THYROID FLYER

Inside Page

FEATURE:

Newsletter of Thyroid Australia Ltd Volume 2 No 4 October 2001

Feature - T_3 and T_4 Combination Therapy

Editorial

By **Megan Stevens**

The thyroid produces two hormones which are essential for normal metabolism. These are thyroxine (T_4) and a small amount of triiodothyronine (T_3), which is the active thyroid hormone. More T_3 is produced by the conversion of T_4 into T_3 within the cells.

We get many hypothyroid patients asking us about combination T_4/T_3 therapies as outlined by R Bunevicius et al in their article "Effects of thyroxine as compared with thyroxine plus triiodothyronine in patients with hypothyroidism" (*The New England Journal of Medicine*, February 11, 1999, Vol. 340, No. 6). This article finds that "In patients with hypothyroidism, partial substitution of triiodothyronine for thyroxine may improve mood and neuropsychological function" by substituting 50µg of the patient's normal thyroxine with 12.5µg of triiodothyronine. (You can find the abstract of this article on the internet at http://content.nejm.org/cgi/content/short/340/6/424)

In his book *The Thyroid Solution: A mind-body program for beating depression and regaining your emotional and physical health* (Ballantine Books, New York, 1999, p.286) Texan endocrinologist Dr Ridha Arem suggests dosages for combination therapy to replace full thyroxine therapy. His suggestions are given in the table on Page 4.

The brand of T_3 available in Australia is called Tertroxin. The manufacturers of Tertroxin, Boots Healthcare, suggest that "Tertroxin is indicated in the treatment of: coma due to myxoedema; management of severe thyroid deficiency; hypothyroid states arising in treatment of thyrotoxicosis. Tertroxin may be preferred for treating severe and acute hypothyroid states because of its rapid and more potent effect but thyroxine sodium

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What Is The Optimal Treatment For Hypothyroidism?

By **John Walsh and Bronwyn Stuckey**

The management of patients with primary hypothyroidism (as indicated by a high serum TSH (thyroid-stimulating hormone) concentration and a low serum free thyroxine concentration) is often straightforward.[1] Recent studies suggest, however, that standard thyroid replacement therapy with thyroxine may not be completely effective in relieving the symptoms of hypothyroidism, and that there may be a role for combined treatment with thyroxine and triiodothyronine (T_3). Here, we review the management of established primary hypothyroidism, with particular reference to recent research. The issues of screening and treatment for subclinical hypothyroidism (indicated by high serum TSH and normal serum thyroxine concentrations) were reviewed recently in the Journal and are not discussed here.[2]

Thyroxine replacement

The dose of thyroxine required for standard thyroid replacement therapy depends to some extent on body weight, but it is not usually prescribed in this way. Rather, younger patients who are otherwise healthy are treated initially with a dose of 50µg or 100µg/day, which is adjusted by 25-50µg, if required, at intervals of 4-8 weeks. As thyroxine tablets are available in Australia in only three strengths (50µg, 100µg and 200µg), fine adjustment of dose may require cutting tablets in half, or using alternate-day dosing schedules (eg. 150µg alternating with 100µg to give an average daily dose of 125µg). A resultant serum TSH concentration within the reference range is conventionally regarded as indicating adequate therapy, and is a more reliable measure than serum thyroxine or T_3 concentrations for monitoring treatment.[3]

- Standard treatment of primary hypothyroidism is with thyroxine, with the aim of relieving symptoms and bringing the serum TSH (thyroid-stimulating hormone) concentration to within the reference range.
- Recent research suggests that in some patients symptoms of hypothyroidism persist despite standard thyroxine replacement therapy. The optimal treatment of these patients is not known. Adjusting the thyroxine dose until the serum TSH concentration is in the lower part of the reference range (eg. 0.3-2.0 mU/L) may be beneficial.
- Animal studies and a single small clinical trial suggest that a combination of thyroxine and T_3 (triiodothyronine), rather than thyroxine alone, may be required for optimal thyroid replacement therapy.
- Further research is needed to determine why some patients appear to have a suboptimal response to thyroxine, and whether combined thyroxine/T_3 treatment is preferable to thyroxine alone in these patients.

Physical signs of hypothyroidism, although they may prompt the diagnosis, are relatively insensitive for monitoring and fine-tuning therapy,[4,5] However, in patients with secondary hypothyroidism arising from pituitary disease, serum TSH concentration is not a reliable guide to therapy, which must be assessed clinically and by measurement of the serum thyroxine concentration.

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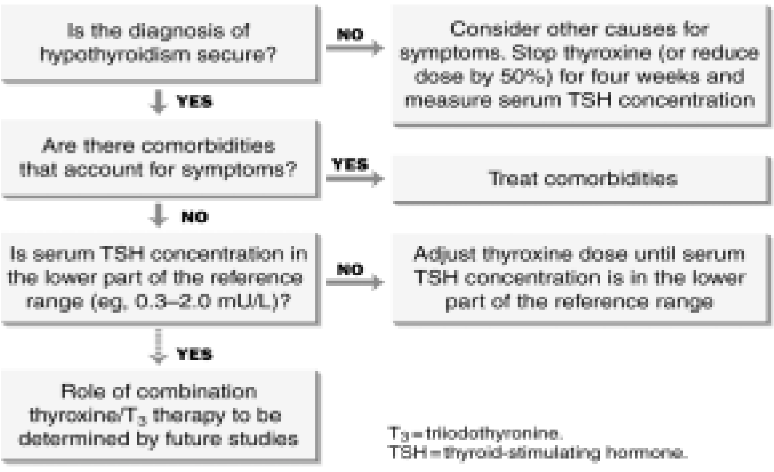
Optimal Treatment for Hypothyroidism *from Page 1*

For elderly people, who require less thyroxine because of reduced clearance,[6] the initial dose should usually not exceed 50μg/day. In patients with ischaemic heart disease, and those with severe, long-standing hypothyroidism, rapid correction of hypothyroidism may precipitate angina, cardiac arrhythmias or other adverse effects. For these patients, smaller initial doses (25μg or 12.5μg/day) may be appropriate, followed by slow titration to full replacement (as tolerated) over several months.

Once started, thyroxine treatment is usually continued life-long, as spontaneous resolution of hypothyroidism is uncommon, occurring, for example, in only 5%-10% of patients with Hashimoto's disease.[7,8]

Autoimmune hypothyroidism occurring in women during the postpartum period often resolves, at least in the short term, but there is a high long-term risk of recurrence in affected women,[9] raising the question as to whether long-term thyroxine treatment might in fact be appropriate for these women. In pregnancy, thyroxine requirements often increase by about 50μg/day, particularly in the first trimester.[10] Serum TSH concentrations should therefore be measured during each trimester and thyroxine dose adjusted accordingly.



