THYROID FLYER

Newsletter of Thyroid Australia — Volume 1 No 3 July 2000

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Feature - Hypothyroidism

Editorial

By **Megan Stevens**

Introducing Robyn Koumourou

We take great pleasure in introducing Robyn Koumourou, who has agreed to be co-opted on to our committee. We are sure she will add value to what we do. She is 32 years old, and is married with two young daughters. She trained at Melbourne University and gained a BA and Diploma of Education in Art and Fine Arts. After only 4 years of secondary school teaching she had to leave due to ill-health. Over the next 5 years her health problems increased, and after the birth of her second child her condition became debilitating. It took another year before she was finally diagnosed with Hashimoto's Thyroiditis (March 1998). Her recovery was slow, and it took a year and a half for her condition to stabilise. Since this time she has diligently researched thyroid disorders to increase her understanding, improve her own condition, and help others. She is currently writing a book on thyroid disorders and related illnesses, specifically for thyroid patients in Australia. Robyn has written a great article for this edition of the newsletter, which will also be put on our web site.

Support Meetings

Our meetings at the Royal Women's Hospital in Melbourne and St. Matthew's Anglican Church in Mulgrave have been well attended. We appreciate the support of all those who attended, and hope that you learnt from the experience. We know we did!

We experimented with a workshop format at our June meeting with a slide presentation covering thyroid conditions, their symptoms and treatments.

We plan to use this format at our July meeting and our meeting in Geelong on

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Thyroid Gland Disorders

By **Robyn Koumourou**

Is your thyroid gland the culprit? How many times have you heard these words stated:

- 'It's Chronic Fatigue Syndrome, there's nothing much you can do about it'!
- 'You're just suffering from stress and anxiety'!
- 'It's in your genes, learn to live with it'!
- 'Just snap out of it and get on with your life'!

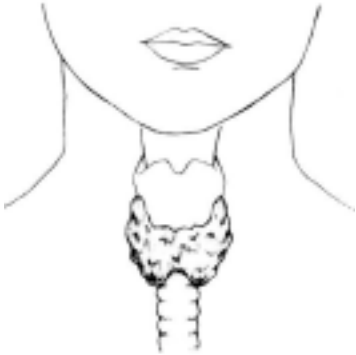
I'm sure you've heard these types of statements many times, from well meaning friends, relatives and even doctors. It can be very discouraging when those around you do not understand your physical and mental suffering. You may wish that they could live inside your body for just one day, and experience the symptoms you have to deal with constantly. However, it does come as a relief when you do find a doctor or person, who understands, to a degree, or shares similar experiences.

I have found that in Australia, in particular, the average person knows little about thyroid disorders and their detrimental affects upon health. Moreover, it has been difficult for some patients to find a doctor who is willing to test thoroughly, to make a diagnosis, and then explain their condition clearly.

There are many diseases and illnesses that have similar symptoms and it can be difficult for a doctor to make a quick diagnosis. It is therefore important to have a thyroid function test to rule out any possibility of thyroid abnormalities. Thyroid disorders can produce a multitude of symptoms that can affect any or every part of the body.

Thyroid Gland

The thyroid gland is an Endocrine (ductless) gland, which secretes its hormones directly into the bloodstream. It is located in the lower part of your neck. It wraps around your windpipe (trachea) like a bow tie, with two connecting lobes, and is well supplied with blood vessels.



Thyroid Hormones

The thyroid gland contains cells that secrete chemical substances called hormones. The main two hormones made by the thyroid gland are called thyroxine (T4) and triiodothyronine (T3), with T4 being produced in much greater quantities than T3.

T3, however, is the primary active hormone. T4 is much less active and while it does produce a limited effect, most of the T4 must be converted to T3 before it can be used by the body. This conversion takes place in particular organs (primarily the liver) and tissues, and is extremely important for the overall functioning of the body.

These hormones act like chemical messengers and deliver instructions to various tissues and organs (target organs) via the bloodstream. The cells within these organs then use the thyroid hormones and respond by speeding up or slowing down their activities. Overall, the thyroid gland is responsible for the speed

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How Many Australians Have Thyroid Conditions An Actuarial Doodle

By **Alun Stevens**

When my wife was diagnosed with Hashimoto's thyroiditis, one of my first points of interest as an actuary was what the incidence and prevalence rates were for the disease. (So that there is no confusion, *incidence rate* means the percentage of people who develop the disorder in a year, while *prevalence rate* means the percentage of people who have the disorder.) I have trawled through medical references and the internet for incidence and prevalence studies. I have found a number, but none which I regard as actuarially reliable for estimating population prevalence rates. I find this disturbing because it is impossible to develop effective public policy with respect to thyroid disorders without a knowledge of how many people are affected. How, for instance, can the Health Insurance Commission determine whether the amount of money spent on thyroid function tests is too high or too low without a clear idea of the number that should be ordered each year?

