

The Guide to Supplementing with Iodine

*How to successfully implement an
iodine supplementation protocol.*



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It is available on the Yahoo Iodine Group or at the Stepping Stones Living, LLC website.

****NOTE:** *This document is for educational purposes only. It is not meant to treat or diagnose any medical condition. Please seek the help of a qualified medical practitioner for any medical issues.*

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1. Forms of Iodine

There are a few things to consider when looking for a supplement to get iodine. Does the product contain both iodine and iodide? The body needs both forms. Different parts of the body look for one of the specific forms. For instance the breasts look for iodine and the thyroid needs iodide. It was previously thought that the body could convert iodine to iodide and vice versa but in actuality this does not work. Another important consideration is finding a product that provides milligram (Mg) dosages vs. microgram (Mcg) amounts. Microgram amounts will offer little to no health benefits. These products also tend to be very expensive compared to Lugol's.

a. Recommended Forms

- i. **Lugol's liquid** – Iodine / Potassium Iodide – 2% and 5% solutions. 2% solution is 2.5 mgs / drop. 5% solution is 6.25 mgs / drop.
- ii. **Iodoral** – Lugol's formula in pill form – Iodine / Potassium Iodide - 12.5 mgs & 50 mgs
- iii. **Biotics Research Iodizyme** – 12.5 mgs per tablet of Iodine / Iodide
- iv. **Tri-Iodine by Vitaminlife** – 12.5 mgs per tablet of Iodine / Iodide.

b. Not Recommended

- i. **Nascent** (aka **Magnascent, Detoxified, or Atomidine**) – Based on Edgar Cayce's "energized" iodine. The iodine is reduced to a 1% concentration in 100% ethyl alcohol and electro-magnetically transmuted (while being suspended in a wet bath containing a mild acid solution) into the Atomic state. 1 drop = 150 microgram (mcg) or .150 mg of Iodine. This form will not saturate body tissues and has not been proven to detox halides such as bromide, fluoride, chloride, and mercury, as other forms have. This form of iodine is not recommended on this protocol as the goal is tissue saturation and halide detoxification / protection.
- ii. **Iosol** – 1830 mcg / drop this form of iodine is not recommended. It is microgram dosages and has the same issues that Nascent iodine (above) has.
- iii. **Prolamine (Standard Process)** – This product has 3 mgs Iodine and 20 mgs of Calcium. The iodine dosage in this product is too low to adequately detox the body from halides or saturate the tissues of the body.
- iv. **Pure Encapsulations, Solray, Source Naturals, Progressive Labs, and NOW** all offer microgram dosage supplements of iodide only.
- v. **Kelp** – Kelp supplements are not recommended for addressing a low iodine status. Kelp has been found to be toxic in arsenic and halides. It is also impossible to know the iodine content. It would not supply enough iodine to assist in tissue saturation and detoxification.

c. May Be Ok But Doesn't Fit the Protocol Well

- i. **Iodine Plus2** – It contains 12.5 mgs of Iodine / Iodide along with 15 mcg of Selenium as well as 15 mgs B2 (Riboflavin). The iodine protocol includes 200 – 400 mcg of Selenium and in some cases requires ATP CoFactors which are a combination of 100 mgs of B2 (Riboflavinu) and 500 mgs B3 (Niacin). One bottle contains 60 tablets and is \$25. 180 tablets of 12.5 mgs

Iodoral can be purchased for approx \$25-30 and you would still have to add more Selenium to the Iodine Plus2 product, making it not cost effective.

2. Lugol's - How many milligrams per drop?

Iodoral 50 mg = Iodine 20 mg, Iodide 30 mg
 Iodoral 12.5 mg = Iodine 5 mg, Iodide 7.5 mg
 Lugol's 5% = Iodine 2.5 mg, Iodide 3.75 mg = 6.25 mgs total per drop
 Lugol's 2% = Iodine 1.0 mg, Iodide 1.5 mg = 2.5 mgs total per drop

The chemical composition of Lugol's is:

5% (wt/v) - Iodine (I₂)
 10% (wt/v) - Potassium Iodide (KI) - (7.5 mgs Iodide & 2.5 mgs of Potassium)
 Distilled Water - 85%

Drop dosages are based on a vertical dropper:

% Solution	# Drops	Total mg Dosage
2%	1	2.5 mg
	5	12.5 mg
	10	25.0 mg
	15	37.5 mg
	20	50.0 mg
5%	1	6.25 mg
	2	12.5 mg
	4	25.0 mg
	6	37.5 mg
	8	50.0 mg

3. How much iodine do I need to take?

There are no amounts that can be given as a blanket recommendation. Everyone needs different amounts based on their body's ability to utilize the nutrients as well as the level of toxic halide exposure they have each day. If you are dealing with a severe health condition then your dosages would need to be higher than those trying to maintain good health.

