



THYROID FLYER

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Newsletter of Thyroid Australia

Volume 1 No 2 April 2000

Feature - Hyperthyroidism and TED

Treatment of Graves' Hyperthyroidism The Australian Way

By Peter Colman

People who try to research the treatment of Graves' disease on the Internet or via medical books often end up confused rather than informed. Part of the confusion flows from the fact that approaches to treatment differ quite dramatically within and between countries.

There is universal agreement that people presenting with Graves' disease require rapid treatment to settle the symptoms, which are often incapacitating. However, this can be achieved by tablets, by surgery or by radioactive iodine treatment.

The tablets fall into two groups, β blockers (such as Inderal) and anti-thyroid drugs (such as carbimazole or propylthiouracil). The β blockers block some of the most troublesome symptoms of thyrotoxicosis - shakes, sweating, rapid heart beat - by blocking the effects of the excessive thyroid hormone on the muscles, skin and heart. However, β blockers have no effect whatsoever on reducing the excessive production of thyroid hormone from the thyroid gland. The anti-thyroid drugs, on the other hand, work on the thyroid directly to decrease the excessive thyroid hormone production. These tablets often take a few weeks to produce effects and often need to be used in quite high dosage, at least initially.

The other treatments, surgery and radioactive iodine, are grouped together as 'ablative' treatments. Both

reduce the amount of functioning thyroid tissue and hence reduce thyroid hormone production.

In 1996 a group from Stockholm, Sweden published a report in the Journal of Clinical Endocrinology and Metabolism which highlighted the variation in treatment of Graves' disease between countries. These researchers circulated the case of a 'typical' patient with Graves' disease - a 43-year-old woman with moderate hyperthyroidism and a diffuse goitre - to specialists in USA, Europe and Japan. The results were surprising. The first choice of treatment offered by thyroid specialists in the USA was anti-thyroid drugs (30%), surgery (1%) and radioactive iodine (69%); the corresponding figures among specialists in Europe were 77% (anti-thyroid drugs), 1% (surgery) and 22% (radioactive iodine), respectively. The figures for patients with typical, moderate and uncomplicated Graves' disease in Japan were 88% (anti-thyroid drugs), 1% (surgery) and 11% (radioactive iodine), respectively. Factors taken into consideration included the patient's age and preference, severity of disease and glandular size. However, it is obvious that local traditions and available treatment resources are probably the most important factors guiding the choice of treatment.

Similar figures for Australia are not known. However, from talking to my colleagues in Melbourne and in-

terstate clearly treatment practices do differ considerably. Does this matter? Probably not.

The same trial mentioned above, which included 179 patients with Graves' disease, compared each of the three treatments and found that they were equally effective in normalizing thyroid hormone levels within 6 weeks. More importantly, after treatment, 95% of patients were satisfied with the treatment they had received.

So how should we choose what treatment is the right one for a person with thyrotoxicosis? The treatment choice should be made on the basis of many factors such as age, severity of symptoms and most importantly wishes of the patient. With Graves' disease there is a 50% chance that a course of tablet treatment (for 12 to 18 months) will permanently cure the condition. For this reason most doctors will advocate trying the tablets first. In people in whom the tablets control the condition but there is then a recurrence, surgery or radioactive iodine treatment is usually advised.

Overall, the most important thing for you to do is to discuss the treatment alternatives with your doctor and if you are not sure **Ask!**

Associate Professor Peter Colman is Director, Department of Diabetes and Endocrinology, Royal Melbourne Hospital

Editorial

Zoo Picnic and Launch

Melbourne put on a beautiful summer's day on Sunday 13 February for the national launch of Thyroid Australia at the Melbourne Zoo. Near our picnic site, you could hear the lions roaring and there were hundreds of people wandering around. A special attraction was Yakini, the baby gorilla just a few months old.

Why did we pick the zoo? The Melbourne Zoo is famous for its butterfly house - a temperature and humidity controlled tropical room through which you can walk and have colourful, exotic butterflies fly around and rest on you. And of course the Ulysses butterfly is the logo for Thyroid Australia, representing that butterfly shaped gland in our necks that has, in one way or another, drawn us together to form this support group.