Suggested management of patients with persistent symptoms of hypothyroidism despite standard thyroxine replacement therapy

How effective is thyroxine treatment?

Although many people with hypothyroidism have a good symptomatic response to thyroxine, anecdotal reports have long suggested that in some patients symptoms persist despite apparently adequate replacement. The symptoms are often non-specific (eg. tiredness), making it difficult for the clinician to know if they are truly related to hypothyroidism. One study found that patients experienced improved well-being if they took a daily dose of thyroxine 50μg greater than the optimal dose suggested by serum TSH concentration and TRH (thyrotopin-releasing hormone) stimulation tests.[5] This could be interpreted as showing that thyroid function tests underestimate patients' true thyroxine requirements, but could equally well reflect a euphoric effect of hyperthyroidism resulting from excessive thyroxine replacement.

Recently, Dayan and colleagues examined the problem of persistent symptoms by administering a standard psychiatric questionnaire (the General Health Questionnaire 12)[11] and a novel Thyroid Symptom Questionnaire to 600 thyroxine-treated patients as part of a community-based, case-controlled study in the southwest of England.[14] As a group, subjects with hypothyroidism had significantly worse scores on both instruments, indicating higher psychiatric morbidity and persistent symptoms of hypothyroidism, such as impaired memory and clarity of thought, tiredness, weight gain, somatic aches and pains, and physical clumsiness. This was despite apparently adequate treatment, as indicated by serum TSH concentrations within the reference range. The results suggest that at least some people with hypothyroidism are not returned to normal health by standard thyroxine replacement therapy. Further research is needed to determine whether there is a biological basis for this suboptimal response.

How should patients with persistent symptoms be treated?

Patients with hypothyroidism whose symptoms fail to respond, or respond only partially, to thyroxine present a difficult management problem (see Box). In some cases, it is apparent that the evidence for the diagnosis of hypothyroidism was not strong, and the symptoms that persisted after thyroxine treatment were probably unrelated to thyroid disease in the first place. In other cases, comorbid conditions such as depression or anaemia can be identified as causing the symptoms, which respond to specific treatment. However, there remain some patients with an unequivocal history of hypothyroidism who experience an initial improvement after thyroxine treatment but whose symptoms do not resolve completely.

The optimal management of these patients is not known. There is evidence that individuals have different set points in the relationship between serum thyroxine, T_3 and TSH concentrations.[12,13] The reference range for TSH is wide (typically 0.3-4.0mU/L) and not normally distributed, with a mean and median in the lower part of the range, at about 1.5mU/L.[13,14] Thus, a serum TSH concentration of 4.0mU/L, although within the reference range, might reflect significant undertreatment for a patient whose optimal thyroxine replacement dose would result in a serum TSH concentration of 0.4mU/L. In patients with persistent symptoms, therefore, it is reasonable to adjust the thyroxine dose until the serum TSH concentration is in the lower part of the reference range in the hope of achieving symptomatic improvement. Although this approach is widely used,[15,16] it is of unproven benefit. Further increases in thyroxine dosage that reduce the serum TSH concentration to below normal levels should probably be avoided, as this is association with tissue evidence of hyperthyroidism (increased bone resorption, cardiac hypertrophy and an increased risk of atrial fibrillation).[17-20]

Is there a role for combined thyroxine and T_3 treatment?

Although thyroxine is the major hormone secreted by the thyroid, its tissue effects are achieved largely by conversion in peripheral tissues to the more biologically active hormone, T_3. The thyroid also secretes T_3 directly, accounting for 20% of the body's total production,[21] but until recently this was thought to be physiologically unimportant. Based on the premise that peripheral conversion generates adequate amounts of T_3, thyroxine alone has been used to treat hypothyroidism.

Animal studies suggest, however, that the direct contribution by the thyroid to circulating T_3 concentrations may be important, and that thyroxine alone may not be adequate treatment for hypothyroidism. In studies in thyroidectomised rates, no single dose of thyroxine could be found that normalised both circulating and tissue concentrations of thyroid hormones. To achieve normal tissue concentrations of T_3 required either high doses of thyroxine, resulting in suppression of TSH secretion, or combined thyroxine/T_3 treatment, which was able to normalise serum thyroxine, T_3 and TSH concentrations, and levels of thyroxine and T_3 in most peripheral tissues.[22,23] If the same is true of humans, then combined thyroxine/T_3 treatment might be a more physiological replacement regimen for hypothyroid patients than thyroxine alone.

Combined thyroxine/T_3 treatment is not a new idea. From 1891, when thyroid extract was first used to treat myxoedema, until the widespread use of synthetic thyroxine in the 1950s and 1960s, patients were treated routinely with extracts of sheep or beef thyroid containing both thyroxine and T_3.[24] These preparations are no longer available in Australia *[Ed. Natural extracts from animal thyroids are avalable in Australia. See our web site or ring Robyn on 03 9754 6281]*, but are still taken by some patients overseas, as are commercially produced combinations of synthetic thyroxine and T_3. They are not recommended by bodies such as the American Thyroid Association owing to their variable potency, their high T_3 content relative to thyroxine, and the prevailing view that thyroxine alone can provide adequate thyroid replacement therapy.[25]

A recent study compared the effects of thyroxine alone and combined thyroxine/T_3 treatment administered in a double-blind, crossover fashion to 33 hypothyroid subjects.[26] Combination treatment, in which 12.5µg of T_3 was substituted for 50µg of the patient's usual thyroxine dose, was associated with improved mood, wellbeing and cognitive function compared with thyroxine treatment alone, and was preferred by most of the patients. Weaknesses of the study included its small size and the fact that the treatments were given for only five weeks, barely long enough for a steady state to be reached after a change in thyroxine dosage. The findings therefore require confirmation in better-designed trials before combined thyroxine/T_3 treatment can be generally recommended, although its empirical use in selected patients is not necessarily contraindicated.

Conclusions

Thyroxine remains standard therapy for hypothyroidism, but evidence is accumulating that in some patients it does not completely relieve symptoms. For such patients, it may be beneficial to adjust the thyroxine dose until the serum TSH concentration is in the lower part of the reference range. Further research is needed to establish whether combined thyroxine/T_3 treatment has benefits over thyroxine alone in the treatment of patients with persistent symptoms despite thyroxine replacement, or in hypothyroid patients in general.

