Thyroid Foundation of Canada

thyrobulletin

La Fondation canadienne de la Thyroïde

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Better medical education: what can and should be done

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by
Dr. Ian R. Hart

Everyone who is sick, wants and expects the best possible care from any physician to whom they turn for help. Physicians also expect to do the best job they can in diagnosing, treating and following every patient they see. If both of these sets of expectations were always attained, and the 'best possible job' was done, everyone would be satisfied and the delivery of health care would be close to perfection.

Unfortunately life is not like that! Doctors cannot pretend to know everything and every patient's case is different. Surely you might say that, if you have Graves' disease, it is simply a matter of better training and having trainees spend more time learning how to diagnose and treat thyroid disorders. But since there are only so many hours in the day, so many weeks in the month and so many months in the year, and so many diseases, disorders and causes of pain and suffering to learn about, the practicing physician cannot always be fully informed and have all the necessary skills all the time.

It is only natural that every patient expects their physician to be knowledgeable and skillful in diagnosing their particular disease. But the reality is that no training program, neither at the student nor the resident training level, can provide truly in-depth training in every special area of medicine, and even if it could, no one, including doctors, can remember everything forever.

What can medical education do? Before making a series of specific suggestions as to how medical education can and should improve the delivery of thyroid health care, it is important to consider the following factors:

- Knowing everything about every disease – the enormity of the problem
- What clinical competence is all about
- How people learn
- How doctors reason

Knowing everything about every disease

As the practice of medicine has become increasingly complex over the past few decades, the amount of knowledge that someone studying medicine theoretically needs to accumulate and retain is now well beyond the intellectual capacity of any human being. Medical education has increasingly recognized that it is impossible to teach trainees everything about everything, and equally impossible for medical students and residents-in-training to learn and retain everything.

To overcome this problem, medical educators have developed two strategies. The first is to recognize that since certain disorders kill and maim more patients than others, we tend to spend more curriculum time ensuring that students learn about these critical problems, leaving little time for less serious disorders. Thyroid disorders, although debilitating and in some cases devastating, seldom kill or maim, and they are only one part of one medical specialty. They are therefore given little curriculum time, even though they occur commonly in the population, whether in North America, Europe, Asia or in other parts of the world where there is severe iodine deficiency.

The second strategy is to continually impress on their students that they must become lifelong learners. Thus, attempts are made, in both undergraduate and postgraduate training, to teach trainees how to learn for themselves and where to find information resources. This approach will not only allow trainees to keep up-to-date but help them gain new knowledge and skills. Indeed, the approach is similar to that used by many patient thyroid organizations in helping

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their members find reliable sources of information such as support groups, libraries and the Internet. So in a broad sense, thyroid patients are also trainees.

What clinical competence is all about

To practice good medicine, physicians need to be clinically competent. Clinical competence is not an easy concept to understand. It includes things like taking a patient's history, carrying out an appropriate physical examination and acquiring other data such as results of blood tests and x-rays. Having gathered all this information, the physician then needs to solve the patient's problem by diagnosing it and treating it. As part of all this the physician needs to be able to communicate in a compassionate and meaningful way with patients. They need to listen carefully to what their patients are telling them.

Clinical competence requires knowledge, skills and appropriate attitudes. Knowledge is the easiest of these to understand, teach and measure. Knowledge is basically information stored in the learner' s mind. Either they know it or they do not. Skills, such things as examining the heart or feeling the thyroid gland, are actions that must be performed in a competent way to achieve a goal. Skills are much more complex than knowledge to teach and test, harder to master, and in many ways much easier to lose and forget. Unlike knowledge, where the learner either knows it or does not, an individual may have a little skill, a moderate amount of skill or complete skill. For example, a beginning student can examine a thyroid properly but not pick up abnormalities when they are present, the resident in training picks up the more obvious abnormalities, the expert misses nothing. All have some skill in thyroid examination, but their level of skill is different.

Attitudes have been defined as feelings about an object or concept that result in a tendency to act in either a positive or a negative way. To a large extent, attitudes are determined by an individual's personality. By our late teens, most of us have already formed our personality and it is very difficult to change. Probably the most important thing determining the attitudes of those who graduate from medical school is the attitudes they have when they enter medical school. When it comes to relationships between doctors and patients, attitudes, good or bad, seem to be the greatest factor in determining how good or bad these relationships are. Competence in a clinical situation involves the complex ability to apply appropriately these three attributes – knowledge, skills and attitudes. They form the basis of all clinical practice.

How people learn: deep memory

Learning involves getting knowledge, skills, and attitudes into memory. But there are two types of memory. The first involves superficial learning, the second involves deep learning – that is, getting what has been learned into deep memory. When learning is superficial, students remember words and phrases. They can only remember a limited amount at any given time. What has just been learned is very vulnerable to being displaced by what is learned immediately after. In other words, things learned in a superficial way are not remembered for long. As medical educators, our real goal is to make sure that learning gets into deep memory, beyond memorizing words and phrases. This involves comprehension and understanding and lasts for a long time. A number of factors are known to facilitate deep learning. Medical teachers, themselves, must be taught to understand and use teaching strategies which ensure that most of their students' learning is deep rather than superficial.

How doctors reason: testing the key cases

As we have seen, knowledge, clinical skills and appropriate attitudes form the foundation of those who practice the health professions. But clinical diagnostic competence goes beyond these basics. It involves what is called clinical reasoning – that is, how doctors think their way through patients' problems to come up with the correct diagnosis.

We now know that the cases encountered during training form the basic fundamental framework for how doctors diagnose. It appears that a basic set of medical problems or types of medical cases underpin the reasoning that takes place when a doctor is trying to diagnose a new patient. Throughout the course of taking the history and carrying out the physical examination, doctors are constantly thinking of possible diagnoses, comparing them to cases that they know and have seen previously, and discarding one after another until they are left with what they suspect is a correct diagnosis. There seems to be a relatively small number of these key or prototype cases – possibly as few as 150. These are common and important diagnoses around which most practicing doctors reason when they are trying to diagnose a patient with a problem that they are seeing for the first time. It is somewhat like the case work of Sherlock Holmes, a process of deduction.