Just over twenty people joined the Committee for a picnic, including many new members and some who joined on the day, as well as partners and family members. We were particularly happy to welcome Professor Peter Colman of the Royal Melbourne Hospital.

Our organisation was launched officially by Dr John Ross MLC, Victorian Legislative Council Member for Higginbotham. Dr Ross is on several Opposition committees on health and related issues. We thank him for his time, and for all his good words about Thyroid Australia and the work we are doing.

A special presentation was also made to Stephanie Mawson who has set up the Thyroid Australia website.

The launch was also a terrific vehicle to attract publicity for the organisation. We received coverage in *The Age*, *The*

Herald Sun, the *Geelong Advertiser*, the *Bendigo Advertiser*, the *Maroondah Journal*, and ABC Radio. As well we had articles with photos in the *Yarra Leader*, the *Monash Journal* and the *Waveley Gazette*. Several of the free community newspapers around Melbourne included notices of the launch and we were also mentioned on community radio.

This publicity has caused our contact statistics and membership to increase dramatically. We now have close to 100 members throughout Victoria and elsewhere. We look forward to having our first regional support meeting in Geelong shortly and hopefully other regional centres will follow.

By **Christopher McDermott**

Thyroid Australia Web Site

We are very excited that Thyroid Australia now has its own web site at <http://www.chronicillness.org.au/Thyroid/index.htm>. We thank the Chronic Illness Alliance for hosting our site, and particularly Dr Christine Walker. Our thanks too to Stephanie Mawson for all her work in getting the site up and running. We look forward to your comments and suggestions about the site.

Support Meeting

We held the first of our support meetings at the Royal Women's Hospital on Saturday 18 March. We had a good turn-up of members (and others) and a lively discussion over coffee and biscuits. One member said afterwards that she had learnt more about her thyroid condition that afternoon than she had in the years since her diagnosis!

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The launch of Thyroid Australia at the Zoo with Dr John Ross MLC (Front Right Centre) and Prof Peter Colman (Centre Rear)



A Funny Little Story

By **A Graves' Patient**

Well, as you all know being diagnosed with a disease that is 'for life', can get pretty damn depressing. So here's a funny little story to cheer you up.

Recently I called in to see a friend of mine. She owns a little cat called Crystal. I must confess that the last time I saw Crystal, I thought she was on her last legs. She looked terrible, her fur felt rough and dry to my touch, and she was so skinny and bony when I patted her, I thought I'd probably never see her again.

However, on my next visit, to my surprise she was still alive. My friend explained they had taken her to the vet, who diagnosed her with an overactive thyroid gland. Yes, she had Graves' disease, which helped explain why she was always so hungry, but never put on any weight.

"Oh, you poor little thing, I know just how you feel," I said. Her owner told me that she was taking Neomercazole or Carbimazole, the very same tablets I had been taking too!

I was talking about the cat with another person who also has Graves' disease, and he said, "Oh, and did she have shaky paws too?" With that, we both roared with laughter.



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Russian Material on the Internet

Dr Valentin Fadeyev at the Moscow Medical Academy has alerted us to a Russian web site dedicated to thyroid disorders (over half of it for patients). The URL is <http://thyronet.rusmedserv.com>. Cyrillic language software is needed to access the material properly. Congratulations to the team in Moscow who put it all together!

Young People With Chronic Illnesses

On 1 February, the newly formed Children's and Young People's Working Party of the Chronic Illness Alliance (CIA) was formed to address issues of concern to children and young people with a chronic illness. It will look at the relationships between them and hospitals as well as the need to inform schools of issues they face in trying to maintain as normal a life as possible. The working party will not be a "complaints" mechanism, rather a forum to collect information and to advocate on behalf of children and young people with chronic illness.

Thyroid Australia encourages those with an interest in children and young people with thyroid conditions to share with us, or with the CIA, ideas and issues so that the Working Party can better reflect these needs.

Contact Dr Christine Walker, CIA (03) 9614 0500 or Megan Stevens, Thyroid Australia (03) 9561 2483.