- a. **Maintenance** – It was once believed that a good maintenance dose is 25 mgs per day. But with more information being gained about the exposures to halides bombarding our systems (bromides, fluorides, chlorine) as well as mercury, etc., maintenance of health may require higher doses of iodine. The iodine doctors are now beginning to believe that 50 mgs may be the minimum required dose.
- b. **Cancer** – Cancer is a result of mutated cells. Iodine is absolutely critical for something called P53 gene which is known as the “keeper of the genetic code”. Without iodine and selenium it will not function to eliminate abnormal cells from the body such as cancer. Cancer patients have taken anywhere from 50 – 300

mgs / day successfully. Here is a good article on how P53 works with the mdm2 in cancer <http://www.sciencedaily.com/releases/2007/10/071015215101.htm> For information on the P53 and Iodine see the Minerals for the Genetic Code book.

- c. **Children** – These are the levels that I gave my children at the various ages. This is not meant to be a recommendation but a guideline for what was safe for my (Dr. Buist) children and others I have been in contact with. General guidelines suggest .08 mg x the weight of the child but is dependent on the health condition.
- i. **Up to 3 years** – 3 drops of Detoxified Iodine (www.iodinesource.com) per day or take 1 drop of 5% Lugol's solution in water and then take ½ of the water and give it to the child. his results in 3.125 mg / dose.
 - ii. **3yrs to 5 yrs** – 6.25 mgs of Iodoral or 1 drop 5% Lugols Solution (6.25 mg)
 - iii. **5 yrs to 9 yrs** – 12.5 mgs of Iodoral or 2 drops 5% Lugols Solution (12.5 mg)
 - iv. **9 yrs to 16 yrs** – 25 mgs of Iodoral or 4 drops 5% Lugols Solution (25 mg)
 - v. **16 yrs and up** – will depend on health issues, weight, etc and cannot be given in generalities. Dosages range from 12.5 mgs to 300 mgs.

4. Supporting Nutrients for taking Iodine.

These are required to support the body while supplementing with iodine:

- a. **Vitamin C** – 2,000 – 5,000 mgs / day – supports the symporters and assists as an antioxidant to detoxing.
- b. **Selenium** – 200 – 400 mcg / day – needed for detoxification and thyroid hormone creation.
- c. **Unrefined salt (Celtic)** – ½ tsp / day – supports adrenals, binds to bromide and assists in removal, supports symporters (sodium iodine symporters or NIS)
- d. **Magnesium** – 400 mgs / day – critical for over 300 enzyme reactions in the body.
- e. **Optional – ATP CoFactors** -1 tablet 2x / day – when individuals continue to feel fatigued or have autoimmune thyroid disease this product can assist in increasing ATP (energy) within the cells. Riboflavin and no-flush niacin.

5. When should I take my supplements?

- a. Iodine should be taken with food. This seems to enhance absorption as well as protecting sensitive stomachs from a potential upset.
- b. The supporting nutrients can be taken with iodine and with food. There is no spacing or timing required. Some believe it is necessary to take Vit C separate from Iodine supplements. This has not been proven to be necessary as many have had success taking them together, so it is the individual's choice as to what they do.
- c. Iodine should be taken earlier in the day (before 2 pm) because for some it increases energy so much that they are unable to sleep.

6. Does Iodine remove good bacteria?

No you do not need to worry. Iodine functions as an adaptogen – meaning it “knows” what does not belong and works to destroy the bad bacteria in the gut. It does not destroy the good bacteria (probiotics). Remember, this is a natural element and not a drug. Anti-bacterial drugs are broad spectrum in most cases and work by removing all

bacteria whether it is good or bad. This is why natural remedies are often the best option.