This understanding of how doctors think when they are making a diagnosis is relatively recent. It carries one very strong and important message. If students have never been exposed to some of these prototype cases during their medical training, they are unlikely to be good at diagnosing new patients.

If it is important to ensure that students have the appropriate knowledge, skills and attitudes before they are allowed to practice medicine unsupervised, it is just as important to ensure that, during their training, they have been exposed to the wide variety of common key cases around which doctors reason when they are trying to make a diagnosis. If students have never seen a case of hyperthyroid Graves' disease, they will have great difficulty in diagnosing hyperthyroidism from any cause.

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Monthly Draw

By renewing your Membership now you become eligible for our Monthly Draw.

Every month one renewing member receives a book on thyroid disease.

Our September 2001 winner was:
Ms. Claudette Skryba
Sault Ste. Marie, Ontario

Our October 2001 winner was:
Mrs. Kay Seney
Richmond, British Columbia

Our November 2001 winner was:
Mrs. Faye Praise
Ste-Anne-de-Bellevue, Quebec

Each of our winners received
"The Thyroid Gland
A Book for Thyroid Patients"
by Joel I Hamburger, MD, FACP

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Putting it all together: what can medical education do?

Unlike diseases in other specialties, diseases of the endocrine system are frequently hard to diagnose because hormones affect all parts of the body. In many other specialties, where the clue to the diagnosis often lies in a single symptom in a given organ system, for example, diarrhea as the presenting symptom of gastrointestinal disease, or chest pain pointing to coronary artery occlusion. But endocrine disorders, the thyroid included, usually present with a number of non-specific symptoms, such as tiredness, nervousness, dry skin etc. Diagnosing endocrine diseases usually requires what is called pattern recognition. The problem with pattern recognition is that if you have never seen the pattern before, you are unlikely to recognize it and make the diagnosis.

Thyroid disorders are common, but they are generally treated as outpatient disorders. Since much of the training of medical students and residents takes place in tertiary care hospitals, students do not have much opportunity to see thyroid cases. Attempts must be made to ensure that all students and trainees are exposed to the key thyroid diseases, wherever possible throughout the period of training. This requires training students and residents in community settings. Medical education is moving rapidly to increase the amount of student training in ambulatory care and community settings.

All students and trainees should be exposed to new cases of hyperthyroidism, Graves' disease, hypothyroidism and should have the opportunity to examine thyroid glands with nodules or goitres. These are the prototype cases, exposure to which in training will enable them, when in practice, to diagnose any thyroid condition more easily.

The two most important factors that lead to deep learning are:

- Learning that takes place actively rather than passively; that is, students learn by themselves rather than simply being told by a teacher.
- An opportunity to apply what they have learned as soon as possible after the learning has taken place.

This means, that after having gained new knowledge and skills regarding thyroid disorders, students should be exposed to patients with thyroid diseases and given the opportunity to assist in their management as soon as possible. If something is learned and no immediate opportunity is given to apply that learning, it is lost. As the popular saying goes, if you don't use it, you lose it. Increasingly, practicing physicians need to be devoted self-learners. They must be given the resources to seek their own new knowledge and information and given support and encouragement to do so.

The ultimate key to improving practicing physicians' skills in any given area, including that of thyroid diseases, is continual professional development and education. Medical school lasts only a few short years. The practice of medicine is for a lifetime. Fortunately, Canada has long been in the forefront of providing and supporting continuing education for doctors. As the practice of medicine changes at an ever faster pace, encouragement and support for doctors to maintain their skills and to acquire new ones will become increasingly important. This is true not only in Canada but also worldwide, wherever thyroid disease remains a major problem.

Ian R. Hart, MB, ChB, MSc, FRCPC, FACP, was, until his retirement, Chief of Medicine, Endocrinology, Ottawa Civic Hospital. Since retirement Dr Hart has travelled extensively in aid of improved medical education, giving lectures and presentations particularly in south-east Asia. Reprinted with kind permission from ThyroWorld, publication of Thyroid Federation International.

Thyroid Foundation of Canada

La Fondation canadienne de la thyroïde

22nd Annual General Meeting

Saturday

June 15, 2002

Toronto, Ontario

Darlene Ibey
National Secretary

Canadian Thyroid Cancer Support Group

The Canadian Thyroid Cancer Support Group was formed November 2001 subsequent to the thyroid cancer meeting in Toronto, September 29 (Autumn 2001 issue of *thyrobulletin*). This informal group of thyroid cancer survivors, who met online through the American-based listserv for thyroid cancer (ThyCa) survivors, came together out of a common search for information and support in dealing with diagnosis, treatment and management of thyroid cancer.

Its goals are:

- to provide support, friendship and guidance to each other online and through occasional meetings;
- to provide information and emotional support to other thyca survivors;
- to help ensure that thyroid cancer survivors in Canada have a place to go for information, including other sources;
- to educate others about thyroid cancer.

For more information contact:

Dianne Dodd
Dianne_Dodd@pch.gc.ca
Tel: 1-613-836-3996

Other sources of thyroid cancer information:

- **CancerConnection, Canadian Cancer Society**
  help-line for one-on-one confidential support
  - Ontario, Newfoundland & Labrador: **1-800-263-6750**
  - other Canadian locations: **1-888-939-3333**
- **Thyroid Foundation of Canada** cancer literature and Low Iodine Diet (see back cover for address)

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Please note:

The information in *thyrobulletin* is for educational purposes only. It should not be relied upon for personal diagnosis, treatment, or any other medical purpose. For questions about individual treatment consult your personal physician.

Notez bien:

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.

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.

President's message

Irene Britton/Irène Britton
National President/Présidente nationale

Karl Benne, Senior Consultant for Health Canada, retired on December 31, 2001. For almost 20 years, the Foundation has benefited from Karl's invaluable guidance and support. Messages for a memory book and best wishes on his new journey were sent by the Foundation. Thanks Karl – we will miss you!