I decided to apply a little actuarial science to the studies that were available to try to estimate how many Australians have thyroid disorders – an actuarial doodle. The results are indicative rather than definitive.

Research Problems

The studies have generally used very small samples or samples not representative of the population. Some suffer from both problems. Most have only produced overall prevalence or incidence rates and have not determined the rates at specific ages. These results are not useful for estimating population prevalence even if they satisfy a medical purpose.

The other difficulty which besets this subject is the difficulty in deciding who actually has the condition. The problem is that irregularities in blood chemistry range from minor to significant and people with minor irregularities can have pronounced symptoms whilst others with significant irregularities can have less severe symptoms. Researchers have to draw the line somewhere. The problem is that they do not all choose the same definition. This obviously makes it very difficult to combine or compare results.

The only study that comes close to providing reliable results is the Whickham Survey[1] which was conducted in England over 20 years from 1972. The results from this study with an original sample of 2,779 are still subject to large statistical errors. A sample some 10 to 20 times larger would have been needed to produce reliable results. Nonetheless, this is the best we have so what does it mean?

Whickham Study and Australia

The Whickham study determined incidence rates by age for spontaneous (ie not caused by treatment) hypothyroidism and hyperthyroidism for women and overall incidence rates for men. The authors also reviewed a large number of earlier studies. I have taken these rates, smoothed the statistical fluctuations and applied them to the Australian population.[2] The results for the prevalence of overt hypothyroidism and hyperthyroidism are given in the table.

As an example of what these results mean, consider the age group 51 to 60. In this age group some 107,000 women suffer from hypo- or hyperthyroidism. This represents some 11.25% of women in this age group. There are only some 25,000 men in the same age group with these conditions or 2.5%. There are therefore 4.2 times as many women with the conditions than there are men.

The very high rate for the over 80's must be treated with some caution as the incidence rates at these ages have large statistical errors. The errors in incidence rates for the younger ages also accumulate to produce bigger errors in the prevalence rate for the older ages.

The overall result is that some 850,000 Australians can be expected to be suffering hypo- or hyperthyroidism. This group represents some 7.5% of women and some 1.5% of men. Further analysis also indicates that just over 40,000 new cases will develop each year – approximately 35,000 women and 5,500 men.

There are other forms of thyroid disease which are not included in these results. Cancer is ignored as are goitres and nodules which are not accompanied by abnormal blood chemistry. People with sub-clinical conditions – ie their blood hormone levels do not fit the definition used - are also excluded. The total number of thyroid sufferers will therefore be bigger than these results indicate.

The results highlight the fact that thyroid disorders are predominantly female conditions – especially of the over 50's. The inevitable consequence of this is that the prevalence of thyroid disorders will rise markedly over the next 20 years as the Baby Boomer generation moves into this age group.

Another interesting point arises when these prevalence rates are compared to the results of the 1995 National Health Survey conducted by the Australian Bureau of Statistics.[3] This survey reported that only 4% of women indicated that they had thyroid disorders against the 7.5% who are likely to have the disorders. This suggests that nearly half the thyroid sufferers are undiagnosed!

Australian Prevalence - Spontaneous Hypo- and Hyperthyroidism

Age	Female Number	Female %	Male Number	Male %	Female to Male
20 & under	16,065	0.60%	4,055	0.14%	3.96
21 to 30	26,891	1.91%	7,856	0.55%	3.42
31 to 40	50,631	3.46%	15,361	1.06%	3.30
41 to 50	83,833	6.28%	23,349	1.74%	3.59
51 to 60	107,289	11.25%	25,563	2.59%	4.20
61 to 70	136,747	19.30%	25,274	3.68%	5.41
71 to 80	166,344	29.22%	21,869	4.85%	7.61
Over 80	123,815	41.85%	9,504	6.26%	13.03
Totals	711,614	7.56%	132,831	1.43%	5.36

The Colorado Study

I also feel that I should comment on a prevalence study in Colorado which was published in February 2000.[4] This study, which has received a lot of publicity on the internet, reported average prevalence rates of 9.5% for hypothyroidism and 2.2% for hyperthyroidism. The combined prevalence of 11.7% is much higher than earlier studies. This high result and the apparent statistical reliability of the study (25,000 people were tested) have been used to promote the cause that thyroid disease is much more widespread than medical authorities are prepared to admit.

