Thyroid Foundation of Canada

thyrobulletin

La Fondation canadienne de la Thyroïde

Volume 24, No. 3 **Autumn 2003**

A message from the editor

Rick Choma, editor, *thyrobulletin*

It's hard to imagine that in the late 1970s there was neither literature nor organizations in the world for the lay person relating to thyroid disease. In June 1980 Diana Abramsky of Kingston, Ontario, the founder of the Thyroid Foundation of Canada, courageously and tirelessly set out to change all that. In Diana's words *"for the newly diagnosed individual with a malfunctioning thyroid gland, it felt like a descent into a medical wasteland where fear, anger and isolation were constant companions"*.The Foundation was to be the vehicle for Diana's vision, that is, to awaken public interest in, and awareness of, thyroid disease; to lend moral support to thyroid patients and their families; to assist in raising funds for thyroid disease research. The first newsletter was published in August 1980; in March 1985 the name *thyrobulletin* was officially adopted for the Foundation's quarterly publication.

As editor of *thyrobulletin* over the past two years, I have had the privilege of working with a strong, united and knowledgeable editorial team who continually put their hearts and souls into a publication that today includes more than 4,000 readers nationwide. Margaret Burdsall, Nathalie Gifford, Mary Salsbury of Kingston ON, Irene Britton (our French translator) of Riverview NB, Lottie Garfield of Toronto ON and Ed Antosz of Windsor ON, make up our current volunteer editorial committee. Our past editors also deserve recognition for their leadership, dedication and hard work. Without volunteer commitment over the years *thyrobulletin* would not exist.

This edition of *thyrobulletin* features an article by Dr. Paul Walfish, a member of our peer review committee and long-time contributor to the thyroid cause. His paper, which was recently presented at the 75th Annual American Thyroid Association Meeting, September 17, 2003, relates to the treatment of thyroid cancer. In addition there is considerable information on thyroid disease and how it affects pregnancy and fertility. Although thyroid disease is not common among pregnant women, studies have shown that if untreated during pregnancy, it may negatively affect a child's psychological development leading to a lower I.Q. score and a decrease in motor skills, attention, language and reading abilities. Thyroid disease can impair fertility. It can also lead to a common but seldom diagnosed disorder known as postpartum thyroiditis, the symptoms of which include depression, anxiety and insomnia and often mimic postpartum depression. A TSH test can pinpoint postpartum thyroiditis and medication will return the thyroid gland to normal, often reversing the depression.

I am glad you're continuing to enjoy *thyrobulletin*. It is encouraging to receive e-mails and letters. Your personal stories, letters to the doctor and submissions to the Foundation's mailbox are always welcome. I also appreciate your comments and suggestions about *thyrobulletin*. You can e-mail me at rchoma@sympatico.ca or write to me at P.O. Box 488, Verona ON K0H 2W0.

The best in health to you and your family.

Rick Choma

Contents

Thyroid disease, pregnancy and fertility

Thyroid disease is not common during pregnancy. This is because the immune system, of which the thyroid is a part, is depressed in pregnancy in order to protect the developing fetus. However, untreated hypothyroidism during pregnancy may impair full and normal development to at least a slight degree.

As a result of the loss of this protective effect at the end of pregnancy, there is a tendency for thyroid disease to occur in those women who have had previous thyroid disease.

Thyroiditis is particularly common after pregnancy. In most cases, so called "postpartum thyroiditis" tends to get better after a few weeks although recurrence in subsequent pregnancies is highly likely.

Fertility

Women who have been treated for Graves' disease or Hashimoto's thyroiditis can become pregnant, since normal fertility is restored after treatment. Graves' disease should be treated with radioactive iodine or by surgery before pregnancy can occur. *However, it is recommended to wait six months after radioactive iodine treatment before becoming pregnant.*

Graves' disease and pregnancy

Treatment of Graves' hyperthyroidism during pregnancy is different from that in non-pregnant women, since radioactive iodine cannot be given and surgery should not be performed, particularly in the first and third trimesters of the pregnancy, for fear of inducing a miscarriage. Because of the immuno-suppressive effect of pregnancy, antithyroid drugs can be given in lower doses than with non-pregnant patients. Over-treatment of the hyperthyroidism with antithyroid drugs can affect the baby's thyroid, since the drugs cross the placenta into the baby's bloodstream and will affect the baby's thyroid gland.

Thyroxine treatment in pregnancy

Very little thyroxine crosses from the mother's circulation into that of the fetus - so there is no contra-indication to taking thyroxine throughout pregnancy. Many specialists do increase the dose slightly during pregnancy because they feel that pregnancy increases the requirements for thyroxine and the TSH does rise.

Breast feeding and thyroid disease

Radioactive isotopes are secreted in milk and no isotope tests or isotope scans should be performed on someone who is breast feeding.

Propylthiouracil can be used when breast feeding, as only negligible amounts actually get into the milk. Thyroxine is also secreted in the milk, but providing the dosage in the mother is in the physiological range, it appears to be quite safe for the mother on thyroxine to breast feed.

Infertility

Patients with either hyper- or hypothyroidism tend to be infertile, although it is certainly possible to have these diseases and still get pregnant. Once the diseases have been treated it is important to recommence birth control (if desired), since fertility is restored quickly once the patient's thyroid function is normal. In addition, both men and women with untreated thyroid disease often have decreased sexual desire (libido).

Menstruation

Menstruation tends to be increased in hypothyroidism and decreased in hyperthyroidism. The effects of thyroid hormones on menstrual periods, ovarian function and the endocrine system in general are complicated but important, so that with too much or too little thyroid hormone a variety of effects on the reproductive system can occur. Girls who become hyper or hypothyroid during puberty may have delayed menstrual function.

Male infertility

Hyper- or hypothyroidism is also a cause for male infertility since sperm development requires normal thyroid hormone levels.

Female infertility

One other cause of infertility in patients with thyroid disease is the uncommon condition of primary ovary failure. This is an autoimmune disorder, like Graves' disease and Hashimoto's thyroiditis, caused by proteins and white cells in the blood which attack the proteins in the patient's ovaries. This leads to shrivelling of the ovary, failure to ovulate, premature menopause and infertility.

Relationship between thyroid disease and iodine treatment for fibrocystic disease of the breast

For unknown reasons, the breasts, like the thyroid gland, trap iodine from the blood. Furthermore, it is found that iodine treatment for various breast conditions markedly improves these abnormalities. For example, iodine is frequently given for fibrocystic disease, a lumpy nodularity of the breast common in middle-aged women.

In normal amounts iodine is necessary for thyroid hormone production. Large amounts can produce goitre and various forms of thyroid disease. Women taking iodine for breast conditions must, therefore, be aware of the possibility of goitre and thyroid disease, particularly if they previously had thyroid disease or have a family history of thyroid abnormalities. Doctors treating breast conditions carry out thyroid blood tests and clinical examination every six months.

The foregoing information appears in the Foundation's Health Guide # 8. For the complete list of Health Guides available from the national office or your local chapter, please see page 6.

Maternal thyroid deficiency during pregnancy

and subsequent neuropsychological development of the child

by
James E Haddow, MD et al

When thyroid deficiency occurs simultaneously in a pregnant woman and her fetus, the child's neuropsychological development is adversely affected. Whether development problems occur when only the mother has hypothyroidism during pregnancy is not known.

Methods: In 1996 and 1997, we measured thyrotropin in stored serum samples collected from 25,216 pregnant women between January 1987 and March 1990. We then located 47 women with serum thyrotropin concentrations at or above the 99.7th percentile of the values for all the pregnant women, 15 women with values between the 98th and 99.7th percentiles, inclusive, in combination with low thyroxine levels, and 124 matched women with normal values. Their seven to nine year old children, none of whom had hypothyroidism as newborns, underwent 15 tests relating to intelligence, attention, language, reading ability, school performance, and visual-motor performance.

Results: The children of the 62 women with high serum thyrotropin concentrations performed slightly less well on all 15 tests. Their full-scale IQ scores on the Wechsler Intelligence Scale for Children, third edition, averaged 4 points lower than those of the children of the 124 matched control women (P=0.06); 15 percent had scores of 85 or less, compared with 5 percent of the control children. Of the 62 women with thyroid deficiency, 48 were not treated for the condition during the pregnancy under study. The full-scale IQ scores of their children averaged 7 points lower than those of the 124 matched control children (P=0.005); 19 percent had scores of 85 or less. Eleven years after the pregnancy under study, 64 percent of the untreated women and 4 percent of the matched control women had confirmed hypothyroidism.

Conclusions: Undiagnosed hypothyroidism in pregnant women may adversely affect their fetuses; therefore screening for thyroid deficiency during pregnancy may be warranted.

Abstract from The New England Journal of Medicine. Original article, volume 341:549-555, August 19, 1999, Number 8..

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The role of thyroid in brain development

by
Learning Disabilities Association of America

To protect early brain development, the Learning Disabilities Association of America (LDA) will promote an educational initiative to inform the public on the role of thyroid hormone during pregnancy.

The initiative is based on the following facts:

- Thyroid hormone is essential for pre and post natal brain development.
- Maternal hypothyroidism during pregnancy has been associated with lower IQ scores and lower scores on tests of neurobehavioural functioning, including learning and attentional abilities.[1]
- In the last population study, hypothyroidism was found in 4.6% of the US populations (0.3% clinical and 4.3% subclinical).[2]
- Women with subclinical hypothyroidism may not be aware of this condition, or aware of treatment options.

In addition it is essential for women of child bearing age to maintain normal levels of iodine.

- Iodine deficiency leads to impaired production of thyroid hormones.
- Low urinary iodine concentrations were found in 11.7% of the National Health and Nutrition Examination Survey (NHANES) 1988-1994 study population.[3]
- Women of child-bearing age on salt-restricted diets should be aware that they may need to supplement their iodine intake with their doctor's advice.

