IODINE AND YOUR THYROID

By Marie Pace, DNM, HHP, CNC, Health Coach

Do you have: fibrocystic breasts, inflammatory breast disease, thyroid nodules or goiter, low functioning thyroid gland, adrenal fatigue, overweight, cancer, any autoimmune disease in the body, infertility, ADD or ADHD or autism, have high cholesterol, heartburn, have an inability to sweat, or feel that your tongue is enlarged… then you are most likely iodine deficient!

Since the atoms of thyroid hormones re composed of iodine, there’s a strong connection between inadequate iodine intake and hypothyroidism. Iodine is a universal nutrient in that it regulates hormones and metabolism, enhances brain development and function as well as detoxifies toxic halogens and heavy metals. Iodine works as an “adaptogen,” that is, it helps strengthen the body’s ability to adapt to and compensate for physical disruptions. Some thyroid medications make the body metabolize iodine faster than normal. This can result in a functional loss of iodine if you are already taking thyroid hormones.

In the past (1800’s-early 1900’s) medical records show that iodine was used to treat medically: goiter, atherosclerosis, syphilis, uterine fibroids, mercury poisoning, scarlet fever, bronchitis and pneumonia, obesity, depression, breast pain, eczema, malaria, ovarian cysts, cough, tumors, tonsillitis, etc. Literally it was the SUPER DRUG (all natural, of course) for almost any ailment.

Iodine is an essential micro-nutrient … that means that every cell in your body needs and uses iodine! The main form of iodine used for supplementation is Lugol’s Iodine Solution or Lugol’s in tablet or capsule form (we have a specially formulated product called MOTION that is a natural Lugol’s solution!).
A normal thyroid gland contains 50mgs of iodine, fat in the body and breast tissue contain 700mgs, striated muscle - 650mgs (lack of iodine in muscle may result in muscle pain). 20% of body iodine (about 400mgs) is present in skin and without it the skin cannot sweat.

Complete lack of iodine in the unborn infant and young child results in cretinism with severe mental deficiency. A deficiency results in low IQ. Mothers who supplement iodine during pregnancy have notably brighter babies!

Iodine is also essential for production of oxytocin. This hormone is the "love" hormone - it is what Puck must have given to Titania so she fell in love with Bottom in A Midsummer Night's Dream! Without oxytocin there is no empathy. Indeed, it has been postulated that there is a deficiency of oxytocin in autism and early trials have shown that oxytocin is helpful in this condition.

A study in Japan showed that the average daily intake of iodine was 13.8mg (because of their high intake of seafood) and the Japanese have the lowest incidence of breast cancer in developed nations.

Interestingly enough up until the 1980’s, potassium iodate (iodine) was used as a dough conditioner in bakery products. But for some reason, it was removed and replaced with potassium bromate, a halide (salt) that inhibits thyroid function! Halides such as fluoride, chloride, bromide and mercury will block the absorption of iodine. If you don’t ingest enough iodine overcome these common environmental factors then your overall health will suffer.

Some people feel that once they start iodine supplementation that a bad “reaction” occurs. What is commonly thought to be a bad reaction to iodine is most likely bromide toxicity and/or lack of selenium. Iodine, Bromide, Fluoride and Chlorine are all halides. When we are low in iodine and are exposed to these other halides they will take a place on the iodine receptors. If we have been exposed to many of these halides over a long time period we may be considered bromide toxic.

It has been verified many times that many(not all) people with Hashimoto’s thyroiditis in the United States are deficient in iodine. However, if they are deficient in iodine then they are almost sure to be deficient in selenium also. Selenium is what the thyroid uses to manage H2O2. If a client runs into problems when taking iodine it is low selenium that is causing these bad reactions, not iodine! Think about it from an evolutionary standpoint. If soil is low in selenium it is very likely to be low in iodine. If soil is low in iodine it is very likely to be low in selenium. As people evolved and moved around the world, they had to be able to adapt to either low selenium and iodine or higher selenium and iodine. What they did not typically have to deal with was high iodine and low selenium. That is until some “smart people” started increasing one without increasing the other. I have yet to read of a bad reaction to iodine if the person was first started in 200 mcg per day of selenium as L-selenomethionine and then increasing the iodine.

Some clients might still have a “problem” with detoxing the bromines and/or mercury out of their body. Below are some of the symptoms that CAN occur. Please note I said, “CAN”. Not everyone goes through this. If you’ve had a diet filled with breads, crackers, junk foods, pastas, etc. you might notice a few of these detox symptoms when starting iodine supplementation. If you have heavy metals, yeast, fungus, etc… then you might also have a few detox symptoms. That is when you will need to literally replace the bad salts (bromides, fluorides, etc.) with good salt (see SALT LOADING PROTOCOL below).