Feature

Our feature is hyperthyroidism, Graves' disease, and thyroid eye disease. Our thanks to Prof Peter Colman for his thoughts on the treatment of hyperthyroidism in Australia - the approach in Australia seems to be different from that in other countries. Our thanks also to Dr Anthony Hall for his article on thyroid eye disease, and how best to treat it. We also have the first contribution by one of our members, in our *Over to You* series. A member with Graves' disease talks about her diagnosis of and the difficulties she had with thyroid eye disease. And did you know cats could suffer from hyperthyroidism as well?

By Megan Stevens

Thyroid Eye Disease

By Anthony J H Hall

What is thyroid eye disease?

Thyroid eye disease is an auto-immune disease of the orbit (eye socket) and eye muscles that occurs in people with thyroid disease. It is characterised by inflammation, swelling and eventual scarring.

Who gets thyroid eye disease?

Thyroid eye disease is most commonly seen in people with Graves' disease (hyperthyroidism) but it can also occur with hypothyroidism, Hashimoto's thyroiditis, and thyroid cancer. About 40% of people with Graves' disease will develop thyroid eye disease. Most cases of thyroid eye disease develop shortly before, or soon after the diagnosis of hyperthyroidism is made. Some people do develop thyroid eye disease a long time before or a long time after their thyroid problem becomes apparent.

What are the features of thyroid eye disease?

Thyroid eye disease has two distinct phases:

1. The first phase is characterised by active inflammation and swelling. In this phase the eye is often red and inflamed. The lids are swollen and the eye is "poppy". Often in this phase there is quite a bit of discomfort and ache, especially at night.
2. As this phase resolves the muscles that move the eye begin to scar and malfunction. In this phase the upper eyelid often "retracts" (sits up too high) and double vision is common. Commonly in this phase the appearance of the eye remains prominent.

Either phase can be accompanied by irritation, a feeling that there is something in the eye and visual blurring.

What can be done to help?

There is much that can be done to help patients with thyroid eye disease. The ocular irritation is helped by simple lubricants (tears plus or liquifilm tears). The swelling and ache may be helped by sleeping with the head of the bed elevated by one or two bricks and by using cold compresses (available from the chemist).

During the acute inflammatory phase some patients benefit from oral steroids (prednisolone) to reduce the swelling and help the pain (and visual loss). Oral steroids must be used with caution as they have many side effects including worsening the mood disturbances that thyroid patients often develop. Some patients in this phase will require radiotherapy for the swelling.

During the scarring phase of thyroid eye disease many people require surgery for their thyroid eye disease. Surgery can be used to lower the upper eyelid if it is abnormally raised. Surgery can be used to reduce the "poppyness" (proptosis) of the eyes. If double vision is a problem then this can be fixed by surgery to move the eye muscles. All of this surgery is best delayed until the eye disease is as stable as possible. With any surgery it is important to weigh the potential benefits against the potential risks.

Obviously patients with hyperthyroidism will require treatment for their increased thyroid hormone levels but disappointingly this correction of their hyperthyroidism often doesn't help their eye disease a whole lot.

What happens in the end?

Unfortunately for many people who develop it, thyroid eye disease is a long term problem. The acute inflammation and swelling nearly always resolve within a few months but many patients are left with permanent abnormalities. About $\frac{1}{3}$ of people with thyroid eye disease will have ongoing dryness, sensitivity and irritation. About half of patients believe that their eyes continue to look abnormal. The good news is that with current treatments long term double vision and visual loss are very uncommon.

If you have any questions you should speak to your endocrinologist or ophthalmologist.

Dr Anthony J H Hall, MD, FRACO, is Director, Ophthalmology Unit, Royal Melbourne Hospital

Over To You

From time to time we would like to publish letters and thyroid stories from our members. So if you would like to write to us or send us the story of how, when, where and why your thyroid condition was diagnosed, and how the condition and treatment has affected you, please do so. If you are able to include any lab test results (such as TSH, T4 and T3) at the time of diagnosis and during your treatment, all the better. Letters would normally be published with the author's name acknowledged, whereas stories would normally be published anonymously, unless you specifically request to have your authorship acknowledged. We would also like to establish a section on our web site which includes these stories, so please indicate your preference as to whether or not you would like your story to be put on our web site.