The Thyroid Foundation of Canada is grateful to Abbott Laboratories, Limited for sponsoring this issue of ***thyrobulletin***, and to Ashok Bhaseen, Project Manager, Abbott Laboratories for his interest and support. May it be the beginning of many such sponsorships. Without Abbott's sponsorship, we would not have been able to publish this issue.

The Foundation, a 20-year young organization, is at a stage in its growth where financial assistance is desperately needed to continue its education programs. In 2002, the donations from members, readers and willing businesses will make the difference between whether TFC "sinks or swims". Please be generous.

Our best wishes for the year 2002.

Message de la présidente

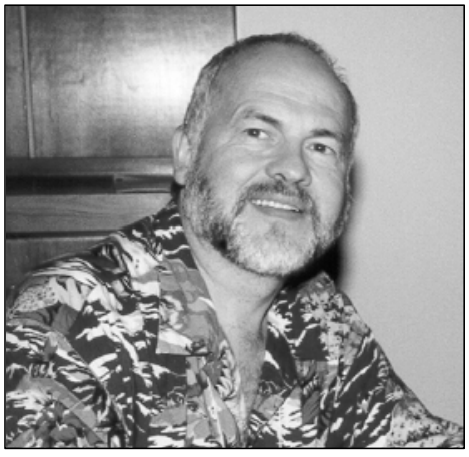
Karl Benne, conseiller aîné, de Santé Canada, a pris sa retraite le 31 décembre, 2001. Pendant près de 20 ans, la Fondation a été bénéficiaire de sa provenance inestimable de direction et d'appui. Des messages pour un livre de mémoires, et nos meilleurs vœux furent livrés à l'occasion de sa retraite. Merci Karl! Vous nous manquerez.

La Fondation canadienne de la Thyroïde remercie Abbott Laboratories, Limtée, pour leur parrainage de ce numéro du ***thyrobulletin*** et à Ashok Bhaseen, chef de projet, Abbott Laboratories, pour son intérêt et son appui. Que ce soit le commencement de plusieurs tels parrainages pour la fondation! Sans ce parrainage, nous n'aurions pu publier ce numéro.

La Fondation, un jeune organisme de 20 ans, est à une phase dans sa croissance où de l'assistance financière est désespérément nécessaire pour continuer ses programmes éducationnels. En 2002, les donations des adhérents, des lecteurs et des firmes ainsi disposées feront la différence entre la réussite et l'échec de FCT. S'il vous plaît, soyez généreux.

Nos meilleurs vœux pour l'année 2002.

From the editor



Ever wonder why, over the past few years, this editor has seldom written messages to *thyrobulletin* readers?

The answer is quite simple. Most editors in their message outline the content of the issue but readers can get this overview by flipping through the publication. I have always felt that space in *thyrobulletin* can be better used conveying to our readers educational information as well as the latest news in the thyroid world.

But this time, I do have something important to say. This issue almost did not go to press. The Foundation is struggling financially in our Education & Services Fund and a reduction in the number of issues of *thyrobulletin* has been under discussion. However, for the current issue, the day was saved through the intercession of Ashok Bhaseen of Abbott Laboratories Ltd. Mr. Basheen arranged for a grant to the Foundation specifically designated to underwrite the cost of this issue.

For this I thank Abbott Laboratories, Limited and Ashok Bhaseen.

So we are in press and in circulation and hopefully future issues will continue with no disruption – but we are not out of the metaphorical woods! The Board of the Foundation is considering its options. There is discussion as how best to form an alliance with corporate sponsors to support *thyrobulletin*. Should *thyrobulletin* accept advertising? Should *thyrobulletin* be published with the financial support of pharmaceutical companies? Should *thyrobulletin* be funded by grants and in turn acknowledge these grants in the pages of the publication?

These questions are important to the well-being of both the Foundation and *thyrobulletin*. It appears the time is at hand for a major change. This challenge affords an excellent opportunity for you, our readers, to express your thoughts and ideas.

Feedback and response to the above questions are welcome, as well as any other thoughts or ideas you may have for these pages. I look forward to hearing from you.

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Emotional impact of thyroid cancer

"There's no such thing as a "good cancer"

Dianne Dodd

By Dianne Dodd

Thyroid cancer affects women three times as often as men and frequently during their childbearing years. Its impact is felt on the whole family. Although thyroid cancer is treatable, thyroid cancer (thyca) patients undergo a draining and often lengthy treatment. As with any major illness, patients may face anxiety, anger, depression, reduced self-esteem and even marital and/or family strain. In addition thyca patients cope with hormonal changes. I wrote this article to share my experiences; to let others know what to expect through the treatment process, to help thyroid cancer patients and their families be better prepared and to reassure patients and caregivers they are not alone – there are resources in the community to help families shoulder the burden of a major illness.

Diagnosis and the waiting game

Many patients experience long waiting periods leading up to a cancer diagnosis. This can be a real roller coaster ride, with one physician reassuring the patient while the next makes some passing comment that sends her crashing into despair. Some patients research their illness on the Internet or through books. However, until a diagnosis is made this may only serve to worry rather than empower. It is difficult to make day-to-day decisions not knowing what the future will bring. Many patients choose to wait until a diagnosis is confirmed before telling family, friends and colleagues, thus facing their anxiety alone. Receiving a diagnosis, whether good or bad, is often a tremendous relief.

Absorbing the reality of a cancer diagnosis initially throws most people into a state of shock, fear and sometimes denial. Each person must set her own timetable for sharing the diagnosis with others. But remember, ***now is not the time to cut yourself off from loved ones***. Communicating the news openly with friends and family allows them the chance to share their feelings and to offer help and support. Some parents try to protect their children from the truth. But when a family is turned upside down by cancer, children sense their parents' distress. Not knowing the cause they will imagine things to be much worse than they really are, or worse still, blame themselves for the mysterious upheaval. Explain that Mommy (or Daddy) will be sick, maybe tired or even sad for a while, but will get better in time. Children have wonderful capacities to help, to understand, and to be warm and nurturing toward a sick parent.