Please note that NOT ALL WILL EXPERIENCE THE FOLLOWING…

**Iodine-related bromide detox symptoms may include:**
- eye lid twitching – foot twitching – tingling in hands or feet
- dark thoughts (e.g., there is no reason to live)
- depression (e.g., there is no reason to get out of bed)
- anxiety – emotionality – irritability – sedation – lethargy
- skin “cuts”rash (bromaderma) bromide acne,” “acne-like eruptions” without “coniform.”
- hair loss
- leg and hip ache (feels like arthritis)
metallic taste – dry mouth – increased salivation
mouth and tongue sores and cuts or “sore mouth”
sinus ache – runny nose
headache - brain fog
odd swallowing sensation (reported in old medical literature as “swollen glottis”)
body odor (bromos is Greek for stench)
ureteral spasm, frequent urination (mistaken for urinary infection) – unusual urine odor
diarrhea – constipation - nausea
kidney pain
vision changes
dream changes
hormone changes

SALT LOADING PROTOCOL:

SALT DOSING (different than SALT LOADING): salt DOSING is 1/2 tsp of good salt like celtic sea salt (not white salt,) EVERY day, all at once or spread out throughout the day. This is great to do if there are no “detox” symptoms present and the person is starting iodine supplementation. You can do SALT DOSING for as long as you feel you need it.

Natural occurring salt and iodine are very potent alkalizers for the body… probably the best way to alkalize for overall health.

SALT LOADING is USED for when detox is troubling. See protocol below. The bromides displaced by the iodine bind to the chloride in the salt and are excreted in your urine. If you need to do this for more than 2 or 3 days, you need to either pulse dose your iodine or decrease your iodine dose. No one can tell you WHEN to do this... you will need to pay attention to your body and note the changes... bottom line is if you don’t feel good taking iodine or notice any of the detox symptoms listed earlier... then SALT LOAD!

(note: we’ve suggested people who are VERY sensitive "start low, start slow" with iodine. But there’s an additional Pre-treatment Protocol that some of the doctors use. They start patients with NO iodine but all the companion nutrients for two weeks. (magnesium, selenium, Celtic salt, Vit. C, B vitamins, Vit D, Vit. E, etc.) The dosage for each is BASED ON THE INDIVIDUAL’S NEED for these minerals and vitamins per testing (we utilize a Hair Tissue Mineral Analysis for this).

How to do it:

Mix (1/2 teaspoon Celtic sea salt (or Himalayan) dissolved in 1/2 cup warm water, then followed immediately with 12-16 oz or more of pure water. Repeat every 30-45 minutes until copious (lots of) urination begins.

Do this for 1-3 days in late morning or early afternoon. The salt will bind to the toxins (bromides, fluorides, etc) that may be mobilized after starting the iodine treatment. You may notice for a few days detox symptoms of pimples, headaches, fatigue. They will go away as you continue supplementing iodine. You may need to repeat salt loading numerous times throughout your course of taking iodine... it really depends on how you feel.
The average dose to work up to of iodine is 50mcg daily (don’t take in afternoon or night as it could keep you awake!). Correct supporting minerals and vitamins should also be taken while supplementing iodine: B complex, Vitamin C, selenium (vital if you have Hashimoto’s), Vit. D, Vit. E (or as directed by your holistic practitioner based on personalized testing).

Facts:
1. It is impossible to get enough iodine from iodized salt.
2. If you’re allergic to shellfish you can still take iodine supplements! People allergic to shellfish are allergic to the protein molecules in the fish, NOT the iodine!
3. Eating dried seaweed or seaweed / Kelp supplements does not give you the iodine you need!
4. The iodine in your multi-vitamin is not sufficient
5. Iodine supplementation/replacement will NOT shut down your thyroid function
6. Iodine supplement may cause an increase or fluctuation of your TSH on testing during the first 2-3 months of starting iodine. We usually suggest not testing the TSH until after 90 days of 50mg of iodine supplementation daily. Test ONLY the FREE T3 and FREE T4 and Reverse T3 during this time. If you’re taking “thyroid” (synthroid, etc.) for hypothyroidism, whether it’s the whole natural variety or the single hormone, synthetic type " you’ve probably improved your energy levels, become a bit more alert, lowered your cholesterol and improved your overall health. (or maybe you’ve had no real results at all), in either case, unless you’re getting enough iodine you simply won’t get the results needed! There’s a very good chance that you simply are not getting enough iodine even though you eat well and take supplements on a regular basis.
7. Your body needs at least 15mg of iodine daily to metabolize lipids (fats) - 50mg of iodine daily reduces cancer cells significantly
8. Your body cannot make hormones without iodine
9. When supplementing with the correct form of iodine the excretion of mercury, lead, cadmium, aluminum, fluoride and bromine is hugely increased.
10. A person will feel warmer (no more cold hands and feet), may need less sleep and their bowels will become more regular. A person might notice an increase in body odor or cloudy urine for the first few weeks due to the detox action occurring.