7. How long should I take iodine?

Dr. Abraham has stated that it should take 6 months of 50 mgs to reach 90% saturation. However, as testing has become more widely available, it seems to be taking individuals years to detox halides and allow the iodine to enter the cells. Consequently, there is no set time that a person can expect to supplement and reach saturation levels.

8. How do I know when to increase my dosage?

Many people are scared to start out at a higher dose of iodine. This fear is not supported by any medical science but is a perpetuation of the iodophobia (fear of iodine) in the medical community.

If you are afraid to start iodine at 25 mgs or more per day then it is OK to try 6.26 mgs and work up. Generally issues (if any) are felt in 2–4 days after starting. Positive effects can be felt in just one day. Some take a lower dose and feel no change. It is in these situations that an increase may be warranted.

In other cases an individual may experience detoxing issues and then after some time of supplementing no longer have an issue. It is at this point that you may decide to increase the dosage to determine if further detoxing is needed by the body. Many members have “pushed the envelope” to the point of detox and then pulled back on the dosage to allow the body to keep up with the detoxing or will follow a pulse dosing protocol of 5 days of supplementation with 2 days off while continuing to take the supporting nutrients along with liver supporting items such as milk thistle, dandelion root extract or a formal liver product like Pure Zen Health TLC.

9. Where can I buy Iodoral?

These are a few sources that have been found to be a good option.

- a. www.breastcancerchoices.org - ships internationally / free shipping with larger orders
- b. www.illnessisoptional.com - ships internationally
- c. www.vrp.com - ships internationally
- d. www.amazon.com
- e. You can check Froogle (google shopping tool) to find the current costs of various suppliers <http://tinyurl.com/49zvmrl>

10. What is the Salt Loading Protocol?

Perform the salt loading protocol when you are experiencing detoxification symptoms with iodine supplementation. ***Note that you should not need to do this for more than 3 days. If you do then you need to reduce your dosing of iodine.*

1/2 tsp celtic (or other unrefined) salt in 1/2 cup of warm water

Follow the above with a glass of 12 oz filtered water.

** Repeat every 30-45 minutes as needed until urination begins.

Why does this help?

Salt - containing chloride - binds to the bromide in the blood stream and carries it out through the kidneys.

11. How do I support my body from the detoxing?

- Salt Loading Protocol** – Outlined in item #10 (above)
- Milk Thistle** – this is an herb that helps the liver to clear toxins if sluggish.
- Dandelion Root Extract** – this is an herb that helps the liver to clear toxins if sluggish.
- Liver Cleansing products** like – Pure Zen Health TLC, Metagenics, Ultra Clear Plus. There are many professional-grade liver detoxifying products.
- Pulse dosing** - take iodine for 5 days with 2 days off while continuing to take the companion / supporting nutrients along with one of the other liver supporting products.

12. What are the sources of Bromide?

Over and over people come to the Iodine group claiming that they can't possibly be toxic in bromide because they are gluten free, eat a clean diet, etc. Guess what? It isn't diet related in most cases. Bromide is a flame retardant that is used in and on many items around you. These include carpeting, furniture, mattresses, clothing, computers, iPhones, and automobiles – just to name a few. Food sources can include items like baked goods that contain brominated flour or vegetable oil as well as soft drinks like Mountain Dew and other citrus based sodas. It can also be found in some Gatorade products. For many years it was used in the form of Methyl Bromide as a pesticide on strawberries.

13. Symptoms of Bromide Detox

Psychiatric	Dermatologic / Physical	Neurological
Fatigue	Cherry Angiomas	Headache
Sluggishness / Lethargy	Rash	Tremor
Impaired Memory/Concentration	Bromoderma (acne) on face and hands	Disturbance of color perception
Impaired Memory/Concentration	Bromoderma (acne) on face and hands	Disturbance of color perception
Irritability	Abnormal pigmentation	Slurred Speech
Emotional Instability	Hair loss	Vision changes
Depression	Runny Nose	Reflex changes
Schizophrenic-like actions	Metallic Taste	Sensitivity to light
Hallucinations	Diarrhea / Constipation	Eyelid twitching
Dream changes	Increased salivation	Extensor Plantar Responses
Anxiety	Kidney pain	
	Dry mouth	
	Body Odor / Sweating	