The first of our member contributions comes from a member with Graves' - so it's *Over to You ...*

Double Trouble

It all began one night when I couldn't sleep. I was very restless, tossing and turning. When that happened I usually got up and go and watch TV until I get sleepy again and go back to bed. This particular night I went into the bathroom and turned on the light, looked in the mirror, and, looking back at me was my image, except, instead of two eyes looking at me, there were four! I then decided to watch a bit of TV. But to no avail. Everything on the screen was double too! Feeling somewhat disconcerted, I went back to bed.

The next day I rang my optometrist and she referred me to an eye specialist. I saw him fairly quickly and he thought that I either had Myasthenia Gravis or Graves' disease. I had heard of Myasthenia Gravis as a distant relative of my grandmother's had it. It is a terrible disease of which there is no cure. It affects all the muscles in the body. I hoped that I didn't have that!

He examined my eyes very carefully and even measured the distance with which the eyes protruded out from the face. He suggested I use eye masks (which can be bought from the chemist) to help reduce the puffiness of my eyes and well as propping up my bed at the head, and making sure I wore sunglasses outdoors to protect my eyes from the light.

We did try to prop up the bed, once with bricks (very dirty and messy on the carpet) and then with old telephone books, (not a good idea, as they tended to slip and slide about). In the end I was propped up with four pillows. We used to joke about it - that

I was the 'Titanic' and he (my wonderful friend) was just a little tugboat, way down below sleeping on only one pillow. Even now I still sleep with two pillows.

Basically I did everything I could to elevate my head while sleeping. The reason for this is that if you are lying completely flat in the bed, the five or six muscles behind your eyes are more likely to become filled with fluid. It is this build-up of fluid which causes the eyes to protrude and to alter the way we see, ie. the double vision.

At this time I also had X-rays taken of my eyes, so that the eye specialist could see the muscles behind the eyes and observe exactly how swollen they really were with fluid.

My local GP had put me on some tablets to help with my trembling hands and perspiration. When you have Graves' disease, your whole body is working much too fast. Your heart beats faster, food passes through your system faster, you go to the toilet more frequently, you seem to be more hungry, but you don't gain any weight, in fact, you often lose weight and you can perspire more quickly. However, everybody doesn't always have all the same symptoms.

I was then referred to an endocrinologist. He sent me off for blood tests which confirmed that I had Graves' disease. I also had a test in which they inject radioactive iodine into your body to take a closer look at your thyroid gland. My experience at this big public hospital with this team of technicians was not a very good one.

Once you swallow this medication, you have to lie perfectly still for about

twenty minutes. Then they return, move the machine to another position and you lie still again. This goes on for about six or seven times. The machine takes 'pictures' of your thyroid gland. Once they had finished doing this they asked me some questions. I was not given the opportunity to ask them anything, as they just wandered off and left me. I was so annoyed at the way in which they had treated me, that I wrote to the Head of the Department. He wrote back to me apologising for their lack of consideration. He said he would speak to those involved and get them to improve their 'communication and people' skills. I couldn't help wondering how people with little or no English would feel, as I came away from the place feeling very low. I had to stay away from pregnant women and babies as I was radioactive. However, after a few days the radioactivity would have left my body and it was OK to be near people.

On seeing the endocrinologist, he gave me a thorough examination, weighing me, checking my reflexes, listening to my heart etc. He explained the type of tablets he was prescribing and told me what to watch out for in the way of side effects. He was very caring and said if I had any problems I could even ring him at home. He stressed the importance of taking the tablets regularly, which I did.

Thinking back as to how I felt about this disease I realise that I was quite depressed at the time. With any change to your health you eventu-

ally have to come to terms with it, whether you like it or not. I was very lucky in that where I worked there was a counselling facility and I was friendly with one of the women there who kindly photocopied information on the various tablets I was taking and listened and talked to me whenever I needed her.

One of the problems with this disease is that the symptoms can be so subtle that when they occur, you don't even notice them at first. Things like scant periods I just put that down to the fact that I was getting near the menopause stage of life.

I would walk to the bus stop, about ten minutes walk, and would be dripping in perspiration, and maybe think that I was just very unfit (which I am anyway).

A slight tremor in my legs one day, and I remember thinking, I wonder what that is, but then, quickly forgot about it.

At least with the double vision I acted quickly, under the impression that there was something wrong with only my eyes. Never dreaming that it was my thyroid gland that was causing all the problems.