You literally won’t know how you will respond to iodine until you start taking it. In some, iodine is truly the “cure” to a long list of ailments. In others, it can cause a lot of movement in the body (detox) and create “symptoms” that are uncomfortable (this is why we insist on monitoring you closely). Iodine can correct Hashimoto’s thyroiditis in some. For some clients on thyroid medications, taking iodine can affect their required dosage — they may require less…or more.

In almost everyone, the TSH will go up while on iodine, as explained below.

It takes 150 micrograms per day to prevent a goiter, but iodine is also required for the rest of the body requires more. For example, 3000 mcg/day (3mg) is necessary to keep breasts healthy and it has been recommended that approximately 12,000 mcg/day (12mg/d) is needed to keep the entire body
healthy. The Estimated Average Requirement (EAR) for iodine is the amount expected to meet the needs of 50% of people in a specific age group, based on a review of the medical/scientific literature.

Iodine is necessary for health of many organs including the pancreas, liver, and mucosa of gastric, small, and large intestine, nasopharynx, choroid plexus and the ciliary body of the eye, the skin, and the following glands: saliva, lacrimal (tear ducts) and both lactating and non-lactating mammary glands. TSH (thyroid stimulating hormone) increases the activity of the Sodium-Iodine Symporter (NIS) that drives iodine into the thyroid and into the cells of the other organs. That is the reason that the TSH blood levels increase when patients are taking iodine — the TSH is needed to drive iodine into the cells. If you start iodine supplementation and then go to your doctor for a TSH thyroid test… he/she might be alarmed at seeing your TSH go sky high! If he is not well educated on iodine supplementation or if you forget to even tell him that you’re on iodine… your protocol of thyroid hormones might be incorrectly changed.

It is best to wait at least 4 months (up to 6) after being on iodine before testing the TSH. If your doctor orders a TSH test and doesn’t realize that you are on iodine he might react by suggesting you need thyroid hormone supplementation! Please be careful and ensure that you work with doctors who are iodine literate.

Raising iodine intake to an optimal level might also help women lower their endometrial and ovarian cancer risk as well as assist in ridding the body of ovarian cysts. In men, it can help lower prostate cancer risk. In both sexes it may also help reduce or even eliminate their need for thyroid hormone supplementation altogether by boosting iodine levels.

Iodine can actually help your body get rid of potentially harmful elements like lead, cadmium, arsenic, aluminum, mercury and toxic amounts of fluoride.

Dr. David Brownstein said, “After testing individuals and finding low iodine levels, I began to use smaller milligram amounts of iodine/iodide (6.25 mg/day). Upon retesting these individuals 1-2 months later, little progress was made. I therefore began using higher milligram doses (6.25-50 mg) to increase the serum levels of iodine. It was only with these higher doses that I began to see clinical improvement as well as positive changes in the laboratory tests.”

Dr. Michael B. Schachter says, “The treatment dose when a person is iodine insufficient is generally between 12.5 mg and 50 mg daily. Preliminary research indicates that if a person is iodine insufficient, it takes about three months to become iodine sufficient while ingesting a dosage of 50 mg of iodine and a year to become iodine sufficient while ingesting a dosage of 12.5 mg of iodine daily. However, the patient needs to be monitored closely.”

We know that high intake of iodine is associated with a lower risk of breast cancer. We also know that low iodine intake is associated with liver cancer.

Women with a history of low iodine levels (hypothyroidism) face a significantly higher risk of developing liver cancer. Researchers led by Manal Hassan of Anderson Cancer Center at the University of Texas concluded that this finding suggested a clinical association between hypothyroidism and hepatitis C, which is contributing to the country’s rising rate of liver cancer.

Why have we become iodine deficient in the past few decades?
Three reasons. First, our iodine consumption has dropped since the 1970s because iodine has been removed as a fortifying nutrient from wheat flour and replaced with an anti-iodine chemical in the bromine family, bromate.

