

## *WHAT IS THYROID DISEASE?*

Thyroid disease is a disease of the thyroid gland, which controls key functions in the body. The thyroid gland is located at the base of the neck, just below the Adam's apple. It makes, stores and releases two hormones – T<sub>4</sub> (thyroxine) and T<sub>3</sub> (trilodothyronine) – both of which control the body's metabolism, the rate at which every organ works. The condition known as hypothyroidism occurs when there is not enough thyroid hormone in the bloodstream, which causes the body's metabolism to slow down. Hypothyroidism is one of the most common chronic diseases in the United States. Hyperthyroidism occurs when the thyroid gland makes too much thyroid hormone, which causes metabolism to speed up.

## *WHAT CAUSES THYROID DISEASE?*

Hypothyroidism occurs when the thyroid gland doesn't work hard enough. It is generally caused either by thyroiditis (an inflammation of the thyroid gland) or from a diet that does not include enough iodine. Although most common in middle-aged women, the disease can occur at any age. Symptoms are slow to develop, and can include weakness or fatigue, decreased appetite associated with weight gain, change in menstrual periods, loss of sex drive, feeling cold when others don't, constipation, muscle aches, puffiness around the eyes, brittle nails and hair loss. Untreated, hypothyroidism can lead to confusion and mental disorders, breathing difficulties and heart problems.

Hyperthyroidism results from an overactive thyroid gland, which produces too much thyroid hormone. The most common cause of hyperthyroidism is Graves Disease, which, like thyroiditis, is also characterized by an enlarged thyroid gland. It most often affects women in their childbearing years. The most common symptoms of hyperthyroidism are fatigue, weight loss with increased appetite, intolerance to heat, weak muscles, increased frequency of bowel movements, tremors, anxiety, rapid heartbeat and difficulty sleeping.

## *WHAT CAN A BLOOD TEST TELL ME ABOUT THYROID DISEASE?*

Screening for thyroid disease involves blood tests that measure the T<sub>4</sub> thyroid hormone and serum TSH (thyroidstimulating hormone) levels. A high TSH level and elevated T<sub>4</sub> measurement indicate hypothyroidism, while a low TSH level and associated low T<sub>4</sub> indicates an overactive thyroid gland (hyperthyroidism). The tests are also helpful in determining small abnormalities before symptoms occur. This is particularly important for pregnant women, who are at greater risk for both types of thyroid disease.

*For more information regarding the services provided by the Pathology Center,  
call (402) 354-4541 or (888) 432-8980.*

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