[Editor's Note:
Drs John Walsh and Bronwyn Stuckey have asked Thyroid Australia to stress that they are of the opinion that combination T_4/T_3 treatment for hypothyroidism is not yet of proven benefit and more work needs to be done to test whether it is indeed so. We would like to remind readers that Dr Walsh is currently engaged in a study in Perth WA testing combination T_4/T_3 treatment in hypothyroid patients.]

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Walsh JP and Stuckey BGA. **What is the optimal treatment for hypothyroidism.** MJA 2001; 174: 141-143. ©Copyright 2001. *The Medical Journal of Australia* – reproduced with permission.

Editorial ***from Page 1***

is normally the drug of choice for routine replacement therapy. Tertroxin can also be used therapeutically in the treatment of thyrotoxicosis as an adjunct to carbimazole in order to prevent subclinical hypothyroidism developing during treatment." (from HealhAnswers.com.au, Tertroxin Tablets at http://www.healthanswers.com.au/drugdata/DrugDetails.asp?ID=9289)

A problem arises with the size of dose of Tertroxin available in Australia, as it is only available in a 20 µg dose. Not only does the size of the Tertroxin dose pose a difficulty for this regime in Australia, but so do the sizes of the Oroxine (T_4) doses, coming as they do in 50 µg, 100 µg, and 200 µg dosages. This means that Australian patients have to cut tablets (and so compromise the actual doses of their medication) in order to achieve the dosage levels recommended either by the article in the *New England Journal of Medicine* or those suggested by Dr Ridha Arem.

Many medical practitioners still view this new combination T_4/T_3 treatment protocol as controversial and want further evidence before they accept it as valid. It seems to me that if this treatment protocol of combination T_4/T_3 therapy should receive acceptance among medical practitioners in Australia, the manufacturers of both Tertroxin and Oroxine might need to review the dosages in which their products are available in Australia.

Following the publication of the article in the *New England Journal of Medicine*, I approached my doctor to see if I too could try this new protocol. I felt pretty good on a daily dose of 150 µg of Oroxine, but wondered if I might feel better on the combination. My doctor suggested that I replace 50 µg of Oroxine with 10-20 µg tablet of Tertroxin. After vascillating between hyper- and hypothyroidism for about a month, I decided to abandon my one-person experiment and started taking my full dose of 150 µg of Oroxine as previously prescribed again. I probably did not give the combination T_4/T_3 therapy a fair trial, and maybe at a later stage I will try it again. However, at the moment it seems as if I am one of the many hypothyroid patients who does reasonably well on thyroxine alone.

We get many calls from patients who are being treated for hypothyroidism who may be under-dosed. As most hypothyroid patients tolerate T_4 well, and feel pretty well when their dose is at the right level for their bodies, our organisation recommends that hypothyroid patients first try to work with their doctors to get their T_4 dose to that optimum level before approaching their doctors about trying T_3 as well.

RIDHA AREM DOSAGES	
Initial Thyroxine Dose (µg)	New Thyroxine Dose (µg) With 5µg T_3 Twice Daily
88	50.0
100	62.5
112	75.0
125	88.0
137	100.0
150	112.0

Further information on the T_4/T_3 combination therapy can be found in the article by Drs John Walsh and Bronwyn Stuckey, and that by Dr Colin Dayan. We thank Drs Walsh and Stuckey (as well as the *Medical Journal of Australia)* for permission to publish their excellent article and thank the Thyroid Eye Disease Association of the UK for permission to use their material. Please note that Drs Walsh and Stuckey stress that they are of the opinion that combination T_4/T_3 treatment for hypothyroidism is not yet of proven benefit and more work needs to be done to test whether it is indeed so. We also thank our members who have supplied us with their experiences with combination T_4/T_3 therapy in our Over To You section on Page 6.

Public Seminar
Sunday 12 August 2001

We would like to thank all of those who gave up a beautiful sunny Sunday to attend our first Public Seminar. We would particularly like to thank our speakers, Prof Jim Stockigt, Dr Tony Hall, Dr Christine Rodda and Dr David Barton for their informative talks and for taking the questions of all our inquisitive thyroid patients. Thank you for your very valuable time. Photographs of the speakers are presented on this page and page 5. We had a great turn-out and a great time. Hopefully we will see more of you there next year. Thank you too for all the helpers on the day – without you the day would not have been the success it was.

Monash University has notified us that a cleaner picked up a mobile phone which has since been handed in at the Security office. So if anyone lost a mobile phone that day please contact Margaret Hill on (03) 9905 3101. One of our speakers also lost a laser pointer, so if anyone came across that, could you please contact me on (03) 9561 2483.

We don't have space in this edition of Thyroid Flyer to publish the results of the survey we distributed at the seminar. We will do so next time.

Brisbane Meeting
Tuesday 16 October 2001

We would like to thank Christine Bloom, one of our Brisbane members, for organising a meeting on *Understanding and Managing Thyroid Conditions*, held at the Mater Adult Hospital, South Brisbane on Tuesday 16 October. We also thank endocrinologist Dr David McIntyre, Director of Endocrinology at the Mater Adult Hospital and Diabetes Centre, as well as dietician Penelope Doney, who addressed the meeting. We were unable to publish the newsletter before this meeting, but sent out notices to our Brisbane members and others in the area to inform them of the meeting. If we omitted to send this notice to anyone else who might have wanted to go, we apologise for this omission. Hopefully Chris will be able to organise other meetings in Brisbane at another time.

Annual General Meeting
Sunday 18 November 2001

We extend a warm invitation to all our members to attend our AGM. Endocrinologist Dr Richard Arnott has agreed to address this gathering (which is a members-only event) and will talk on *The Genetics of Autoimmune Diseases and Their Relationships.* So if you are not a member or your membership has expired and you would like to hear what he has to say, please send in your membership application or renewal notice as soon as possible to ensure that you will gain admittance.

Christine Rodda following her presentation on pædiatric thyroid conditions

At this meeting I will be stepping down as President of Thyroid Australia, and our Vice-President, Christopher McDermott, will be taking over in this role. This method of succession is in accordance with our Constitution. We will also be electing other members to the Board, so if you feel you have something to offer and would like to become involved, please don't hesitate to throw your hat into the ring. We welcome your support and involvement.

I would like to take this opportunity to express my deep appreciation for the wonderful support I have had from my fellow Board members, from our Medical Advisory Committee, and from our members. I would especially like to thank Colleen Dean who is retiring as Telephone Contact Coordinator. You have all made my tenure as President worthwhile.

Donors

Once again I would like to thank all of those who send us donations for their generosity. We really do appreciate it.