1. Haddow, JE; Palomaki, BS; Walter, CA; Williams, JR; Knight, JG; Gagnon, J; O'Heir, CE; Mitchell, ML; Hermos, RJ; Waisbren, SE; Faix, JD, & Klein, RZ. (1999) Maternal thyroid deficiency during pregnancy and subsequent neuropsychological development of the child. The New England Journal of Medicine, 341(8) 549-555
2. Hollowell, JG; Staehling, NW; Flanders, WD; Hannon, WH; Gunter, EW; Spencer, CA; & Braverman, LE (2000) Serum TSH, T4 and thyroid antibodies in the United States population (1988-1994): National Health and Nutrition Examination Survey (NHANES III), The Journal of Clinical Endocrinology and Metabolism 87 (2) 489-499
3. Hollowell, JG; Staehling, NW; Hannon, WH; Flanders, WD; Gunter, EW; Maberly, GF et al (2002) Iodine nutrition in the United states. Trends and public health implications: Iodine secretion data from National Health and Nutrition Examination Survey I and III (1971-1974) and (1988-1994)

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Thyroid Foundation of Canada
La Fondation canadienne de la Thyroïde

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Contributions to/à – Editor/Rédacteur:
Rick Choma
PO Box 488, Verona, ON K0H 2W0
Fax: (613) 542-4719
E-mail: rchoma@sympatico.ca

thyrobulletin team

Volunteers
Rick Choma, Editor
Ed Antosz
Irene Britton
Margaret Burdsall
Lottie Garfield
Nathalie Gifford
Mary Salsbury

Office Staff:
Katherine Keen
Helen Smith

Typesetting and Layout:
Wordmaster Publishing
Kingston, Ontario

Printing:
Performance Printing
Smiths Falls, Ontario

Addressing and Mailing:
Mail Rite, Kingston, Ontario

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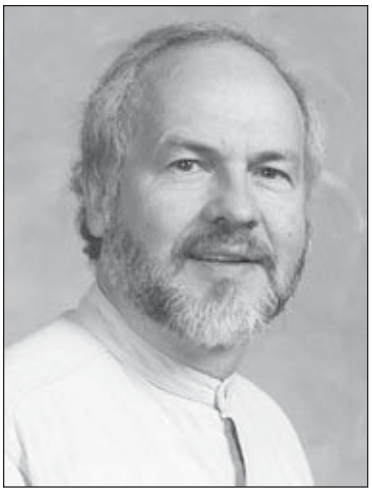
Avis Important:

Les renseignements contenus dans le ***thyrobulletin*** sont pour fins éducationelles seulement. On ne doit pas s'y fier pour des diagnostics personnels, traitements ou tout autre raison médicale. Pour questions touchant les traitements individuels, veuillez consulter votre médecin.

President's message

As you read this the Thyroid Foundation of Canada is completing an examination of its governance structure. I would like to tell you the outcome of that process but unfortunately I am not clairvoyant and cannot see the future. (Please remember that I am writing this six weeks before you read it.)



Ed Antosz
National president/Président national

This year the workshops preceding the Annual General Meeting (AGM) will focus on the findings of a report being prepared by Don Pierson of Southtown Consulting. Don has experience in the process of reviewing governance and has worked internationally with over 30 organizations such as the Foundation. In preparing his report to the Foundation, Don will interview and survey our current national board members (chapter presidents, members-at-large and executive members), the pharmaceutical community and stakeholders of the thyroid cause including other organizations.

I sincerely hope that Don's findings will enable us to streamline our organization. At the end of the process I would like to see a strong chapter structure which looks after concerns locally and a strong national structure which supports our chapters through fundraising and organization. I would like to see a smaller national board, with appropriate representation from all concerned, look after national issues. The final decision will of course be in the hands of the current national board. There will be time at our upcoming AGM workshops to examine these questions.

Speaking of the AGM activities, we will be hosting a Thyroid Update Forum on Saturday, November 1. There will be a number of guest speakers who will address topics such as thyroid nodules, surgical approach, Thyrogen, radiation therapy, diabetes and thyroid disease, thyroid and osteoporosis, and thyroid disease and pregnancy. Mark your calendar for October 30, 31, and November 1. Your attendance and participation at the activities on these three days are vital to the growth of the Foundation.

In closing, I get to say goodbye once again. I will be stepping down for personal reasons from the position of president and wrote a farewell note last spring. Because of the SARS crisis in the Toronto area, the Foundation postponed its AGM until the fall and my tenure continued with the result that I get to repeat myself in saying goodbye. I've enjoyed my year as president and hope that I've been able to make a positive contribution in steering the ship to look at reorganizing our governance.

Thanks to all who have helped keep the Foundation operational.

Message du président

A ce moment, La Fondation canadienne de la Thyroïde complète un examen de sa structure de gouvernance. Je voudrais bien vous faire part des résultats de ce processus mais je ne suis ni clairvoyant et je ne peux voir le future. (If faut comprendre que j'écris ce message six semaines avant que vous le lisiez.)

Cette année les ateliers précédant l'assemblée générale annuelle seront fixés sur les conclusions d'un rapport préparé par Don Pierson de Southtown Consulting. Don a de l'expérience dans le processus de la critique de gouvernance et travailla à l'échelle internationale avec plus de 30 organismes tel que la Fondation. En préparation de son rapport pour la Fondation, Don fera un entretien et un sondage des membres de notre conseil national du moment (présidents de sections, membres au large et membres de l'exécutif), de la communauté pharmaceutique et des intéressés à la cause thyroïde y inclus autres organismes.

J'espère sincèrement que les conclusions de Don nous aideront à rationaliser notre organisme. A la fin du processus, je voudrais voir une structure forte de nos sections qui s'occupent des affaires locales et une structure forte nationale qui appuie les sections par le ramassement de fonds et l'organisation. Je voudrais voir un plus petit conseil national qui s'occuperais des affaires nationales avec une représentation appropriée de tous les intéressés. Il y aura le temps d'examiner ces questions durant notre AGA imminente.

En parlant des activités de l'AGA, nous animerons un Forum Thyroïde Update le samedi, 1 novembre. Il y aura un nombre de présentateurs qui adresseront les sujets de nodules thyroidiennes, approche chirurgicale, Thyrogen, thérapie radiation, diabètes et les affections thyroidiennes, la thyroïde et l'ostéoporose, et les affections thyroidiennes et la grossesse. Cocher votre calendrier pour le 30 et 31 octobre et le 1er novembre. Votre présence et participation dans ces activités durant ces trois jours sont essentiels à la croissance de la Fondation.

Enfin, je vous dis un re-bonjour. Je démissionne comme président pour raisons personnelles et je vous ai dit adieu le printemps dernier. A cause de la crise SARS dans la région de Toronto, la Fondation avait remis l'AGA jusqu'à l'automne alors mon terme continua et ainsi je dois répéter mon adieu. J'ai beaucoup aimé mon année comme président et j'espère d'avoir fait une contribution positive en dirigent la Fondation vers la réorganisation de notre gouvernance.

Merci à tous ceux et celles qui ont aidé à la continuation de la Fondation.

ESTATE PLANNING
Will You Do It Now?

If you have not made your will yet, will you do it now? Will you remember the Thyroid Foundation of Canada? If you plan to update your will, will you do it now? Will you help the Thyroid Foundation of Canada?

If we have helped you, will you help us help others? A bequest, an insurance policy, a tax exempt donation – will you think about it? Will you do it now?

Women of child bearing age may need earlier thyroid screening

by Paula Moyer

Physicians may need to revisit the conventional practice of deferring a basal thyroid-stimulating hormone (TSH) test until a patient is 40-years old, and instead consider screening women in their more fertile years.

In findings presented at ENDO 2002, the 84th annual meeting of the Endocrine Society, held in San Francisco, June 2002, investigators from the University of Vienna, Austria, found an elevation of thyroid peroxidase (TPO) antibodies in supposedly euthyroid women.

Lead investigator Wolfgang Raber, MD, and colleagues theorized that women could be at risk for autoimmune thyroiditis if they had an exaggerated TSH response to stimulation with thyrotropin-releasing hormone (TRH).

The investigators observed 152 premenopausal women who were younger than 45 years. All of the women had been referred for thyroid evaluation as part of a general physical examination, and none had signs or symptoms suggestive of any thyroid disorder.

They underwent stimulation testing with 400 mcg of TRH, thyroid volume evaluation, echogenicity measurement by ultrasound, as well as measurement of TPO antibodies concentration (normal: <100 IU/ml).

The women were divided into three groups – 39 women in Group 1 had normal TRH-stimulated TSH levels; 46 women in Group 2 had elevated TRH-stimulated TSH levels, more than 25 mU/L or more than 20 mU/L above baseline; 67 women in Group 3 had subclinical hypothyroidism, consisting of an elevated basal TSH but normal T4 levels.

TPO antibody levels were elevated in 21 percent of the women in Group 1, and in 42 percent and 72 percent of the women in Groups 2 and 3 respectively ($p<0.04$). The thyroid ultrasound patterns were normal for 87 percent of the women in Group 1, in 67 percent of Group 2 and 37 percent of Group 3 ($p<0.03$). Percentages of thyroid atrophy did not differ significantly among the groups and were 10 percent for Group 1, 17 percent for Group 2, and 19 percent for Group 3.

These results show considerable variation in thyroid reserve among women who would superficially seem to be euthyroid, the investigators stated, suggesting that the exaggerated TSH response to TRH stimulation may indicate an increased risk of autoimmune thyroiditis.

"It is generally atypical to screen a healthy person for thyroid dysfunction before the age of 40," Dr. Raber, an endocrinology fellow at the University of Vienna said. "However, women of childbearing age represent a different subgroup within the healthy population that would warrant a more in-depth screening upfront." He collaborated in his work with Alois Gessl, MD, associate professor of medicine at the University of Vienna.

"Endocrinologists should identify women at risk for [gestational] hypothyroidism before they get pregnant," Dr. Raber stressed. The critical time periods for brain development are between the 8th and the 10th week of gestation, and again at the 13th week, when the neuronal waves enter the neocortex. Unrecognized thyroid disorder could compromise foetal brain development.

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Health guides on thyroid disease

The following Health Guides on Thyroid Disease are available in English and French.

The information in these Health Guides was provided by Drs. Jody Ginsberg, Ian R. Hart, Irving B. Rosen, Sonia R. Salisbury, Robert Volpé, Paul G. Walfish and Jack R. Wall. The medical information in these brochures is for general patient education. For individual treatment or diagnosis consult your personal physician.

1. *The Thyroid Gland: A General Introduction*
2. *To Confirm the Clinical Diagnosis*
3. *Hypothyroidism*
4. *Thyroid Nodules*
5. *Thyroiditis*
6. *Graves' Hyperthyroidism (Thyrotoxicosis)*
7. *Graves' Eye Disease (Ophthalmopathy)*
8. *Thyroid Disease, Pregnancy and Fertility*
9. *Thyroid Disease in Childhood*
10. *Thyroid Disease in Late Life*
11. *Surgical Treatment of Thyroid Disease*
12. *Thyroid Cancer*
13. *Common Concerns of Thyroid Patients*

All Health Guides are available through the Foundation's national office or from your local chapter (see back page). Please send a self-addressed business size envelope stamped with two 48 cents stamps.

Tous les Dépliants Santé sur les affections thyroïdiennes sont disponibles auprès du bureau national de la Fondation ou de votre section locale. Veuillez nous faire parvenir une enveloppe d'affaires adressée à soi et affranchie de deux timbres de 48 cents.

In Memoriam

Diana Hains Meltzer Abramsky
1915 - 2000

A loving wife, mother and grandmother.