Everyone will need time to absorb the information. Some want to talk about it, others avoid the topic for a while. Sometimes timetables and approaches differ within a family. For example, caregivers try to protect themselves or their loved ones by engaging in false cheeriness. This denies the person with cancer the opportunity to discuss real fears and anxieties. Each suffers alone, the patient feeling emotionally deserted while the caregiver feels unappreciated in carrying the extra burden of housekeeping, child care, and nurturing. Such resentments are difficult to express, however, because cancer is no one's fault.

Families can avoid such an impasse. While ***it is the patients' right to set the agenda,*** patients can help by sending clear signals to family or friends that they are ready to talk, or not. Caregivers and friends should be receptive to these clues. Patients can also help by telling friends, family and colleagues what kind of help and/or support they need. Most people are happy to help if they know what to do. Similar communication approaches will also work with physicians, may of whom believe that cancer patients cannot, or do not want to, absorb all the information at once. They, too, wait for clues from the patient.

- When I'm hypo, don't ask if you should walk the dog, do the laundry or bring dinner over, just do it.
- Invite my family over. Sometimes I need time alone. Even if they're being good, my children can keep me from resting.
- Drive me to appointments until I can drive.
- Handle phone calls, faxes, emails from family, friends and well-wishers. Sometimes its just too much.
- Patients are often anxious and distressed when visiting their physician. Take a tape recorder, or better yet, a calm friend or relative to help ask questions, and remember what the doctor said.

Surgery

Thyroid surgery, whether a partial or total thyroidectomy invokes fear and anxiety. Many patients report that the thyroid surgery is relatively painless and that surgery was the easiest part of their treatment. Following surgery most patients prepare for radioactive iodine treatment. It is especially important at this time for patients to preserve their physical and mental health by getting lots of rest, eating healthy foods, and avoiding stress-causing situations. Caregivers and patients may need to relax housekeeping standards for a while, or get help with

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childcare and housework. Patients who accept offers of help will not only keep themselves well rested but will provide friends and family with an opportunity to express their concern.

Going hypothyroid

To prepare for radioactive iodine treatment, patients must be off thyroid medication, usually for six weeks, inducing a state of hypothyroidism. Being hypothyroid can be debilitating and is a process that is often repeated for follow-up diagnostic scans. It helps to know what to expect.

Every patient is different. A few lucky thyca patients breeze through what survivors have affectionately dubbed 'hypo-hell.' However, most experience considerable discomfort and emotional upset. Hypothyroidism causes a general slowing of metabolism which may result in indigestion, constipation, nausea, headaches, weight gain, fatigue, muscle aches, slow reflexes, memory loss and cognitive problems, intolerance to cold and puffy eyes.

Thyca patients are especially vulnerable to depression due to the hormonal imbalances caused by rapid hypothyroidism. Rapidly changing, contradictory feelings are not uncommon. Patients may become angry and irritated and exhibit unexplained hatred toward partners, spouses, relatives and friends. Patients may also get confused and forgetful – a phenomenon sometimes called 'brain fog'. Hypothyroid patients may also become extremely withdrawn and appear not to care about family, friends... even their own children. Patients may also become emotionally dependent.

Remember that however bizarre the thyca's behaviour may be, it is a normal reaction to withdrawal of needed hormones. Remind yourself of this and remind your partner. All of this will pass. Indeed caregivers play an important role during hypothyroid periods by being supportive, by avoiding negative reactions, and by assessing whether the patient and/or family may need professional help. While it can be very draining to be around a depressed person, it is important to relate to him or her frequently. Even if the patient is withdrawn, try sitting nearby, reading a book or the newspaper if they don't want to talk. Just letting them know you are there helps. Caregivers may find the thyca patient's expressions of anger, fear and inner confusion frightening, especially those who avoid confrontation in their relationships. However, lashing out in anger at the patient only serves to reinforce the sick person's feeling of worthlessness. Patients need to express negative feelings – indeed it is part of recovery. Remember, they are not angry with you. They are angry with fate, or God, or who or whatever they blame for bringing cancer into their lives. Also try to avoid distancing yourself from a patient, another common reaction, as this will leave the patient feeling abandoned. Guard against excluding the thyca patient from family activities, conversations and decision-making. Patients are ill, they are not mentally incompetent!! They will recover more quickly if you make them feel included, loved and needed.

- Illness causes as much stress to a spouse as to the patient. A worried spouse, burdened with extra work could use a 'day off', assistance with chauffeuring kids, or maybe some help at mealtimes.
- Listen while she sounds off. There's a lot happening to her and she needs to verbalize without hurting someone's feelings.
- Act normal, and don't try to cheer her up when she is depressed. It's normal to be depressed when things are going badly.
- Children are amazingly resourceful. Coming to understand that when 'mommy is hypo, she's going to be sad', and that she still loves her child, can help the child mature and eventually deal with adult relationships. Be understanding and patient with a patient who is not acting her old self.

Thyca patients themselves can also help, even when in the depths of hypo-hell. Fatigue is a significant contributor to depression and mental distress so try to not overdo it. Accept offers of help and don't be afraid to tell people what you want or need. If you begin to feel emotionally neglected by your spouse, children, friends or family, ask yourself whether they are ignoring you or whether you have withdrawn from them.

Sexual relations can also be fragile at this time. Although fatigue, depression, illness, loss of self-esteem and changes in both body image and relationships may cause a loss of interest in physical intimacy, illness alone is rarely the cause of infidelity or marital breakdown. Remind the patient that it is not her physical attributes which make her attractive to you, but intangible qualities, like sense of humour, caring and intellect, none of which are lost during illness. Keep talking and don't be afraid to show affection. Hugs work wonders!

Radioactive iodine (RAI)

Once the patient is sufficiently hypothyroid, she undergoes radioactive iodine treatment. Perhaps the worst aspect of this phase of treatment is its necessary isolation. Hospital personnel often refuse to come into a patient's room and everything is covered in plastic and cellophane to prevent contamination and for ease of clean-up. Upon discharge, and especially if treatment was administered on an outpatient basis, patients are asked to follow a number of precautions to avoid contaminating other people. Being instructed not to touch their own young children for up to a week nor to be near pregnant women leaves many patients feeling like lepers. Already sick and tired, patients find it incomprehensible that everyone is so fearful of this irradiated iodine, when they have to drink it!! Still, once the treatment is administered patients may begin taking thyroid medication and will feel better within several weeks.