Telephone Contacts

So far this year our Telephone Contacts have dealt with over 1,100 phone calls. In order to help manage their workload we have asked them to stipulate the times at which they would prefer to take calls. The names of our Telephone Contacts, their phone numbers and their nominated times can be found on Page 11. The Board of Thyroid Australia is also trying to ensure that all Telephone Contacts get a break on Sundays, and is therefore trying to discourage callers from ringing Telephone Contacts on Sundays. Our Telephone Contacts are not expected to be sitting by the phone at all times during their nominated hours, so please leave a message for them to call you back if they have an answering machine or if another member of their household answers the phone. Please treat our Telephone Contacts with courtesy. They are all unpaid volunteers who are trying to help others. They have other aspects of their lives to lead and therefore are not available 24 hours a day, 7 days a week.


Tony Hall discussing thyroid eye disease


David Barton giving an overview of psychological aspects of thyroid disease

On a personal note

Some of you may remember that I wrote in our April 2001 issue of the *Thyroid Flyer* about stress and the thyroid, and about my experiences in trying to deal with stressful situations. I have now received an answer to what was causing me to collapse after prolonged periods of stress, and it was not the answer I was looking for, nor does it relate to my thyroid function. In August, on consulting a Specialist Physician, I was told that I was suffering from Chronic Fatigue Syndrome and Fibromyalgia. This seems to have been precipitated by a particularly nasty virus I picked up in August 2000, one which my GP described as being a whooping cough variant. Since then I have slowly been going downhill and having a great deal of difficulty coping with stress of any kind, often resulting in extreme fatigue and feeling as if my limbs were encased in lead, making them very difficult to move. I have been told that I have to learn to control my physical, emotional and mental stress levels, which has not always been easy to do while running Thyroid Australia. It has also not been easy on my family (poor Alun now has to iron his own shirts). I have good days and I have bad days. Unfortunately it is going to take a long time for me to get my energy levels back to normal. I therefore ask all of you to try to stick to the hours I have stipulated for contacting me or Alun on (03) 9561 2483 - 10am to 4pm, Mondays to Fridays. If you cannot ring during those hours, please make an appointment for another more convenient time, or email us on aalunste@bigpond.net.au There will be times when I will let calls go through to the answering machine, so please leave a message and we will get back to you later. If I am feeling well enough to answer your call, I will do so. Please be patient with me. As someone who likes to be involved and to get things done, I am finding the reduction in what I am able to do very frustrating.

Medical Advisory Committee Profiles

Alla Turlakow MBBS (Hon), FRACP is a Nuclear Medicine Physician, working at the Alfred Hospital, Melbourne since 2000. She began her Nuclear Medicine training at the Austin and Repatriation Medical Centre, Heidelberg, subsequently completing a Fellowship in Nuclear Oncology at Memorial Sloan Kettering Cancer Center, New York. Her personal interests include the management of thyroid conditions including thyroid malignancies, where there are continuing advances in diagnosis and therapy, as well as the evolving role of Positron Emission Tomography (PET) in oncology, which have been the subjects of her research activities over the last few years. Over the next few years she looks forward to the increased availability of PET services throughout Australia and also to the gradual incorporation of nuclear medicine therapies into the oncologic therapeutic armamentarium.


Prof Jim Stockigt answering a question

Jan Richard (Jim) Stockigt is professor of medicine at Monash University and senior endocrinologist at the Alfred Hospital in Melbourne, Australia. Graduation from Melbourne University and clinical training in internal medicine and endocrinology in Australia was followed by three years as post-doctoral fellow in medicine and physiology at University of California, San Francisco, and a year at St Mary's Hospital, London. Research interests include thyroid hormone regu-

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Over To You

We 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.

T_3 Let Me Live Again

I am a forty-one year old female who was diagnosed with Hashimoto's Thyroiditis nine years ago. For eight of those nine years I had a pretty pathetic life.

I had a huge goitre, overwhelming fatigue, muscle pain and weakness, depression, brain fog, slurred speech, migraines, blurred vision, a puffy face and a puffy body. When I was feeling at my worst my pulse was 53 and my blood pressure was 87/47. There were days when I felt so weak and depressed that I contemplated suicide. I don't know how many times I would just burst into tears in front of my young child. Sounds bad!! IT WAS!!!!

At the time I was taking a big dose of 200µg of T_4. A lot considering I am a small person. My endocrinologist said that my T_4 levels were in the normal range. “It can't be your thyroid,” she said, “I don't know what is wrong with you.” I fired that doctor and set out to find what was wrong with me.

I searched the Internet, read books, talked to others with this disease. After months of studying the disease and the role of T_3 in your body I knew that without question I needed T_3. Loading my body with T_4 was no good to me if it was not being converted into T_3 or being utilised by the cells properly.

I convinced my doctor to let me try some T_3. My T_4 was cut back from 200µg to 150µg daily and in addition I took 12.5µg of T_3. Want to know how it changed my life? Let me tell you!

Within one month of taking the T_3, I started working 20 hours a week. The “brain fog” disappeared so quickly. I was intelligent and sharp like I used to be. It was like I had been living in a haze before. I no longer needed a two-hour sleep every afternoon.

Over a period of about 5-6 months my appearance changed. I lost that puffy look and no longer had a goitre or two chins. My skin was less thick and it developed a smooth texture. I literally looked 5 years younger and felt 10 years younger. Blurred vision - GONE!! I don't even need to wear glasses to drive anymore! Heavy periods - GONE! Just as well I didn't have an unnecessary hysterectomy. My hair one year later is soft and shiny and my nails don't peel and break anymore. I run on the treadmill and do weights at the gym. I have been able to lose 6 kg that I could never lose before the T_3 treatment. I am a small person. I knew that my weight gain was due to my thyroid levels being out of whack. I have my bright cheerful personality back again and can now work 8 hours and still have energy to go to the gym. My pulse is up around 73 now and my blood pressure is 110/70.

For 8 years I was a bloated, exhausted depressed invalid who could hardly look after her child some days. Every single doctor I saw in those eight years seriously under-treated me. I have before and after photos that would amaze you. My face was so swollen up. My goitre was enormous.

For doctors to assume that every bit of T_4 you take is converted into T_3 successfully is beyond me. I am not a scientist but I feel like I have proven through my testimony that some people just don't covert T_4 to T_3 properly.

You get ONE chance at life and I was damned if I was going to spend the rest of my life with such poor health. My life is so different today to what it was a year ago. I could not have written this article a year ago. I must add also that I need a higher T_3 dose in the winter and in times of great physical or emotional stress. I live in my body and know exactly how much thyroid hormone I need. I have regular blood tests and when I am feeling at my best my T_3 levels are always at the upper end of normal.

