



THYROID FLYER

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Newsletter of Thyroid Australia Ltd

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Thyroid Basics

Editorial

By Christopher McDermott

Welcome to the second edition of the Thyroid Flyer for 2007. This is a "back to basics" edition. It briefly covers all the major thyroid conditions and their treatments.

Every year we have so many new members with newly-diagnosed thyroid conditions. We have all been in that position at some point. Whatever condition, we have been looking for basic – and reliable – information on what it is we have just discovered. What does it mean? How does it explain the way I have been feeling over recent months – or even years?

(continued page 7)

Call for Volunteers

Thank you for our recent volunteers offering to help!!! But we still need more...as there are a lot of things to help with!! Do you live in/near Mount Waverley? Are you able to donate a few hours of your time? Thyroid Australia (TA) is a not-for-profit organisation which was founded on the passion to provide leading edge information for people with a thyroid condition. Thyroid Australia was founded by volunteers and is still run by volunteers and receives NO Government funding

We are currently looking for people who can spare a few hours on a regular or even casual basis to assist Brenda, our office manager, at Thyroid Australia's Mount Waverley office with light administration tasks. No experience is necessary, just a keenness to assist!!!

Thank you in advance!!!

A gland affair

By Anne Fawcett

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A malfunctioning thyroid can affect our physical and emotional wellbeing, but it is often not diagnosed.

We've all got one, but most of us don't even know what our thyroid gland does - until it stops doing it right. According to figures from support organisation Thyroid Australia, about 7.5 per cent of Australian women and 1.5 per cent of men suffer some form of thyroid dysfunction.

The thyroid gland is a bow-tie or butterfly-shaped gland at the front of the throat below the larynx. It produces two hormones that regulate metabolism. These are thyroxine (T4) and triiodothyronine (T3). Both increase our metabolic rate. The more thyroid hormone in the blood, the faster our metabolism.

"The thyroid gland is a bit like the body's accelerator or the carburetor of an engine," says Professor Bruce Robinson, endocrinologist at the University of Sydney. "If you're going too fast, everything overheats; your heart races; you get tired and shaky; your muscles waste away. If things are going too slow - if the accelerator is not pressed hard enough to the floor - your heart rate slows down, you don't think clearly, you get constipated and so on."

Most thyroid disorders are due to an overactive or underactive thyroid. In healthy individuals, the thyroid gland maintains the metabolic rate at a reasonable speed, but it doesn't act alone.

The thyroid is controlled by the pituitary

gland, located at the base of our brain, which produces

thyroid-stimulating hormone (TSH). If there is too little thyroid hormone in the blood, the pituitary gland produces more TSH, which in turn results in more T3 and T4. If there is too much, the pituitary gland produces less TSH, resulting in a reduction in T3 and T4 levels.

The pituitary gland is under direction from another part of the brain, the hypothalamus, which produces thyroid-releasing hormone (TRH). So thyroid function can be affected at many levels. For example, if the thyroid gland is attacked by the immune system or affected by cancer, it may produce more or less of the thyroid hormones. Similarly, if the pituitary gland or hypothalamus are affected, for example by a tumor, thyroid function can go awry.

Thyroid dysfunction can also arise when the thyroid gland doesn't receive the right amount of iodine, the fuel it uses to produce thyroid hormone.

"Without iodine the gland can't make enough thyroid hormone," says Professor Creswell Eastman, vice-chairman of the International Council for the Control of Iodine Deficiency Disorders.

Adults require 150 micrograms (millionths of a gram) of iodine each day (twice this for pregnant women) to maintain a normal metabolism.

Iodine is in most foods, particularly seafood and dairy. But recent studies by Eastman and his colleagues found 50

per cent of Australian children - particularly those in NSW and Victoria - are mildly iodine deficient. More worrying, a study of pregnant women in NSW found most were iodine deficient.

"We know from studies done in other countries that iodine-deficient pregnant women will not make enough thyroid hormone," Eastman says. As a consequence, they have a higher rate of miscarriage and premature delivery. Babies born to iodine-deficient mothers can suffer brain damage.