Follow-up

Following treatment, many physicians recommend diagnostic scans which require the patient to become hypothyroid once again, each time for six weeks. Following each treatment or scan the thyroxine dose must be adjusted, a process which takes time and patience. Thyca patients need to maintain a suppressed TSH in order to reduce the risk of recurrence. That means living with slight hyperthyroidism which can cause agitation, anxiety, mood swings, insomnia, tremors, weight loss, diarrhea, heart palpitations and intolerance to heat. In the initial phase, many patients experience confusing swings between hypo and hyperthyroid symptoms.

In the period immediately following active treatment, both patients and family

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members expect everything to go back to the way it was before. They may become angry, resentful and/or depressed when this doesn't happen, or it doesn't happen as quickly as they'd like. But many people take a year or even longer after treatment before they feel normal again, and many patients, like other cancer patients, must find a different definition of 'normal'.

After a lengthy absence from work, most find that returning to employment helps them to feel more normal. However, they aren't always sure what or how much to tell co-workers. Again, it is up to the patient to send the right signals. Most people are genuinely concerned and they will respect your right to privacy or your need to talk. Just as no healthy marriage falters as a result of illness, most employers accommodate illness. If you find, however, that ungrounded fears of absenteeism, death or contagion caused by your cancer, result in dismissal or unfair treatment at work, there are human rights provisions in place to protect you. Become familiar with them and stand up for your rights.

Don't be afraid to ask for help

While most people can cope admirably well with a temporary emergency, thyroid cancer treatment which can extend into months even years of disruption, adds strain to families. A few may find they need professional help. For example, if a patient has a predisposition to depression and/or anxiety disorder, hypothyroidism can trigger the onset of these conditions. Depression coincident with cancer treatment is not unusual, nor is it just something one has to suffer through. In fact, suffering through can actually inhibit recovery. During treatment patients CAN be treated for depression, a very treatable medical condition, usually with a combination of anti-depressants and/or counselling. Because depression causes great lethargy and there is a stigma attached to being treated for depression, patients often feel they don't deserve treatment. Caregivers can play an important role in encouraging the patient to seek help.

Although it may not fit with our image of families as loving and nurturing groups, the reality is that families, like individuals, are not perfect. They respond to the crisis of illness in ways that reflect their distinctive coping strategies. Some remain open and calm, others react with fear and anger. Thyca treatment may exacerbate existing unresolved psychological, personal, marital or relationship problems within a family. Gender differences in communication and in coping strategies can add further strain. When the patient is a woman and her caregiver a man – often the case with thyroid cancer – our social conventions are challenged. Unaccustomed to performing the social, emotional management work that most women perform in families, a husband may suddenly find himself called upon to sooth children's disputes, keep dinnertime conversations on an even keel and just listen.

If you need to ask for help, do so. It does not mean your family is falling apart. On the contrary, asking for help is the first step in strengthening a family or relationship. There are support groups, where spouses and close relatives or their partners, who have to live with thyroid cancer, can talk to each other. Many find this beneficial. As well, many cancer clinics offer psychological counselling and other professional counsellors for individuals and families.

No one forgets: the years after

Having cancer is something that no one ever forgets. Cancer forces us to face our own mortality, to lose our sense of control and security and to accept a compromised state of health. Aptly compared to grieving the death of a loved one, this loss may be initially greeted with denial, then anger, depression, and eventually acceptance. Most patients find that they must acknowledge all these tumultuous feelings before they can recover fully. All of this takes time. Well meaning relatives and doctors should not dismiss the suffering of thyca patients by telling them they have the 'good cancer', leaving patients feeling guilty that their illness is not very serious.

The long term emotional impact of cancer is not all negative. Most people discover hidden strengths and compassion in people they least expected it from, and many relationships are strengthened. Many spouses do learn to nurture, and children may also learn to be more considerate of an ill parent. Sadly, however, some cancer patients have reported the loss of one or more friends. Many people are unsure of how to treat an ill person. They may avoid calling, or even looking at you. If this happens, ask yourself whether you may have withdrawn from them in a period of anger or depression. Then, once you are feeling well enough, try contacting them and letting them know what they can do for you. If this doesn't work however, it is not your fault. Perhaps your illness reminds them of their own mortality, forces them to relive some particularly painful episode in their past, or they have their own unresolved fears of desertion or rejection. Although it is inescapably sad, many patients have to accept the fact that some people will slip away.

Many patients also report that, having faced cancer – that much feared disease – everything else seems insignificant by comparison. This can have a calming effect. Many find they worry less over small things, and have the vision to see each day as a precious gift. Maybe this means enjoying enhanced relationships or starting a new hobby or interest. For some patients, volunteer work is good therapy which allows them to put their new-found knowledge and empathy to good use. There are lots of support agencies who would be glad to hear from you.

Dianne Dodd, who has had thyroid cancer, is a member of Ottawa Area Chapter, and is the Chair of the newly formed ***Canadian Thyroid Cancer Support Group****. Dianne wrote about her thyroid cancer experiences in the previous issue of* ***thyrobulletin.***

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

Deadline for contributions are:

March 15, 2002 (Spring)

June 15, 2002 (Summer)

September 15, 2002 (Autumn)

December 15, 2002 (Winter)

Contributions to:

Ed Antosz, Editor
973 Chilver Road,
Windsor ON N8Y 2K6

Fax: **(519) 971-3694**
E-mail: **antosz@uwindsor.ca**

Chapter coming events

Free admission – everyone welcome

Burlington/Hamilton

Location: Joseph Brant Memorial Hospital, Bodkin Auditorium. 1230 Northshore Blvd, Burlington. Free Parking

- Tuesday March 12, 2002, 7:30 pm. Display 7:15 pm. **Dr. N. Purohit,** Psychiatrist, Topic: *Depression and thyroid disease.*
- 9:30 pm. Annual General Meeting and elections follow education meeting.