Secondly, since the 1970s, bromines, the anti-iodine which purges iodine, has been added to furniture, electronics, cars, baby pajamas and mattresses—to name just a few sources. Bromines are present in foods and drugs also, but the main source is when we breathe in the dust from fire retardants.

Bromines compete with iodine for the same receptors in the body. So, if you’re not getting iodine, bromine will bully its way onto the receptor and you will become what we call, Bromide Dominant.

So even if you eat a clean, whole foods, organic diet, bromine exposure is unavoidable in the 21st century. We can eat like our grandparents but they didn’t have to deal with exposure to environmental toxins so eating clean is not enough. The only defense is to take iodine so that the environmental bromines can’t win.

This battle applies to fluoride also since all the elements in the halide family will jump into the competition for the same receptors.

Third, the un-substantiated medical advice to avoid salt keeps people from getting even the most minimal iodine.

Dr. Jorge D. Flechas states, “We have received many comments over the last two years. Following iodine supplementation, patients have described vivid dreams, dissipated depression, no more cold extremities, more energy and less fatigue. Patients have noticed an overall feeling of well-being. Patients have noticed a loss of weight. One patient after taking four pills of iodine lost eight pounds of fluid weight in 24 hours. We have had patients note better bowel function. Patients who have been constipated for over ten years have now noted daily bowel movements. We have also had patients noted relief from leg cramps at night.

David Brownstein, M.D. states in his research, “The illnesses that iodine/iodide has helped are many. These conditions include: fibromyalgia, thyroid disorders, chronic fatigue immune deficiency syndrome, autoimmune disorders as well as cancer. Most patients who are deficient in iodine will respond positively to iodine supplementation. In fact, I have come to the conclusion that iodine deficiency sets up the immune system to malfunction which can lead to many of the above disorders developing. In medical school, little was taught about iodine. Specifically, we were taught that the iodization of salt was implemented to prevent goiter and therefore no further iodine was necessary in the diet. After studying the literature on iodine, I realized what I was taught in medical school was incorrect. The iodization of salt was adequate to lessen the prevalence of goiter, but it did not address the rest of the body’s need for iodine. When I began testing my patients for iodine levels, I was amazed at the prevalence of iodine deficiency. As previously stated, 94.7% of my patients have tested low for iodine. I have noticed those patients with chronic illnesses, from autoimmune disorders to cancer, often have lower iodine levels as compared to relatively healthy patients. Why would people need the larger doses of iodine? Why have iodine levels fallen 50% in the last 30 years? As I pondered these questions, I came to the conclusion that the toxicity of modern life must be impacting iodine levels. It is well known that the toxic halides, fluoride and bromide, having a similar structure as iodine, can competitively inhibit iodine absorption and binding in the body. As I started to use larger doses of iodine (12.5-50mg/day), I began to see positive results in my patients. Goiters and nodules of the thyroid shrank. Cysts on the ovaries became smaller and began to disappear. Patients reported increased energy. Metabolism was increased as evidenced by my patients having new success in losing weight. Libido improved in men and women. People suffering with
brain fog reported a clearing of their foggy feelings. Patients reported having vivid dreams and better sleep. Most importantly, those with chronic illnesses that were having a difficult time improving began to notice many of their symptoms resolving. Iodine/iodide supplementation has markedly improved the course of illness in fibrocystic breasts in almost all of my patients with fibrocystic breast disease. In addition those with breast cancer also improve. Nodules and fibrous changes of the breasts significantly improve in a short time period. I believe that the epidemic of breast disease we are seeing in this country is due, in no small part, to iodine deficiency. Iodine deficiency is wide-spread. The National Health and Nutrition Survey undertaken by the CDC showed iodine levels falling over 50% in the last 30 years. All patients with chronic illness need to be assessed for iodine status.

Iodine can actually help your body get rid of potentially harmful elements like lead, cadmium, arsenic, aluminum, mercury and toxic amounts of fluoride. As we have seen in over 1000 Hair Tissue Mineral Analysis tests done in our offices those who have heavy metals are mostly slow metabolizers on a cellular level and show a strong tendency toward hypothyroidism and fatigue with sleep problems.

There is now a medically documented easily available solution: Lugol’s Solution. (NOTE: we have now custom formulated our own that is exactly the same as Lugol’s Solution in pill form: “MOTION” available by calling our office at 337-989-0572 or go online to www.mariepace.com/shop)

In the 1820’s the French physician Jean Lugol combined iodine and potassium iodide along with water. Since iodine kills germs, he used it for nearly any infectious disease, as well as many other problems, frequently with success. The combination quickly became known as “Lugol’s Solution” and was adopted by practicing physicians throughout Europe and the Americas. Lugol’s solution was widely used until the 1920’s. Many physicians recommended 2 drops daily for good health and more on occasion to help kill germs.