The World Health Organisation and the International Council for the Control of Iodine Deficiency Disorders recommend that women living in iodine-deficient areas, including Australia, should take an iodine supplement before and during pregnancy and breastfeeding. Iodine deficiency can also lead to goitre, a swelling of the thyroid gland. Goitre may occur because of underactivity or overactivity of the thyroid gland.

The most common form of thyroid dysfunction in Australia is hypothyroidism (an underactive thyroid gland). The metabolism becomes sluggish, causing symptoms such as lethargy, fatigue, feeling cold, weight gain, bloating, depression, difficulty concentrating, hair loss and constipation.

The primary cause of hypothyroidism is an auto-immune condition, Hashimoto's disease, in which the body's immune system attacks the thyroid gland, reducing its ability to produce thyroid hormone. Hashimoto's disease may occur secondary to other auto-immune conditions such as rheumatoid arthritis.

Melbourne mother Cornelia Cefai developed the condition in her late thirties, just after the birth of her second child.

"I felt like I was starting off with a really bad flu. Doing simple things like folding nappies became a chore," she says. Cefai had a sore throat and thought she looked "puffy" around the face, but didn't pay much attention until one morning she literally couldn't get out of bed. "My baby was crying and I just couldn't feed her. I felt completely depressed."

Cefai's doctor told her that while her symptoms seemed consistent with postnatal depression, it was important to check her thyroid function. "My blood tests showed I had low thyroid levels and a huge amount of antithyroid antibodies."

Her symptoms improved as soon as she commenced a course of thyroxine, a thyroid hormone supplement. "I was very lucky in fact that my doctor did do those blood tests," Cefai says. "He could have just called it postnatal depression."

Eastman agrees. "Hypothyroidism is so common that all women with postnatal depression should have thyroid function tests and thyroid antibody levels performed to rule out a thyroid condition," he says.

At the other end of the spectrum, an overactive thyroid (hyperthyroidism) pushes our metabolism over the speed limit. Symptoms include weight loss despite an increased appetite, rapid heart rate, sweating and sensitivity to heat, bulging eyes, diarrhoea and anxiety. Left untreated, the condition can lead to cardiovascular disease.

"Hyperthyroidism also leads to increased rate of bone turnover, which can lead to premature development of osteoporosis," Robinson says, adding that those who seek to lose weight by speeding up their metabolism with thyroid hormone supplements risk these and more serious side effects.

The most common cause of hyperthyroidism is another autoimmune condition, Grave's disease. Antibodies attacking the thyroid act like thyroid-stimulating hormone, causing the gland to produce more T3 and T4. Occasionally, a nodule or lump in the thyroid gland contains overactive thyroid cells.

According to endocrinologists, thyroid conditions shouldn't be difficult to treat. There are thyroid supplements for conditions leading to an underactive gland and thyroid hormone suppressants or surgery for treatment of an overactive gland, depending on the cause. But diagnosis is problematic.

"Thyroid disease is almost certainly underdiagnosed in this country," Robinson says. "The symptoms are very similar to those you can get in a lot of other conditions, so people often don't think about testing thyroid hormone levels."

Beverly Garside, president of the Australian Thyroid Foundation, another support group, says many affected women are in their forties and fifties when hot flushes, weight fluctuation, depression and anxiety are often dismissed as the menopause.

"The classic scenario is that women return to their doctor and say that they are still very depressed and nothing is working, and all the doctor will hear is the word depression," Garside says. "They end up on antidepressants."

But blood tests don't always yield a definitive diagnosis.

"The normal range of thyroid hormone levels is quite broad, so people can have thyroid hormone levels that fall within the normal range but still experience symptoms," Robinson says. "The question is, what levels of abnormality should be treated?"

Robyn Koumourou, research officer with Thyroid Australia, says this is a big issue for Australians with thyroid disease. "Often they are initially told they are in the normal reference range and therefore they don't have a thyroid condition, but the doctor doesn't go on to look at their symptoms or their family history or their thyroid antibody levels," she says.

Doctors initially look at TSH levels to determine thyroid function as this is the only test funded under Medicare. But it is possible for a patient to have normal TSH levels despite having abnormal levels of hormones T3 or T4. In patients with pituitary tumours, TSH levels are notoriously unreliable.

