

# The Tuesday Minute

Nutritional information.... one byte at a time

## *This Week's Topic*

### **A Little Iodine Can Make A Big Difference**

Over 80% of people tested for iodine in the Midwest are deficient. Iodine is emerging as one of the most deficient and misunderstood nutrients. David Brownstein M.D., author of the book *Iodine: Why You Need It, Why You Can't Live Without It*, believes that it is impossible to achieve optimal health if you do not have adequate iodine levels. He believes that iodine when taken in the inorganic nonradioactive form is the safest of all essential trace elements and can be taken daily for long periods of time.

Iodine is found in each of the cells in the body; and without it, life is not possible. It is responsible for the production of all the hormones of the body. Adequate levels are necessary for proper immune function as well as warding off bacteria, parasites, viruses, and cancer. It alkalizes pH, and it is well known that an acidic chemistry is a major factor in many diseases.

Iodine has been used in treatment with the following conditions: ADD, atherosclerosis, fibrocystic breast disease and breast cancer, excess mucous production, fatigue, hemorrhoids, headaches, hypertension, liver diseases, ovarian disease, prostate disorders and thyroid disorders.

In the body, the highest concentration of iodine is found in the thyroid. The next highest concentration is in the ovaries. The highest volume of iodine is found in breast tissue, but iodine is present in every cell of the body and is required for healthy cellular metabolism.

Iodine deficiency can cause mental retardation, goiter, increased child and infant mortality, and infertility. In fact, iodine deficiency disorder is the most common preventable form of mental retardation known.

Iodine is found in seawater, ocean fish, and specifically seaweed. It is added back into commercial salt since bleaching depletes it of iodine and other minerals. Sea salt is available that has not been bleached, and therefore still contains natural occurring iodine.

Iodine is so deficient in the Midwest it is considered the "goiter belt." Other inland areas are also known by the same name because of a much higher incidence of goiter due to a lack of natural iodine.

The RDA for iodine is 150 mcg supposedly the amount of iodine needed to prevent disease. Dr. Brownstein and his colleagues' feel these numbers are far too low as many countries such as Japan ingest 13 mg or more per day. That's 86 times more than is suggested by our RDA.

The U.S. has the highest incidence of breast cancer. Japan's breast cancer level is the lowest in the world. The U.S. life expectancy rating is 48th of the 226 countries. Japan is 6th. Our infant mortality rate is 7 per 1000 births. Japan is 3.5 per 1000 which is the lowest incidence in the world. Yet when the Japanese relocate to this country and

adopt our diet, they quickly join the U.S. statistics for cancer, life expectancy, and infant mortality.

Two reasons why we are so deficient in iodine are: First, and obviously, we don't ingest enough iodine every day. Second, the little iodine we ingest gets displaced or pushed out of the essential tissues.

Remember the periodic chart of elements that we studied in chemistry? You may recall a highly reactive group called the halogens on the right side of the chart. As you know, the elements at the top of a column displace the elements below. Reading from top to bottom in the halogen family we have fluorine, chlorine, bromine, and iodine.

Fluorine is a known carcinogen and is present in our drinking water and in many of our drugs such as Cipro, Lipitor, Prozac, Paxil, and Effexor.

Chlorine is also found in our drinking water and in many drugs such as Zolof and Wellbutrin. Chlorine is considered a neurotoxin and is used as a pesticide. It is a major ingredient in the new miracle sweetener Splenda.

Most people are not aware that bromine, another iodine displacer, is a major player in our diet. Before the 1980's, iodine was used as an anti-caking agent in breads and other baking products. Some researchers felt that iodine could cause problems with the thyroid gland, so in the 1980's it was replaced with bromine. Bromine interferes with iodide uptake and utilization in the thyroid gland. Bromine is a toxic element and is considered a chemical that causes goiters. This substitution has been in large part responsible for the declining iodine levels in the U.S.

So the point of the halogen illustration is this: Fluorine, chlorine, and bromine all displace iodine. To displace means to push out or mobilize. Iodine which is already deficient in our diet is being displaced by other more aggressive elements that can actually poison enzyme systems.

So if we take lowered cellular levels due to dietary deficiencies and add the halogens which further deplete this essential nutrient, we can see why iodine deficiency is so rampant.

There are two tests doctors can use to test iodine levels. One is called the iodine patch test; the other is called the iodine loading test. The patch test has been criticized because it is a screen and does not give qualitative numbers. As such it is difficult to say when to stop supplementing with iodine. I like it because it is inexpensive and easy to understand. You can click on the web page and get a written discussion for both tests and labs that perform the qualitative 24 hour urine test.

Here's the short version of the patch test and something you can do with your patients tomorrow. Apply iodine on the skin in one inch square area. Iodine is a stain, and it is important to avoid staining one's clothes. The stain should be visible for 24 hours. The faster the stain disappears... the more likely the degree of deficiency. You will be amazed at how fast some of the stains disappear. Considering how many things iodine affects, with treatment, your patients can really feel the difference.

As I stated earlier, iodine is found in each of the cells in the body. Without it, life is not possible. It is responsible for the production of all the hormones of the body, so a little iodine can make a big difference.