It’s not as commonly used anymore, but it is still available but as a liquid it is a bit inconvenient. It can stain clothing and has a rather metallic taste and it’s also easy to accidentally take too much.

Why is iodine deficiency common in the United States?

We first need to note that the body produces no iodine, and there is no organ other than the thyroid that can store large quantities of iodine. In some areas of the US, including mountain regions, the Mississippi River Valley, the Ohio River Valley, and the Great Lakes regions, the soil has always had a very low iodine content. But even in other areas of once iodine-rich soil, over farming has frequently depleted this iodine content. Hence, we no longer get adequate iodine via the plants we consume. To compensate for this, iodine was added to salt, bread, and milk. Today iodine is no longer added to bread or to milk, and the amount of iodine added to salt has steadily declined over the years. All of these factors contribute to the current prevalence of iodine deficiency in the United States.

How does iodine deficiency manifest itself?

Research work has shown that iodine deficiency in the thyroid presents as a thyroid goiter (enlargement of the thyroid). In those areas of the world where iodine deficiency is very high, such as in Switzerland and in certain areas of Asia and Africa, there are also higher incidents of thyroid cancer. Iodine is also concentrated by breast tissue, and a lack of iodine in the breasts manifests as fibrocystic breast disease (painful breasts with nodules and cysts and often more symptomatic prior to menstrual periods). 93% of American women have fibrocystic breast disease and the longer this disease exists, the higher the potential risk for development of breast cancer. 20% of all iodine in the human body is stored in the skin,
specifically in the sweat glands. Lack of iodine in the sweat glands manifests as dry skin with a decreased ability to sweat. Iodine can also be concentrated in the stomach tissue, and the lack of iodine in the stomach manifests as achlorhydria (lack of digestive acid production). Iodine is used by the stomach cells, also known as parietal cells, to concentrate chloride which is necessary to produce hydrochloric acid (digestive acid). With the prolonged presence of achlorhydria, there is a much higher incidence of stomach cancer. Iodine is concentrated in the lacrimal glands of the eye, and a lack of iodine can cause dry eyes. Iodine can also be concentrated in the parotid and submandibular glands of the mouth, and iodine deficiency here can result in dry mouth. Iodine can be concentrated in the ovaries, and Russian studies done some years ago showed a relationship between iodine deficiency and the presence of cysts in the ovaries. The greater the iodine deficiency, the more ovarian cysts a woman produces. In its extreme form, this condition is known as polycystic ovarian disease.

Is there enough iodine in our salt?

When people go shopping for salt they will notice there is iodized salt verses regular salt. This is also true for sea salt that is plain sea salt verses sea salt with iodine. There is more iodine in iodized table salt that there is in plain sea salt, which contains very little iodine to start with. Quite frequently we see articles in the local press showing that there is a high amount of iodine in salt and we need to reduce the total amount of salt because of the potential damage from iodine. However, during the last National Nutritional Survey called the NHANES III from 1988 - 1994, the study revealed that 15% of the U.S. adult female population suffered from iodine insufficiency where this was defined as a urine iodine level 60 meq per liter. Another misconception that is out on the market is that high consumption of iodized salt helps prevent iodine deficiency. The fact is that iodized salt contains 74meg of iodine per gram of salt. The purpose of iodization of salt was to prevent goiter and cretinism and was never meant for optimal iodine requirements by the human body. An example of this would be the ingestion of iodine in order to control fibrocystic breast disease that is a level of five milligrams of iodine per day. In this particular case one would need to consume 68 grams of salt. In Japan, the Japanese population has an intake of around 13.8 milligrams of iodine per day. Among the population of the Earth, the Japanese have the lowest prevalence and incidence of female reproductive organ cancer in their tissues.

Can I use seaweed purchased from the grocery store to supplement my body with iodine?

Seaweed sold in the United States has a tremendous variation in the amount of iodine content. In Japan, the average Japanese eats around 13.8 mg of iodine per day with the vast majority of that iodine coming from seaweed that has been specifically grown and cultured to maximize iodine trapping in the seaweed. To my knowledge, this particular type of seaweed is not being sold in the United States at the present time.

What about iodine and aging?