Member Order of Canada
Founder, Thyroid Foundation of Canada

Passed away October 9, 2000

Her good deeds and vision benefitted all humanity.

Thank You

Thyroid Foundation of Canada acknowledges with gratitude the bequest of $11,000 for thyroid research and education from the estate of the late Joan E. Saunders.

Joan, who died on April 6, 2003, was a long-time board member of Kingston Area Chapter and a willing and tireless volunteer for the chapter's many activities.

She is greatly missed.

Diana's wishes

I wish for earlier diagnosis and treatment of thyroid gland malfunction.

I wish for improved doctor/patient communication vis-a-vis understanding thyroid disease and treatments.

I wish for more thyroid clinics across Canada where, without referrals, people could have their symptoms evaluated by thyroid specialists.

I wish hypothyroid screening, which has helped prevent mental retardation in infants, would be expanded to include adolescents and adults in high risk cases.

I wish thyroid research were not so seriously underfunded, that it would become a more visible target for private donations and bequests, as well as for corporate and government funding.

I wish the cost effectiveness of government-sponsored thyroid education update programs, for health care professionals, would be realized.

I wish for a continuation of national media coverage of the Foundation's thyroid awareness programs, which inform the public-at-large about serious medical problems that may result from an untreated, malfunctioning, thyroid gland.

I wish for talented leaders and members, at the chapter level, to continue promoting the Foundation as a recognized source of thyroid information, for all age groups and all segments of society.

I wish for dynamic leaders and members who will inspire the public-at-large (lay and professional) to become thyroid conscious; to **"THINK THYROID RESEARCH!"** and **"SUPPORT THYROID RESEARCH!".**

I wish for caring, dedicated leadership in our growing network of chapters, to continue to accept new tasks and challenges, with the same warmth towards thyroid patients, and with the same heart and soul of our early days.

I wish for a World Thyroid Foundation with chapters in every corner of the globe, where universal problems of thyroid patients may be addressed.

Reprinted from the "Thank you, Diana" Program of the June 11, 1988 Diana Abramsky Testimonial Dinner-Dance.

Advances in the early detection and treatment of residual/recurrent papillary-follicular thyroid cancer

by
Dr. Paul G. Walfish
CM, MD, FRCP(C), FACP, FRSM (Engl)

Dr. Paul G. Walfish
CM, MD, FRCP(C), FACP, FRSM (Engl)

Well-differentiated papillary-follicular thyroid carcinoma (WDTC) is the most frequent cancer treated by endocrinologists. Although its prevalence has been increasing in many geographic regions, advances in early detection and treatment have improved survival and lessened the chance of recurrent or residual WDTC. These improvements have resulted from the increasing recognition that to optimize long-term results, there is a need to systematically administer adequate treatment to every affected WDTC patient during three successive management steps (**Fig. 1**). Step #1 mandates a total to near total thyroidectomy surgical procedure and the removal of abnormal cervical lymph nodes. Step #2 requires adherence to specific protocol preparations and precautions (**Fig. 2**) and an adequate dose of radioactive iodine ^{131}I (RAI) ablation therapy to remove any remnants of residual thyroid cancer. Once these two steps have been properly completed, Step #3 long-term follow-up on thyroid hormone suppression therapy (THST) follows to monitor by clinical and laboratory assessments for the earliest possible detection and treatment of any residual/recurrent thyroid cancer (**Fig. 3**).

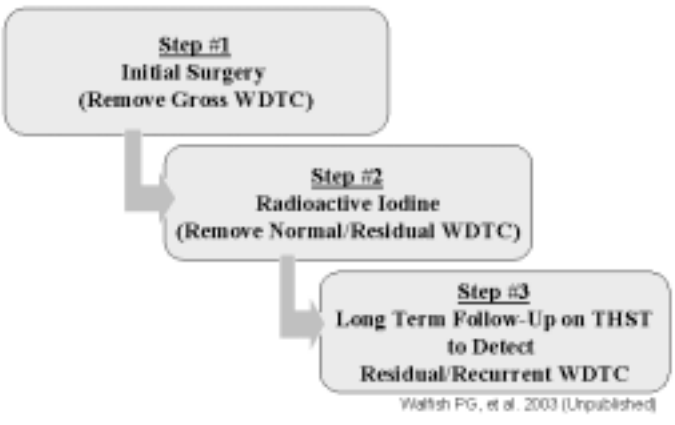

Figure 1. Management steps for WDTC treatment.

The methods used over the past several decades to monitor WDTC patients in Step #3 have included various combinations of neck ultrasound and an isotopic diagnostic whole body scan (WBS), as well as serum TSH, free T4 and serum thyroglobulin (Tg) blood tests (Fig. 3). However, much confusion has occurred in the literature as to the utility of these tests in the early detection of residual disease and their impact the quality of life for WDTC patients. In this article, the strategies currently available for the earliest detection and prompt management of residual/recurrent thyroid cancer will be reviewed and the limitations of previously recommended diagnostic screening methods such as radioisotopic whole body scanning (WBS), with its associated morbidity and inconvenience, will be re-evaluated.

What are the best strategies for detecting and managing residual/recurrent WDTC?

The increasing recognition that the serum thyroglobulin test can be a useful diagnostic method for detecting high-risk compared to low-risk recurrent/residual WDTC for most affected patients has greatly assisted in Step #3 follow-up management. As demonstrated in the current report, routine serum Tg testing on either thyroid hormone suppression therapy (THST) or after TSH stimulation, and the advances in tumor localization by neck ultrasound, CT, MRI, and FDG-PET have greatly improved the long-term outlook and quality of life for the vast majority of WDTC patients.

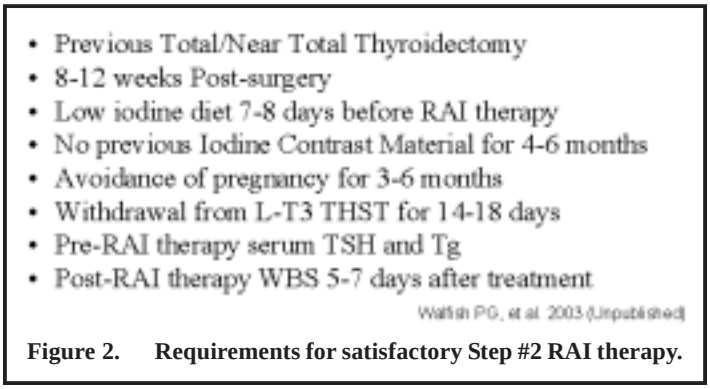

Figure 2. Requirements for satisfactory Step #2 RAI therapy.

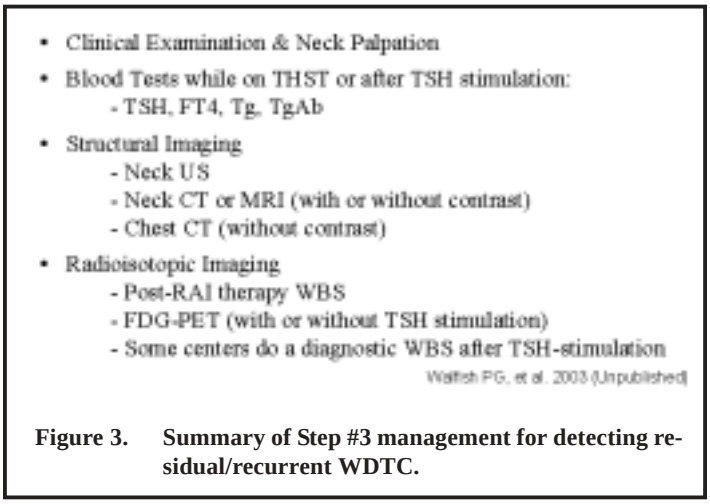

Figure 3. Summary of Step #3 management for detecting residual/recurrent WDTC.

continued on page 9

What are the clinical features of high-risk versus low-risk WDTC?

Clinical features at WDTC presentation that contribute to an increased risk of residual/recurrent disease and mortality include: > 45 years of age, primary lesion size > 4 cm, local invasion into adjacent extrathyroidal structures, extension into regional neck lymph nodes, cancer cell histology of tall/columnar > Hürthle > follicular > papillary, as well as a delay of WDTC treatment in Steps #1 and #2 for > 1 year. Patients of the male sex, inadequate previous Steps #1 (surgery) and #2 (radioactive iodine treatment) as well as inadequate thyroid hormone suppression therapy (THST) during Step #3 can also increase the risk for WDTC recurrences and death. Delay in the treatment of residual disease may contribute to an unfavorable outcome.

The extent of WDTC documented at the time of surgery (Step #1) using a staging classification can also assist in predicting high vs. low risk for residual/recurrent disease. **Stage 1** is when the WDTC is confined to the thyroid gland; **Stage 2** when cervical regional lymph node metastases are observed; **Stage 3** has evidence of extrathyroidal extension to adjacent structures at the time of surgery; and **Stage 4** has spread to distant sites such as the lung and bone. The clinical risks and staging of WDTC disease at presentation can be applied to each affected patient to determine the indications for aggressive radioactive iodine ablation therapy (Step #2) and intensity of follow-up care (Step #3). Thus, low-risk Stage 1 disease confined to the thyroid bed at initial presentation and adequately treated with surgery and radioactive iodine will have a lesser risk for recurrence and the need for further treatment than WDTC patients with a Stage 2, 3 and 4 staging classification.

Serum thyroglobulin as a marker for determining residual/recurrent WDTC.

It has been estimated that 10-20% of WDTC patients are at risk for residual/recurrent disease within 10-20 years after initial diagnosis and treatment. Since the highest risk occurs in the first ten years, it has been of importance to determine the best screening methods for providing the earliest detection and prompt treatment of residual/recurrent WDTC. In the past, the "gold standard" for long-term care had been to routinely perform a radioactive iodine (RAI) whole body scan (WBS). However, a diagnostic WBS requires a withdrawal from thyroid hormone suppression therapy for 4-6 weeks and the imposition of severe symptomatic hypothyroidism every 6-12 months. Concurrently, there has been increasing recognition over the past decade that the measurement of serum thyroglobulin (Tg) can also be a useful screening test for detecting residual WDTC. Providing that Steps #1 and #2 have been correctly performed and there is no anti-thyroglobulin antibody that could interfere with the Tg assay, it has been well established that the serum Tg becomes an excellent marker for the risk for residual disease. Unfortunately, approximately 15% of WDTC patients have concurrent autoimmune (Hashimoto's) thyroiditis with the release of an anti-thyroglobulin antibody into the circulation that interferes with the accurate measurement of serum Tg levels. Depending upon the commercial detection method employed, Tg antibody interference results in either a false low or false high serum Tg. Fortunately for the remaining 85% of WDTC patients who do not have Tg antibody interference, the serum Tg test can be utilized as a more convenient and cost-effective diagnostic test than a diagnostic WBS for detecting residual/recurrent WDTC. Observations in our center and others have documented the very frequent occurrence of a negative WBS result when the serum Tg has been positive. Interestingly, we have also shown that a serum TSH-stimulated Tg test taken just prior to Step #2 RAI ablation therapy can also be a useful predictor of the risk for either an unfavorable or good long-term outcome during Step #3. Based upon these experiences, we and others have concluded that whenever initial surgery (Step #1) and RAI ablation therapy (Step #2) have been correctly performed, the serum Tg becomes the "platinum standard" for detecting residual/recurrent thyroid cancer (**Fig. 4**).