Lobby groups say TSH levels that fall within the normal range cannot rule out thyroid dysfunction. "If you want a complete picture of thyroid function you need to do T3 and T4 levels and look for thyroid antibodies," Koumourou says.

Robinson agrees performing all tests is the ideal.

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Hypothyroidism and Hyperthyroidism - The Basics

Important Information for Thyroid Patients

Since thyroid hormones affect every cell in your body, an overactive or under active thyroid can produce a wide variety of symptoms.

Your thyroid gland is located in the front of your neck below your Adam's apple. It plays an important role in regulating your body's metabolism.

HYPOTHYROIDISM (under active thyroid)

Hypothyroidism may occur at any age but is especially common in older individuals. It affects 17% of women and 9% of men by age 60.

Do you have Hypothyroidism?

Check out these Possible Signs and Symptoms:

Skin, Hair, Nails: Is your skin: cold, thick, dry with little or no sweating, waxy, flaky, itchy, pale ivory or jaundiced?

Do you bruise easily, do wounds heal slowly, are you always feeling cold?

Is your body temperature below normal? Have you noticed puffiness of hands and face - especially of the eyelids and under the eyes? Do you get "Pins and Needles"? Do you have Carpal Tunnel Syndrome? Have you noticed hair loss of scalp, groin, outer half of eyebrows? - are you constantly cleaning out the sink and tub drains after each shampoo? Is your scalp dry? Does your hair feel like straw? Is it starting to "frizzle"? Are your nails brittle and thick and always breaking, splitting, layering?

Digestive system: Are you always constipated?

Have you gained weight and feel "bloated"? Is your cholesterol high?

Reproductive system: Do you have heavy menstruation (clotting is common), a tendency for low birth weight babies and early delivery? Did you miscarry your last pregnancy? Have you recently given birth? Post Partum Thyroiditis occurs in approx 8% of women after delivery and involves a hypothyroid stage 12-14 weeks after delivery.

Cardiac System: Is your pulse slower than normal? Do you experience skipped beats followed by a "boom", chest pain, shortness of breath? Are you sleeping excessively yet still feel totally "drained and lifeless"? Do you "sigh" a lot? Is everything an extreme effort? Have you lost your "get up and go"? Do your family and co-workers (if you're still able to work) think of you as lazy? Do you feel "100 years old"? Do you take iron medication for chronic anemia? Has your blood pressure changed—gone either up or down?

The Mind and Emotions: Does your mind feel "foggy"? Does your mental process seem slower than usual making thinking and decision making more difficult? Is your memory poor? Do you feel depressed, sad, and cry easily for no reason? Do you see "something" in your peripheral vision when nothing is there?

Musculator System: Is it hard to keep your arms up when

curling your hair? Do you get muscle cramps, lose your balance and have a sluggish tendon reflex?

Eye, Ear, Nose and Throat: Although Thyroid Eye Disease is more commonly associated with Graves' Disease (Hyperthyroidism), it can also be associated with Hypothyroidism. Do you find you have to listen harder to hear conversations and need the radio turned up? Does your voice seem deeper and hoarse? Is your speech slurred at times? Do you notice swelling at the front of your neck and feel pressure on your throat which is making swallowing more difficult? Do you suffer from frequent chest colds and other infections?

Have you been treated for hyperthyroidism? (Hypothyroidism often develops after treatment).

Do you have a family history of thyroid disease and/or diabetes?

A TSH test is the most important test for detecting primary hypothyroidism.

Note: If you have had X-ray therapy as a child for enlarged adenoids or tonsils, enlargements of the thymus gland as a newborn, birthmarks, whooping cough, acne, or ringworm of the scalp, your physician should palpate your neck carefully to check for thyroid nodules as in almost every instance the thyroid function test will be normal, even in patients who have a proven carcinoma. The T4 (a thyroid hormone) and TSH (thyroid stimulating hormone) value can be misleading in this case, as they reflect the state of the total thyroid function, rather than the presence or significance of a thyroid nodule.

HYPERTHYROIDISM (overactive thyroid)

Hyperthyroidism is most common between the ages of 20-40 but may occur at any age.

Could you be hyperthyroid?