As most of us know, hypertension (high blood pressure) often becomes an issue as we age. Because of this, many are being told that they need to decrease the total amount of salt in their diet. However, we must realize that most people over age 60 are becoming depleted of iodine due to the lack of iodine in the diet and that this particular group of individuals is also the group with the highest occurrence of thyroid nodules and goiters. Also of interest is that 25% of the people in this age category will become senile as a result of low thyroid (hypothyroidism). Iodine supplementation may alleviate these iodine-related maladies.
Can Iodine be used while a woman is pregnant?

In Japan, the average Japanese woman is eating 13.8 mg of iodine per day while the average American woman consumes 100 times less iodine per day (approximately 0.138 mg per day). Iodine is very crucial in the first three years of life from the development of the fetus inside the womb until two years after birth. In the development of a child’s IQ, I feel that it would be very advantageous for the mother to supplement her diet during pregnancy and, if she is nursing the child, for the first two years after pregnancy. Pregnant women are notoriously iodine deficient. This data was uncovered in the mainstream press recently. The impact on low birth weight and the baby’s IQ is evident in women with even slight iodine deficiencies.

When breastfeeding, evolution has programmed the mother’s dietary iodine to reroute the lion’s share of her iodine toward nourishing the baby. But the baby still may not get enough from breastfeeding if the mother’s intake is low. Unfortunately, moms rely on prenatal vitamins which usually contain inadequate iodine.

I’ve heard that Iodine prevents breast cancer. Is this true?

We’ve seen a 30 fold increase in breast diseases in the last 50 years. Research does suggest that some breast cancers are linked to an iodine deficiency. It is a fact that as iodine consumption has gone down, breast cancer rates have gone up. It’s interesting to note that Japanese women consume 25X more dietary iodine than American women and have lower breast cancer rates.

Iodine has been determined to actually alter breast cancer associated gene expressions. It turns off cancer promoting genes and turns on genes that promote cancer cell apoptosis or cellular destruction. (http://www.medsci.org/v05p0189)

Another study proves that large iodine intake does not adversely affect thyroid hormone production or quality. The researchers did this to allay concerns in the medical profession about potential downsides for using iodine against breast cancer. Iodine, a well-known topical antiseptic and antimicrobial agent, also directly kills cancer cells and serves as the key player in our body’s surveillance system for removing abnormal pre-cancer cells. There is considerable medical research to support this statement. Dr. B.A. Eskin published 80 papers over 30 years researching iodine and breast cancer, and he reports that iodine deficiency causes breast cancer and thyroid cancer in humans and animals. Iodine deficiency is also known to cause a pre-cancerous condition called fibrocystic breast disease. Iodine supplementation which not only resolves breast cysts and fibrocystic breast disease, it also resolves ovarian cysts and thyroid cysts.

Can Iodine help with Breast Tenderness and/or Pain?

Often, when a woman has breast pain, she will be frightened and fear the worst. Thankfully, in most cases breast pain is benign and not a reason to panic. One study showed that breast pain alone is a symptom in only seven percent of women who had early-stage breast cancer, and another eight percent presented with both pain and a lump.1 That said, if you are concerned, see your health care provider.

Breast pain is caused by the fluctuation of fluids. During your menstrual cycle, there is a build-up of fluid in your uterus and your breasts due to inflammatory hormonal changes. When you get your period, some of this fluid leaves your body (when you menstruate). However, the fluid in other parts of your body, like in your breasts, has to be reabsorbed before it can be eliminated.
If you no longer menstruate, it’s still possible for inflammatory hormonal changes to affect your body. This could occur if you eat inflammatory foods, like highly-processed, chemical-laden, or high-glycemic foods. It also occurs when you’re under chronic stress for prolonged periods.

Daily iodine intake can help many women with breast pain. Research shows that those who take iodine in doses ranging from 6 mg to 90 mg per day feel healthier and have a greater sense of well-being. Taking iodine at these levels eliminates breast pain from fibrocystic changes about 70 percent of the time. In one recent study of women with breast pain, more than half of those who took 6 mg of iodine daily reported a significant reduction in overall breast pain.

Iodine decreases the ability of estrogen to adhere to estrogen receptors in the breast. This ties into the compelling evidence that iodine deficiency is a cause of breast cancer. The ductal cells of the breasts, those most likely to become cancerous, actually have an iodine pump in them, indicating that they have the ability to actively absorb iodine. Iodine taken in doses 100 times the RDA (which is only 100–150 mcg per day) has important benefits. These include its role as an antioxidant, in preventing and treating fibrocystic disease of the breast, and in preventing and treating breast cancer.

I have suggested iodine supplements for women with breast pain and saw excellent results, usually within only two weeks. I recommend a minimum of 12.5 mg/day to start and may have to build up to 50mg daily.