For information call: (905) 637-8387

Fun and Fundraising Days
Location: 178 Craigroyston Road, Hamilton

- **Second annual spring plant sale** Saturday May 25, 2002, 8:00 am to 2:00 pm

For information call: (905) 549-1464

Location: Hamilton Beach Blvd.

- **Huge used book sale** Saturday July 7, 2002. 8:00 am to 2:00 pm. In conjunction with the Beach Strip, Street and Garage Sale

For information call: (905) 549-1464

Kingston

Location: Ongwanada Resource Centre, 191 Portsmouth Avenue, Kingston

- Tuesday 16 April 2002 TBA
- Tuesday 21 May 2002 TBA

For information call (613) 389-3691

Monthly thyroid discussion group
Location: Loblaws Market, Upstairs, Kingston Centre

- Fourth Sunday of each month, 3:00 - 4:00 pm. Discussion led by pharmacists, Douglas Clarke and Bozica Popovic. Sponsored by Loblaws Pharmacy. Elevator, thyroid literature.

For information call (613) 530-3414

Kitchener/Waterloo

Location: The Community Room, Albert McCormack Arena, 500 Parkside Drive, Waterloo

- Tuesday February 12, 2002, 7:30 pm. **Dr. M. Gulam,** Endocrinologist. *Thyroid Cancer*
- Tuesday April 9, 2002, 7:30 pm. **Dr. Rick Dubeau**, *Nuclear Medicine and thyroid disease*

For information call (519) 884-6423

London

Location: London Public Library Auditorium, 305 Queens Avenue, London

- Tuesday March 19, 2002, 7:30 pm. **Dr. Terri Paul**, Endocrinologist, St. Joseph's Health Centre. Topic: *Thyroid disease and osteoporosis - is the hip bone connected to the thyroid?*
- Tuesday May 21, 2002, 7:30 pm. **Dr. Lisanne Laurier,** Endocrinologist, St. Joseph's Health Centre. Topic: *Hyperthyroidism.*

For information call (519) 649-5478

London Spring Fundraiser
Location: Hellenic Centre, Southdale Road West, London.

- **2nd Annual Fashion Show**, Thursday April 18, 2002. Dinner and Fashion Show! Draws! Door Prizes!

For ticket information please call (519) 649-5478. Please join us for this worthwhile cause and help support the Thyroid Foundation of Canada

Montreal

Location: Livingston Hall, 6th Floor, Montreal General Hospital

- February 13, 2002, 7:30 pm TBA
- March 11, 2002, 7:30 pm. **Dr. Keyerlingk**. Topic: *Current concepts of thyroid imaging and surgery.*
- April 13 to 16, 2002. **6th Annual Art Exhibition and Sale** Vernissage will be held on Saturday April 13, 4:00 - 7:00 pm. Show hours are 10:00 am - 6:00 pm Sunday to Tuesday. Raffle tickets for three paintings generously donated by Sharon Goodman, Phyllis Pedicelli and Joyce Pratt are available for $3 each or two for $5. Montreal members **please support us.**

For information call (514) 482-5266**.**

The Greatness Challenge

3rd Annual Golf Tournament

Thursday, May 30, 2002

Shawneeki Golf Club *(20 miles north of Toronto)*

Sponsored by The Head & Neck Cancer Foundation

Head & Neck Cancer *Research Scholarships* & **Thyroid Foundation of Canada** *Education Fund*

Fee: $250 per golfer, or $1,000 for a foursome

Includes: day of golfing, golf cart, practise, après golf refreshments, dinner & dessert, prizes and awards ceremony

Information: Mark Daniels, Executive Director, The Head & Neck Cancer Foundation
2345 Yonge Street, Suite 700, Toronto ON M4P 2E5
Tel: 1-416-324-8178 ext. 228 • E-mail: mdaniels@dancap.com • Web Site: www.headandneckcanada.com

A great day and a great fundraiser!!

Smoking and the thyroid

by
David S. Cooper, MD, FACP

Everyone knows that smoking is hazardous to our health, and even to the health of others. When we think of the problems that smoking can cause, we generally focus on heart disease, lung diseases like emphysema, and cancer of the lung, mouth, and larynx. But, did you know that smoking also might be bad for your thyroid?

In this brief article, I will summarize what we know about the relationship between smoking and the thyroid. This connection could have important implications for thyroid patients and their families.

What's in the smoke?

We have known for a long time that tobacco smoke contains substances that can affect the function of the thyroid gland. Thiocyanate is the most well-studied of these chemicals. Thiocyanate can act to prevent the normal trapping of iodine by the thyroid gland, but no one understands the exact way in which it does this. Since iodine is the major constituent of thyroid hormone, any substance that blocks its entry into the thyroid could affect thyroid hormone production.

For example, many foods that are commonly eaten in third-world countries contain thiocyanate (e.g. cassava); researchers believe that the thiocyanate in cassava contributes to the thyroid enlargement (goitre) that is so prevalent in third-world countries. This happens because a goitre develops whenever the production of thyroid hormone is inadequate: the thyroid gland enlarges, stimulated by the pituitary gland, trying to make more thyroid hormone. Iodine deficiency goitre, worsened by thiocyanate ingestion, is a particularly important public health problem in areas of the world where the iodine content of the food is low. Fortunately, this is not a problem in North America.

What the studies show

Thyroid enlargement

What does this have to do with smoking? Several studies of thyroid gland size have found that smokers are more likely to have thyroid enlargement compared to nonsmokers. In one Danish research paper, only 3 of 112 nonsmokers had thyroid enlargement, compared to 32 of 107 smokers (a smoker was defined as a person who had smoked more than 15 cigarettes daily for more than five years).

The effect of smoking is most noticeable in areas of the world like Denmark, where iodine intake is borderline-low. That would explain why there were no differences in thyroid size in smokers compared to nonsmokers in people living in Sweden or The Netherlands, where iodine intake is higher than in Denmark, and is closer to the intake in the United States and Canada.

It has also been reported that babies born to mothers who smoke have larger thyroids than infants born to nonsmokers, suggesting that thiocyanate can cross the placenta. Although thyroid hormone levels in the blood have been similar in smokers compared to nonsmokers, it is possible that mild thyroid enlargement in smokers could be a sign of a subtle thyroid disturbances.