The study cannot support this claim. The results show categorically that the population prevalence rate cannot be as high as 11.7%. The reason is very simply that although a large number of people were tested they represent an extremely biased sample. The results are, in fact, of no use for estimating population prevalence rates.

The age and sex distribution of the sample is a primary cause of bias. The sample was much older (median age 56) than the general population (median age 32). 56% of the sample were women whereas women represent only 51% of the population. Correcting for this bias reduces the combined prevalence rate to around 7%. This is still higher than other studies, but is still not meaningful because of the final source of bias.

The sample was not random. It was made up of attendees at a 1995 Colorado Health Fair who volunteered to have their thyroid status tested. This methodology is guaranteed to produce results which are too high. Unfortunately the level of bias cannot be calculated so the results cannot be adjusted and are effectively unusable. The only thing that the study tells us is that the average prevalence of thyroid disease is definitely less than 7% of the population.

The Future

I find it disappointing that there is no reliable estimate of incidence and prevalence rates for thyroid disease in Australia. It would be heartening to see a collaboration between medical and actuarial professionals to produce a meaningful set of statistics so that there is a proper basis for public health policy. We would need government or commercial support as a study over 2 to 3 years with some 25,000 subjects would not be cheap. I live in hopeful anticipation.

(The answer to the question regarding thyroid function tests is that Australia should be spending some $90m per year - at $60 per test.)

Alun Stevens MSc FIAA, is an actuary who manages his own consultancy. (And for those who don't know, actuaries are the people who calculate rates of death etc., and then use these to fix the price for insurance – amongst other things.)

References

1. MPJ Vanderpump, WMG Tunbridge et al, 'The incidence of thyroid disorders in the community: a twenty year follow up of the Whickham Survey'; *Clinical Endocrinology* (1995) **43**, 55-68
2. Australian Bureau of Statistics, 'Population by Age and Sex', *Report 3201.0* (June 1999).
3. Australian Institute of Health and Welfare, 'Australia's Health 1998', *AIHW Cat No AUS10*, 17
4. GJ Canaris et al, 'The Colorado Thyroid Disease Prevalence Study', *Arch Intern Med* (Feb 2000), **160**, 526-534

How to "Test" Your Thyroid Levels at Home

By **Sharon Rigdon**

This is a multi-step process, so please take notes

1. Hook up the Nintendo
2. Place a game in it (preferable Tetrasaurus or Zelda)

3. Play for 1 hour.

Results:

A: If you have screamed, cursed, thrown down the controller and/or placed a curse on the maker of the game - you are HYPER!

B: If you are zombie-like and haven't moved off the level you started on - you are HYPO!

Now all you Warriors, we have a new "test result" to take to our next appointment with the doctor.

Gotta get back to Zelda - I'll beat that nut-throwing scrub yet!

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Editorial *from Page 1*

12 August. (Thanks to Kay and Robyn for organising the meeting in Geelong.)

At our 26 August meeting, Robyn Koumourou will chair the discussion on thyroid symptoms and their effects on the various parts of the body.

Prof Duncan Topliss has agreed to ad-dress our meeting to be held at the Al-fred Hospital on 23 September. This will be an excellent opportunity to discuss thyroid matters with a leading endocrinologist.

See Page 5 for all meeting details.

Butterflies Internet Chat Group

We have been approached by one of our members who is looking for young people (and those who are young at heart) with Hashimoto's Thyroiditis to join the Chronic Illness Open eMailing List at http://www.chronicillness.org.au/mailing.htm, to discuss their experiences with each other. This list is open to anyone who is interested in being part of a public, wide ranging discussion on issues related to chronic illness, so is open to those with other thyroid conditions as well. Looking forward to seeing what you have to say!