What happens to thyroid hormone production in the presence of iodine supplementation?

Traditional medical literature indicates that patients who have thyroid nodules or thyroid goiter may have the potential to develop hyperthyroidism when supplementing with iodine. For iodine therapy patients not also on thyroid hormone replacement therapy, adjustments to the iodine therapy should be made if signs of hyperthyroidism should occur. Should signs of hyperthyroidism occur in patients who are taking thyroid hormone replacement therapy as well as taking iodine supplementation, the practitioner should first recommend an adjustment in the thyroid hormone therapy rather than in the iodine supplementation. This adjustment in therapy is recommended because iodine is required not only by the thyroid but is required for the proper functioning of many other tissues. The presence of pre-existing thyroid nodules or goiter does not preclude the patient from iodine supplementation therapy. In fact, in the extensive research with iodine therapy done in many medical offices, I have seen many case of pre-existing thyroid nodules and goiter shrink in the presence of iodine therapy. Sometimes the breasts and thyroid temporarily swell after the introduction of iodine supplementation in an attempt to stockpile the available incoming iodine. Do not be alarmed... this usually changes within 3-4 weeks. The interpretation of swelling and nodules would be interpreted as the result of such an extreme iodine deficiency that the tissue expanded to trap the sudden bounty of iodine. The iodine deficient body may hoard iodine because it’s so used to an iodine famine that it wants to stock up.

I’ve heard that someone with Hashimoto’s should NOT be taking iodine. Is that true?

There seems to be a lot of controversy regarding iodine supplementation in Hashi patients. As I’ve covered above a sudden increase in iodine can cause a bad reaction due to detoxing too fast and lack of selenium. Iodine levels have fallen over 50 percent during the last 40 years. During that same timeframe, Hashi’s has increased at epidemic rates. Common sense will tell you that too much iodine is not the cause for this rise in Hashimoto’s. It’s just the opposite!

But if you take iodine in the presence of selenium deficiency, your body won’t be able to handle it (and the same can be said for excessive selenium). FACT: selenium deficiency causes an intolerance of iodine, especially high dose iodine.
When I hear of a Hashi sufferer having a bad experience with iodine, all that says to me is that they were selenium deficient, or they took a bad form of iodine, or too high of a dose too fast.

A selenium deficient person shouldn’t take iodine alone, you have to start by giving selenium first before any iodine, or right along with it. The opposite is true too, giving selenium to Hashi clients without some iodine will cause huge problems too. Like everything else in life, it is about balance.

**Is there a way to inhale iodine to assist asthma or bronchitis or flu symptoms?**

Interestingly, iodine can be a powerful tool in helping to clear out the lungs if there is an infection. You could simply purchase a nebulizer at a local pharmacy and add in liquid Lugol’s solution. Start with 1 drop (6.5mg) and increase based on how you feel, possibly up to 12+ drops for serious illness). Nebulizing iodine allows the substance to reach the lung tissues “transdermally” and can be quite effective in controlling and healing of Flu, colds, bronchitis, lung cancer, emphysema, asthma and TB.

**SOLUTIONS:**

1. Avoid Soy proteins, MSG, artificial sweeteners, gluten, alcohol

2. Increase: apricots, dates, egg yolks, molasses, parsley, potatoes, prunes, raw seeds and whole grains, fish, chicken.

3. Drink plenty of water - Avoid all processed and refined foods and sugar

4. Selenium: Not only is selenium now recognized as important for preventing and managing heart conditions but it has also recently been found to support the conversion of T4 storage thyroid hormone into T3 active thyroid hormone!!!! (do not get into the mind-set that more selenium is needed... just follow the above guidelines); vitamin C and the B vitamins

5. Balance hormones naturally...progesterone and estrogen and DHEA in males as well as females needs to be well balanced naturally (not synthetic) it helps with the thyroid production as well... (Note: if you've had your thyroid removed this is still vital to balancing your hormones and allowing the supplemented synthetic or natural T3 and/or T4 to work properly.)

6. Supplement with a good quality iodine supplement and work with a practitioner who truly understands and is literate on iodine supplementation along with thyroid and adrenal health.
CANCER REFERENCES:

This is a study on 12 different cancer cell lines.

Antiproliferative/cytotoxic activity of molecular iodine and iodolactones in various human carcinoma cell lines. No interfering with EGF-signaling, but evidence for apoptosis.