**Taken from Gulflink Military document – Chapter on Bromism **

14. My patch test disappeared quickly.

Many think this means they are not deficient. This is not necessarily true. The patch test isn't very scientific and many factors go into why it disappears. Read the following article by Dr. Abraham for more information

http://www.optimox.com/pics/Iodine/updates/UNIOD-02/UNIOD_02.htm

15. My ferritin dropped while on Iodine.

This has been happening to people taking 50 mgs or more of Iodoral. It has been rectified by adding a B6 – Complex along with an iron supplement to help restore ferritin to normal levels. It is thought to occur due to an increase in metabolic rate that requires more iron. Sufficient ferritin levels (60-70) are needed to create and utilize thyroid hormones. If there is an issue with stomach upset with an iron supplement, make sure you are taking it with food, or try Floradix Iron Plus Herbs. It may also help to use a cast iron pan for cooking as well as getting black strap molasses in your diet.

16. I am gaining weight since starting Iodine.

Unfortunately this can occur in those that are very toxic in halides like bromide. If your detoxification pathways are not able to eliminate the toxins being released by iodine then your body will buffer them with water and fat. It may be due, in part, to lowered calcium levels as well as magnesium, vit D, and B Vitamins. All of the nutrients work to maintain balance in the cells and eliminate toxins.

17. Iodine and mercury amalgam fillings.

While iodine does seem to pull out mercury from the cells / tissues of the body, there has been no indication that it is dangerous to take iodine while amalgams remain in the body. If there is concern, supplements like cilantro, chlorella and others can be used to help bind and carry the mercury out of the body. Consulting with a good holistic / biological dentist as well as an alternative medicine doctor can help to assess your toxicity level and assist you in safe removal of amalgams and chelation.

18. I have Hashimotos. Can I take Iodine?

Yes, Dr. Brownstein believes that low iodine is one the key causes in autoimmune thyroid disease. The following is an excerpt from Dr. Brownstein's book, *Iodine: Why You Need It, Why You Can't Live Without It* (available for purchase at www.steppingstonesliving.com)

THE UNDERLYING CAUSE OF AUTOIMMUNE THYROID ILLNESSES: IODINE DEFICIENCY AND ANTIOXIDANT DEFICIENCY

Chapter 7 described the apoptotic (i.e., anticancer) effects of the iodinated form of lactone (δ -Iodolactone). δ -Iodolactone is not only important for preventing cancer, its production is also necessary to help regulate the oxidation of iodine. Figure 3 illustrates this regulatory step in the oxidation/organification of iodine.

As previously mentioned, the oxidation of iodide to iodine occurs through the interaction of H_2O_2 and TPO. Iodine is a necessary product in order to provide the correct molecule in the cell so that

organification can occur. If organification does not take place or is blocked, thyroid hormone and iodolipids will not be formed. As can be seen from Figure 3, this reaction is controlled by intracellular calcium levels and iodinated lipids— δ -iodolactone.

Intracellular calcium stimulates this pathway. On the other hand, δ -iodolactone and other iodinated lipids act as a brake on the system. If there is not enough iodine in the cell to organify and produce adequate amounts of δ -iodolactone, it can set the stage for damage to the thyroid cell and the development of an autoimmune thyroid disorder such as Hashimoto's or Graves' disease.

A Proposed Mechanism for the Development of Autoimmune Thyroid Disorders

The NADPH oxydase system is found in the mitochondria of our cells. The mitochondria are the energy-producing cells of our body. The mitochondria produce energy (i.e., ATP) through a complex process called oxidative phosphorylation. All medical students (and most physicians) are familiar with oxidative phosphorylation because we have to memorize the many steps responsible for producing ATP. This production of ATP requires many items including: oxygen, magnesium, ADP, and amino acids.

Many people with chronic illnesses, such as fibromyalgia, chronic fatigue syndrome, and autoimmune disorders, complain they have no energy. ATP is the molecule that stores energy for the body. The body is constantly producing and utilizing ATP. Its production is a complex process that is beyond this book. However, there are two cofactors, Vitamins B2 (*riboflavin*) and B3 (*niacin*), that are integral to stimulating oxidative phosphorylation and ATP production.