Unfortunately with Graves' disease, the eye problem tends to run independently from that of the thyroid. So, even though my endocrinologist gradually got my thyroid under control, my eyes were getting steadily worse.

It began from the minute I woke up and looked around the bedroom. Yes, everything was double. This would last initially for about ten minutes. Then fifteen, then half an hour. Usually, by the time I was on the bus going to work it would have stopped.

Then one morning at a staff meeting it started again. This created problems for me at work as I use a computer every day and everything was double, unless I either covered or closed one eye. I even bought an eye patch (black of course, like a pirate's) but it was too uncomfortable to wear, and besides, it drew attention to my eyes, which was the last thing I wanted.

By the end of the day, when I was tired from work, relaxing reading a book or watching TV again meant winking or holding one hand over my eye. It became obvious that there was only one avenue left to try, and that

was taking steroids. I had resisted this course of action because of the many nasty side affects. However, as my eye specialist pointed out, there was no other drug he could offer me. The old "between a rock and a hard place" situation.

Initially I was put on a very high dose and then gradually it was lowered over about two months. One of the worst side affects for me on the steroids was thrush.

Prior to starting the course of steroids, I took the precaution of having a bone density test which showed that I had some bone loss in my left hip. I haven't had it checked again since taking the steroids so don't know if I have had further bone density loss.

The steroids did the trick, in spite of their side affects. Cortisone does tend to make you feel pretty fantastic. I guess there have to be some positives. More importantly, it worked in reducing the swelling of the eye muscles. Gradually the dosage of the steroids was reduced until I stopped taking them altogether.

With regard to the tablets for the thyroid, over many months, and frequent visits to the endocrinologist, (always preceded by a blood test), I gradually reduced my intake to $\frac{1}{2}$ a tablet every second day. It occurred to me that if this was all that was needed to keep my thyroid 'on an even keel', things must be improving. It's been eleven months since I stopped taking any medication for the thyroid or for the eyes. I no longer see the eye specialist, but see my endocrinologist every six months.

All in all I think I have been very fortunate in that I no longer have double vision, my eyes do not protrude, my thyroid gland (touch wood), is behaving itself, and thanks to the care and attention of very good specialists and my GP, understanding friends and work colleagues (who know about my condition) and most importantly, the love and understanding shown by my friend without whom I could not have managed. Thank you sweet-heart.

Next issue of the *Thyroid Flyer*

The next issue of the *Thyroid Flyer* will be published in July 2000. Articles or letters for publication should be sent to The Editor by 15 June 2000.



Thyroid Federation of Australia
Thyroid Diseases in a Medical Perspective

A Plea to Endocrinologists Throughout the World

Can you help us ensure that health professionals in your area:

- are fully aware of the whole spectrum of symptoms of thyroid disease
- realize the cost effectiveness of using a TSH test for initial diagnosis
- understand how to interpret thyroid tests correctly
- choose the correct method of treatment
- are updated on latest research finds.

Please send us the complete mailing address, e-mail address and fax of your National Medical Society so we can add this to our mailing list. E-mail to TFI Office tfi@kos.net

Why not present a symposium on all aspects of thyroid disease for physicians in your area or publish information in your Medical Society's magazine/newsletter?

Originally published on the TFI web site at <http://www.thyroid-fed.org/intro/endo.html>. Republished with permission.

UPCOMING MEETINGS

We now have enough members to run monthly support group meetings in Melbourne. We have arranged the following meetings:

Royal Women's Hospital, Grattan St, Carlton (Melway 2B F7)

27 May

29 July

26 August

The meetings will be held in the Conference Room on the First Floor
St Matthews Anglican Church, Lum Road, (c/- Earlwood Dr), Wheelers Hill (Melway 71 F10)

29 April

24 June

All support group meetings will begin at 2.00 pm and will finish at 5.00 pm

We are also trying to organise support meetings in country Victoria. We will give you details as meetings are arranged.