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Abstract

Twelve human cancer cell lines and one non-malignant cell line were investigated with respect to a potential antiproliferative/cytotoxic activity of molecular iodine and iodolactones. Except CCL221 colon carcinoma cells, the growth of all cancer cell lines decreased if the cells were cultured in the presence of 10 microM molecular iodine (I(2)) for at least two days. delta-iodolactone (IL, 5 microM) was found to have a similar effect. SH-SY5Y neuroblastoma cells turned out to be most susceptible to both iodine compounds (total inhibition), followed by MCF-7 mammary carcinoma cells (60% and 77.7% inhibition in the presence of I(2) respect. IL) and HS24 lung carcinoma cells (36.3% respect. 40.3% inhibition). In contrast, MCF-10 normal mammary epithelial cells were much less affected by the iodine treatment. In both, SH-SY5Y and MCF-7 cells, I(2) and IL also abolished EGF-induced promotion of cell growth completely. This effect was, however, not due to an interfering with EGF-signaling, because I(2) and IL did not affect the phosphorylation of EGF-receptors, EGF-induced activation of MAP-kinase (Erk(1/2)), or EGF-induced lamellar actin protrusion. A disruption by molecular iodine of mitochondrial transmembrane electrical potential, which was prevented by a pre-treatment of the cells with N-acetyl-cysteine, supports a mitochondria-mediated apoptotic mechanism.


Specific NOTES on IODINE supplementation with HASHIMOTO’S disease:

Selenium deficiency is the underlying prerequisite for iodine induced thyroid damage in Hashimoto’s Thyroiditis. Selenium supplementation is protective and prevents thyroid damage from iodine. Iodine opponents such as Dr K and Chris Kresser as well as the studies they quote tend to ignore the role of selenium.

Renato Iwakura Reviews the Literature
An excellent review of this Iodine Question can be found in a two part article by Mario Renato Iwakura, a Brazilian engineer and Hashimoto’s thyroiditis patient who is intimately familiar with the hypothyroidism literature.
He concludes:

"A survey of the literature suggests that Hashimoto’s is largely unaffected by iodine intake. However, the literature may be distorted by three circumstances under which iodine increases may harm, and iodine restriction help Hashimoto’s patients:

1. Selenium deficiency causes an intolerance of high iodine.
2. Iodine intake via seaweed is accompanied by thyrotoxic metals and halides.
3. Sudden increases in iodine can induce a reactive hypothyroidism."
All three of these negatives can be avoided by supplementing selenium along with iodine, using potassium iodide rather than seaweed as the source of iodine, and increasing iodine intake gradually.” endquote Renato Iwakura.
Iwakura quotes animal studies which support his conclusion from Drs. Xu and Yang. In these studies, animals (mice) were given varying amounts of iodine as well as varying amounts of selenium. Dr Xu concludes in his 2011 report:

“Conclusion: Excess iodine intake can cause an autoimmune thyroiditis that bears all the characteristics of Hashimoto’s. However, in animal studies this occurs only if selenium is deficient or in excess. Similarly, in animal studies very high iodine intake can exacerbate a pre-existing autoimmune thyroiditis, but only if selenium is deficient or in excess. With optimal selenium status, thyroid follicles are healthy, goiter is eliminated, and autoimmune markers like Th1/Th2 ratio and CD4+/CD8+ ratio are normalized over a wide range of iodine intake.”

In addition, human studies such as this 2007 report by Fan Yang in the European Journal of Endocrinology concluded:

“Chronic iodine excess does not apparently increase the risk of autoimmune hyperthyroidism or influence the incidence and outcome of subclinical hyperthyroidism, which suggests that chronic excessive iodine intake may not be involved in the occurrence of autoimmune hyperthyroidism as an environmental factor.” end quote Fan Yang

Role of Selenium in Hashimoto’s
Dr Elias E. Mazokopakis from Greece reports in 2007:
Selenium (Se) supplementation in patients with AITD (autoimmune thyroid disease), including HT (hyperthyroidism), seems to modify the inflammatory and immune responses, probably by enhancing plasma glutathione peroxidase (GPX) and thioredoxin reductase (TR) activity and by decreasing toxic concentrations of hydrogen peroxide (H2O2) and lipid hydroperoxides, resulting from thyroid hormone synthesis.

In Conclusion:
Selenium supplementation is a prerequisite in all patients with elevated anti-thyroid antibody levels and Hashimoto’s thyroiditis. Iodine deficiency is a health risk and supplementation is beneficial, realizing that selenium must be started first to avoid aggravating the auto-immune thyroid disease. Selenium is inexpensive and readily available as a supplement in tablet or capsules. Usual dosage is 200-400 mcg/day of seleno-methionine. (this is the form of selenium we use in our office at Optimum Solutions Holistic Health).

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