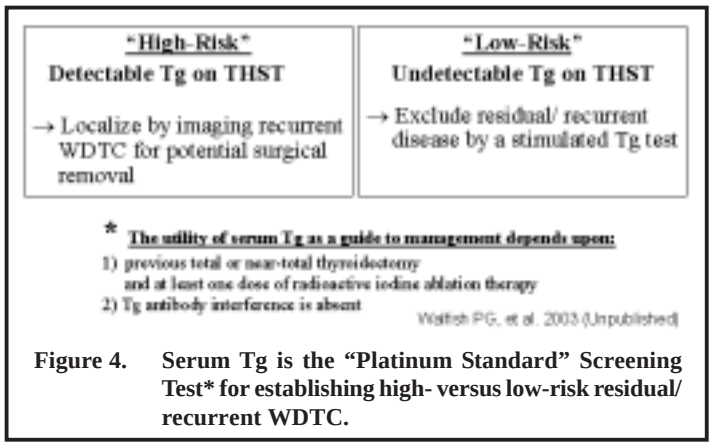

Figure 4. Serum Tg is the "Platinum Standard" Screening Test* for establishing high- versus low-risk residual/ recurrent WDTC.

A detectable serum thyroglobulin while on thyroid hormone suppression therapy indicates a "high-risk" for residual/recurrent WDTC.

Patients with "high-risk" by either clinical features and/or a detectable serum thyroglobulin despite thyroid hormone suppression therapy require intensive investigation to localize the site of residual disease (**Fig. 5**). Imaging methods can be used for diagnostic confirmation and tumor localization. Such tests include neck ultrasound (US), magnetic resonance imaging (MRI), computerized tomography (CT) of the neck and chest. Additional functional imaging for patients who are WBS negative, but thyroglobulin positive, includes a radioactive fluorodeoxyglucose labelled positron emission tomography (FDG-PET) test. Although PET imaging is not yet routinely available in Ontario, it may assist in localization of the thyroid cancer cells by detecting increased glucose uptake in cancer cells. The goal of these localization imaging studies is to determine whether residual cancer can be detected and amenable to surgical removal before another radioactive iodine (RAI) treatment is administered. Since radioactive iodine therapy may only effectively ablate small volumes of residual disease (i.e. not readily seen with imaging techniques), preference is given to surgical resection of WDTC whenever possible prior to another RAI treatment. Should a post-I^{131} therapy WBS fail to demon-

An estimated 10-20% of patients have residual/recurrent disease on follow-up over 10-20 years, with the highest risk of recurrence in the first 10 years.

continued on page 10

Advances in the early detection . . . continued from page 9

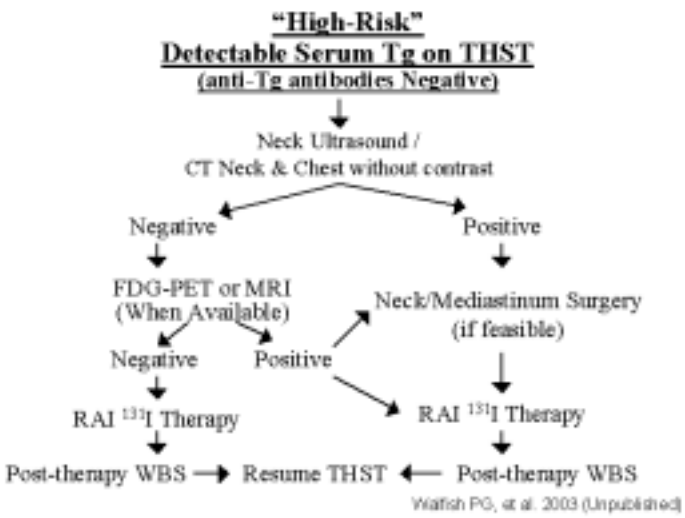

Figure 5. Schematic outline of the management strategy for "high-risk" WDTC patients.

strate uptake in any site (i.e. negative result), RAI is no longer a feasible treatment option for the future management of such WDTC patients. For "high risk" WDTC patients with a negative post-therapy WBS, the goal of future Step #3 follow-up would be to localize by structural imaging procedures residual disease which is accessible to removal. To this goal, periodic neck ultrasound, CT, MRI and/or an FDG-PET imaging studies may assist in the identification of metastatic deposits that can be surgically resected.

What are the recommended management strategies for those "low-risk" patients who have undetectable serum thyroglobulin while on thyroid hormone suppression therapy?

Although an undetectable serum Tg when the serum TSH is suppressed on thyroid hormone suppression therapy, indicates a "low risk" for residual WDTC and a potentially favorable long-term outcome (particularly for Stage 1 WDTC patients), it has been established that stage 2 to 4 WDTC patients with an undetectable serum Tg on THST can have approximately a 20% risk for residual/recurrent lymph node metastases and 5% risk for distant metastases. It has therefore become essential to obtain a serum Tg after TSH stimulation particularly in those with previously identified clinical and pathologic evidence indicative of a "high risk" to facilitate the earliest detection and treatment of residual disease in Step #3 follow-up monitoring.

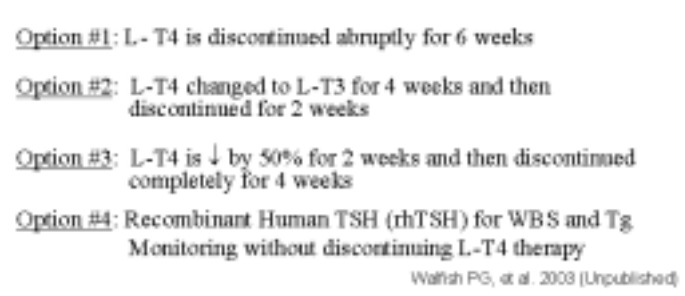

Figure 6. Summary of Options #1-4 for TSH stimulation in treated WDTC patients.

What are the methods available to increase serum TSH levels?

Four previously applied protocol options recommended in Step #3 WDTC management to increase the serum TSH to levels greater than 25 mIU/L before either a diagnostic WBS and/or a serum Tg test have been reported (**Fig. 6**). In **Option #1**, levothyroxine (L-T4) therapy is abruptly discontinued for four to six weeks. Unfortunately, this protocol leads to severe hypothyroid symptoms by the 4th week that greatly impair the quality of life and limit employability. In **Option #2**, levo-triiodothyronine (L-T3) is substituted immediately for L-T4 for four weeks before its complete withdrawal for two weeks. Because L-T3 is a very short acting thyroid hormone compared to L-T4, this approach also induces severe symptomatic hypothyroidism and also markedly impairs the quality of life during the last 7-10 days of this protocol. In **Option #3**, the L-T4 dose is reduced by 50% for two weeks and then completely withdrawn for four weeks. This method also induces symptomatic hypothyroidism with a concomitant increase in morbidity and loss of employment time.

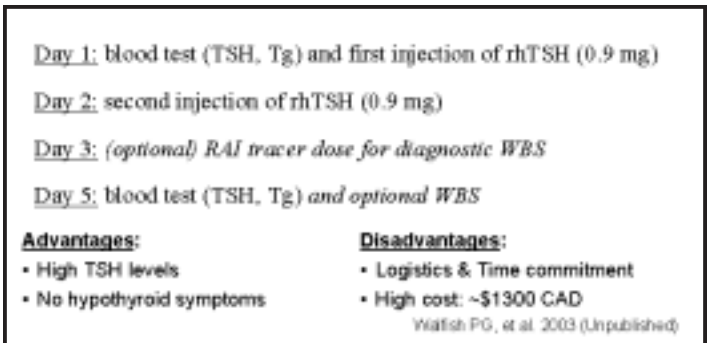

Figure 7. Option #4: Protocol for rhTSH administration.

Option #4 has become available within the past several years to completely avoid any risk of symptomatic hypothyroidism by injecting human recombinant thyroid stimulating hormone (rhTSH) on two successive days while continuing THST. **Option #4** requires adherence to a five-day (Monday-Friday) protocol, as well as the ability to purchase the rhTSH Thyrogenâ (Genzyme) at a cost of approximately $1,300. This medication is not routinely funded by universal health care plans in Canada and is available only to those fortunate to have a private health insurance plan that will pay the costs of this option (**Fig. 7**). To further simplify **Option #4**, the need for a Day 3 RAI 4 mCi ^{131}I tracer dose for WBS and low iodine diet preparation may be eliminated. Although **Option #4** does induce high serum TSH levels (i.e. over 100 mIU/L), THST is maintained and the metabolic clearance of thyroglobulin from the serum remains increased. Consequently, the stimulated Tg levels observed using **Option #4** may be lower or no different than those obtained using thyroid hormone withdrawal protocols which may have lower TSH stimulation effects (see **Option #5** on next page).

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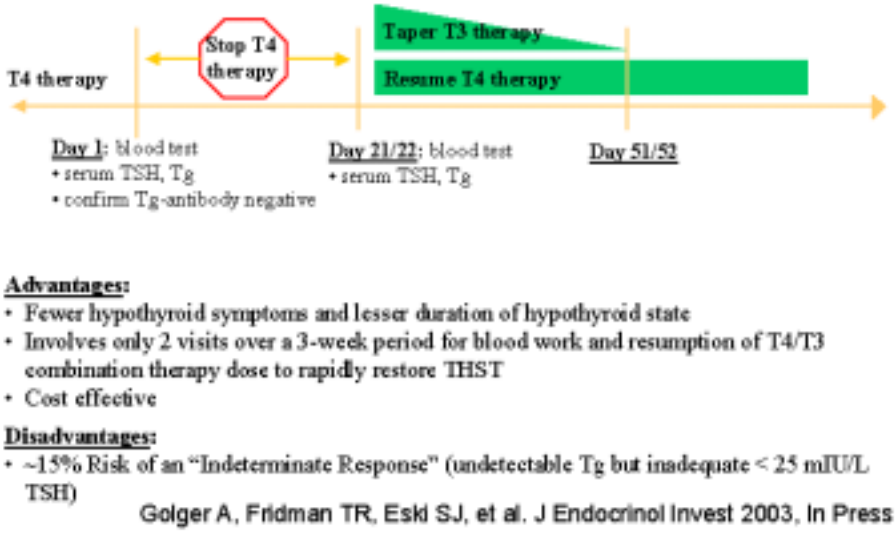

Figure 8. Option #5 shortened (3-week) T4 withdrawal protocol for obtaining a TSH-stimulated serum Tg test.