Monash Uni Medical Curriculum

In May Alun and Megan Stevens attended a forum convened by Dr Christine Walker of the Chronic Illness Alliance and the Curriculum Committee of Monash University's Medical School to discuss the development of the University's medical curriculum. A number of other organisations representing those with different chronic conditions also attended. It was a most interesting meeting, and we felt privileged to be involved. Thyroid Australia looks forward to any future involvement in this forum.

Feature

Our feature is hypothyroidism, particularly that caused by Hashimoto's thyroiditis (the most common cause of hypothyroidism). Our thanks to one of our members who submitted her experience of Hashimoto's thyroiditis for inclusion in this newsletter. Our resident actuary, Alun, has long been considering the incidence and prevalence of thyroid conditions in Australia, and gives us the benefit of his experience with his Actuarial Doodle. And for those of you who wonder how to test your thyroid levels at home, we include a recent article on self-testing published by the National Graves' Disease Foundation.

Thyroid Gland Disorders *from Page 1*

of metabolism (metabolic and chemical processes) in our bodies, by affecting every cell, tissue, organ and organ system. The thyroid gland is therefore essential for life, growth and development.

Thyroid hormones affect body temperature and circulation, appetite, energy levels, growth, skeletal development, muscle tone and agility, cardiac rate (force and output), fluid balance, blood sugar levels, central nervous system function, bowel function, blood fat (cholesterol) levels, and the regulation of fat, carbohydrate and protein metabolism in all cells.

The amount of T3 and T4 produced by the thyroid gland is controlled by the pituitary gland at the base of the brain. It does this by secreting Thyroid Stimulating Hormone (TSH). When the levels of T4 and T3 fall, the pituitary secretes more TSH. When T4 and T3 levels rise, the pituitary secretes less TSH. Normally this complicated production and control system ensures that the body has just the right amount of T3 and T4, but it can go wrong.

Abnormal Function

When the thyroid gland produces too much thyroid hormone (becoming overactive), the condition is called Hyperthyroidism. When the thyroid gland produces too little thyroid hormone (becoming underactive), the condition is called Hypothyroidism.

The most common cause of Hyperthyroidism is an autoimmune condition called Graves' Disease. With Graves' Disease the body produces antibodies which behave like TSH and stimulate the thyroid gland uncontrollably, to make too much thyroid hormone.

The most common cause of Hypothyroidism is also an autoimmune condition, called Hashimoto's Thyroiditis. With Hashimoto's Thyroiditis, white blood cells invade the thyroid gland and attack the tissue and the immune system produces antibodies which interfere with the production of the thyroid hormones.

With some individuals there can be a malfunction at the cellular level, where the cells of the body do not respond to or utilise thyroid hormones correctly. The receptor sites in cells may be resistant to thyroid hormones and the chemical messages may not be received. The successful conversion of T4 into T3 may also be hindered within the cells, and the body is then starved of sufficient amounts of T3. These problems with T4 to T3 conversion and thyroid hormone resistance are uncommon, and they can be easily misdiagnosed.

Another uncommon problem relates to the pituitary gland. It can malfunction and produce too much or too little TSH. This has a direct impact on thyroid function and the amount of T4 and T3 produced.

Thyroid related illnesses have a variety of causes, and sometimes the problem is not with the thyroid gland itself. Whatever the cause, abnormal physical and mental symptoms will appear, which can range from mild to severe.

Hyperthyroidism

The type of complaints that characterize Hyperthyroidism – an overactive thyroid gland:

Common

- Palpitations, fast pulse and irregular heartbeat
- Trembling and twitches
- Heat intolerance
- Hot flushes and increased sweating
- Increased appetite (or loss of appetite)
- Weight loss (especially if eating well)
- Diarrhoea
- Anxiety, nervousness and/or panic attacks
- Restlessness
- Irritability
- Thin, moist skin
- Soft, thinning hair
- Shortness of breath
- Muscle weakness
- Insomnia
- Enlarged thyroid gland
- Eye complaints (especially gritty or bulging eyes)
- Fatigue, exhaustion and lack of energy
- Infertility
- Menstrual cycle disturbances (intermittent and light)
- Depression and mood swings

Less Common

- Bowel disorders
- Brittle nails
- Chest pain
- Cramps
- Decreased libido
- Easy bruising
- Hair loss
- Headaches and migraines
- Sore throat
- Swelling of legs

Not everyone has all of these symptoms. You may relate to only a few of the above conditions, or you may relate to many of them. Everyone is different.