Check out these possible signs and symptoms:

Skin, Hair, Nails: Do you always feel hot and can't stand the heat? Is your skin warm and velvety to touch? Is your face flushed? Do you have increased sweating and frequent hives/itching? Have you noticed increased pigmentation of palms/soles? Do you have orange skin like lumps on the skin of the shins? Is your hair very soft, hard to curl and diffusely thinning? Are your nails soft, grow quickly and "lift" allowing dirt to get trapped underneath which is hard to get out? Have you noticed your fingers taking on the shape of a "club"? - fingertips widen at sides of nail (rare).

Digestive System: Are you "shoveling food" into your system because of an excessive appetite but losing weight?

Do you have frequent bowel movements/diarrhea?

Reproductive System: Is your period now scant or stopped altogether? Have you been told you are experiencing early menopause? Are you having difficulty to conceive? Decreased sex drive due to total exhaustion of constantly being "driven" is common. Have you recently given birth? Postpartum thyroiditis involves a hyperthyroid stage 6-12 weeks after delivery followed by a hypothyroid stage 12-14 weeks post partum.

Cardiac System: Is your pulse faster than normal with times

Thyroid Nodules

- The Basics

when it goes so fast (tachycardia) you become very weak? Are you short of breath? Do you have swelling of your ankles? Do you get chest pain and palpitations but a cardiac checkup reveals "nothing wrong?" When your doctor checks your blood pressure is your systolic blood pressure reading (top number) elevated with diastolic reading (bottom number) normal? This is known as wide pulse pressure.

The Mind and Emotions: Do you feel as if you're in overdrive and "out of control"? Are you restless, nervous, impatient, irritable, unable to stop cleaning house etc.? Do you feel "ready to explode", have mood swings, panic attacks, headaches, difficulty sleeping you're so wound up?

Muscular System: Do you find yourself pulling on the banister with your arms to help you climb stairs due to weak thigh muscles? Have you noticed a fine tremor (you can check this by placing a sheet of paper on the back of your hand) or obvious shakiness of your hands? Is your knee jerk response exaggerated? Are your ankles swollen?

Eye, Ear, Nose and Throat: Do you "stare" a lot without blinking? Have you noticed changes in your eyes such as eye lid elevation, a feeling of "sand in eyes", pain, watering, redness, possible protrusion.

If you have thyroid eye disease symptoms, you should be seen by a specialist. Do not hesitate to ask for a second opinion on treatment options. According to **Dr. Robert Volpe, FRCP, FACP, Toronto, Canada**, "the general view is that if patients do have eye signs to begin with and yet radioactive iodine is the treatment of choice, then Prednisone given concurrently with the radioactive iodine and for 6-8 weeks tends to prevent the aggravation of the eye signs. There is some suggested evidence that patients should not be allowed to become hypothyroid after treatment and possibly thyroxine should be given after the radioactive iodine so as to prevent hypothyroidism. However this is somewhat controversial, and most endocrinologists would wait until the TSH begins to rise before prescribing thyroxine."

Are you very sensitive to noise now? Have you noticed a lump or swelling on the front of your neck?

Do you have a family history of thyroid disease and/or diabetes?

Please note: the above symptoms are extensive in order to present the "whole picture". You probably won't have all of these symptoms. Seniors usually present atypically so TSH testing is very important. Early diagnosis followed by correct treatment will prevent serious complications. It is extremely important for you to tell your doctor all of your symptoms—simply "highlight" or circle them above and take this article with you. Also write down any questions you may have and give a copy to your doctor. We urge all doctors to take time to **listen** to your patients ... don't "isolate" symptoms but look at the whole spectrum. If a patient tells you s/he feels as if s/he's falling apart and "nothing seems to be working properly", chances are s/he's right!

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www.thyroid-fed.org/intro/patients.html

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What is a thyroid nodule?

A thyroid "nodule" is a localized swelling within the thyroid gland. Of most concern is a single swelling, but sometimes it is part of a "multinodular goitre" in which several such swellings are present. Multinodular goitre is not uncommon in older people and often causes no symptoms. Single nodules are also common, affecting perhaps 5% of the population - although most of those affected are not aware that there is anything wrong with their thyroid gland. There are many causes of single nodules in the thyroid gland. Although cancer is uncommon, it is the most important of these causes since the main reason to investigate thyroid nodules is to diagnose those nodules that may be malignant. Cancer is less likely with multinodular goitres, rather than in single nodules.