If you feel well on T_4 alone then don't mess with your treatment. If you don't feel well you owe it to yourself to find a doctor who will let you try some T_3. Make sure you get the slow release form that is compounded at a Melbourne pharmacy especially for patients like me. If you still have a lot of thyroid symptoms then you are not being treated properly. Be assertive with your doctor. Don't ever give up!!!

I have this to say to all the specialists that didn't think I needed T_3. SHAME SHAME SHAME! How could you look at me with my puffy face and list of symptoms and say T_3 is not necessary.

For goodness sake listen to your patients and at least test T_3 levels. Slow release T_3 has made my life worth living again.

Thank you to the doctor who finally did listen to me, and to the pharmacy that makes the slow release T_3.

If you would like to contact me you can do so through Thyroid Australia. Good luck to all those people who are still suffering. I hope you can live life again like I am.

Next issue of the *Thyroid Flyer*

The next issue of the *Thyroid Flyer* will be published in January 2001. Articles or letters for publication should be sent to The Editor by 15 December 2001.

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.

T_3 For Me Was The Key

I am a 59-year-old woman, excited about feeling well! Since early teens I suffered constantly from migraine headaches - there seemed to be no relief. Then in my mid 20's, after the birth of my daughter (1967), I lost a lot of weight - I looked like a scarecrow. As well, I started to experience periods of depression that grew in intensity and length over the years, until I was finally admitted to a psychiatric hospital. Eventually I was diagnosed as a manic-depressive. I was prescribed lithium. It helped in reducing my emotional highs a little, but I still often felt suicidal.

In 1993 I felt ill in a way I couldn't describe - I wondered if I was going to die - it felt as if my whole body was rotting. And I was running a temperature of 37.8 constantly, as well as having constant panic attacks at night and spasms of intense (illogical) fear during the day. Arthritis was so bad that I could barely use one arm. My GP had no answer, so I decided to seek another opinion.

My new GP immediately suspected an ***overactive*** thyroid - which proved to be right. I was treated for about 12 months for this with antithyroid medication. How I soon felt was unbelievable - I wasn't depressed and my headaches had become infrequent and my arthritis gradually disappeared (never to return). Unfortunately, my headaches and depression slowly returned. My 'good' GP had retired, and my new doctor said my thyroid hormones levels were normal. She recommended I still take lithium to control depression.

Over the next 6 years, my health gradually deteriorated, until I became almost completely debilitated with extreme fatigue, chronic headache, inability to concentrate or think, aching stiff muscles, sleepless nights, palpitations, and constant infections. My gums were so sore I could hardly bear to eat. These were just some of the things that were constantly there - covered by a thick blanket of depression. Eventually I was diagnosed as having Chronic Fatigue Syndrome. I was told it was nothing to do with my thyroid, as my thyroid hormone levels were 'normal'.

In 1998, my daughter was diagnosed as having Hashimoto's Thyroiditis. Her thyroid hormone levels weren't much different to my last test results. So she decided to do further research to help us both, and at the same time, found a doctor who had been seriously looking into the effects of differing levels of thyroid hormones on the various systems of the body. So I had another thyroid function test and this time my test results showed that my thyroid was ***underactive***.

I can't explain the technical terms very well that I am writing about. But when having your thyroid tested, you need to have all three different levels tested - TSH, T_4 and T_3. My TSH and T_4 were normal but my T_3 was too low. (Many doctors think that if the TSH level is O.K. then the others will be also. But this isn't always true.) Here are my test results – 1998 – with the normal ranges in brackets: TSH 3.69 (0.30 - 5.00), T_4 14 (11 - 23), T_3 3.2 (3.5 - 6.7).

Even though my T_3 was only slightly low, my doctor put me on a combination of $T_4 + T_3$ hormones, in a natural form, to bring my level of T_3 into the acceptable range. I needed only a small dose of thyroid hormone, and to my amazement, my depression lifted, and my headaches almost disappeared. At the same time my other body systems started to function better. My lithium medication has been substantially reduced, but I still require a small dose. I also discovered that lithium is known to hinder the conversion of T_4 hormone into T_3 hormone, but simply taking me off the Lithium did not resolve my problems. My thyroid hormones needed to be corrected to keep my migraines and depression at bay. Although my hormone levels are not completely stable, I can now read my body signs well, and so adjust my medication slightly when necessary.

Don't hesitate to query your doctor, even if you are only a little on the low side of a hormone, as I was. Having your hormone levels adjusted slightly could make a world of difference!

How do I feel now? Alive! Enjoying life as it's meant to be lived. And despite my age, I can still outrun my granddaughters (6 and 4).

10 Top Reasons to Attend a Support Group

10. There are usually empty seats, refreshments are often served, and there is always a restroom nearby.
9. If you don't want to talk, you can just listen.
8. People discover it is okay to care about oneself.
7. Knowledge is power.
6. Anger, grief and loss are common feelings that are okay to talk about.
5. Hope and encouragement are important gifts of the group.
4. Shared feelings, not solutions, give the group power.
3. Living with difficult life situations colours life, but you choose the colour.
2. One of the rewards of life is that no one can seriously help another without also helping themselves.
1. **Where else can you go where people will understand what you are talking about?**

Blepharospasm Support Group Newsletter June, 2001 – Taken from Self Help Queensland, August Newsletter, Issue 2.2001, p.10.

Before you judge a man, walk a mile in his shoes. After that, who cares? .... He's a mile away and you've got his shoes.

Billy's Desiderata; Billy, Pamela Stephenson, (HarperCollinsEntertainment, London 2001, Page 290).

Thyrogen News

We are pleased to advise that Thyrogen will be available in Australia from 1 November. Thyrogen offers an alternative to thyroid hormone (thyroxine) withdrawal for patients having follow up assessments for recurrence of their thyroid cancer. Patients are therefore spared the often-debilitating signs and symptoms of hypothyroidism such as fatigue, weight gain, constipation, mental dullness, lethargy, and depression. Unfortunately, Thyrogen is not yet funded by the Federal Government, so it may not be affordable for many patients. You can discuss with your doctor whether Thyrogen is appropriate for you. More information on Thyrogen can be found in the April 2001 Thyroid Flyer.

Unravelling the Mystery

Unravelling the mystery behind my own health problems has been an incredible learning experience for me. Although the correct diagnosis of my condition was a long time coming and my recovery has been slow, it has definitely made life worth living again.

Early years

When I look back, it was at the age of twelve when I entered the twilight zone of puberty that my health problems began. I can remember always being tired, suffering from constant headaches and an irregular and painful menstrual cycle. As time went on allergies, colds, flu's and viruses seemed to be a normal part of my life. In my twenties I ended up with glandular fever, then gallstones, and finally I was diagnosed with irritable bowel syndrome. This brought an end to my secondary school teaching, as my physical problems were becoming more extreme and debilitating.