Hypothyroidism

Hypothyroidism has been called the "unsuspected illness" and one that is fre-quently misdiagnosed. The manifesta-tions that characterize Hypothyroidism – an underactive thyroid gland - are the following:

Common

- Weight gain
- Chronic constipation
- Feeling cold (especially hands and feet) even on warm days
- Low basal temperature
- Fatigue, exhaustion and low energy (even after 12 hours sleep)
- Slow reflexes
- Slow, weak pulse
- Slowness of thought processes
- Indecisiveness
- Poor memory and concentration
- Sluggishness
- Muscle weakness
- Pain and stiffness in muscles or joints
- Deepening, hoarse voice
- Depression, mood swings, and PMS
- Thick, dry, coarse skin
- Creviced, cracking skin on heels, elbows and knee caps
- Enlarged thyroid gland
- Lump in throat (hard to swallow)
- High cholesterol
- Menstrual cycle irregularities (prolonged and heavy)
- Infertility
- Numbness and tingling (especially in hands and face)
- Fluid retention
- Brittle hair and nails
- Hair loss
- Shortness of breath on exertion

Less Common

- Allergies
- Back pain
- Blood pressure problems
- Breast tenderness
- Irregular heartbeat
- Chest pain
- Digestive disturbances
- Dizziness
- Dry eyes and mouth
- Headaches and migraines
- Irritability
- Pale skin
- Palpitations
- Reduced libido
- Skin rashes
- Sore throat
- Stiff neck and shoulders
- Thinning eye brows
- Visual disturbances

Once again not everyone has identical symptoms. You may relate to some of these conditions, or you may relate to many of them. Everyone is different.

A person suffering from either an overactive or underactive thyroid gland may display many of these symptoms, and find that coping from day to day is extremely difficult. The pressure on bodily functions will continue to increase unless appropriate treatment is given. A thyroid function test should be performed, measuring the levels of thyroid hormones in the blood.

Thyroid Function Test

Immunoassay techniques for diagnosing thyroid disorders measure the amount of circulating hormones in the blood very accurately.

A Thyroid Function Test (TFT) generally consists of the following:

Hormone	Range
TSH	0.30 - 5.00 mIU/L
T4	11 - 23 pmol/L
T3	3.5 - 6.7 pmol/L

Normal reference ranges have been developed for the various hormone levels. These may differ slightly depending on the laboratory's assay methods (methods of analysis). Any blood test results that show hormone levels outside of these ranges usually indicate a potential thyroid problem.

TSH only?

The TSH level is a good indicator of thyroid function and is considered the most important hormone to be initially tested. Thyroid Stimulating Hormone (TSH), produced by the pituitary gland, is therefore the first hormone assessed when suspecting a thyroid disorder.

If the TSH level is abnormal, a far clearer picture of thyroid function is needed, and T4 and T3 levels must also be tested to ensure a correct diagnosis. People with a diagnosed thyroid problem must also ensure that their T4 and T3 levels are routinely tested along with their TSH level. If the diagnosis were unclear, with blood tests results near the outer limits of the normal range, it would be wise to have a thyroid antibody test. This may indicate that your thyroid gland function is being compromised, especially if you present with classic thyroid symptoms.

Communication

When it comes to thyroid conditions, it is extremely important to find a doctor (or specialist) with a sensitive and compassionate approach, who is willing to work with you, and vice versa. Communication needs to be open and honest and you should feel comfortable in asking questions concerning your condition. It is also important to know and understand your thyroid function tests, and you should feel confident in asking your doctor for copies of your lab results.

Treatment

It is definitely worth researching and understanding your thyroid disorder before making a decision on treatment. Your doctor will explain the most appropriate procedures with regard to your condition, and then you can make a fully informed decision, once you understand your options.

Successfully treating and recovering from thyroid related illnesses does take time. Dedication from both the patient and doctor is needed. Medications and procedures will be required to increase or decrease the levels of thyroid hormones in circulation. Hypothyroid patients will be given T4 (thyroxine) in tablet form, to restore the amount of thyroid hormones in the body to normal. Hyperthyroid patients may be given anti-thyroid medication to reduce the amount of thyroid hormones made by the thyroid gland. Some patients will recover relatively quickly and will only need occasional blood tests to keep check of thyroid hormone levels. For others, their treatment may be tedious and complicated, and may require surgery. It could take up to a year or more to stabilize thyroid function. This will depend upon the severity, and type, of condition. Overall, patients well cared for and treated appropriately should enjoy a healthy vibrant life with a lowered risk of long term health problems.