Hypothyroidism

Thiocyanate from smoking cigarettes may also influence the development of hypothyroidism in people who are predisposed to develop worsening thyroid function.

In a 1996 Japanese study, thyroid function was examined in women with Hashimoto's thyroiditis, an autoimmune condition that is the most common cause of hypothyroidism. Among the Hashimoto's thyroiditis patients who smoked, 76% were hypothyroid, compared to 35% who did not smoke. Thiocyanate levels were highest in hypothyroid smokers, possibly because hypothyroidism is associated with a slower metabolism of various chemicals and drugs. It is possible that hypothyroid patients develop ongoing thyroid damage because of higher serum levels of thiocyanate. Thiocyanate may impair thyroid function directly, or it may accelerate the autoimmune damage to the thyroid in an unknown manner.

High levels of cholesterol is one of the well-know effects of hypothyroidism. In a Swiss report published in 1995, smokers and nonsmokers with very mild hypothyroidism were studied to see whether smoking influenced the expression of the hypothyroidism. With the same degree of thyroid hormone deficiency, people who smoked had higher cholesterol levels than nonsmokers. This suggests that smoking somehow exaggerates the effects of hypothyroidism on the body, possibly by interfering with thyroid hormone action at the tissue level.

Hyperthyroidism

In a provocative 1993 report, a group of Dutch researchers observed that smokers were about twice as likely to develop Graves' disease as nonsmokers. Additional statistics showed that the estimate of 'twice as likely' really could be as high as three times as likely or as low as 1.1 times the likelihood of a smoker developing Graves' disease as a nonsmoker. There was no difference in the number of smokers among patients with various other thyroid conditions compared to controls, e.g., thyroid nodules, goitres, and thyroiditis.

The eye disease associated with hyperthyroidism

The authors also found that Graves' disease patients who had the eye disease associated with Graves' disease were almost eight times as likely to be smokers as age-matched controls.

The more cigarettes they smoked, the worse their eye problems became. This observation corroborates two other smaller studies that also showed that smoking seems to be a risk factor for the development of eye problems in people who already have Graves' disease.

Patients with Graves' disease who also have significant eye problems are at risk for a worsening of their eye problems if they receive radioactive iodine therapy for their overactive thyroid. A 1998 study looking at risk factors associated with worsening of eye disease after radioiodine showed that smokers with eye problems

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Why check your neck?

North Americans who have elevated cholesterol may need to also check their necks for an underlying condition that could put them at risk for heart disease and stroke, according to a recent survey by the American Association of Clinical Endocrinologists. The Association has launched a public education initiative, "Take Cholesterol by the Neck, " to urge people with high cholesterol to perform a simple self-examination which can detect an enlarged thyroid. The thyroid is a small butterfly-shaped gland located below the Adam's apple that produces hormones to regulate body metabolism. If you have been diagnosed with high cholesterol, ask about having your thyroid checked.

To check it yourself, hold a mirror in your hand, tip your head back while taking a drink of water, then swallow. While swallowing, check for any bulges or protrusions in the neck area. If you do see any bulges, contact your physician.

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Smoking . . . con't from page 10

were far more likely to experience a worsening of their eye disease after radioactive iodine therapy than nonsmokers.

How it works in Graves' disease

How could smoking cause Graves' disease or make Graves' eye disease worse? Although we do not know the answer, one possibility is that tobacco smoke contains chemicals, like thiocyanate, that could trigger abnormal immune system reactions. These reactions ultimately lead to the development of Graves' disease.

Another possibility is that these chemicals lead to subtle thyroid abnormalities, which in turn cause the immune system to go awry and lead to Graves' disease. Finally, it is equally possible that it is not smoking *per se* that causes Graves' disease, but other behaviours that smokers engage in more than nonsmokers, such a drinking coffee or alcohol, that are the true cause of Graves' disease.

Recommendations

Given these facts, what should be recommended?

First, it is obvious that smoking is dangerous to your health. Smoking causes heart disease, lung disease, and cancer: smokers should quit smoking because of a threat to their longevity.

Second, smoking may have poorly understood effects on thyroid gland structure and function.

In patients who are at risk for the development of Hashimoto's thyroiditis or Graves' disease, because of a positive family history of certain thyroid diseases (Graves' disease, Hashimoto's thyroiditis) or other problems (prematurely grey hair**,** Type 1 diabetes) smoking may be a factor that triggers the onset of either hypothyroidism or hyperthyroidism.

If it is hyperthyroid Graves' disease that develops**,** eye problems are more frequent and more severe, and are more likely to be made worse by radioiodine therapy.

Therefore, for all these reasons, smokers should stop smoking. Although passive smoke could also be a trigger, this has not been studied.

Dr. David S. Cooper is Professor of Medicine, Johns Hopkins University School of Medicine, Director of the Thyroid Clinic, Johns Hopkins Hospital; Director of the Division of Endocrinology, Sinai Hospital, Baltimore, Maryland. Dr. Cooper is the newly appointed Medical Adviser to Thyroid Federation International.

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Hugs

There's something in
a simple hug
That always warms the heart
It welcomes us back home
And makes it easier to part.
A hug's the way to share the joy
And sad times we go through
Or just a way for friends to say
They like you 'cause you're you.
Hugs are meant for anyone
For whom we really care
From our grandma to your
neighbour
Or a cuddly teddy bear.
A hug is an amazing thing
It's just the perfect way
To show the love we're feeling
But can't find words to say.
It's funny how a little hug
Makes everyone feel good
In every place and language
It's always understood.
And hugs don't need new
equipment
Special batteries or parts
Just open up your arms
And open up your hearts.

