Breast Cancer, The Iodine and Thyroid Connection

Breast cancer is one of the most familiar health risks women face, and one that all women wish to avoid. The mortality rate has not changed significantly since records started to be kept in the 1920s. Surgery, chemotherapy, mammography, and radiation have not altered the mortality rate. Eighty-five percent of women who develop breast cancer will die of causes directly related to breast cancer. (Source: Dr. David Derry)

Men also get breast cancer, although it is rare.

As breast cancer rates across the country continue to increase, more people are interested in early intervention or prevention. Dr. Derry's theories, based on extensive review of published medical literature in combination with his experience as a clinician, are not his alone. In fact, research is already underway on the impact of iodine on cancer prevention and reduction. Dr. Derry proposes supporting the body's natural immune system and metabolic health with proper thyroid levels, and combining that with the intake of a small daily dose of iodine.

A starting point: fibrocystic disease

Fibrocystic disease of the breast consists of small or large, sometimes painful lumps in women's breasts. It varies in the way it shows—not only in different women, but also because it changes from month to month in the same women. Medical doctors generally believe that fibrocystic disease results from the excess number of cells that grow in the breast during the menstrual cycle from the hormonal stimulation.

Since the number of cells increases in the breast during the cycle, some of the cells have to be removed to restore the normal state each month. Iodine is the trigger mechanism that causes excess cells to disappear to complete this normal process of cell death. Without enough iodine, the extra cells that develop during the menstrual cycle due to the hormonal stimulation do not resolve back to the normal breast architecture. These leftover cells build up over repeated cycles and cause the lumps, soreness, and larger lesions of fibrocystic disease.

However, while about 90 percent of North American women have fibrocystic disease, about 40 percent of these women experience no symptoms. Their breasts may be normal to examination, but the disease may be only microscopically detectable with a biopsy.

Enough iodine enables the excess cells to be cleared out, and the breast can return to its normal resting state as the fibrocystic disease slowly disappears from the breast.

Iodine treatment

Fibrocystic disease over decades of hormonal stimulation eventually tends to cause some cells to change to cancer cells. Lack of iodine causes fibrocystic disease, so women who have fibrocystic disease are susceptible to breast cancer. Although breast scars from fluid leakage out of the cysts are often permanent, iodine given therapeutically in the correct doses gradually gets rid of all fibrocystic disease except for the scars.

How much iodine is enough? It has been shown that daily doses of iodine above two to three milligrams per day (about half a drop from a standard eyedropper) saturate the thyroid within a couple of weeks. At this point, the thyroid gland stops taking up iodine. This means that at a dietary intake above two to three milligrams, all of the iodine goes to all its other functions in the body, such as killing off abnormal cells.

A theory of phases

Progress in cancer research is hampered by the lack of a coherent theory of how cancer starts or what causes it, and also of how or why it progresses: genesis and progression. Some have suggested that it is foolish to try to postulate a theory because of the multitude of factors that appear to be able to start or promote cancers. However, based on my clinical experience, I am proposing a theory of cancer, in particular breast cancer.

My working theory is that cancer's beginnings and spread are biphasic.1 The first phase is the gradual change from a normal cell into an abnormal cell and all the way to carcinoma in situ.2 This phase has changes that are caused by many factors, but the process is long, usually measuring in years and decades. The second phase is the spread of cancer cells in the connective tissue3 compartments. It is related to the strength of the connective tissue barrier, which in turn is controlled by the amount of thyroid hormone present in the tissues.

The iodine and thyroid hormone defence

Some experimental data and much research on the metabolic fate of iodine strongly suggest that iodine is the main trigger mechanism for apoptosis4 within the body. The sites of rapid apoptosis are also the sites of high levels of iodine. For example, in the stomach, where cells have a life cycle of two to three days, the lining actively transports a lot of iodine into the stomach cavity.

As long as a woman's thyroid gland is working well, the cancer in situ stays in the breast and does not cause any problems. If the cancer goes to the second phase, it spreads through the surrounding connective tissue,3 so the strength and function of this connective tissue barrier are important. Connective tissue is controlled by thyroid hormone. If the connective tissue level of thyroid hormone is high, then the defence of connective tissue is strong, and the cancer cannot spread. Thus the spread of cancer can be inhibited by giving exogenous thyroid hormone.