Robyn Koumourou is a Committee member of Thyroid Australia. She is writing a book about thyroid disorders and related illnesses in Australia.

Next issue of the *Thyroid Flyer*

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

UPCOMING MEETINGS

Royal Women's Hospital, Grattan St, Carlton (Melway 2B F7)
29 July (Workshop)
26 August (Thyroid Symptoms)
Conference Room on the First Floor

Church of Christ, Latrobe Terrace, Geelong (Melway 228A D5)
12 August (Workshop)

Alfred Hospital, Commercial Road, Prahran (Melway 2L D9)
23 September
Prof Duncan Topliss will discuss thyroid conditions and their treatment and will answer questions.

Directions to the venue will be provided at the main entrance on Commercial Rd.

All 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.

Change of Address?

If you are moving house, or if any of your contact details are changing, please include us in the list of those you need to inform. You can ring, fax, or write to us by mail or e-mail. We need this information to ensure that you receive your *Thyroid Flyer* and correspondence promptly.

Thyroid Flyer by email

We would like to remind our readers that the Thyroid Flyer is also available in full colour as a PDF [portable document format] file as an e-mail attachment. Please let us know if you would prefer to receive the newsletter in this format instead of having it mailed out to you (or if you would prefer to receive it in this format as well as having it mailed to you).

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. The stories will be published anonymously unless you ask to be named.

The views expressed in this section are not necessarily those of Thyroid Australia. Check all treatment options with your doctor.

"I'm Not Going Mad - I Have a Thyroid Disorder!"

"I cried with relief when he told me. At last I knew what was wrong ... I was not imagining the symptoms. He also told me I would not have survived a further two weeks and that stunned me."

My story starts in April, 1995 when I first had a problem with my muscles. I noticed the muscle in my forearm go into a cramp for no reason and this lasted a while and I thought it unusual. I was getting tired but with four children I figured this was normal. This tiredness started to get worse over the next couple of months and as winter was coming on I started to feel cold all the time. The muscle cramps were getting worse and I started to feel something was not quite right. I went to my doctor for the first time but he said it was nothing to worry about and if I got worse come back. I started to have trouble standing up for long periods of time such as washing up, hanging clothes on the line and walking anywhere. My back especially felt like I was stretching my muscles in my lower back down towards my feet and after a while I had to sit down to rest. I also started having very painful muscle spasms in my shoulder muscles which would keep me awake at night. These lasted for a few minutes before I would get some relief. I went to the doctor again and was told it was stress with a virus and it would go away.

June was now ending and winter really setting in. The feeling of being cold was getting worse. I felt very cold to the touch and my workmates used to ask me if I was dead. At night I would sleep with winter nightie, bed socks, jumper and sometimes dressing gown together with my waterbed on high to get a bit of warmth. The depression started about now. I was starting to get concernerned with all these symptoms I was having. I would come home from work and sit on the lounge not being able to do anything and it was an effort to even lift my arms. I was crying a lot and feeling very down and confused. By the time August and September came I was getting a lot of symptoms.

As well as the ones already mentioned, I was putting on weight, I was also dizzy and feeling pretty weird. I was not motivated to do anything and I realised this was not normal for me. My husband is in the Navy and was away a lot that year and saw the changes happening to me. He and my family tried to help but could not understand what was happening to me. How could they - I was unable to myself.

I was getting symptoms which may have indicated low blood sugar so my doctor sent me for a glucose tolerance test. This was a nightmare. I had to have my blood tested every half an hour for six hours. As I had put on weight my veins would not cooperate and I ended up with seventeen puncture marks in both arms and hands and only five of the twelve tests I could not take anymore and stopped them. I had bruises up both arms where the veins had collapsed and could not be used. If I had been pulled over by the police they would have thought they were track marks from drugs. I was diagnosed with hypoglycemia (low blood sugar) and put on a special diet and told to eat every 3 hours but after a couple of weeks was no better. I got my results and asked my doctor if he thought it was low and he said it was but within normal range.