Hydrogen peroxide is a byproduct of oxidative phosphorylation. It is this production of hydrogen peroxide that is so critical to the oxidation process of iodine. Hydrogen peroxide and TPO help to oxidize iodide to form iodine.

If there is a deficiency in iodine, which is common when ingesting the RDA for iodine, there will not be enough substrate (i.e., iodine) to produce iodinated lipids. As can be seen from Figure 3, the lack of δ -iodolactone and other iodinated lipids results in a loss of the 'brake' in the pathway to oxidize iodide. This may result in a temporarily production of too much hydrogen peroxide. This excess hydrogen peroxide can damage the enzyme TPO.

What Happens If TPO Is Damaged? Autoimmune Thyroid Illness

The body's response to TPO damage is to produce antibodies against TPO or anti-TPO antibodies. A diagnosis of Hashimoto's disease requires the presence of anti-TPO antibodies. As the damage worsens, surrounding proteins can also be damaged such as thyroglobulin. Damaged thyroglobulin will result in the body producing antibodies against thyroglobulin—anti-thyroglobulin antibodies.

In most cases of Hashimoto's disease, there are antibodies to both TPO and thyroglobulin present. Although Graves' disease may also possess these same antibodies, antibody production is not necessary to make the diagnosis of Graves' disease. However, my clinical experience has shown that the treatment for both Hashimoto's and Graves' disease can follow a similar course with similar positive outcomes.

How to Treat Autoimmune Thyroid Disorders

1. Ingest enough iodine in order to provide adequate substrate to iodinate lipids.
2. Take Vitamins B2 (Riboflavin) and B3 (Niacin) in amounts necessary to stimulate the NADPH system to produce adequate amounts of H₂O₂.
3. Correct oxidant stress in the thyroid gland and the mitochondria with antioxidants.
4. Ensure adequate magnesium levels.
5. Minimize oxidative stress in the body.

19. My TSH went up on Iodine.

This is a common occurrence when a person starts to take iodine after being deficient. The body increases TSH to stimulate production of thyroglobulin which is used to bind to the iodine in thyroid hormone production. Individuals can have TSH levels as high as 75 for up to 6 months without clinical signs of hypothyroidism. The best values to check with labs if there is a concern are the Free T3 and Free T4. You will find in most cases that the "frees" are nicely within the ranges.

20. I have adrenal fatigue. Can I take Iodine?

Yes, Iodine is used by every gland and mucosal lining and is needed to heal the adrenals. You should also use unrefined salt to support them as well as Vitamin C. Other products such as ashwaganda, licorice root, adrenal glandulars and in severe conditions a doctor can prescribe hydrocortisone to replace the body's deficiency.

21. Information about Breast Cancer & Iodine

The best resource for breast cancer is www.breastcancerchoices.org which is a non-profit organization run by Lynne Farrow who is a breast cancer survivor. They are dedicated to the grass roots research into iodine's effectiveness as treatment. Another good resource is a book by Dr. David Derry called *Breast Cancer and Iodine*.

22. Bromide Toxicity and Iodine Loading Test.

As the years have gone by members of the group have been testing relatively high in their saturation levels with the Iodine loading tests. This is usually met with jubilation that they are at a good level. But wait! This isn't a place to stop. A bromide level test has become available and can be added to the loading test. This is highly recommended because it gives a clearer picture of what the TRUE status of the saturation level is. As a general rule if you see a higher saturation level (80% or above) with a bromide level over 10 mgs/L (the upper limit of normal per Dr. Guy Abraham) you

are bromide toxic and the receptors that would normally be able to pull iodine into the cells cannot because bromide is blocking the receptors. This will result in a high level of iodine being eliminated in the urine indicating (falsely) that you are more saturated than you are. Persons with results such as these should consider supplementing with Lugol's or Iodoral in doses of 50 mgs or more for 6 mos to 1 year and then retest Iodine Loading and Bromide levels to see what the new status is. Dr. Abraham has stated that this amount of time is needed to make significant progress in detoxing and to build saturation in the cells. After supplementing for 6 mos to 1 year, the trend has been to see saturation levels go down while bromide elimination levels increase.

Another reason for a false high reading in saturation levels is due to defects in the symporters of the cells. Dr. Abraham addresses this on his website at http://www.optimox.com/pics/Iodine/IOD-11/IOD_11.htm which suggests the usage of Vitamin C to heal symporters.