Emerging Hypothyroidism

After surviving pregnancy and two painful and complicated caesarians, my health started to spiral down hill quite rapidly. I was now 29 years of age and my body seemed to be deteriorating before my very eyes. It was now that the signs and symptoms of hypothyroidism were becoming more apparent.

Post-natal depression?

Most people that I talked to at this time said I was probably going through post-natal depression, and that the exhaustion I was experiencing was quite normal. At first I believed them, but as the months rolled by unusual things began happening to my body and I became increasingly debilitated. I would wake up in the morning and feel as though I hadn't slept at all. I would drag myself out of bed and prepare breakfast and then while eating it I would have to force myself to stay awake. I hardly felt like eating most of the time as I had no appetite and would feel quite ill afterwards. By lunchtime I could barely function or concentrate on anything. I felt almost delirious with tiredness and had to lie down or I knew I would vomit. I was also emotionally drained and had trouble holding back the tears. I began feeling as though I was trapped and I wanted a way of escape. By the end of the day I was so exhausted I would collapse into bed around 7.30 p.m. My entire body would be aching and throbbing, and it felt like every nerve in my body was jumping up and down, making it difficult to go to sleep.

Falling apart

As time went on I began having diarrhea on a regular basis. My hair started falling out in chunks and my nails kept snapping off and shredding. I had to go to a podiatrist on several occasions because I had continual problems with ingrown toenails. My skin was now more dry than usual and would crack, bleed and itch, and some wounds would take months to heal. I became even more prone to bruising and my pain threshold was decreasing rapidly.

Severe headaches

As the weeks went by I began having headaches and migraines like I'd never experienced before, with sharp pains and throbbing all over my head and the back of my neck. I could barely touch the area above my eyes without wanting to pass out with the pain. At nights I found it difficult to sleep and so I would toss and turn all night trying to alleviate my discomfort. Other symptoms that accompanied these headaches were dizziness, nausea, visual disturbances and diarrhea.

Visiting the Doctors

I went back to my family doctor who couldn't really give me a clear diagnosis or explanation for the array of symptoms I was experiencing. He suggested I look closer at the areas of stress in my life, as well as allergies and diet. So I visited more doctors and specialists to find some answers.

Chest pain

As the weeks rolled by I continued to add more and more ailments to my list of health problems. During the day, the smallest activity would cause my heart to jump around abruptly as though playing leapfrog inside my chest, and then it would actually pause for a second or two. This would be accompanied by sharp chest pain, similar to severe indigestion, as well as heavy painful arms and lightheadedness. Walking up to the letterbox also became a chore as I would be puffing and panting and gasping for air on the slightest exertion. At nighttime I found that I could not lie on my right side when first getting into bed, as my heart would jump around erratically and I felt as if I couldn't breath. As I tried to go to sleep my body would throb to the rhythm of my pulse, which would become so slow that I didn't know if my heart would make it to the next beat.

Muscles and joints

As my heart became worse I began to experience numbness and tingling in my hands, arms, feet and face. In bed I would constantly turn over because I would cut off the circulation to different parts of my body. At times the left side of my face, arm and leg would go numb and I would have severe cramping in my calf muscles. To top it all off I had to deal with increasing muscular and joint pain, as well as joint stiffness where my knees or elbows would lock up and my toes wouldn't bend properly when I walked.

Symptoms worsening

After a year had gone by, from the birth of my second child, I'd almost given up on myself. My irritable bowel symptoms were worse than ever and my diarrhea wouldn't stop. I had pains in my bladder and lower back, and my sex drive was non-existent. Two weeks of every month surrounding my period were a nightmare, with severe PMS and painful heavy menstruation. I had a continuous sore throat and tenderness in the front of my neck, which actually hurt to swallow. My overall body temperature must have been low because I couldn't keep warm and my feet were like ice even in the middle of summer.

Too much to handle

It got to the point where I could barely look after my children or cope with everyday chores or activities. My auntie would come over regularly to help out with the housework and give me time to sleep during the day. I felt as if the whole world was spinning around me like a whirlpool and all I wanted to do was scream out 'stop'! Finally, it became all too overwhelming, and I felt like I was going insane. I knew that if I didn't become aggressive and do something to help myself, there would be no end to my misery and my family would ultimately suffer in the long run.

The Correct Diagnosis

With sheer anger and frustration I marched straight back to my family doctor and handed him an A4 page documenting all of my health problems over the past year. I asked him to do every test he could think of, for things that may account for the type of symptoms I was displaying. He looked at my list of complaints and wasn't sure where to begin. His first idea was to put me on antidepressants because he felt that my physical and emotional symptoms could be stress and anxiety related. I didn't completely agree with his analysis.

Underactive thyroid gland

When I returned a few weeks later, he sat me down and gave me a big smile. He told me that he had actually found something that might account for some of my complaints. He proceeded to tell me that he had tested my thyroid gland function and it wasn't completely normal. I looked at him quite strangely, as I knew nothing about the thyroid gland and its purpose in the human body. He gave me a brief explanation and then felt the front of my neck where the thyroid gland is situated. He said the tenderness in my neck and the constant sore throat could be attributed to a poorly functioning thyroid gland, as well as my extreme tiredness and feeling the cold. He couldn't really tell me much more than this so he showed me my results. He had tested my level of thyroid stimulating hormone (TSH) and said that it was just outside the normal reference range, TSH : 4.93 (0.05 – 4.00). He had also tested the thyroid hormone T_4, which was 12.9 (10 – 19). He said this might indicate that I have a mild underactive thyroid gland. However, what he found interesting was that I had high levels of thyroid antibodies, which over time would slowly destroy the functioning cells of my thyroid gland. Eventually I would need treatment, although he wasn't sure if it were appropriate yet. He reassured me that this was a perfectly treatable condition.

Thyroid hormone replacement

The next time I saw my doctor I came armed with loads of information. He asked me how I was feeling on the antidepressant medication, and although I felt a little calmer, it had really made no difference and my symptoms remained the same. I asked him whether or not he was going to treat my thyroid problem, for according to the information I had read, my symptoms indicated that my underactive thyroid condition was far more advanced than what my blood tests revealed. He tended to agree with me although he hadn't ruled out the possibility that more was happening to my body than only a thyroid disorder. From the reading I had done I knew that further blood tests were needed to give a clearer picture of my thyroid function. For over the past two months he had only tested my TSH level. I asked him to test my thyroid hormone levels, i.e.: T_4 and T_3. He had never tested T3 levels before, so this was something new for him. The following week my results were in and they definitely confirmed that I had an underactive thyroid gland. My thyroid hormone levels were quite low, T_4 9.00 (11 – 23) and T_3 2.9 (3.5 – 6.7), falling outside the normal reference range. According to these results my doctor promptly prescribed me thyroxine to increase my thyroid hormone levels, and he apologized for not taking more notice of my symptoms. He started me on a very low dose (25µg) and said I would need to have my blood levels checked again in four to six weeks.