October came and I was getting even worse. My weight was getting out of control. My face was very puffy. My speech was slurred (slowing down) to such a degree that my family in Queensland used to ask if I was drinking (I am not a drinker). The depression got worse and the muscle cramps were coming a lot more during the day and night and involved different muscles. I can remember trying to eat a sandwich and only got half way through before my jaw was so tired from chewing I could not continue. After this time the depression got so bad I was referred to a psychiatrist who put me on anti-depressants. I kept telling him about the other symptoms but he told me they could all be caused by depression. After about six weeks and a reaction to the anti-depressants, I started to feel I was better, mentally at least. I think this is when I realised there was something very wrong with me. The physical symptoms I was having were getting worse. I was so tired I would go into a trance-like state sometimes. I found it very difficult to concentrate and was confused and when I woke in the morning it would take all my strength to stay awake. I remember one morning I could not wake myself up and told my husband if he could not rouse me shortly to call an ambulance. After about an hour I woke up enough to get up. It is a very scary feeling not being able to wake up.

I went to my doctor again and this time was not able to see him but got a lady doctor instead. I told her about all the symptoms I was having. She could not say what was wrong but when I told her I was seeing a psychiatrist for depression she "smiled". I asked her to phone the psychiatrist to see if they could work out what was wrong. After some persuasion on my part, she did. I was listening to her conversation and then she started to laugh and look at me. By this stage I felt I was being treated as a "lunatic who should be locked up". When she got off the phone she told me everything would be okay and go home and take some Panadol and lie down and if things got worse to come back. This was the only time I have ever pleaded with a doctor to help me as I knew I was not imagining the problems I was having and I was frightened for me and my kids who needed me to be well. I have never gone

back to that doctor again! This was the end of November and I was very bad now. My skin was so dry the hair was standing on end and my skin was flaking. My hair was very thin and falling out. My face was so puffy I could not open my eyes properly. The muscle spasms were very bad. I was nauseous all the time and could not eat. I was exhausted. My heart rate was very slow and so were my reflexes and could not walk for more than a few feet before becoming very breathless.

I then started to get angina attacks. The first one threw me for six. I thought I was having a heart attack. I had the second one the same day after I had gone to bed and this one was a lot worse. The pain shot across my chest and down my arm and I thought it would never end. After about 10 minutes it did and I went to the doctor (a different surgery) in the morning and he said he did not know what was wrong but could be low potassium (told me to eat more bananas) or multiple sclerosis but he referred me to a specialist. The first time I saw him he took heaps of blood for tests (my veins were hidden so he took it from my foot). I went back the following week and was diagnosed with Hashimoto's Thyroiditis. I cried with relief when he told me as at last I knew what was wrong and I was not imagining the symptoms.

My symptoms were so pronounced he says he knew what was wrong with me as soon as I walked into his room but had to get the results before he could tell me for sure. He also told me I would not have survived a further two weeks and that stunned me.

I was put on a large dose of Oroxine and it took over six months before I started to feel well again. It has not been easy to get the dosages right but I am there now. It has been 18 months now since I have been diagnosed and I feel really well. I also joined Weight Watchers last year and have lost 34 kilos and feel so well and have so much energy. I am having blood tests (out of my arms) every 6 months and my results are in the high normal range but because I feel so good the doctor says to keep taking the same dose. Taking the tablets each day is a small price to pay to have control of my life back.

Thyroid Australia Recommends ...

After discussing thyroid conditions and their treatment with hundreds of you over the past year, we have decided to list the following recommendations for those being treated for thyroid conditions:

- All thyroid patients should have their T4 (thyroxine), T3 (triiodothyronine) and TSH (Thyroid Stimulating Hormone) levels tested annually or when they need a new prescription or when their dosages are changed.
- All thyroid patients should keep a copy of their thyroid function test results. They should also record their symptoms and state of health at the time. This will allow them to understand and manage their conditions properly in partnership with their doctor.
- Thyroid replacement doses for hypothyroid patients should relieve their symptoms AND return their hormone levels to the normal ranges. Experience indicates that this requires T4 levels at the upper end of the normal range and TSH levels at the lower end.

Telephone Contacts

Hashimoto's Disease: Chronic Lymphocytic Thyroiditis

By **Lawrence C. Wood, M.D.**
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In 1912 Dr. H. Hashimoto, a Japanese pathologist, described four patients with enlargement of their thyroid glands. He examined the thyroids of these patients with a microscope and found that their thyroid tissue was invaded by white blood cells known as lymphocytes. In addition, he described degeneration and scarring within the gland, features which suggested tissue destruction by some underlying process.