To minimize morbidity and cost in obtaining a TSH-stimulated serum Tg test, I have administered over the past several years a new protocol – a shortened 3-week T4 withdrawal, **Option #5** (**Fig. 8**). The effectiveness of **Option #5** in not only stimulating an adequate rise in serum TSH, but also detecting residual/recurrent WDTC by a serum Tg test without the need for a routine WBS test has subsequently been confirmed. From a quality of life questionnaire administered to WDTC patients during the **Option #5** protocol, it was documented that a 22-day interval of L-T4 withdrawal resulted in almost no loss of employment time and only mild hypothyroid symptoms that could be promptly reversed by resuming combined L-T4/T3 therapy (**Fig. 8**). The time commitment for Option #5 required only one extra office visit 22 days after withdrawal from L-T4 therapy to obtain the blood test and instructions for resuming combined L-T4 and L-T3 therapy. When **Option #5** is administered, three possible serum Tg/TSH outcomes were observed (**Fig. 9**).

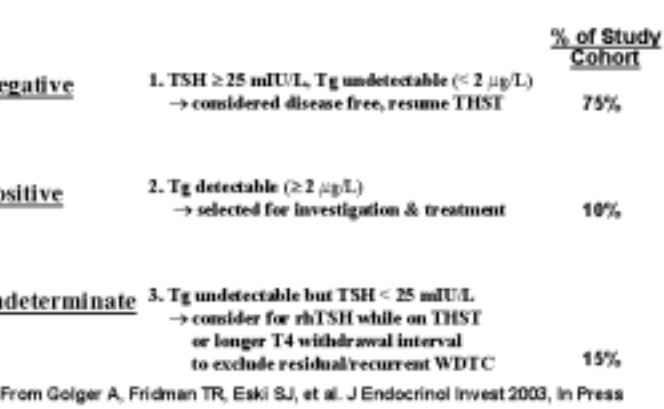

Figure 9. Summary of possible serum TSH/Tg responses to a 22-day T4 withdrawal TSH-stimulated Tg test.

Among approximately 200 patients screened by **Option #5**, 75% had a negative test result response for residual/recurrent WDTC, i.e. a sufficient rise in serum TSH ≥ 25 mIU/L and an undetectable serum Tg (< 2 µg/L). This large subgroup was considered free of disease and was instructed to resume THST management with the possibility that their thyroid hormone dose could be lowered to avoid the consequences of excessive long-term thyroid hormone therapy. This could be relevant to those WDTC patients in older age groups with cardiac disease and menopausal complications. In agreement with other TSH-stimulated Tg protocols, it is also feasible to identify a second small subgroup (≈ 10%) requiring further investigation and treatment who had a "positive test result" for residual/recurrent WDTC on the basis of a serum Tg test ≥ 2 µg/L. Finally, a small (≈ 15%) WDTC third subgroup was identified with an "indeterminate test response" on the basis of an insufficient rise in their serum TSH (< 25 mIU/L) and an undetectable serum Tg. This latter subgroup could be selected for more intensive TSH stimulation by either extending the thyroid hormone withdrawal interval (with its associated morbidity as outlined in Options #1-3) or by using rhTSH Thyrogen® stimulation (with its associated cost and time commitments, as outlined in Option #4). WDTC patients in the third small subgroup with an "indeterminate" TSH stimulated Tg previously identified to have high-risk clinical and pathologic features may require additional TSH stimulation testing and structural imaging tests to more definitively exclude residual/recurrent WDTC. Follow up on low-risk WDTC patients initially screened by Option #5 with a negative stimulated Tg test result over a subsequent 3-5 year interval by clinical examinations and supplemental serum Tg, as well as non-radioisotopic imaging, has not revealed to date any patient who developed residual/recurrent WDTC.

Consequently, either Option #5 or #4 protocols can be recommended as the most convenient and effective strategies to guide further management by obtaining a TSH-stimulated serum Tg on "low-risk" WDTC patients followed in Step #3 protocol with an undetectable Tg on THST. As outlined **(Fig. 10)**, those patients who have a positive TSH-stimulated Tg test undergo further imaging to localize the detected residual disease that may be treated by surgery and/or radioactive iodine. Those patients identified to have a negative Tg result can resume THST, whereas those who have an indeterminate result will require repeat TSH stimulation and follow-up. Long-term observations are in progress to determine the precise clinical outcome and significance of a positive TSH-stimulated serum Tg test (^{3} 2 mg/L). Preliminary data from our center suggest that low-risk WDTC patients with a TSH-stimulated Tg positive values less than 20 mg/L may not have residual WDTC that can be easily localized by currently available diagnostic imaging technology and could continue to have a

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Advances in the early detection . . . continued from page 11

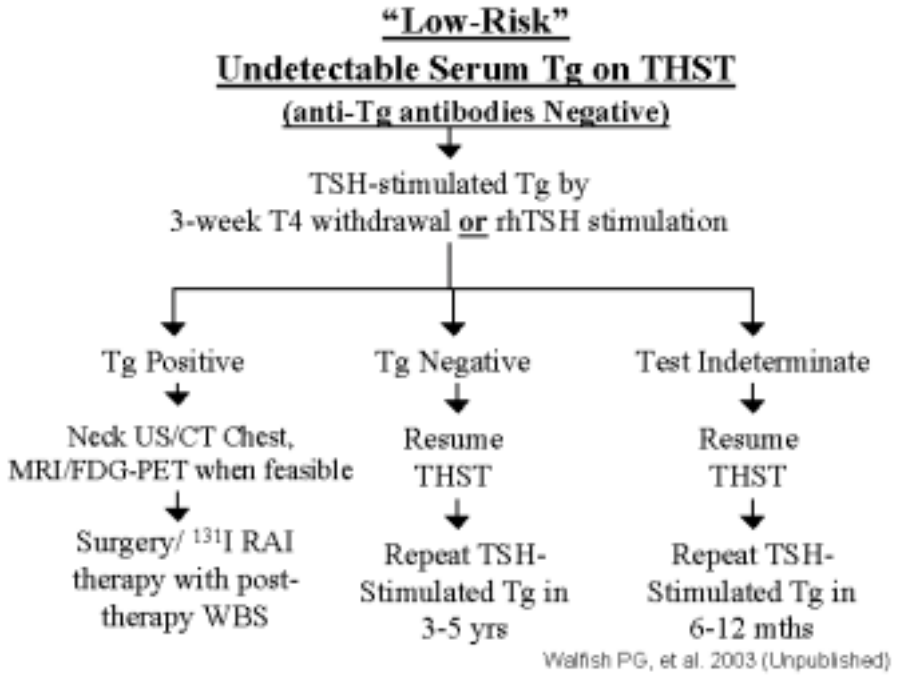

Figure 10. Schematic outline of the management strategy for "low-risk" WDTC patients.

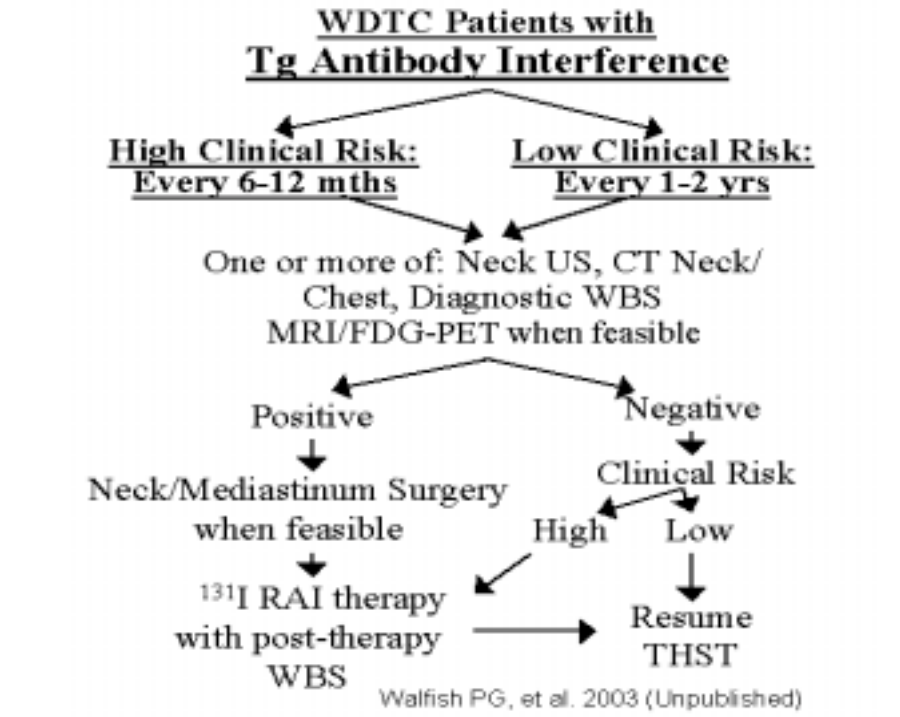

Figure 11. Schematic outline of the management strategy for WDTC patients with Tg antibody interference.

favorable long-term prognosis. For those patients who have thyroglobulin antibody interference, the strategies outlined based on serum Tg detection cannot be applied and a greater reliance must be placed on special imaging methods to detect residual/recurrent WDTC (**Fig. 11**). Those with previously established higher clinical risk for residual WDTC (i.e. those with Stages 2-4 disease), but with negative imaging and/or detected disease not amenable to surgical removal, may be considered for a second RAI treatment and a post-therapy WBS to confirm and attempt to treat unsuspected residual/recurrent WDTC **(Fig. 11**).

In summary, the advances in diagnostic detection and management of residual/recurrent well-differentiated thyroid cancer by the application of a serum thyroglobulin test without a diagnostic WBS test have been outlined. When combined with the established long-term clinical risk factors and recent improvements in structural imaging technologies for localizing residual/recurrent disease, the management of WDTC has greatly improved the quality of life and long-term survival for most WDTC patients.

Acknowledgements

The author thanks Ms. Tauba Fridman for her invaluable assistance in the preparation of this report, as well as Ms. Carolyn Walfish for her typing assistance. This publication has been supported by an educational grant from Abbott Laboratories, Limited, as well as operating grants to the Mount Sinai Hospital Dr P Walfish Thyroid Cancer Centre Database from the Temmy Latner/Dynacare and the Julius Kuhl Family Foundations, as well as the Mount Sinai Hospital Foundation of Toronto. This work has been presented in part at a Meet the Professor session on Strategies for Managing and Detecting Residual/Recurrent Well-Differentiated Papillary and Follicular Thyroid Cancer at the 75th Annual American Thyroid Association Meeting, September 17, 2003.