Most of the potential environmental causes of breast cancer, such as pesticides and estrogen-like compounds in the environment, have been found to be only a small factor in causing breast cancer. However, if a person has enough iodine flowing through the body systems, the toxins cannot do much damage because iodine is one of the greatest inactivators of chemical toxins.

In the second phase of the cancer process, distant metastases,5 such as the spread of cancer to the lungs or brain, almost invariably involve connective tissue.3 When working properly, the connective tissue serves as a barrier to cancer cell migration. Since the edema6 of severe hypothyroid states is located in the connective tissue of all organs, it has been assumed and then proven in more recent years that thyroid hormone is the main controller of connective tissue function.

At levels of two to three milligrams of dietary iodine per day, the thyroid gland becomes saturated, and most of the iodine then bathes the extracellular compartment, triggering apoptosis4 by means of an old (in terms of evolution) reaction between iodine and tyrosine, or iodine and histidine—the same chemical reaction by which iodine in dilute solutions causes the death of bacteria and all other single-celled organisms, such as bacteria of all types, viruses, fungi, and protozoa.

Seaweed

This reaction of iodine with tyrosine and histidine, which makes iodine rapidly kill bacteria, viruses, fungi, and other single-celled organisms at even very dilute (1/170,000) concentrations, is the main reaction. Said another way, the simple chemical reaction between iodine and the two amino acids, tyrosine and histidine, causes the protein that the amino acids are attached to to stop functioning properly. Iodine could therefore be the surveillance mechanism to remove cells that are abnormal. The abnormal cells likely distort their own outer membranes and expose a protein under the membrane surface that contains either tyrosine or histidine.

It is likely that this reaction was preserved in multicellular organisms derived from the sea as a surveillance mechanism for abnormal cells. As the reaction that kills most bacteria is the reaction of iodine with the surface tyrosine molecules, this reaction denatures7 the protein and kills the bacteria.

The Japanese have consumed on average around eight to 10 milligrams of iodine per day for many centuries. Most of this is consumed in the form of seaweed, which has the highest concentration of iodine of any living tissue. In Japan, seaweed is used to mulch gardens and to wrap many types of foods. Not only is the seaweed that is wrapped around the food high in iodine, but if seaweed is spread on gardens, every carrot, every piece of lettuce, and every radish will have a lot of iodine in it. The Japanese

also put seaweed in soups, gravies, and anywhere else it will fit. Some scientists theorize that this high level of iodine intake is why Japan has one of the lowest rates of breast cancer and of most other cancers in the world.

Why iodine and thyroid hormone work

Iodine remains the perfect antiseptic with the least side effects of all time. As a perfect antiseptic killing all single-celled organisms, there has to be a common mechanism of a single element like iodine. In fact, the reaction of iodine with tyrosine destroys the protein and consequently the cell itself. If, in vertebrates and multicellular organisms, the tyrosine molecule is hidden from the surface when it is normally functioning, the iodine will not trigger any apoptosis. However, during abnormal development, it could be that tyrosine or histidine molecules are slowly exposed to the surface. Extracellular iodine bathing the cells could then trigger the apoptotic4 mechanisms.

The second phase of cancer spread involves thyroid hormone indirectly. The connective tissue3 barrier and function is controlled and strengthened by adequate levels of connective tissue thyroid hormone. Thus thyroid hormone controls the connective tissue barrier, and prevents the spread of cancer cells.

Iodine in adequate doses prevents the development of cancer cells, and adequate thyroid hormone in the connective tissue prevents the spread.

David Derry, MD, PhD

Footnotes

1 biphasic: has two phases
2 carcinoma in situ: cancer at the site
3 connective tissue: a sort of mesh- or net-like tissue found in the spaces between organs
4 apoptosis: programmed and/or natural cell death
5 metastases: transfers of the cancerous cells to other parts of the body
6 edema: swelling from mucus
7 denatures: changes the natural qualities of

*** What if something very simple could be the key to unlocking the body's healing properties? For years, scurvy was a plague—until the role of Vitamin C was discovered. Rickets was eliminated with the understanding of Vitamin D. What if someday cancer were considered a disease that was cured by proper iodine and thyroid support?

BITES (Breast Iodine Thyroid Effectiveness Society) does not claim to have all the answers. However, we believe that Dr. David Derry's treatment for breast cancer is groundbreaking, and that it should be made public so that people with breast cancer have the option to consider this type of treatment. More info: www.bites-medical.org/brcan.html