Dear Friends,

It is difficult to determine the actual prevalence of thyroid diseases in the United States because so many cases are misdiagnosed or undiagnosed. It is estimated that 5% of American females compared to 0.5% males have a thyroid condition. According to the 2010 U.S. Census there are 308,745,538 people living in our country, and the number of cases of thyroid diseases is likely to run in the millions.

Women have a higher risk for most thyroid conditions and we are focusing this month's e-newsletter on the most common forms of the disease. Thyroid dysfunction can impact many of our every day functions like sleep, metabolism and weight but treatments are available. So if you feel out of sorts, and do not know why, it might be worth having your thyroid checked!

Happy Summer!

The Institute Staff
The thyroid is a small, hormone-producing gland found just below the Adam's apple at the base of your neck. Two main thyroid hormones, T3 and T4, regulate the rate of your metabolism, including how fast your heart beats and how quickly you burn calories. A healthy thyroid produces just the right amount of hormones needed to keep the body from using energy too quickly or too slowly.

Thyroid problems can disturb the production of thyroid hormones, which can lead to problems throughout the body. For reasons not completely understood, thyroid disorders are more common in women than in men. Because thyroid disease often develops slowly with mild or no symptoms, it is important to be familiar with the characteristics of common thyroid disorders. Untreated, these diseases can affect many aspects of life, including weight, sleep, digestion, mood, fertility and menstruation.

HYPERTHYROIDISM

When the thyroid makes more hormones than your body needs, your metabolism speeds up. This is called hyperthyroidism. Graves' disease, an autoimmune disorder, is the most common cause of hyperthyroidism. Swellings in the thyroid, called thyroid nodules, are another cause of hyperthyroidism. Although you might not notice symptoms of an overactive thyroid at first, over time the disorder can cause symptoms such as:

- Rapid or irregular heartbeat
- Weight loss, even if you eat the same or more food
- Increased appetite
- Anxiety and/or irritability
- Trouble sleeping
- Increased sweating and/or increased sensitivity to heat
- More frequent bowel movements
- Muscle weakness
- Trembling in your hands or fingers
- Less frequent menstrual periods with lighter than normal menstrual flow

Women with hyperthyroidism may also have osteoporosis in addition to these symptoms. Postmenopausal women especially may have osteoporosis before they experience any other symptoms.

Treatments for hyperthyroidism include:

- Antithyroid medicines that stop the thyroid from making new hormones
- Radioiodine that damages or destroys thyroid cells
- Surgery to remove most of the thyroid
- Beta-blockers that block the effects of thyroid hormones on the body

If the thyroid is removed through surgery or destroyed by radioiodine, you will have to take thyroid hormone pills for the rest of your life.

HYPOTHYROIDISM

When your thyroid does not make enough hormones, your metabolism slows down. This disorder is called hypothyroidism. In the U.S., the most common cause of an underactive thyroid is Hashimoto’s thyroiditis, an autoimmune disease (see below.) Other causes of hypothyroidism can be radiation treatment of certain cancers, treatment for thyroid cancer or a tumor of the thyroid.

Women may also experience irregular or absent periods, and their periods may be lighter than usual. Other symptoms include:

- Feeling chilly
- Body aches
- Fatigue or mental slowness
- Sore throat
- Memory loss
- Increased sensitivity to cold
- Muscle twitching
- Heart palpitations

If left untreated, hypothyroidism can cause serious problems such as heart disease, stroke and heart block.

Treatments for hypothyroidism include:

- Synthetic thyroid hormone
- Desiccated animal thyroid

If you are treated with thyroid hormone, you will need to have your thyroid levels checked after your treatment begins, every few months, and then every year.
Like other thyroid disorders, hypothyroidism develops slowly, often with mild symptoms. Initial signs of an underactive thyroid can be as inconspicuous as feeling tired and sluggish. Other symptoms that develop and worsen over time are:

- Weight gain, even though you are not eating more
- Increased sensitivity to cold
- Constipation
- Depression
- Muscle weakness
- Joint or muscle pain
- Fatigue
- Pale dry skin
- A puffy face
- A hoarse voice
- Dry, thinning hair
- Problems getting pregnant
- Excessive menstrual bleeding

Women with hypothyroidism may also have high blood levels of LDL cholesterol, which can increase your risk for heart disease.