Types of Thyroid Nodules

The single thyroid nodules is usually one of four things:

1. a fluid-containing cyst;
2. a degenerated benign tumour/adenoma;
3. a slowly growing adenoma;
4. a small percentage are malignant.

Because the rest of the thyroid gland is usually normal, thyroid function is normal and patients are not hyper- or hypothyroid.

Clinical Features

Thyroid nodules are usually small and painless. They do not cause any pressure effects in the neck. Most patients do not even notice the swelling. The swelling is found by their doctors when they have routine medical checkups or are examined for other conditions. Thyroid nodules are usually firm, smooth, and easily felt through the skin if they are large enough (over 1 cm in diameter). Smaller nodules are only detectable by ultrasound. The rest of the gland feels normal.

Thyroid cancer usually differs from benign thyroid nodules. The nodule is often very hard and there may be associated swellings in the lymph nodes in the neck if the tumour has spread. However, physical examination alone cannot suffice to distinguish between benign and malignant nodules.

Laboratory Tests

One of the most important tests for nodules is the ultrasound which determines size, shape, and solidity. Another important test is the radioactive iodine scan which allows the physician to look at the nodules as well as the surrounding thyroid gland.

If the doctor marks the outline of the nodule on the overlying skin, at the time the scan is performed, abnormalities on the scan will correspond to the position of the nodule. Nodules which do not take up radioactive iodine are called "cold" nodules. Occasionally, nodules take up most of the iodine at the

expense of the rest of the gland. These are called "hot" nodules. "Hot" nodules can become overactive and cause hyperthyroidism. Nodules which take up the same amount of iodine as the rest of the gland are called "warm" or functioning nodules. It is only the "cold" nodule that may be malignant - in fact, only about 10% or less of "cold" nodules are thyroid cancers.

Thyroid Biopsy

The next step is to carry out a fine needle biopsy of the thyroid nodule. Cells and fluid are removed from the thyroid gland and examined by a pathologist to determine whether this is benign or malignant. A needle may also be placed into a thyroid cyst and fluid is drawn into the syringe. This fluid is usually a red-dish-brown colour because of altered blood on the broken down thyroid tissue within a benign or malignant tumour, or it is a clear yellow fluid from a congenital cyst. Very occasionally, pus is drawn off indicating that the nodule is a thyroid abscess.

Treatment

Treatment of thyroid nodules depends on the nature of the nodule as revealed by these two tests. If the nodule is "warm" and the biopsy does not show malignant cells, it can be safely assumed that the nodule is not malignant. However, if the scan shows a "cold" nodule and the biopsy shows that the cells are "suggestive of malignancy" then the nodule must be removed. If, at operation, pathological examination shows the nodule to be malignant, all abnormal gland is removed. The surgeon also carefully searches the neck and removes those lymph nodes which may contain malignant tissue.

Prevention of Recurrence

Many physicians put all patients, who have been operated on for thyroid nodule, on thyroxine for life, in order to prevent the development of nodules in the remaining tissue.

Treatment of Benign Nodules

Benign thyroid nodules may be treated with thyroid hormone (e.g. thyroxine) to shut "off" TSH and thereby hopefully shrink the nodule. Patients treated in this way must be examined every six months. As long as the nodule does not enlarge, there is no concern. However, if the nodule enlarges despite treatment with thyroxine, this would suggest that it may have become malignant and should be removed. It should also be emphasized that most benign nodules do not shrink with thyroxine therapy, and fewer such nodules are treated in this fashion. Cysts never respond to thyroxine.

Irradiation of The Thyroid and Neck Region

In the 1940's and early 1950's, many children were given X-ray treatment for a variety of benign conditions of the thymus, adenoids, tonsils, and skin. It was later realized that this irradiation affected the thyroid gland. In some studies up to 25% of such people eventually developed thyroid nodules, one third of whom developed thyroid cancer.

Thyroid nodules which appear following irradiation should be investigated by clinical examination, thyroid scan, and biopsy just like other nodules. However if there is a suspicion of malignancy, the thyroid nodule should be removed and the rest of the gland examined carefully for the presence of other thyroid cancers. Indeed many clinicians recommend removal of all single thyroid nodules after irradiation.