Health improving

The following month my thyroid medication was increased to 50µg, and this brought my thyroid hormone levels to within the normal range. My TSH was now 1.52 (0.30 – 5.00), my T_4 was 13 (11 – 23), and my T_3 was 3.9 (3.5 – 6.7). To my great relief, as the weeks rolled by, the severity of my health problems began to decrease.

The Physician

A month later my doctor sent me to see a physician who supposedly knew more about the thyroid gland than he did. After a short conversation he simply stated that my thyroid problem was minor and would probably fix itself over time. He didn't believe that my health problems were necessarily thyroid related and suggested that I resume taking antidepressants and seek some psychiatric help. Well, I was not impressed with this specialist and wondered if they were all the same. To them the best remedy for any illness was antidepressants and a psychiatrist.

Downward dive

For a couple of months I seemed to be doing better, then suddenly my bodily functions took a downward dive, and my symptoms were worse than before I started treatment. I called the doctor immediately and had some blood tests to see what was happening with my thyroid gland. My levels of TSH had increased dramatically, indicating that my thyroid gland was definitely underactive again. My TSH was now 35.56 (0.30 – 5.00). I became so weak and fatigued that I found it hard to do anything, even walking was an effort. I experienced heart palpitations and chest pain, and even found it hard to talk without becoming lightheaded, as not enough oxygen was reaching my brain. My doctor immediately increased my thyroxine medication and within three days I noticed some subtle changes and I was beginning to improve.

Debilitating

After stabilizing my blood levels of thyroid hormones I had another two months of reasonable health. I also started seeing another doctor who specialized more in women's health and thyroid disorders. Then the whole scenario began again, but this time it was a little more challenging. Over a period of a month my symptoms began to creep back and I called the doctor for a blood test. I did not think that my thyroid related health problems could be any worse than what I'd already experienced. Well, I was wrong. Within one week my symptoms became so debilitating that I could barely move out of a chair. Walking became a slow shuffle and I could hardly lift my arms up. My heart was beating erratically and causing severe chest pains. I didn't want to exert myself at all, as I was afraid of blacking out. Joints and muscle pain set in, not to mention arthritis like pain in my fingers and knuckles. My circulation became extremely poor, as my hands and feet turned white, and felt like ice to touch. I had continuous cramping in my legs and I would often go numb down the left side of my body. My voice became deep and hoarse, and headaches, neck pain and severe nausea came back to haunt me. Then to top it all off I found I was continually trying to control my tongue from going down the back of my throat, and my eyes from rolling back in my head. SOMEBODY HELP ME!

Blood tests normal

By this time I was desperate to find out my results so that I could increase my medication. I rang the specialist, and to my absolute shock, my blood tests were normal. My TSH was 2.04 (0.40 – 4.70), T_4 was 16.9 (10 – 25), and T_3 was 3.6 (2.5 – 5.5). I explained to him that my symptoms were identical to last time and that they had to be thyroid related. He checked my blood pressure and found it to be quite low and he had difficulty finding my pulse because it was so weak. He sat me down and told me that he didn't think my thyroid gland was responsible for my symptoms because my blood tests were normal. I questioned his view here, and asked him if I could increase the amount of thyroxine I was taking to see if it would make a difference. He disagreed and said that it may be dangerous.

Quick fix antidepressants

Unfortunately, my family doctor was going on holidays for a month commencing the following day. He suggested that I resume taking antidepressants or he could

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Unraveling the Mystery ***From Page 9***

give me some tranquilizers, to tide me over until I saw him again. I glared at him at this point because I knew I couldn't go another month like this, and I didn't feel that these forms of treatment were appropriate. I felt he was relying solely on my blood tests and ignoring my physical symptoms. It seemed obvious to me that they were related to my thyroid gland. He suggested that I see another doctor the following week if my condition didn't improve.

Heaven sent

After returning home I rang my specialist in women's health and explained how serious my condition was. He looked at his notes on my past experience and compared them to what I was going through now. He felt that my symptoms were definitely related to a thyroid disorder and told me to increase my thyroid medication slowly. He also explained that it would be more dangerous to ignore the symptoms and not treat the problem correctly, and that blood tests were not the be all and end all. I appreciated his advice, so I increased my thyroid hormone replacement to 175 µg per day. In three days I noticed an improvement in my condition, and within a week I had about fifty percent relief of symptoms. Obviously we were on the right track. I had also obtained the name of an endocrinologist who I thought might shed some more light on what was happening to me.

The Endocrinologist

The following week, my husband and I saw the endocrinologist, who specialises in the hormone secreting glands. He gave me a thorough examination and reviewed my results. He went on to tell me that there was no point running any more tests as he would not find anything wrong with me. He explained that my symptoms were not thyroid related, because everything appeared normal. He told me then and there that he believed that stress and anxiety accounted for all such symptoms and that I should see a psychiatrist for an assessment.

No second visit

We sat there in shock at first because we thought an endocrinologist would know more about the thyroid gland, and its subtle abnormalities, than a general practitioner would. I asked him about cellular resistance to thyroid hormone, and conversion problems, and whether this was a possibility in my situation. He adamantly replied, "Definitely not, it is such a rare occurrence". I went on to explain to him that I'd increased my hormone replacement the week before, and was noticing a marked improvement. He presumed this was mainly due to my wishful thinking, and again reiterated that my blood tests were normal, and I should go see a psychiatrist. Following this, I also saw a cardiologist to check my heart function. He too, dismissed the fact that an underactive thyroid gland could cause such problems and basically summed me up as a nut case.

A rare case

I finally got to see my specialist again, who was far more open-minded and empathetic. Before I said anything, he looked at me and stated, "What is normal for one person is not necessarily normal for another. I think you are one of the rare ones". He explained to me that thyroxine (T_4), has to be successfully converted by the cells into active T_3 before the body can use it. He felt, in my situation, that my cells were not converting sufficient amounts of thyroid hormone into T_3, to maintain my bodily functions. He was also concerned that each time I increased my dosage, the relief was only temporary and the symptoms that would return would be worse than the previous time. He decided that I might respond better to a hormone replacement that included both T_4 and T_3. Up to this point I had only been taking synthetic thyroxine (T_4). Unfortunately, in Australia, T_3 is only used in the most extreme cases, for severe accident victims, during surgical procedures, or for rare individuals who barely convert any T_4 into T_3. There are no combination thyroid drugs available in synthetic form here in Australia. My specialist said there was a natural form available that he preferred to use, called desiccated thyroid extract, taken from a pig's thyroid gland. This contained both T_4 and T_3, and so he ordered some immediately.