Appendix of Abbreviations:

WDTC:	Well-Differentiated Papillary-Follicular Thyroid Cancer
THST:	Thyroid hormone suppression therapy
WBS:	Whole Body Scan (diagnostic or post-therapy radioiodine ^{131}I)
Tg:	thyroglobulin
US:	ultrasound
CT:	computed (axial) tomography
MRI:	magnetic resonance imaging
FDG-PET:	(^{18}F-)fluorodeoxyglucose positron emission tomography
RAI:	radioactive iodine (^{131}I isotope)
TSH:	thyrotropin
L-T4:	levo-thyroxine
L-T3:	levo-triiodothyronine
FT4:	free thyroxine

Dr Walfish is a Professor Emeritus of Medicine, Pediatrics and Otolaryngology, University of Toronto Senior Consultant, Head & Neck Oncology Program and Endocrine Division, Mount Sinai Hospital, Toronto ON Canada

Chapter news

Burlington/Hamilton

Fundraising: Entertainment Books are now available**.** They make great holiday gifts and support our chapter programs.

Gift Memberships: The gift that keeps on giving throughout the year. Christmas is fast approaching. Call or e-mail the chapter to find out more.

The chapter has just completed a very busy schedule with public education meetings in Hamilton, Milton and Burlington. The Hamilton event on thyroid cancer was filmed for cable television. The chapter is planning a series of "Fantastic Fridays" and "Toonie Tuesdays" in local malls to raise money for thyroid research. If you would like to help call Patty at the chapter toll free number 1-866-377-4447.

As 2003 comes to a close we would like to thank the volunteers and members who made this year the best ever, presenting five public education meetings, three fund-raising programs, launching our Helpline and our thyroid awareness program. Our young chapter is about to enter its fourth year of operation and looks forward to many events. At this time the Board of Directors of the Burlington/Hamilton area chapter would like to wish everyone a safe and happy holiday.

Kingston

This year Kingston chapter undertook its first ever direct mail fundraising project. The funds were directed 75% to the Diana Abramsky Research Fund and 25% to the work of the chapter, unless otherwise allocated. The project which will run until the end of 2003 has raised almost $1,500 for the Diana Abramsky Research Fund**,** $650 for chapter activities and we benefited from new and renewed memberships. Letters were mailed to chapter members, lapsed members and local enquirers.

We would like to gratefully acknowledge the ongoing support we receive from Sandra Lecouffe as beneficiaries of her Wee Corner Store Nevada sales, and many thanks to Crown Collision Service for its generous donation of $200 for the work of Kingston chapter.

Ottawa

Mayor's Walk: Over 300 walkers representing agencies congregated at Ottawa City Hall on Saturday, September 13 to take part in the first annual Mayor's Walk for Volunteerism - a joint project of City Hall and Volunteer Ottawa. The Ottawa area chapter, TFC, was well represented with a team of nine walkers and three members in charge of our display booth, all of us nattily attired in our green and white T-shirts and matching hats. The walk was a pleasant 3.5 km along the Rideau Canal which out team easily accomplished. Over all, the walk raised $39,000, to be divided among Volunteer Ottawa for its programs and the participating agencies for theirs. It also generated a lot of interest in the work of the Foundation and raised our profile a notch or two.

Patient Panel and AGM: Following this successful event came another on September 16 when the chapter held its first public education meeting of the autumn season with the popular patient panel telling their stories and Dr. Timothy O'Leary acting as Moderator. It was also our AGM held over from the spring, and a new Board of Directors was elected.

Toronto

Toronto held its AGM on September 13 in conjunction with a very informative lecture by endocrinologist Dr. Jay Silverberg of Sunnybrook and Women's College Health Sciences Centre – a frequent contributor to our educational meetings. The topic: *Treatment of hypothyroidism, one hormone or two?* outlined the results of a study Dr. Silverberg did with Dr. Levitt of the department of psychiatry at Sunnybrook and Women's College concerning treatment outcomes of two groups of patients. One group used T4 alone (traditional treatment) and another group used a combination of T4 and T3. In general there was no significant difference reported between the two groups in this carefully controlled double blind study. The detailed results are to be reported soon in a medical journal.

Monthly Draw

By renewing your membership you become eligible for our monthly draw.

Every month one renewing member will receive a book on thyroid disease.

Our June 2003 winner was:
Mrs. Shirley Ann Lawley
West Lorne, Ontario
who received a copy of
"The Thyroid Gland: A Book for Thyroid Patients"
by Dr. Joel Hamburger

Our July 2003 winner was:
Mr. Sauren Chaubal
Orangeville, Ontario
who received a copy of
"The Thyroid Gland: A Book for Thyroid Patients"
by Dr. Joel Hamburger

Our August 2003 winner was:
Ms. Laurine Umbach
Peace River, Alberta
who received a copy of
"How the Thyroid Works"
by Dr. H. Jack Baskin

thyrobulletin is published four times a year: the first week of May (Spring), August (Summer), November (Autumn) and February (Winter).

Deadline for contributions are:

December 15, 2003 (Winter)
March 15, 2004 (Spring)
June 15, 2004 (Summer)
September 15, 2004 (Autumn)

Contributions to:
Rick Choma, Editor
PO Box 488
Verona, ON K0H 2W0

Fax: **(613) 542-4719**
E-mail: **rchoma@sympatico.ca**

Letters to the doctor

Robert Volpé, OC, MD, FRCPC, MACP, Medical Adviser to the Foundation

I want to refer to your article in *thyrobulletin*, Volume 22, No. 3, Autumn 2001, page 9.

I suffer with classic symptoms of fatigue, I am very tired after physical activity. I will be 83 in June. One side of my face is puffy and my stomach is swollen up. I showed my doctor your article (Dr. J. Lea, Lynn Valley Centre, North Vancouver). He said it shouldn't be the thyroid as I am taking the right amount according to your tests 0.1mg levothyroxine sodium. My stomach bothers me most. I am careful about my diet as he said I am borderline diabetic, he never needed to give me pills, I keep my sugar level well down. I think the thyroid pills are causing the swelling. Could you give me any information as to what is causing the swelling.

Mabel Fox
North Vancouver, BC

Fatigue as you describe is a very nonspecific symptom, and does not necessarily reflect an abnormality of the thyroid. One can readily determine whether the thyroid is responsible by doing thyroid function tests, namely free T4, T3 and TSH. If these are abnormal, then it is possible the thyroid is responsible. On the other hand, if these tests are normal, then it would be necessary to seek out some other explanation. Perhaps your physician has already carried out the appropriate tests and if you wish to send the results to me I will attempt to interpret them for you.

* * * * *

I am turning to you in the hope that you can perhaps help me with an eye problem that is making me panic.

In March 2002, following many symptoms (increased cardiac rhythm, obvious nervousness, heat intolerance, increased appetite, loss of weight) I was diagnosed with hyperthyroidism. I was treated with radioactive iodine in April 2002. Since September, blood tests showed a stable level of my thyroid gland.

In August 2002, eye problems started to appear. Here are the symptoms:

- Increased muscular masses around the eye, mainly in the interior corners near the nose that are swollen and very visible;
- Swelling (oedema?? - fat??) Both upper and lower eyelids;
- Glassy and venous eye;
- Hard lumps near the upper eyelid on my right eye;
- Somewhat diminished visual acuteness and both upper and lower double vision.

Since about October-November, my eyelids don't close right due to the increased ocular masses. In order to sleep and close my eyes without force, I must bandage my eyes. However, during the night the bandage gets displaced and often either the lashes are folded into the eye or the bandage gets stuck to the eye. Other symptoms have since appeared. My eyes become red and irritated. My eyes tear almost all night. In the morning the corneal tissues are swollen. I get up many times during the night to moisten my eyes. Artificial tears, protective creams and lubricating gels, I have tried them all.

My condition has been stable since the beginning of December. I no longer feel the pressure on my eye during the day that I did in September 2002 when the swelling was of disturbing proportions. The only change is when I have a restless night the bandages over my eyes move often. On those mornings it takes a lot longer to moisten my eyes (drops in each eye for a minimum of 15 minutes during a one to three hour period .

Since January 2003, my ophthalmologist has prescribed 40 mg cortisone per day. If I understood him right, it is to stop the swelling – stopping the metamorphosis and thus protecting my eyes from bulging (already started). Yes, the bags may have softened and are less congested. There is no longer any redness around my eye. However, the muscular mass is still obvious. I can feel the muscles drooping around my eyes. There is even a mass on the interior corner of the eye, near my nose. It is as big as my little finger and overflows from my eye. The skin has stretched so much that I don't believe my eyelids will ever return to normal. I am told that the physical damages already made are irreversible. I am helpless and see myself as deformed. I am embarrassed by my strained, depressed and old appearance (I am only 32-years old). It is an awful transformation and difficult to accept. A real trial for my self esteem. I am discouraged.

The above is to ask you if you have had occasion to treat a case such as mine? Do you have a solution for me. Is there is a treatment, surgery for "muscular decongestion" to stop the swelling and the pressure on my eyes? Is there such a treatment, or someone who could restore my appearance to July 2002? Alternatively, is there something to enable me to close my eyes naturally in order to get a good night's rest and thus avoid repetitive conjunctivitis? It is my dearest dream.

Marie-Josée Deschênes
Saint-Antonin (Québec)

This patient has suffered from severe Graves' ophthalmopathy following radioactive iodine treatment. Unfortunately, some patients do develop worsening of their eye disease after radioactive iodine. This patient's eye disease has become quite severe and may require surgical correction. Quite often, however, if one can tolerate the eye disease for a few years, it may improve spontaneously to some degree. However, this is far from a certainty, and she may require surgical correction. This should be carried out by a real expert in surgery of the eyes in relation to Graves' ophthalmopathy. I am not aware of the names of appropriate surgeons in her district. Two such surgeons here in Toronto would be Dr. James Oestreicher or Dr. Kraft.

However, there may well be surgeons in Montreal and Quebec City who are very capable of this type of surgery, and if she has not already consulted such an Ophthalmologist, she should do so forthwith.

* * * * *

Je me tourne vers vous pour peut-être régler un problème oculaire me fait tant paniquer.

En fait, au mois de mars 2002, à la suite de plusieurs symptômes (augmentation du rythme cardiaque, nervosité évidente, intolérance, appétit accrus, perte de poids), on a découvert chez mois, une hyperthyroïdie. J'ai été traité à l'iode radioactif en avril 2002. Et depuis

suite à la page 15

HEAD&NECK CANCER FOUNDATION

Thyroid Foundation of Canada gratefully acknowledges the support of the Head & Neck Cancer Foundation in sponsoring *Letters to the doctor.*

Letters to the doctor . . . suite de la page 14

septembre, les prises de sang démontrent une stabilité au niveau de ma glande thyroïde.