The most common treatment for hypothyroidism is a medicine called levothyroxine. Levothyroxine is a man-made form of the thyroid hormone T4. The body can make the T3 hormone it needs from the T4 in the pills. A medicine called liothyronine is sometimes used in combination with levothyroxine. Liothyronine is a man-made form of T3. Most people who have hypothyroidism will need to take thyroid hormone medicine for life.

**HASHIMOTO'S THYROIDITIS**

Hashimoto's disease is an autoimmune disease in which the immune system makes antibodies that damage the thyroid. Over time, this damage can interfere with the production of thyroid hormones and cause hypothyroidism. Women are about seven times more likely than men to develop this disease. Although teens and young women can get Hashimoto's disease, it more commonly appears in middle age. The first sign of Hashimoto's disease is often an enlarged thyroid, called a goiter. Women who get this disease often have family members with thyroid or other autoimmune diseases. Treatment for Hashimoto's disease is the same as treatment for hypothyroidism.

**THYROID CANCER**

If you have a thyroid nodule, or a swelling in a part of the thyroid, there is a small chance it may be thyroid cancer. Thyroid cancer is often found in thyroid nodules that are not causing any symptoms.

Although thyroid cancer is rare compared to other types of cancer, it is nearly three times more common in women than in men. However, thyroid cancer is usually diagnosed later and at a more advanced stage in men, and men usually have a worse disease prognosis than women. The exact reasons for these differences are unknown, but they may be due to differences in screening for men and women, biological variations or behavioral differences. Some studies have found an increased risk of thyroid cancer in women with a history of breast cancer, as well as an increased risk of breast cancer in women with a history of thyroid cancer.
The main treatment for thyroid cancer is surgery that removes all or most of the thyroid gland. Another treatment is a large dose of radioiodine that will destroy thyroid cancer cells without damaging other parts of the body. If your thyroid is removed or destroyed, you will need to take thyroid hormone medicine for the rest of your life.

**PREGNANCY AND THYROID DISEASE**
Thyroid disorders can make it difficult for you to become pregnant. Untreated hyperthyroidism and hypothyroidism during pregnancy can also cause problems for your baby.

Untreated hyperthyroidism can cause:

- Early labor and premature babies
- Preeclampsia
- Fast heart rate of developing baby
- Smaller babies
- Stillbirths

Untreated hypothyroidism can cause:

- Anemia in the mother
- Preeclampsia
- Low-birth-weight babies
- Brain development problems in the baby
- Abnormal bleeding after giving birth

Symptoms of normal pregnancy, like fatigue, are similar to symptoms of thyroid disease, making it easy to miss signs of a problem. Ask your doctor if you need a thyroid test if you are pregnant or thinking about becoming pregnant, especially if you have a family history of thyroid problems. If you have Hashimoto's disease, it is important that your thyroid function is well-controlled before you become pregnant.

**Sources:**
Rahbari, et al. (2010). Thyroid Cancer Gender Disparity, *Future Oncology*
U.S. Department of Health and Human Services, Office on Women's Health
Yao, et al. (2011). Gender Differences in Thyroid Cancer, *Expert Review of Endocrinology & Metabolism*

Contributing writer: Rose Pastore

**UPCOMING EVENTS**

June 8, 2011
**Eat Well, Live Well, Let's Move**
Northwestern Memorial Hospital, Chicago

June 15, 2011
**Wellness Wednesdays: Melanoma and Sun Protection**
Northwestern Memorial Hospital, Chicago, Illinois

June 21, 2011
Institute for Women’s Health Research Monthly Forum:
**Osteoporosis: Balancing Benefits and Risks of Pharmacologic Therapy**
HEALTH TIP

The Thyroid Stimulating Hormone (TSH) test is often the test of choice for evaluating thyroid function and/or symptoms of hyperthyroidism or hypothyroidism. It is frequently ordered along with or preceding a Thyroxine Test (T4). Other thyroid tests that may be ordered include a Triiodothyronine Test (T3) and Thyroid Antibodies test (if autoimmune-related thyroid disease is suspected).

For adult women at average risk for thyroid problems, a TSH Test is generally recommended every 5 years starting at age 35, and if normal, every 5 years thereafter. However, if you have many of symptoms discussed in this e-newsletter, talk to your doctor.

Illinois Women's Health Registry News

The Illinois Women’s Health Registry has surpassed the 6,200 participants mark and continues to grow! The Spanish version of the registry launched successfully on May 9, in celebration of National Women's Health Week. Be sure to tell all your Spanish-speaking friends, relatives, and colleagues about how great it feels to do your part to improve women's health in our state; they can enroll at https://whr.northwestern.edu/es!