Natural T_4/T_3 combination therapy

After changing over to the natural desiccated thyroid and increasing my dose to the correct level, I began to improve dramatically. My debilitating symptoms were gradually disappearing one by one, and I began to feel relatively normal again. Interestingly, I felt my best when my T_3 level was at the top end of the normal reference range, T_3 being 6.4 (3.0 – 6.8), and my TSH was at the bottom end, around 0.80 (0.40 – 4.70). I was extremely fortunate to have found a good specialist who was dedicated and thorough, and actually listened to my complaints with compassion. Over the following months, he continued to monitor my blood test results, although he felt these were not as important as keeping a close eye on my clinical symptoms. To my amazement and absolute relief, my symptoms were disappearing one by one.

Stable at last

Overall, from the time I was first diagnosed, it took approximately a year and a half for my condition to stabilize. Taking thyroxine (T_4) alone was not sufficient to maintain my bodily functions. It was not until my specialist prescribed me the natural hormone replacement, containing both T_4 and T_3, that I began to improve dramatically. After obtaining the correct levels of thyroid hormone for my body, I have remained stable ever since, and have not regressed back into hypothyroidism. My fatigue is gone and I have energy, which I have not experienced since my late teenage years. The majority of my thyroid related health problems have disappeared, or have been greatly relieved. Obviously, the cells of my body needed a little more T_3 to function normally.

August 2001

I am now another two years down the track and currently taking synthetic T_4 and T_3 instead of the natural thyroid hormone, which is easier to obtain. A compounding chemist, here in Melbourne, makes up the T_3 hormone for me in a smaller dosage that is perfect for my body. Interestingly, I am only taking 90µg of T_4, and 2.5µg of T_3 per day, and this enables my body to function optimally. I have been able to live life again as a normal human being. I am free to enjoy being a wife and mother, and help others who have had a similar journey as my own. To all those doctors and specialists who told me it was all in my head and that I needed a psychiatrist, I would like to say, 'you were wrong'! No one should suffer from the debilitating symptoms of hypothyroidism unnecessarily.

rwk2001

T_4 plus T_3 Instead of Thyroxine Alone for Thyroid Replacement? What's The Evidence?

By **Colin Dayan**

A recent article "Effects of Thyroxine as Compared with Thyroxine plus Triiodothyronine in Patients with Hypothyroidism" in the leading medical journal, the *New England Journal of Medicine*, suggested that patients currently on thyroxine might feel better on a combination of thyroxine (T_4) and triiodothyronine (T_3).

The thyroid normally makes thyroid hormone in 2 forms: T_4 and T_3. T_4 (which is the same as the thyroxine normally taken as a pill) has 4 iodine atoms in each molecule (hence the name T_4) while T_3 only has 3. Most tissues of the body actually use T_3 only. The T_4 in the circulation is gradually converted to T_3 by the body for use by the tissues. We use T_4 (thyroxine) as a drug for thyroid replacement because it lasts longer in the body and so can be given once a day without any worry that it will "run out" half way through the day. T_3 does not last as long and if used alone may be better given twice a day.

In the recent study, a group of Lithuanian researchers switched 33 patients on thyroxine to taking 12.5µg of T_3 in place of 50µg of the thyroxine they were taking (a usual dose of thyroxine is between 100 and 200µg a day). After the treatment, the patients' pituitary test - TSH - did not change, but there was slightly more T_3 and less T_4 in their blood (as you might expect). They then put the patients through a battery of psychological tests. After the treatment 11 patients said that they preferred T_4 plus T_3 whilst 2 felt "nervous" during this treatment and preferred T_4 alone. Of the 17 psychological tests performed, 10 showed no difference while 7 suggested better concentration and less fatigue on the mixture of T_4 and T_3.

Many patients on thyroxine replacement therapy do report lack of energy and tiredness despite apparently normal blood levels, but this is also a common symptom amongst patients not on thyroxine. The results in this study favoured T_4+T_3 as opposed to T_4 alone in some of the tests, but the results did not appear dramatic. Possibly the researchers' results would have been clearer if the study had been tried on patients who were particularly dissatisfied with their treatment. If carefully monitored, T_4+T_3 therapy should be as safe as T_4 alone. However, hormone levels are likely to vary more widely in the blood on T_4+T_3 therapy as the T_3 enters and exits the circulation more quickly. So more frequent testing is likely to be necessary to avoid the side-effects of over or undertreatment with combination therapy.

If you are on thyroxine, should you ask to change? My advice would be that if you feel well on T_4, carry on with your current medication. If you think that your thyroxine has led you to feel run-down and fatigued and you know that the levels in the blood are normal on testing, you might try a switch. More studies are required before we make clear recommendations as this was only a small study with limited results. If you do change, don't expect a miracle, but give it at least 3 months before you make your choice. Note that doctors do not normally prescribe T_3 and may initially be reluctant. Also in this country a 12.5µg tablet of T_3 is not available and we will have to make do with a 10µg dose (used in place of 50µg of your thyroxine). Hopefully more research will follow so that we can advise you better on the potential advantages and/or risks of combination treatment.

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Editorial ***from Page 5***

lation and measurement, inhibitors of thyroid hormone binding, as well as endocrine hypertension. He is past-president of the Endocrine Society of Australia, vice-president of the Asia-Oceania Thyroid Association and a member of the editorial board of the Journal of Clinical Endocrinology and Metabolism. Leisure interests include baroque and modern bassoon, uncovering little-known eighteenth century music sources, tennis and German language. - From http://www.thyrolink.com/literature/report2000_2/overview.html

Lost in the Fog

By **Sylvia Davies**

I want to, so I try.
I want to but I fail.
Don't want to, but I cry.
Try again to no avail.

Tomorrow will be different.
The pain and fog will lift.
Tomorrow I'll be in control.
Not left alone to drift.

I try but can't explain it.
They're kind, but cannot see.
They can't understand my sadness.
They can't see I'm losing me.

Our thanks to British Thyroid Foundation member Sylvia Davies for this poem, which describes the way she felt when she was first diagnosed with an underactive thyroid. She would also like to mention that she is now almost back to her old self and would like to say to newly diagnosed sufferers 'Keep your chin up!'

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