En août 2002 des problèmes oculaires se sont manifestés. Voici les symptômes:

- Augmentation de la masse musculaire entourant l'oeil, principalement celui dans les coins intérieurs, près du nez, ils sont gonflés et bien apparents,
- De l'enflures (oedème??--gras??) au niveau des paupières supérieures et inférieures,
- L'oeil vitreux et veiné. Fragile au froid et au vent: larmoiement,
- Des amas durs au niveau de la paupière supérieur de mon oeil droit (gras??),
- L'acuité visuelle diminuée quelque peu et vision double vers le haut et vers le bas.

Depuis, octobre-novembre, environ, les paupières ferment mal du à l'augmentation de la masse musculaire. Pour réussir à dormir, à fermer les yeux sans forcer, je dois me bander les yeux. Cependant, durant la nuit le bandage se déplace et souvent j'ai, soit les cils repliés dans l'oeil, soit le bandage bien coller sur l'oeil. D'autres symptômes se sont alors apparus. Mes yeux deviennent rouges et irrités. Des larmes coulent presque pendant toute la nuit. Il y a, dans l'avant midi, tuméfaction des tissus sur la cornée. Je me lève plusieurs fois par nuit pour réhydrater mes yeux. Des larmes artificielles, des crèmes protectrices, et des gels lubrifiants j'en ai essayés!

Je trouve mon état stable depuis le début de décembre. Je ne ressens plus durant le jour, la pression exercer sur mon oeil comme en septembre 2002 lorsque l'enflure a pris des proportions inquiétantes. Le seul changement c'est lorsque j'ai une nuit active et que mon bandage sur les yeux se déplace plusieurs fois. C'est matin là, c'est beaucoup plus long pour réhydrater mes yeux (des gouttes dans chaque oeil au 15 - 20 min. durant 1 à 3 heures environ).

Depuis le 30 janvier 2003, mon ophtalmologiste me prescrit de la cortisone, 40 mg par jour. Si j'ai bien compris c'est pour "stopper" l'inflammation. Arrêter la métamorphose! Et ainsi me protéger contre la saillie de mes yeux (déjà commencer légèrement). Oui, peut-être que les poches se sont ramollies, elles sont moins congestionnées. Il n'y a presque plus de rougeur autour de l'oeil. Par contre la masse musculaire est encore bien évidente. Je sens mes muscles descendus autour mes yeux. Il y a même celui qui est au coin intérieur de l'oeil, près du nez, il est gros comme le bout de mon petit doigt et il déborde de mon oeil. Et la peau a tellement été étirée que je ne croie pas que mes paupières redeviennent fermes comme avant. On me dit, de toute façon, que les dommages physiques déjà fait sont irréversibles. Je suis désemparée, je me voie déformer. Je suis gênée de mon apparence fatiguée, déprimée et vieillie (je n'ai que 32 ans). C'est une affreuse transformation difficile à supporter. Une véritable épreuve pour l'estime de soi. Je suis démoralisée.

Mon discourt m'amène à vous demander s'il vous est arriver de traiter un cas comme le mein?

À savoir si vous avez une référence une solution à me soumettre. Si une sorte de traitement, de chirurgie de "décongestion musculaire" existe pour stopper l'enflure et la pression exercer sur mes yeux. S'il existe un moyen, quelqu'un, qui m'aiderait à retrouver mon apparence de juillet 2002. Ou, du moins, me rendre capable de fermer les yeux naturellement pour passer de bonnes nuits, et ainsi éviter les conjonctivités à répétition. C'est mon rêve le plus cher.

Marie-Josée Deschênes
Saint-Antonin (Québec)

Cette patiente a souffert une ophtalmopathie Graves sévère suivant un traitement à l'iode radioactif. Malheureusement, il y a des patients dont la maladie des yeux empire après un traitement à l'iode radioactif. La maladie des yeux de cette patiente est devenue très sévère et devra peut être nécessiter une chirurgie corrective. Cependant, souvent si l'on peut endurer la maladie des yeux pour quelques années, elle pourrait s'améliorer spontanément jusqu'à un certain point. Cependant, ceci n'est aucunement certain et une chirurgie corrective peut être nécessaire. Cette chirurgie devrait être effectuer par un expert dans la chirurgie des yeux en relation à la maladie Graves ophtalmopathie. Je ne connais pas le nom de chirurgien approprié dans son district. Deux tels chirurgiens à Toronto seraient le Dr James Oestreicher ou le Dr Kraft.

Cependant, il y a peut-être des chirurgiens à Montréal et à Québec qui seraient très capable de ce type de chirurgie et si elle n'a pas encore consultée un tel Ophtalmologue elle devrait le faire le plus tôt possible.

* * * * *

Your research dollars at work

The Thyroid Foundation of Canada is pleased to announce that upon receiving the recommendations of its Peer Review Committee, the following awards have been granted.

The recipient of the $30,000 Diana Meltzer Abramsky Fellowship is Dr. Husnia Marrif, PhD. After earning degrees in pharmacology in Libya, she completed her PhD in pharmacology at the University of Saskatchewan. In December 2002 she joined the laboratory of Dr. Enrique Silva, at McGill University in Montreal. Dr. Marrif will be studying the role of mitochondrial proteins in the thermogenic effect of thyroid hormone.

There were two Summer Student Scholarships of $4,000 each awarded for 2003.

Ms. Jennifer Webster, B.Sc. (Hons) Life Science, a second year medical student at University of Manitoba, has been studying the epidemiology of Graves' disease in youth from genetics to outcomes, under the supervision of Dr. Shayn Taback in Pediatric Endocrinology at University of Manitoba in Winnipeg.

Mr. Marcus Povitz, B.Sc.in Microbiology and Immunology, a medical student at McGill University, Montreal has been studying possible mechanisms by which thyroid hormone affects heat generation and the regulation of temperature and metabolism in mammals, under the supervision of Dr. Enrique Silva in Endocrinology at the Jewish General Hospital in Montreal.

A Grant-in-Aid of $5,000 has been awarded to the Women's Health Concerns Clinic of St. Joseph's Health Care Centre, Hamilton, which is affiliated with McMaster University. This grant will be used for a clinical research pilot project to investigate the possible relationship between thyroid antibodies and post-partum depression. This project, which will be starting soon, is under the direction of Dr. Meir Steiner, MD, PhD, FRCPC, Professor of Psychiatry & Behaviour Neurosciences and Obstetrics & Gynaecology.

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Peer Review Committee

Dr. Robert Volpé, Chairman, Toronto ON
Dr. Jody Ginsberg, Edmonton AB
Dr. Jacques How, Montreal QC
Dr. J. Enrique Silva, Montreal QC
Dr. Paul Walfish, Toronto ON

Chapter coming events

Free admission – everyone welcome

Burlington/Hamilton

Location: Burlington Art Centre, Shoreline/Rotary Lakeshore Room, 1333 Lakeshore Road, Burlington.

- Tuesday November 4, 2003. Display 6:30, meeting 7:00 pm. Speaker TBA. Topic: *Graves' hyperthyroidism and Graves' eye disease.*

2004 public education meetings are in the planning stage.

May 2004 – Annual Flower Sale and Mayor's Walk for Volunteerism. All funds raised from these events support the chapter Helplines.

For information call: 905-577-2433, 1-866-377-4447 or 905-381-0475 or e-mail: dan.tammy.butt@sympatico.ca.

Kingston

Location: Loblaws Upstairs, Kingston Centre, Princess Street at Sir John A.

- Fourth Sunday each month, 3-4 pm. Fall season of informal thyroid information sessions. Bo Popovic, pharmacist and a representative from Kingston chapter will be present.

For information call: 613-530-3414.

Kitchener/Waterloo

Location: Kitchener Public Library, lower level. 85 Queen Street North, Kitchener. Wheelchair accessible.

- Wednesday February 24, 2004, 7:00 pm. **Dr. Arshad Khan,** Psychiatrist**,** Kitchener. Topic: *The thyroid mind and emotions.*
- Wednesday April 28, 2004, 7:00 pm. **Dr. Terri Paul,** Assistant Professor, Endocrinology & Metabolism, St. Joseph's Health Centre, London. Topic: *Obesity: what you and your thyroid can do.*

For information call: 519- 884-6423.

London

Location**:** Central Library, Galleria, 251 Dundas Street, London. Two hours free parking for library patrons.

- Tuesday, November 18, 2003, 7:30 pm. **Dr. Malcolm Arnold, Cardiologist,** London Health Sciences Centre, South St. Campus. Topic: *The heart and the thyroid: an intriguing partnership.*

For information call: 519-649-1145 or visit our website: www.thyroidlondon.ca.

Toronto

Location: Metro Toronto Convention Centre, South Building

- Friday, January 16, 2004,10:00-5:00 pm & Saturday January 17, 2004, 9:00-5:00 pm. **2004 Women's Health Matters Forum and Expo.** Drop by the Thyroid Foundation's education booth at the Expo. Listen to a lecture on thyroid disease at the Forum. This is a large annual event with approximately 10,000 people attending every year. It is also your opportunity to learn more about women's health issues.

Check local advertising and phone the chapter Helpline for more details prior to the event. For information call: 416-398-6184.

10 top tips for building a positive body image

1. **Develop a lifestyle that keeps you healthy and vital as an ongoing lifelong process**. Invest in yourself and have some fun. Try shifting your focus from what you look like to being comfortable with your body.
2. **Build on other aspects of your life**. Be with people who respect and accept you for yourself.
3. **Recognize negative self talk about your body**. Catch yourself in the act and replace with positive thoughts to change the way you think about your body.
4. **Be interested in why you hold on to negative feelings and thoughts about your body.** Learn more about the reasons behind the thoughts and become honest with yourself so you can find ways to deal with them and make positive changes in your life.
5. **Protect yourself from cultural bombardment**. Watching TV and reading glossy magazines can give you a false idea of what is a normal body shape. If you really want to know, just look around you, and most likely yours (if you are exercising) will look and feel better than most.
6. **Dress for now.** Many people have a range of different size clothes hanging in their closets. Don't feel bad about it, the bigger ones will motivate you to get closer to the smaller ones, but keep it in perspective – if you haven't worn a size 8 since you were 8, then you're not meant to.
7. **Be on the alert for "size" prejudice.** From books and magazines to school and workplace friends. Size often has nothing to do with health, fitness or personality.
8. **Don't get health messages and thin ideal messages mixed up.** Big people can be very fit, and thin people can be very unfit. Thin does not always equal good health.
9. **Don't allow others to criticize your body.** It is normal as you get older to change your body shape.
10. **Discover who you are.** You are much more than your body alone and it is always sad to see someone waste their life away worrying about the "right" size, being able to wear the "right" clothes and having the "right"shape.

