



**CHUNG INSTITUTE**  
OF INTEGRATIVE MEDICINE

# Iodine

## History of Iodine

In the early 1900's, it was noted that 20%-40% of children in the mid-west had enlarged thyroid glands. It was subsequently discovered that iodine reversed this condition. In Akron Ohio, a randomized trial of iodine with 4,400 school children showed that the non-treated control group had 22% incidence of goiter and the treated group had only 0.2% incidence of goiter- a 100 fold decrease in incidence! As a result, the United States quickly adopted a policy of adding iodine in salt, and the World Health Organization promotes the use of iodized salt.

## Why do we have a problem with Iodine now?

Over the past several decades the U.S. population has increasingly had a deficiency of iodine. The following are major factors:

1. Due to the common (misguided) misconception that salt intake should be reduced; many individuals avoid table salt (which is usually iodized).
2. Increasingly, individuals are using either Kosher salt, or sea salt (which do not have enough iodine) instead of common cheap "Morton's iodized salt"
3. Foods that use to have at least some iodine (milk, eggs, meat) have less iodine because iodine was removed from many food products in the 1980's
4. Crops grown in iodine deficient soil have less iodine in the produce.
5. In the 1960's iodine was added by the commercial baking industry as a dough conditioner. Mistakenly, the NIH raised concern for the safety of adding iodine to baking products. Iodine was hence removed and 20 years later bromine was added instead of iodine. Hence, most baked goods, pasta, have bromine added. Unfortunately, bromine interferes with the binding of iodine in the body. Bromine also is toxic and carcinogenic.
6. Salt in processed foods usually do not have iodine added. Most restaurants use kosher or other gourmet salts that are not iodized.

7. Perchlorate is a substance manufactured for rocket fuel and other industrial uses. Perchlorate can displace iodine in the body and damage the transport of iodine in the cell. Perchlorate contamination in our water supply is widespread and increasing.

8. Excess fluoride exposure. Fluoride also displaces iodine and is toxic.

### **Can I just start using Morton's iodized salt?**

1. Refined salt is a lifeless devitalized product that has had all of its minerals removed and has been exposed to toxic chemicals that give it its white color.

2. Even the iodine in the iodized salt is not very bioavailable. One would need far too much iodized salt to obtain optimal levels of iodine in our body.

3. Hence we strongly recommend some form of sea salt or Himalayan salt, not kosher salt or other refined salt and that iodine be added separately.

### **Why do we need iodine?**

#### *1. Optimal Thyroid function:*

Iodine is essential for the body to have proper thyroid function. In our practice, we have already found there are significant numbers of patients whose thyroid blood tests are "within normal limits" who have persistent thyroid symptoms such as feeling excessively cold, sluggish, and have slow thinking, dry skin and inability to lose weight. Many of these symptoms appear to improve with adequate ingestion of iodine.

#### *2. Fibrocystic Breast Disease:*

Iodine is a powerful therapy and preventive remedy for painful or tender breast cysts. In fact, if you have had a history of painful or tender breasts, you have probably been iodine deficient. Breast tissue need adequate iodine intake to be optimally healthy.

#### *3. Cancer preventive?*

The Japanese have the highest intake of iodine in their food because of high sea kelp and seafood intake. They have the lowest incidence of breast and prostate cancer in the world. Animal studies show increase of abnormal breast tissue when deprived of iodine in their diet. Iodine appears to enhance a phenomenon called cellular apoptosis (programmed cell death), which is one of the important mechanisms that the body uses to kill off abnormal pre-cancerous cells. Iodine displaces accumulated bromine, which is a carcinogen. Iodine appears to help the body also reduce the pro-carcinogenic hormone estrone in the body.

#### *4. Other endocrine glands:*

Other hormone producing organs: adrenals, ovaries, testes, hypothalamus, pituitary are being shown to need iodine for optimal function.

## 5. *Detoxification agent*

Iodine will displace accumulated halide toxins (bromide, fluoride). When patients first take iodine, they may experience headaches, rashes, and malaise. These symptoms are likely a result of the bromides being mobilized (and subsequently excreted). Iodine intake hence helps detoxify the body of excess bromide and fluoride.

### **What is the optimal intake of iodine? Why do we need to take so much?**

1. Patients will need 12.5mg to 100mg of iodine/iodide. The more accumulated bromide and fluoride toxins that you have accumulated, the more you will need higher doses until these have been excreted.

### **What is the best form of iodine/iodide?**

1. We recommend a combination of iodine dissolved in potassium iodide. The body requires both iodine and iodide. The best form is Dr. Lugol's original solution: 10% Potassium Iodide, 5% Iodine, 85% distilled water.
2. Lugol's solution: 2 drops provides 12.5mg of iodine.
3. Iodoral is a tablet form of Lugol's solution.
4. We usually recommend Lugol's or Iodoral.
5. Occasionally we will use SSKI (supersaturated solution of potassium iodide) but this form only provides the iodide form of iodine.
6. Another option is to obtain sea salt that has iodide added. These usually have only iodine in the iodized form. So it is probably still not quite as good.

### **Summary recommendation:**

We recommend women to take approximately 12mg to 50mg of Iodine/Iodide in the form of Lugol's or Iodoral. For men, their requirements may be a bit less. We also recommend either Celtic sea salt or Himalayan salt, ¼ tsp a day.