23. Ordering an Iodine Loading Test with Bromide Levels.

It is recommended that you order both the 24 hour loading and bromide level test. We recommend this because you may obtain a high saturation level and believe that your levels are fine when in fact bromide toxicity will block the iodine receptors not allowing iodine to enter the cell which results in an elimination of iodine when it is needed / deficient thus skewing the test results.

More and more we are seeing issues with fluoride toxicity. It is in our water and things that are made with fluoridated water. If a loading test result comes out looking as though the person is saturated with iodine and registers a low bromide level then it is reasonable to suspect a high fluoride level may be the issue. Hakala Labs is reported to keep samples on hand for 1 week after testing. The test can be added after you have received your results.

The following list is a compilation of resources for obtaining the Iodine loading test.

Hakala Research

885 Parfet Street Unit E
Lakewood, CO 80215
877.238.1779

*** It is not recommended that you do the spot test as this is only an indicator of how much iodine is in the diet and offers no real value to the body saturation. The two asterisk items are the recommended tests.

- ** Iodine Loading Kit Only \$70
- Iodine Spot Level Kit Only \$70
- Iodine Spot and Loading Kit \$95
- ** Bromide Level Testing (must be combined with one of the kits) \$35
- ** Fluoride Level Testing (combined with a kit) \$35

Test prices do not include return shipping.

To test for Organification / Oxidation issues:

A **serum/saliva testing** is available to check for Organification / Oxidation issues as well as symporter defects. The test is available two ways:

1. 24 hour Iodine loading test plus the serum saliva ratio cost: **\$155.00.**
2. Serum saliva ratio without the urine test cost: **\$110.00.**

The serum/saliva ratio gives the degree of usage of iodine within the cell, if the ratio is below normal this signifies a symporter defect (NIS) while a higher than normal ratio points to an organification problem.

According to Dr. Abrahams articles the symporter can be repaired using 3 gm of slow release Vitamin C per day, the organification issue responds to ATP CoFactors (Riboflavin 100mg + No Flush Niacin 500mg) twice daily.

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FFP Labs

Dr. Jorg Flechas MD
80 Doctors Drive Ste 3
Hendersonville, NC 28792
(1-877-900-5556)

The cost of the Iodine Loading test is **\$80.**

If it is not ordered by a physician you must tell them you are ordering it on your own and they will assign you to a nurse practitioner. When you get the results of this test you can receive a free consultation with Dr. Flechas.

You may also obtain a **urine spot test** for an additional **\$30** for a total of **\$110 for both tests.**

Spot / Loading / Bromide test can be obtained for **\$230**

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Vitamin Research Products

**** As of the last time this test was reviewed no bromide testing is available.**

<http://www.vrp.com/ProductPage.aspx?ProdID=9137>

\$100 for both the spot and loading test.

Kit requires an ordering physician.

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Doctors Data

**** This lab does not seem to report in the manner that is described in Dr. Abraham's research so it is difficult to determine true saturation and bromide levels.**

Pre and post loading - requires an ordering physician.

http://www.doctorsdata.com/test_info.asp?id=118

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ZRT Laboratories

This is a new test that is not performed in the manner outlined by Dr. Abraham, Dr Brownstein or Dr. Flechas and which has been used effectively since the 1990s. It has not been proven to correlate with the health conditions of those with iodine deficiency and does not offer a bromide level test which is critical in determining how accurate the saturation level is. At this point the Iodine group does not recommend this test.

24. Recommended Reading

Many of the questions asked over and over are covered in these reference materials. Please familiarize yourself with them to help with limiting the repetition of information on the group.

- a. Dr David Brownstein – *Iodine: Why You Need It, Why You Can't Live Without It*
- b. Dr. David Brownstein – *Salt Your Way to Health*
- c. Dr. David Derry – *Breast Cancer and Iodine: How to Prevent and How to Survive Breast Cancer*
<http://www.thyroidscience.com/reviews/derry/derry.9.19.09.htm>
- d. www.optimox.com - Research by Dr. Guy Abraham – the founder of The Iodine Project

Dr Brownstein's books can be purchased at:

www.steppingstonesliving.com - Stephanie Buist, ND HC

www.drbrownstein.com - Dr David Brownstein

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