruit juice. Coconut water has a long history of use as both a food and as a medicine. Although a variety of fruits grow in abundance in many tropical locations, coconut water is prized above all other juices. It not only satisfies thirst but invigorates the body and brings about a sense of well-being and renewed health. Women are encouraged to drink it when pregnant and nursing so their milk will provide all the nutrients necessary for a healthy baby. The first food an infant receives as it begins weaning is coconut water and coconut jelly (soft immature coconut

meat). Coconut water contains a variety of nutrients including vitamins, minerals, antioxidants, amino acids, enzymes, growth factors, and other nutrients. Coconut water is a good source of the major minerals like magnesium, calcium, and potassium. It's high mineral content make it an excellent rehydrating juice. Coconut Water Article: <http://www.litalee.com/shopexd.asp?id=388>

Use coconut oil daily in cooking, as you would butter or olive oil. Coconut oil supports thyroid function and the immune system. It is similar to the fat in healthy breast milk. It is the best and most healthy fat there is. If you don't like the taste of coconut, buy expeller pressed coconut oil which has no taste. Coconut Oil - Why It Is Good For You: <http://www.litalee.com/shopexd.asp?id=137>

Caffeinated Coffee is a prothyroid drink and very anti-inflammatory. It should not be consumed black but with milk, cream or half & half because it is so metabolically stimulating that it can cause the jitters from low blood sugar. See: To Your Health - April 2001: <http://www.litalee.com/shopexd.asp?id=165>
 Blog: http://www.litalee.com/blog/2009_05_01_archive.html

Eat raw carrots daily. You can make a Ranch dressing with coconut oil (see my recipe) and add it to grated carrots. The fiber in carrots is excellent for binding colon toxins and carcinogens and for preventing the reabsorption of estrogen.

Pregnenolone is a major anti-aging steroid and the second most abundant in the body; the most abundant is cholesterol, a steroid alcohol. Adequate thyroid hormone converts LDL cholesterol into pregnenolone. It opposes the toxic effects of cortisol and thus provides nutritional protection from diabetes and from hot flashes or night sweats, all of which are triggered by cortisol dominance. It will nutritionally counter the chemical reaction in the brain that causes panic attacks. And, it will convert into progesterone and DHEA by whatever amounts are needed in your body. Pregnenolone increases mental focus and prevents "senior moments."

Pregnenolone - A Fruit Of Cholesterol: <http://www.litalee.com/shopexd.asp?id=205>

Carbonated water (Calistoga, Perrier, Talking Rain, Crystal Geysir) - drink daily. You can dilute fruit juices with this. Carbon dioxide increases oxygen to the brain and helps you to relax.

What if you take too much and become hyperthyroid? Contrary to the conditions which arise from hypothyroidism, as listed above, the major side effect of mild hyperthyroidism (say 25% hypermetabolic) is *longevity*. This is not a rumor. Historically, the longest-lived peoples in recorded history are those who lived on thyroid stimulating foods (adequate protein, fruit, salt and coconut oil). This was common in people living in tropical areas who lived on fish, coconut oil and fruits readily available to them. It was also common in the Eskimos before the advent of Western foods. Eskimos lived on raw fish, and raw blubber, not a diet you would consider healthy. Yet, they had no health problems and were slightly hyperthyroid. Why? Because they ate the whole animal, which included all the glandulars, the bones (calcium), and the protein. Thus, even though the fat in the fish was unsaturated, they burned it up because they were slightly hypermetabolic.

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