What about people who received irradiation but who do not have a nodule? It is important that such people be carefully examined by a thyroid specialist because of the high likelihood of a nodule developing. If no thyroid nodule is seen or felt, there would be no reason to do a thyroid scan, ultrasound or biopsy and the patient need only be examined again in six months time. Only when a thyroid nodule is found by the doctor should further investigations be carried out. Such patients may also be given thyroxine therapy, which may prevent nodule formation under these circumstances.

Multinodular Goitre

When there are many nodules in the thyroid gland, it is difficult to be certain as to whether or not one of these nodules is malignant. Luckily, cancer is very rare in association with multinodular goitre. Thyroxine will only rarely cause multinodular goitres to shrink, as there are usually areas of either degeneration or autonomy or both. Indeed thyroxine can bring about hyperthyroidism in some patients with this disorder. If the goitre is large, or if it is enlarging over time, surgical removal is appropriate.

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**What are your thoughts
regarding the articles by Prof.
Stockigt and Dr Dowden from our
April 2007 newsletter?**

We are keen to receive your feedback.

What experience have you had regarding the prescribing of your thyroid medication? Did you receive Consumer Medicine Information (CMI) with your thyroid medication? Did your doctor make any comments to you regarding the currency of the information on your CMI? Did he/she make any comments to you regarding the Product Information (PI) that accompanied your thyroid medication?

Stop Press:

**We have already received a number of replies.
If you wish to send in your feedback
please do so ASAP!!!**

Thyroid Cancer - The Basics

Thyroid cancer is not a very common cancer, but for those who have nodules, it is something to be cautious of. Fortunately, it is among the few curable cancers.

Thyroid cancer is a cancerous tumour found growing in the thyroid gland. It usually forms when thyroid cells experience abnormal growth and reproduce rapidly.

There are four types of thyroid cancer:

- Papillary
- Follicular
- Medullary
- Anaplastic.

Papillary and follicular are the two most frequently diagnosed and successfully treated types.

The most common treatment for thyroid cancer involves surgery and radiation therapy. The surgery involves removing part or all of the thyroid gland.

Depending on what the physician recommends, surgery maybe followed by radiation therapy. The procedure for radiation treatment is fairly simple. For the patient, it involves drinking or taking a capsule of radioactive iodine. The combination of surgery and radiation together ensures that any cells that could contain cancer are cleared out of the body. After the radiation treatment is complete, many patients are placed on thyroid hormone suppression therapy (THST). Its purpose is to replace the hormones (T3 and T4) that the thyroid gland produces.

Although thyroid cancer is curable, regular testing after treatment is required to make certain that the cancer has not returned. The advantage of this testing is that if the cancer does return, it will be caught at an early stage when it is easiest to treat.

It's a good idea to keep a personal health journal. It can be used to record doctor appointments, dates when injections or special treatments are received, dates when medication is started, dosage levels of medications, and to track any unusual symptoms.

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Thyroid Cancer - Discovery Points to New Treatment & Prevention

Press release from Canada: Molecular mechanisms of cancer-causing protein revealed.

Kingston, Ontario, Canada—The actions of a mutated protein in cells linked to thyroid cancer have been uncovered by researchers at Queens University. The discovery paves the way for the future development of drugs to more effectively target, treat and possibly even prevent both inherited and non-inherited thyroid cancers.

“We know why this gene causes these tumours and can start looking at how best to target the mutant proteins so that the cells expressing them can be killed or stopped from growing,” says Lois Mulligan, Professor of Pathology and Molecular Medicine with the division of Cancer Biology and Genetics of the Queen's Cancer Research Institute. She is senior author of a study published on November 15 in the journal *Cancer Research*.

Taranjit S Gujral, a PhD student in Queen's Department of Pathology and Molecular medicine and author of the paper, developed three dimensional models of the mutated RET protein implicated in a condition causing cancerous thyroid tumours. The model allowed him to predict and compare the protein's molecular actions and to see that the protein was ten times more active than normal in cells associated with Multiple Endocrine Neoplasia 2B (MEN 2B) syndrome, an inherited cancer syndrome. Co-authors on the study include Vinay K Singh and Zongchao Jia of Queen's Biochemistry Department.