HYPERTHYROIDISM

By Thyroid Foundation of America

The term hyperthyroidism refers to any condition in which there is too much thyroid hormone in the body. This most commonly results from a generalized overactivity of the entire thyroid gland, a condition also known as *diffuse toxic goiter* or *Graves' disease*. Alternatively, one or more nodules or lumps in the thyroid may become overactive, a condition known as *toxic nodular* or *multinodular goiter*. Finally, a person may become hyperthyroid if he or she has a condition called *thyroiditis*, or if one takes too much thyroid hormone in tablet form.

The symptoms of hyperthyroidism include nervousness, irritability, increased perspiration, thinning of your skin, fine brittle hair, and muscular weakness especially involving the upper arms and thighs. Your hands may shake and your heart may race. Your bowel movements may increase in frequency, though diarrhea is uncommon. Usually you will lose weight despite a good appetite and, if you are a woman, menstrual flow may lighten and menstrual periods may occur less frequently.

In diffuse toxic goiter (Graves' disease) the eyes may appear enlarged due to elevation of the upper lids. Less commonly, a protrusion of one or both eyes known as *exophthalmos* may occur.

What Causes Hyperthyroidism?

Diffuse toxic goiter, found in 70-80% of patients with hyperthyroidism, is caused by antibodies in the blood which stimulate the thyroid to grow and secrete excessive amounts of thyroid hormone. This type of hyperthyroidism tends to run in families, but we really don't know very much about why this disease occurs in specific individuals. We also do not understand why thyroid nodules sometimes become overactive. Somehow one or more nodules gradually increase their activity, so that their total output of thyroid hormone is greater than normal. When thyroiditis occurs it may have been caused by an infective process, but as yet no specific causative virus or bacteria has been identified.

How is Hyperthyroidism Diagnosed?

If your doctor suspects hyperthyroidism, he or she will first try to find out whether that diagnosis is correct by

measuring the amount of thyroid hormone in your blood. If the tests seem borderline and your doctor wants to know with certainty whether your thyroid is overactive, another sensitive blood test known as the serum TSH (thyroid-stimulating hormone) can be done.

If these tests do indicate hyperthyroidism, the doctor may choose to obtain a picture of your thyroid (*thyroid scan*) to find out if your entire thyroid gland is overactive or whether you have a toxic nodular goiter or thyroiditis (thyroid inflammation).

What is the Best Treatment for Hyperthyroidism?

There is no one treatment that is best for all patients with hyperthyroidism. Many factors will influence your doctor's choice of treatment, including your age, the type of hyperthyroidism, the availability of a good thyroid surgeon, allergy to medication, the severity of the hyperthyroidism, and other medical conditions which may be affecting your health.

Drugs:

Drugs known as *antithyroid agents*, methimazole (Tapazole®) or propylthiouracil (PTU), may be prescribed if your doctor chooses to treat the hyperthyroidism by lowering the amount of thyroid hormone in your blood. These drugs make it more difficult for iodine to be used by your thyroid gland. Since your thyroid uses iodine to make thyroid hormone, the net effect is a decrease in thyroid hormone production.

Radioactive Iodine:

Another way to treat hyperthyroidism is to damage the thyroid cells which make thyroid hormone. Since these cells need iodine to make thyroid hormone, they readily take up any form of iodine from your blood stream. In the late 1930's physicians learned that the thyroid would take up radioactive iodine in the same manner as normal, nonradioactive iodine, an observation that led to radioactive iodine therapy. In this form of treatment, your doctor administers a capsule or a drink of water containing radioactive iodine which is tasteless and odorless. Once swallowed, the radioiodine gets into your blood stream and quickly is taken up by the overactive thyroid cells. Over a period of

several weeks (during which drug treatment may be used to control hyperthyroid symptoms), radioactive iodine damages the cells which have taken it up. The result is that the thyroid shrinks in size, thyroid hormone production falls, and blood levels return to normal.

Though doctors make every effort to calculate the optimal amount of radioactive iodine needed to control the disorder, not everyone will be normal after this treatment. Occasionally, a patient will remain hyperthyroid, though usually less sick than before. For them, a second radioiodine treatment can be given if needed. Much more commonly, *hypothyroidism* (an underactive thyroid) occurs after a few months. Indeed, most patients treated with radioactive iodine will become hypothyroid after a period of several months to many years. Fortunately, hypothyroidism is an easy condition to treat with thyroid hormone supplementation taken once-a-day to make up for the hormone which the thyroid gland is no longer able to produce. This medication must be taken for the rest of the patient's life.