Thyroiditis is the general term used to describe disorders in which the thyroid gland becomes inflamed. In some forms of thyroiditis (acute and subacute) the inflammation appears to be caused by or associated with a bacterial or viral infection. In contrast, in chronic lymphocytic thyroiditis, also known as Hashimoto's Disease, the inflammation appears to be due to the action of antibodies produced by the lymphocytes which Dr. Hashimoto observed in his patients so long ago. Because the inflammation is so mild, patients who are developing the condition tend to have few symptoms until so much of the thyroid has been destroyed that hypothyroidism develops.

A Common Disorder

Although Hashimoto's Disease was initially felt to be fairly rare, physicians have come to realize that it is actually extremely common. Studies of large numbers of people suggest that 10% of women over the age of fifty become hypothyroid due to this condition. In fact it may be even more widespread, for other studies have shown that 16% of women over fifty have antibodies against thyroid tissue in their blood. It seems likely that these antibodies reflect the presence of chronic thyroiditis. Follow-up studies of these patients have shown that they are at increased risk for hypothyroidism in later years.

If you begin to develop the low grade thyroid inflammation of chronic lymphocytic thyroiditis you will likely feel perfectly well and have no symptoms or physical evidence of a thyroid problem for many years. Your thyroid hormone levels will be normal and the subtle changes within your thyroid gland do not produce noticeable enlargement or goiter. Therefore, you probably won't have difficulty swallowing. You are not likely to have any symptoms until the inflammation within your thyroid gland damages enough thyroid tissue so that your thyroid is no longer able to make normal amounts of thyroid hormones. At that point your physician may suspect a thyroid problem during your annual physical examination because a slight enlargement of your thyroid gland may be evident. Alternatively, your thyroid may become lumpy or "nodular" and the condition may be detected in a thyroid biopsy done to evaluate one of your thyroid nodules. Some patients with Hashimoto's disease, however, do not have any thyroid enlargement or lumps.

As the disease progresses, you may also begin to have symptoms of thyroid hormone deficiency or hypothyroidism. Many patients feel tired, cold, or mentally down. You may also experience constipation, dry skin, dry and brittle hair, and muscle cramps.

At that point a blood test will probably show a low level of the thyroid hormone Thyroxine (T4) and an increase in your Thyroid Stimulating Hormone (TSH) confirming hypothyroidism.

Treatment

If Hashimoto's Disease is causing only slight thyroid enlargement or nodularity, your physician may not treat you with thyroid hormone. Instead, he or she may simply monitor your condition with periodic examinations and measurements of your thyroid blood tests.

On the other hand, if your thyroid inflammation has progressed to the point of causing hypothyroidism, your physician will probably prescribe treatment with thyroid hormone tablets in gradually increasing doses until your thyroid levels are normal, at which time your symptoms should disappear.

Most physicians monitor treatment by periodically measuring the levels of thyroid hormone and TSH in your blood. If your thyroid hormone level is normal your TSH level will also be normal. If you're not taking enough thyroid hormone, your pituitary will increase its production of TSH and your TSH blood level will be above normal. On the other hand, if you are taking too much thyroid hormone the level of TSH in your blood will be below normal. Your physician will use the results of blood tests to be sure that your medication dosage is appropriate.

Related Conditions

Hashimoto's Disease tends to occur in families. In these families some relatives may also have hypothyroidism, while others may have the type of hyperthyroidism known as Graves' Disease. Still other individuals may have different antibody-mediated "autoimmune" diseases including, insulin-dependent diabetes, pernicious anemia, patchy hair loss known as alopecia areata, white spots on the skin known as vitiligo, and prematurely gray hair.

If some of these conditions occur in your family, your physician may elect to perform thyroid blood tests in older family members, especially in women over fifty, in an effort to detect mild hypothyroidism due to Hashimoto's Disease before it causes serious illness. Such screening techniques are being used increasingly since the symptoms of mild early hypothyroidism can often be mistakenly attributed to aging. Needless to say, it is gratifying for a patient to find that some of their fatigue and lethargy are due to hypothyroidism, which can be treated, rather than to the aging process.

It is fortunate that we have developed these sensitive techniques for diagnosing and treating Hashimoto's Disease and the hypothyroidism which it can produce. If it has caused you to become hypothyroid, you should have no cause for concern, as long as you see your physician regularly for thyroid examinations, blood tests, and treatment.

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