It's like stepping on the gas in a car and getting way more gas than you bargained for,” says Mulligan. The mutation may cause some new actions but it chiefly does some actions more efficiently than normal.”

MEN 2B is a dominantly inherited condition - the most severe of its kind - and I is characterised by the early onset of thyroid tumours, sometimes even affecting infants, and can also cause developmental abnormalities including elongated bones, gastric problems and mucosal neuromas (bumpy lips).

MEN 2B is currently treated with surgery; other treatments such as radiation and chemotherapy are not very effective. The study provides valuable tools for specific targeting of the actions of the protein that may aid in the development of anticancer therapies.

The models created by Mr Gujral, a Canadian Institute of Health Research (CIHR) Trainee in Transdisciplinary Cancer Research and Protein Function Discovery, can be used further to illuminate the actions of the protein with MEN 2B's other mutations. The research team credits the transdisciplinary approach and its benefits for providing fresh perspectives in generating the new understanding of RET's role in MEN 2B. Additional funding for the study came from the Canadian Cancer Society and the CIHR.

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Editorial continued from page 1...

What do I need to do to deal with this condition? And what choices – if any – do I have for treatment?

If you have just been diagnosed and are looking for answers to all these questions, then this newsletter can be a start – but only a start – to finding out more. There is so much information out there – in particular on the Internet – and not all of it is accurate or reliable. You can rely on any information provided by Thyroid Australia – either in hard copy or on our website. Everything has been sourced from respected medical journals – or endorsed by members of our Medical Advisory Committee who are leading specialists and researchers in their fields.

The recent cold snap of weather – which the whole of Australia has experienced – has reminded me of when I was first diagnosed. I was “hyper” – and had been for some years - and so was getting around in T-shirts no matter what the weather. Now, with my levels back to normal I really feel the cold weather – like I did before the onset of my Graves disease. My frozen white fingers are a good sign that I am back to normal. I can't begin to imagine what it must be like for those who are “hypo” in this weather – just unable to feel warm.

The main article in this edition is an excellent piece written by Anne Fawcett from the ‘Sydney Morning Herald’ – and which was later published in ‘The Age’ in Melbourne. It is an informative and intelligent article which will raise awareness amongst the general community – and may very well lead to someone who didn't know they had a thyroid condition to go along to their doctor, take a simple blood-test and be on the road to a normal life again! Our sincere thanks to Fairfax and to Anne Fawcett for covering this important health issue.

Of course the down side to this sort of publicity is that Brenda – in our office – is further swamped by membership applications, telephone and email enquiries and general correspondence. Again, we appeal - especially to those who live in Melbourne – if you want to help in the office, we would like to hear from you.

The great satisfaction of my involvement with Thyroid Australia is knowing that I have been helping other people. If you would also like to help – then please let us know.

I would like to thank Brenda and the committee of Thyroid Australia, as well as all our volunteers, for their continuing work with the organisation.

I wish you all the best.

CMcD

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Thyroid Australia

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Centre section is bright blue

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providing us with office
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CITY OF
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The Neck Check

Now there is a simple self-exam to help you check for nodules and thyroid cancer. A palpable lump (nodule) on the thyroid gland could indicate the presence of cancer and should always be checked by a physician.

This neck check was developed by the American Association of Clinical Endocrinologists (AACE) in 2003.

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To perform the neck check:

1. You will need a mirror and a glass of water.
2. Hold the mirror in your hand, focusing on the area of the neck immediately above the collar bone. Your thyroid gland is a butterfly-shaped gland in this area of the neck.
3. Staying focused on this area, tip your head back.
4. Take a drink of water and swallow.
5. As you swallow, look at your neck. Check for any bulges or protrusions (ignoring your Adam's Apple, of course!) Repeat the process as many times as you wish.
6. If you see a protrusion or bulge, call your doctor. You may have an enlarged thyroid gland or a nodule. The nodule should be checked to ensure that it is not malignant.

An International Vision

Not every member of Thyroid Australia would realise that we are also a member of another thyroid organisation: Thyroid Federation International.