Surgery:

For an occasional patient with hyperthyroidism, the physician will recommend removing part of the thyroid gland in an operation. The operation is fairly straightforward if a single nodule or lump of thyroid tissue is overactive. In such patients, the surgeon removes the part of the thyroid containing the overactive nodule and the rest of the thyroid usually returns to normal function. On the other hand, if many nodules are overactive, or if the problem is generalized overactivity of the entire thyroid gland, the surgeon must remove most of the thyroid in order to restore good health. If this is done, hypothyroidism will usually occur and the patient must take a thyroid hormone supplement for the rest of his or her life. However, by removing most of the thyroid, the risk of the patient remaining hyperthyroid is greatly diminished. The considerations regarding thyroid surgery are important and complex. Therefore, when a physician recommends this form of therapy, careful discussion should take place regarding the alternatives for treatment, the nature and extent of the planned

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Telephone Contacts removed from this page.

Know Your TSH

By **Larry Wood**

Today, as part of the advances in modern medicine, there are many common screening tests which are indicators of good health or of potential health problems. These include tests for cholesterol as a measure of risk for heart disease, a blood sugar test to detect diabetes, and a PSA level test which indicates in men the risk for prostate cancer.

Fortunately, there is also a thyroid test which tells you whether your thyroid hormone levels are right for you. It is called a TSH test (thyroid stimulating hormone) and consists of taking a small sample of blood which is then sent to a laboratory for analysis. All thyroid patients should know their test results and what these numbers may indicate.

For example, if you have too much thyroid hormone in your blood (hyperthyroidism), your pituitary gland senses this and decreases the production of TSH. If, however, your thyroid hormone level is low (hypothyroidism), your TSH level

will be high as your pituitary gland tries to stimulate the thyroid gland to produce more hormone. It is a bit like turning the thermostat up or down if the house is too cold or too hot.

The TSH test is the single most important test to screen for hyper or hypothyroidism, and the only reliable way to tell if your dose of thyroid hormone is right for you. If you are hypothyroid and taking thyroid hormone, your TSH should be in the normal range. In many laboratories, this is 0.5 - 5.0 microunits/ml but you should check the laboratory's normal range as some assays vary in their sensitivity and range of normal values. The normal range may also vary somewhat from country to country. If your TSH results are outside the normal range, further tests of T-3 and T-4 hormones may be in order.

If you have thyroid cancer, and your physician is giving you high doses of thyroid hormone to suppress the activity of

cancer cells, your TSH level should be low.

Whatever the situation is for you, be sure you discuss your TSH results with your physician at the time of your regular checkups and, above all, know your own TSH number and where it fits within the normal range. Keep a record of the results of each TSH test, note any major changes and discuss them with your doctor. Being well informed about your own condition is surely one of the best ways to help yourself.

Dr Lawrence C Wood, MD, FACP (USA), is President of the Thyroid Federation International.

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Recommended Web Sites

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Chronic Illness Alliance: <http://www.chronicillness.org.au> [Based in Melbourne. Represents groups throughout Victoria - including Thyroid Australia.]

Quackwatch: <http://familyinternet.com/quackwatch/index.html> [Guide to health fraud, quackery, and intelligent decisions, operated by Stephen Barrett, M.D.]

Thyroid Homepage: <http://www.thyrolink.com> [From Merck KgaA, Darmstadt, Germany.]

Patient Information

American Autoimmune Related Diseases Association: <http://www.aarda.org/index.html>

American Foundation of Thyroid Patients: <http://www.thyroidfoundation.org/>

Columbia-Presbyterian Medical Center: Thyroid Center: <http://cpmnet.columbia.edu/dept/thyroid/>

Diabetes & Hormone Center of the Pacific: Thyroid Disorders: <http://www.endocrinologist.com/thyroid.htm>

EndocrineWeb.com: <http://www.endocrineweb.com> [The largest web site for thyroid, parathyroid, adrenal, and pancreas disorders, including diabetes and osteoporosis. The information is intended for the education of patients and their families. Pages are added at least twice a week.]