Summary:

There is no 'right" and "wrong" for body shape.

You are the manager of your body, so take the job seriously, look after it, and enjoy it for as long as you live!

From Health, Fitness & Personal Training newsletter, Prestige Personal Training (Vic) Pty Ltd, Rowville.

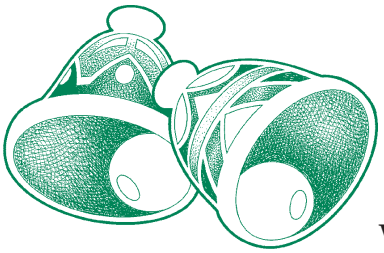
Reprinted with permission of Thyroid Flyer, newsletter of Thyroid Australia Ltd.

The objectives of the Foundation are:

- to awaken public interest in, and awareness of, thyroid disease;
- to lend moral support to thyroid patients and their families;
- to assist in fund raising for thyroid disease research.

Les buts de la Fondation sont:

- éveiller l'intérêt du public et l'éclairer au sujet des maladies thyroïdiennes;
- fournir un soutien moral aux malades et à leur proches;
- aider à ramasser les fonds pour la recherche sur les maladies thyroïdiennes.



A gift that keeps on giving

With the Holiday Season coming up, why not give a gift that keeps on giving? It is often difficult to choose a gift for adult relatives and friends, so this year why not give a gift membership to the Thyroid Foundation – or make a contribution to the Foundation's Research or Education Funds in a relative's or friend's honour?

Seasons Greeting to all our members, families, friends and readers. The staff and national board wish you a happy holiday and a prosperous and healthy new year.

* * * * *

Nous souhaitons de joyeuses fêtes à tous nos membres, familles, amis et amies et à nos lecteurs, de la part de notre personnel et du conseil national. À tous, nos meilleurs voeux de la saison et une nouvelle année prospère et saine.

Thyroid Foundation of Canada
La Fondation canadienne de la Thyroïde

23rd Annual General Meeting

will be held at

2:00 pm

Friday, October 31, 2003

at the

Holiday Inn Select Airport
Toronto, 970 Dixon Road,
Etobicoke ON

Members of the Foundation and the general public are welcome to attend the above meeting.

All TFC members have the right to vote on all resolutions presented for approval.

Joan DeVille, National Secretary

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Thyroid Update Forum

An educational forum for patients and professionals

Everyone welcome!

8:30 am - 5:00 pm

Saturday, November 1, 2003

at the

Holiday Inn Select Airport
Toronto, 970 Dixon Road,
Etobicoke ON

Registration: $25.00
(includes Continental Breakfast at 8:00 am)

To register:
Tel: 1-800-267-8822
1-613-544-8364
Fax: 1-613-544-9731
E-mail:thyroid@on.aibn.com

It's not just your age

by
PE Belchetz, MD

How frequent thyroid disease is in the community never ceases to surprise me – perhaps one in ten women at some stage in their life will suffer from some form of thyroid disorder. The reason it affects women more commonly than men remains a mystery. As people age many thyroid diseases seem to become more common – this is especially true for thyroid underactivity (hypothyroidism). Many older physicians used to call this myxedema, but I don't like the term which refers to a specific kind of change in the skin which only occurs in a minority of people who suffer from an especially severe disease.

In elderly people, the co-existence of more than one problem is common. Thus, what might be a relatively minor degree of thyroid dysfunction in a fit young person, may add insult to injury in an older person already suffering, say, from heart disease. Underactivity of the thyroid can actually worsen angina but the restoration of thyroid hormone levels to normal must be done cautiously to allow the heart to adjust as the body chemistry speeds up under the influence of thyroid hormone taken by mouth.

Worsening of heart disease can also occur in the elderly patient with thyrotoxicosis (thyroid overactivity) who may or may not display any of the more obvious changes that we associate with thyroid disease in the younger generation. Here perhaps the only sign may be the development of an irregular pulse or even heart failure. In a very small number of people a condition called "apathetic hyperthyroidism" occurs when the patients present exactly the opposite picture to the nervous, overactive patterns normally seen when there is an excess of thyroid hormone production. Indeed, it is common even for the experienced doctor to suspect a lack of thyroid hormone in this rather paradoxical condition.

Other reasons why overactivity of the thyroid gland may not be so easy to spot in older people include the frequent absence of eye signs and a lack of detectable thyroid enlargement. On the other hand many patients have enlarged knobbly thyroids (multi-nodular goitres) which give no trouble and require no treatment for many years. In a small minority, as time goes by, one or more of these nodules, which act rather as independent hormone-producing units, may become overactive and the patient may slide surreptitiously from a normal to an overactive thyroid condition.

In hypothyroidism the trouble is that many of the features are non-specific and all too easily laid at the feet of the aging process itself. These include loss of energy, poor memory, poor concentration and weakness. A whole spectrum of features affects the muscles, joints and nerves and can be thought to be "rheumatics". Excessive cold intolerance should alert people to be wondering whether thyroid inactivity is present. Each winter the cold weather endangers some elderly people and those with untreated hypothyroidism are known to be especially vulnerable.

The diagnosis of over and underactivity of the thyroid gland should usually be simple, accurate and available and treatment straightforward, cheap and safe for the patient. A person should be especially vigilant if there has been any kind of thyroid problem in the past or other members of the family have thyroid or some related diseases, such as, diabetes, vitiligo, pernicious anaemia. The bottom line must be that when the conditions are so common, yet "masked" or difficult to spot clinically, tests should be sought on the slightest suspicion.

Reprinted with permission from BTF News, publication of The British Thyroid Foundation.

Thyroid information at your fingertips

Websites:

www.thyroid.ca	Thyroid Foundation of Canada
www.tsh.org	The Thyroid Foundation of America
www.allthyroid.org	The Thyroid Foundation of America
www.thyroid.org.au	Thyroid Australia Ltd.
www.mythyroid.com	Dr Drucker, Toronto ON
www.ngdf.org	National Graves' Disease Foundation
www.endocrineweb.com	Endocrinology website
www.aace.com	American Association of Clinical Endocrinologists
www.thyroidmanager.org	Endocrine Education, Inc. (USA)
www.glandcentral.com	Your thyroid gland central
www.thyroid.org	American Thyroid Association
www.the-thyroid-society.org	The Thyroid Society for Education and Research

Suggested reading:

How Your Thyroid Works, H. Jack Baskin, MD. 4th edition, 1995. Adams Press, Chicago, Illinois.

The Thyroid Gland, A Book for Patients, Joel I Hamburger, MD, in collaboration with Michael Kaplan, 7th edition 1997. W. Bloomfield, Michigan 48322.

Your Thyroid: A Home Reference, Lawrence C. Wood, MD, David S. Cooper, MD, E. Chester Ridgway, MD. 3rd edition 1995. Ballantine Books, New York. ISBN 0-345-41006-8 .

Thyroid Disease, The Facts, R.I.S. Bayliss, MD, and W.M.G. Tonbridge MD, 3rd edition 1998. Oxford University Press, New York. ISBN 0-19-262946-8.

The Thyroid Sourcebook, M. Sara Rosenthal, PhD. 4th edition. ISBN 0737304952. Order on line: www.sarahealth.com or call toll free 1-888-232-4444.

Thyroid problems: A guide for patients, Ivy Fettes, MD, edited by Fred Saibil. MD. Coles Publishing, Toronto, Canada 2001. ISBN 0-7740-3868-3 (available at Coles and Chapters – www chapters.ca).

Has your address or telephone number changed?

We need to know!!

To ensure you receive your *thyrobulletin* and correspondence promptly, please send changes to:

Thyroid Foundation of Canada
PO Box 1919 Stn Main
Kingston ON K7L 5J7

Tel: 613-544-8364

Fax: 613-544-9731

E-mail: thyroid@on.aibn.com

Time To Renew?

Just a reminder that your membership in the Foundation, which includes your quarterly edition of ***thryobulletin*** may be running out. Please check the expiry date on the address label and renew today to ensure that you'll continue to receive our informative newsletter.

You can renew your membership early, for one or two years, and donations are always welcome! You again become eligible for our monthly book draw.

Please use the Membership/Donation form below or our secure payment system at:

www.thyroid.ca/english/membership.html.

Thank-you for supporting the Thyroid Foundation of Canada.

Membership/Donation Form

Awareness **Support** **Research**

All members receive *thyrobulletin*, the Foundation's quarterly publication.

Yes!
I will support the Thyroid Foundation of Canada!

Donations – ***The only gift too small is no gift at all.*** $ _____

Membership Level	One Year	Two Year	
❑ Regular	$20.00	$35.00	$ _____
❑ Senior 65+	$15.00	$25.00	$ _____
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Type of Membership: ❑ New ❑ Renewal • Language Preferred: ❑ English ❑ French

We accept your membership fees and donations by mail, fax or online at our website.
All donations and membership fees qualify for a tax receipt. Please send your application and payment to:

THYROID FOUNDATION OF CANADA, PO Box/CP 1919 Stn Main, Kingston ON K7L 5J7
Tel: (613) 544-8364 or (800) 267-8822 • Fax: (613) 544-9731 • Website: www.thyroid.ca

Please Continue Your Support—We Need You!

National Office/Bureau national

Staff/équipe

Katherine Keen, National Office Coordinator/Coordinatrice du bureau national
Helen Smith, Membership Services Coordinator/Coordinatrice des services aux membres

Office Hours/ Heures du bureau

Tues.- Fri., 9:00 am - 12:00 pm/1:00 pm - 4:30 pm
Mardi à vendredi, 9h00 à 12h00/13h00 à 16h30

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Chapter & Area Contacts/Liaisons pour les sections et districts

BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

Cowichan	(250) 245-4041
Vancouver	(604) 266-0700

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QUEBEC/QUÉBEC

Montréal	(514) 482-5266

NEW BRUNSWICK/NOUVEAU BRUNSWICK

Moncton	(506) 856-5121
Saint John	(506) 633-5920

* Area Contact/Contact régionaux

NOVA SCOTIA/NOUVELLE ÉCOSSE

Halifax	(902) 477-6606

PRINCE EDWARD ISLAND/ÎLE-DU-PRINCE ÉDOUARD

Charlottetown	(902) 566-1259

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Avalon/ St. John's	(709) 739-0757
Gander	(709) 256-3073
Marystown	(709) 279-2499

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Kitchener/Waterloo	(519) 884-6423
London	(519) 649-5478
Ottawa	(613) 729-9089
Petawawa/Pembroke	(613) 732-1416
Sudbury	(705) 983-2982
Thunder Bay	(807) 683-5419
Toronto	(416) 398-6184

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Thyroid Foundation of Canada
La Fondation canadienne de la Thyroïde
PO BOX/CP 1919 STN MAIN
KINGSTON ON K7L 5J7

Has your membership expired? See Page 19