

Managing that unruly thyroid

Early diagnosis is the key to dealing with the impact of this all-too-common glandular disorder

After weeks of feeling unusually tired and stiff, Donna-Lynne Larson woke up one morning so drained of energy she could hardly move, let alone get herself out of bed.

"I could not pull my body off the bed – I felt like I was nailed to it," recalls Ms. Larson, a performing artist who lives in Vancouver. "So I went to my doctor, went through some tests and learned I had a thyroid problem."

Ms. Larson is among the millions of Canadians believed to have thyroid disease. While there are no hard statistics on the prevalence of this condition in Canada, observational studies suggest thyroid disease affects about 10 per cent of the population – or one in 10 Canadians. Yet many people are unaware they have an unhealthy thyroid gland.

There are many types of thyroid disease, including hypothyroidism or underactive thyroid, hyperthyroidism or overactive thyroid, Graves' eye disease, thyroiditis or inflammation of the thyroid gland, cancer of the thyroid, and thyroid nod-

ules or swelling of the gland.

Symptoms vary according to the type of thyroid disease but can include extreme fatigue, unexplained weight gain or weight loss, diarrhea, constipation, tremors, and vision problems.

Ashok Bhaseen, president of the Thyroid Foundation of Canada, says early diagnosis is critical to effective management of this disease.

"Half the battle is being properly diagnosed as early as possible," he says. "Once you're diagnosed, then it's possible to manage the disease and live a normal life."

In Ashley Toledo's case, the diagnosis came just shortly after she was born 10 years ago. Routine blood tests given to all newborn babies in Canada revealed her thyroid gland was not producing the hormones needed to regulate many of the body's functions.

This early finding allowed doctors to start treating Ashley right away with a low-dose, daily regimen of thyroxine, the medication most commonly used to manage thyroid disease. Now in Grade 4, Ashley



Actor Donna-Lynne Larson has not only learned to manage the effects of her thyroid disorder, but has turned her experience into a one-woman show. *Who's Going to Stop My Hair from Falling Out? A True Tale About Thyroid Disease*, a joint production of Ms. Larson and the Thyroid Foundation of Canada, will play at the Kay Meek Centre in Vancouver on June 19 and 20. For details call 604-913-3634 or visit www.kaymeekcentre.com/on_stage/685

gives little thought to her thyroid condition.

"I take medicine but I don't feel sick or anything," she says. "I play soccer and do gymnastics and can pretty much do anything I want to do."

While thyroid disease is more prevalent among women, it does affect men as well. Sebastien Sasseville, a sales representative in Montreal,

found out last October that he had an underactive thyroid.

Mr. Sasseville, who has diabetes, gets blood tests once a year to ensure his condition is under control. Last year's tests revealed he had hypothyroidism.

"When I started to take my medication, I began to feel better almost immediately," says Mr. Sasseville.

In fact, he feels well enough

to continue training for an Iron Man race taking place in Arizona this November.

Sandra Hudgin, a registered nurse who lives in St. George, about 100 kilometres southwest of Toronto, says greater awareness of thyroid disease is needed to help ensure doctors do not overlook the thyroid when assessing their patients' symptoms.

"It's not always front of mind for doctors to check the thyroid," she says. "So if you're feeling lethargic and generally unwell, ask your doctor: what about a thyroid check?"

Ms. Hudgin, who had thyroid cancer 20 years ago, says a prompt diagnosis made all the difference in the outcome of her treatment, which involved surgery to remove her thyroid. "Now I'm on hormone replacement therapy and I live a very normal and active life."

Checking for thyroid disease is a fairly simple process that involves an assessment of symptoms, physical examination of the neck area, and blood tests to analyze hormone levels.

Some doctors are also starting to use a new instrument, called a Thyroflex, to test for thyroid disease. Developed by two American doctors, the Thyroflex uses radio waves to measure a person's arm muscle reflexes, with delayed reflexes taken to be an indication of

low thyroid.

"The Thyroflex is a really innovative way of testing the thyroid at a more cellular level and with a great degree of accuracy," says Rozlynn Myers, president of Thyroid Health Canada, which provides Thyroflex testing and trains doctors on its use. "It's a great adjunct tool to existing blood tests."

For Ms. Larson in Vancouver, being diagnosed with Hashimoto's Disease – an autoimmune system disorder that affects the thyroid – kicked off a journey of recovery and introspection.

Having a thyroid condition caused Ms. Larson to lose her job, making her realize how little people understood this disease. This realization prompted her to write a one-woman show called *Who's Going to Stop My Hair from Falling Out? A True Tale about Thyroid Disease*.

The show, a joint production by Ms. Larson and the Thyroid Foundation of Canada, will play at the Kay Meek Centre in Vancouver on June 19 and 20.

"I wanted to lend a voice and face to thyroid disease and show its impact and cumulative effect," says Ms. Larson. "Because this is a disease that affects so many people, and we truly need to have a better understanding of it."

What you should know about your thyroid

Medical facts surrounding the thyroid gland's function and potential problems

Dr. Mircescu is an endocrinologist at *Hôtel Dieu du CHUM (Centre hospitalier de l'Université de Montréal)*, an assistant clinical professor at *Université de Montréal* and medical adviser to the *Canadian Thyroid Foundation*.

The thyroid gland is a butterfly-shaped structure located in the inferior region of the neck, anterior to the windpipe. Like other glands, it releases in the blood substances known as hormones. Thyroid hormones control the body's metabolism, heart rate, growth, weight, temperature and energy level and are produced in response to thyrotropin stimulating hormone

(TSH), a hormone signal that comes from the pituitary gland. The pituitary gland is located at the base of the brain and is in turn under the control of a portion of the brain known as the hypothalamus.