Florida Thyroid Endocrine Clinic: http://homestead.com/thyroid_doctor/index-ns4.html [Webpage of H Jack Baskin MD. Also includes a link to Dr Baskin's book How Your Thyroid Works <http://howyourthyroidworks.homestead.com/index-ns4.html>]

Gland Central: Your Thyroid: <http://www.glandcentral.com/home.html>

The MAGIC Foundation for Children's Growth: <http://www.magicfoundation.org/> [Go to their Informational Brochures to get to Thyroid Disorders.]

Mary Shomon - About.Com Guide to Thyroid Disease: <http://thyroid.about.com/health/diseases/thyroid> [Please note that this site also contains links to and information about alternative and complementary diagnoses and treatments which are not considered mainstream by conventional medical practitioners. This site and its editor/webmaster, however, are not funded, supported by, or subsidised in any way by companies who manufacture thyroid hormone, thyroid treatment, or thyroid diagnostic drugs or testing.]

The MTC site: <http://perso.wanadoo.es/briant/index.html> [This site is devoted to the

fairly rare form of thyroid cancer known as Medullary Thyroid Carcinoma. It was created and is maintained by an MTC sufferer.]

National Graves' Disease Foundation: <http://www.ngdf.org>

NSW Health, Multicultural Health Communication Service

<http://www.health.nsw.gov.au-public-affairs/mhcs/> [Includes material on a number of health concerns, including one on How thyroid problems affect your health. These publications are in a number of languages other than English - the one on thyroid problems being in Arabic, Chinese, Croatian, English, Greek, Italian, Khmer/Cambodian, Korean, Laotian, Macedonian, Portuguese, Russian, Spanish, Thai, Turkish, and Vietnamese.]

Papillary Thyroid Cancer: An Inquiring Patient's Guide: <http://www.netcomuk.co.uk/~lawrence/PTC/links.html>

ThyCa: The Thyroid Cancer Survivor's Association: <http://www.thyca.org>

Thyroid Federation International: <http://www.thyroid-fed.org/home.html>

Thyroid Foundation of America: <http://www.tsh.org> and <http://www.tfaweb.org/pub/tfa>

Thyroid Foundation of Canada: <http://home.ican.net/~thyroid/Canada.html>

The Thyroid Society for Education and Research: <http://www.the-thyroid-society.org>

The University of Texas MD Anderson Cancer Center: Educational Materials: <http://endocrine.mdacc.tmc.edu/educational.html>

Professional Information

American Association of Clinical Endocrinologists: <http://www.aace.com>

American Thyroid Association: <http://www.thyroid.org>

The Endocrine Society: <http://www.endo-society.org>

The Endocrine Society of Australia: <http://www.racp.edu.au/esa/>

International Council for the Control of Iodine Deficiency Disorders:

<http://www.tulane.edu/~icec/icciddhome.htm>

Thyroid Disease Manager: <http://www.thyroidmanager.org> [Contains the revised version of the textbook "The Thyroid and its Diseases", and supplementary information. Directed at helping medical practitioners care for their patients with thyroid problems. Developed by Leslie J. De Groot, M.D., Georg Hennemann, M.D. and a group of thyroid experts, including Australian Dr. Basil Hetzel.]

operation, and the choice of surgeon. If a patient is unconvinced or unclear about the need for surgery (or any other thyroid treatment plan), a second opinion is a good idea.

Other Treatment:

A class of drugs known as the *beta adrenergic blocking agents* block the action of thyroid hormone on your body, and usually make you feel better within hours, even though they do not change the high levels of thyroid hormone in your blood. Propranolol (Inderal®) was the first of these drugs to be developed. Related but longer-acting beta-blocking drugs such as atenolol (Tenormin®), metoprolol (Lopressor®) and nadolol (Corgard®), and Inderal-LA® are now preferred by some physicians because of their more convenient once- or twice-a-day dosage. Except for hyperthyroidism caused by thyroiditis, these drugs are not the only form of therapy, but are used in combination with other treatments that are specifically directed towards the thyroid gland.

This information is provided by the Thyroid Foundation of America on their Web site at address <http://www.clark.net/pub/tfa/hyperbro.htm>

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Membership Application Form

Included is a membership application form, so if you have not yet joined, you can do so, or if you are a member, you can give it to a friend who might like to join as well.

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