The Thyroid Federation International first convened in Toronto at the 11th International Thyroid Congress in September 1995. The vision of a world thyroid organisation to deal with the problems of thyroid disease in a global perspective was first advocated by Diana Meltzer Abramsky, C.M., B.A. who in 1980 founded the Thyroid Foundation of Canada in Kingston, Ontario Canada - the first lay thyroid organisation in the world. Since then, the idea has received enthusiastic support and leadership from Dr. Lawrence C. Wood of the Thyroid Foundation of America, the Federation's first president. Starting from a base of six member organisations, the Federation has grown to include thyroid organisations in many parts of the world, including Europe, North America, Australia and Japan.

Thyroid Federation International aims to work for the benefit of those affected by thyroid disorders throughout the world.



Thyroid Federation International
Thyroid Disease in a Global Perspective

OBJECTIVES OF THYROID FEDERATION INTERNATIONAL

-  To encourage and assist the formation of patient oriented thyroid organizations.
-  To work closely with the medical professions to promote awareness and understanding of thyroid disorders and their complications.
-  To provide, through member organizations, information and moral support to those affected by thyroid disorders.
-  To promote education and research related to thyroid disorders.

Member Story and Volunteer Update

Hypothyroidism - is it infectious???

So many of my friends now have it!!!

About 5 years ago I had never heard of a thyroid condition before. That is until a close friend told me she had developed hypothyroidism after her second baby. She told me how lucky she was that her doctor had taken a blood test. He told her that her symptoms were so close to postnatal depression she may have been prescribed anti-depressants instead of thyroid hormone. Anyway, that was all that I heard about anyone getting a thyroid condition for a very long time until one day I found myself at the doctor telling her how terrible and tired I felt all the time. She asked me if I had ever had my thyroid tested? Me? Why no! Should I? Was it necessary? Hmm...looks like I was lucky too, as like my friend's doctor...my doctor was suspicious too! And it paid off! The test results came back that I too had developed hypothyroidism after my third baby. Hmmmm....so I too now take thyroid hormone every day. And like my friend I am fine tuning my dose regularly with my doctor to get my thyroid hormone levels just right. But it is worth it. I no longer feel terrible and tired all the time. Also like my friend I am now also noticing more and more of my friends being diagnosed with a thyroid condition. I am told that thyroid conditions occur much more often in women (about 1 in every 13 women) than in men (about 1 in every 67). Also they occur most often during menopause, after pregnancy and during puberty (in that order). Hmmmm....a lot of my friends have just had babies and entering "that" age (late 30s early 40s). Looks like I will have a few more friends joining my friend and me very soon!

Volunteer Profile

Sue has been a board member for THYROID AUSTRALIA now for over 5 years and during that time has been a tireless volunteer. Of the many valuable tasks Sue has done over the years is be the secretary and minute taker for all the committee meetings. She has also been the one to ensure memberships are up to date. We wish to thank her for all her hard work especially as we know we will be having to share her very soon as she takes on a new responsibility in her life, that as a mother.

Congratulations!

Edward Peter Onny (Eddy) was born on Tuesday 21st August at Frances Perry House, Royal Women's Hospital. Brother for Dillon, Eddie arrived at 11.31pm by emergency c-section, weighing 8 lb. 2 oz. He is very cute with thick dark hair and long fingernails. Mum is resting well and is extremely happy! We wish Sue and Paul all the best with their new bundle of joy.



Call for Members Stories

Do you have a story to tell?

Your story could make a difference.

We constantly receive calls from new members noting how a member story has touched them and made them feel "not so alone." Discovering you have a thyroid condition, or any condition for that matter, is often quite life changing. Many questions are asked. The most common are "Why me?" and "How can I get better?" Thyroid Australia was founded on the passion to provide support and information that assists in answering these two key questions.

Note, your story does not need to be very long. A few paragraphs is often plenty! We look forward to hearing from you.

If your story is published you will receive free membership for one year!!!!

THYROID AUSTRALIA LTD
ACN 094 832 023 ABN 71 094 832 023



Thyroid Flyer Editor Cornelia Cefai as she appeared in Fairfax article 'A gland affair' by Anne Fawcett.