The thyroid gland contains two types of cells, the follicular and the C-cells. The follicular cells – the majority of thyroid cells – produce thyroxine (T4) and triiodothyronine (T3). T3 is the active hormone that exerts its effects on the cells and T4 serves as the reserve and is converted to T3 as needed by special enzymes called deiodinases. Proper synthesis of these hormones is dependent on adequate iodine intake. The recommended daily intake is

approximately 150 micrograms a day. Iodination of table salt is mandatory in Canada, so intake is usually sufficient for the majority of individuals. Other sources of iodine are seafood and dairy products. Increased iodine requirements are seen during pregnancy and lactation, so women should be particularly careful during this period. C-cells produce calcitonin, a hormone that plays a minor role in the control of calcium levels.

Thyroid diseases are very common, especially in women who have a five- to seven-fold higher incidence rate than men. The most common problems are hypothyroidism (underactive thyroid gland), encountered in 2 per cent of the population, and hyperthyroidism (overactive thyroid gland). Symptoms of hypothyroidism include: fatigue, weight gain, slow heart rate, cold intolerance, swelling,

constipation, brittle hair and nails. Depression is sometimes a feature of hypothyroidism. A hyperactive thyroid gland is characterized by fast heart rate, trembling of the extremities, heat intolerance, weight loss despite adequate food intake, frequent bowel movements, muscle weakness and in some cases, swelling of the eyes and problems with eye movements. Anxiety, nervousness and insomnia can also be encountered in hyperthyroidism. The most common cause of hypothyroidism or hyperthyroidism is autoimmune disease. Autoimmune damage occurs when the body wrongly identifies the thyroid as a foreign organ and produces antibodies that either gradually destroy the thyroid or make it overactive.

To diagnose thyroid disease, the physician will assess symptoms, palpate the neck in search

of a goiter, or enlarged thyroid gland, and perform blood tests to verify the level of hormones. Levothyroxine (Synthroid®, Eltroxin®) is the main treatment used in hypothyroidism and the average dose is approximately 1.6 micrograms per kilogram. In rare cases a combination of levothyroxine and triiodothyronine (Cytomel®) is used to achieve complete well-being. Hyperthyroidism can be treated using medication, radioactive radio-iodine and, in rare cases, surgery. The majority of thyroid diseases will require lifelong follow-up.

Untreated hypothyroidism during pregnancy may affect a child's psychological development and result in lower IQ levels, reduced motor skills and problems with attention, language and reading. Pregnant women taking thyroid hormone replacement treatment should have close follow-up as dose adjustments are frequently required.

Other thyroid problems include thyroid nodules and thyroid cancer. Thyroid nodules are a manifestation of abnormal growth and are usually small and painless. They can be investigated by thyroid ultrasound and fine needle aspiration for suspicious solid nodules. Fine needle aspiration is a technique whereby a very fine, thin needle is inserted in the thyroid nodule and used to

aspirate the cells. These cells can then be evaluated for the presence of cancer cells. Ninety-five per cent of the nodules are benign and will be followed to ensure that they do not grow and cause problems.

Differentiated thyroid cancer arises from follicular cells and represents 1.5 per cent of all cancers. Its incidence has been increasing in the past decade, in part because of the improvement in the imaging techniques that allow for earlier identification of thyroid nodules. Overall prognosis is generally excellent with survival rates of 80 to 95 per cent after a 10-year follow-up interval. The usual treatment for most patients includes surgery to remove the entire thyroid gland, followed by treatment with radioactive iodine to destroy any residual cells.

Medullary thyroid cancer is a rare type of thyroid cancer that originates from C-cells that are also located in the thyroid. It is important to identify this type of cancer because it can be hereditary in 25 per cent of cases.

While a lot of progress has been made toward understanding thyroid disease, further research is needed to continue improving diagnostic and therapeutic approaches. Public support of thyroid research is vital if we want to achieve these goals.

ADVERTORIAL

Feeling under the weather? It may be your thyroid

What is a thyroid?

Your thyroid is a small butterfly-shaped gland located in the front of your neck below your Adam's apple. It produces hormones that regulate your weight, energy, heart rate, body temperature and mood. When it is not functioning properly, you may feel unwell.

Some common thyroid disorders

An **underactive** thyroid (hypothyroidism) slows down your metabolism. It may cause weight gain, depression, fatigue, increased sensitivity to cold, or other symptoms. Women are three times more likely than men to develop hypothyroidism, the most common thyroid disorder.

An **overactive** thyroid (hyperthyroidism) speeds up your metabolism, which may lead to weight loss, heat intolerance, fatigue, nervousness, or other symptoms.

How prevalent are thyroid disorders?

In a recent survey, almost one in 10 Canadian adults said they had been diagnosed with a thyroid disorder.

What are the risk factors for developing thyroid disorders?

Aging and menopause increase the risk of developing a thyroid disorder. The rate of hypothyroidism rises during pregnancy, after delivery (postpartum) and around menopause.

How are thyroid disorders diagnosed?

A simple blood test, the thyroid stimulating hormone (TSH) test, is the most accurate way to diagnose a thyroid disorder.

The American Thyroid Association advises all men and women aged 35 years and older to be screened for thyroid disorders.

How are thyroid disorders treated?

An underactive thyroid usually is treated with thyroid replacement therapy in order to return hormone levels to normal.

An overactive thyroid may be treated with radioactive iodine, anti-thyroid drugs, or surgery.

What happens if a thyroid disorder is not treated?

Untreated thyroid disorders may lead to long-term health complications such as heart disease, clinical depression, osteoporosis and infertility. In pregnant women, an untreated thyroid disorder may increase the risk of miscarriage, stillbirth, learning disabilities and other developmental problems in children.

If you think you may be experiencing signs and symptoms of a thyroid disorder, talk to your doctor.

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