Summer Studentship Report 2001

Analysis of the protein identified by the monoclonal antibody HBME-1 in thyroid cancer

Maria Diamandis

by
Maria Diamandis

HBME-1 is a marker of mesothelial cells that has been useful in the identification of malignant thyroid tumors of follicular epithelial derivation. This identification is important because it allows an accurate and objective diagnosis of malignancy in order to ensure that appropriate treatment is carried out.The standard method for identifying cancer relies on characterization of abnormal architecture and cytology, which is at times controversial and difficult, and identification of invasion, that can be focal and easily missed in the routine sampling of tissues. Thus, pathologists have tried to identify objective and unequivocal markers of malignancy in thyroid nodules that could be applied to both cytologic and histopathological specimens.

One such marker of thyroid malignancy is HBME-1. This marker is a monoclonal antibody that was initially raised against mesothelioma cells, and is directed against an unknown epitope. HBME-1 positivity in thyroid follicular epithelial tumors is indicative of malignancy, since HBME-1 positivity has been demonstrated in about 60% of malignant lesions of follicular epithelial derivation, while benign lesions do not react with this antibody at all. Unfortunately, the protein responsible for HBME-1 immunoreactivity is not known. The aim of this project was to identify and characterize the protein that is responsible for HBME-1 binding.

Methods and Results

We obtained normal thyroid tissue, thyroid tumors with HBME-1 immunoreactivity, and liver and kidney tissues that are known to be negative for HBME-1. Total protein was isolated, quantified by protein assay, and then run on 8% acrylamide gels for western blot analysis and detection by chemiluminescence using HBME-1 as the primary antibody. We identified a variety of proteins in all samples, but a single band that migrated at approximately 70kD was consistently found only in HBME-1 immunoreactive thyroid cancers. To reduce nonspecific binding of the antibody, protein was subjected to immunoprecipitation with HBME-1 and the product was again run on an acrylamide gel. We stained this gel using the coomasie blue staining technique, cut out the 70kD band, and sequenced it by nanoelectrospray mass spectrometry. Mass spectrometry results indicated that the putative HBME-1 binding protein contained a peptide of 15 amino acids that matched exactly with the known sequence of a human protein called *septin 6*, and also has homology with a number of other members of the *Septin* family (done using the BLAST algorithm). Using the Clustal X algorithm, we were able to show that this peptide lies in area of high conservation among the septin gene family. However, the size of 70kD is not that of native septin 6, suggesting the possibility of a novel rearranged protein.

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University Health Network
Toronto General Hospital Toronto Western Hospital Princess Margaret Hospital

Sylvia L. Asa, MD, PhD, FRCPC, FCAP
Pathologist-in-Chief
Professor
Department of Laboratory Medicine & Pathobiology
University of Toronto

October 25, 2001

Please find enclosed a report of the progress made by Maria Diamandis during her summer studentship of 2001. As you will see, she was able to carry out an analysis of the protein identified by the monoclonal antibody HBME-1 in thyroid cancer. The success of her efforts is reflected in the outcome of a submission of this work for presentation at an international meeting: that abstract has been submitted for presentation in February 2002 at an international meeting of the US-Canadian Academy of Pathology in Chicago.

Maria has returned to her studies at the University of Toronto. Nevertheless, we are continuing to examine the protein that was identified and to determine the mechanism of its overexpression. We hope that the results of this work will lead to novel treatment approaches for thyroid cancer.

Thank you very much for the opportunity to initiate this work and for supporting Maria Diamandis as she carried out this summer studentship.

Sylvia L. Asa, MD, PhD, FRCPC, FCAP
Professor of Pathology
University of Toronto

Summer Studentship . . . con't from page 12

Discussion

Septins are a class of novel GTPase proteins that were originally thought to be involved in cytokinesis in yeast but, as some studies have shown, have many other possible functions including a role in vesicle trafficking, oncogenesis, and compartmentalization of the plasma membrane. Their role in oncogenesis was intriguing to us since HBME-1 identifies malignancies in several organs, including thyroid. Mutations in certain septins have been seen is some ovarian and mammary tumors, and in some yeast studies have resulted in improper cell growth, suggesting that they might also have a role in regulation of mitosis. Moreover, septin 6 has recently been reported to be a fusion partner in a gene rearrangement in some types of hematologic malignancies. Although we are not yet certain of the exact protein identified by HMBE-1, further studies of this protein are still underway in Dr. Sylvia Asa's laboratory at the Ontario Cancer Institute, Toronto.

Conclusions

My studies this past summer have raised important questions about this protein that definitely make its identity worth pursuing. The identification of this protein is important because it will pave the way for (1) understanding the biological basis of thyroid cancer development, and (2) using this protein as a specific target for novel gene therapy of patients with HBME-1 positive tumors.

I would like to thank the Thyroid Foundation of Canada for the opportunity to carry out this fascinating work and for giving me the opportunity to have a tremendous learning experience this past summer.

A candle loses nothing by lighting another candle.

Call for nominations 2002-2003

Nominations are invited for the election of the national executive committee and the six members-at-large on the Foundation's 2002-2003 national board of directors.

The nominations will be used by the nominating committee to determine its slate with **one nominee only proposed for each position.** The slate will be circulated to the members of the Foundation in the next issue of ***thyrobulletin.*** On Saturday June 15, 2002, at the time of the election at the Annual General Meeting additional nominations may be made from the floor.

The Board of Directors of Thyroid Foundation of Canada is comprised of chapter presidents, members-at-large and the executive committee. Chapter presidents and members-at-large are elected for a term of **one year** and shall hold office until their successors are elected or appointed (By-Law No.1, clauses 18 & 20). Executive committee members are elected **annually** and shall hold the same office for no more than **three** consecutive years (By-Law No.1, clause 38). Vice-President Chapter Organization & Development, Joan De Ville, will have completed her three-year term of office in June 2002.

National executive committee

- President
- V-P Publicity & Fundraising
- V-P Chapter Organization & Development
- V-P Education & Research
- V-P Operations
- Treasurer
- Secretary

National members-at-large (6)

three of whom shall be:

- Editor, *thyrobulletin*
- Liaison, Medical Research
- Archivist

In accordance with By-Law No. 1, Clause 53, following the May 2001 annual meeting, the executive committee appointed a nominating committee comprised of a chairman and at least four additional members.

Your 2001-2002 nominating committee is:

Margaret Burdsall
Chair, Kingston ON

Marlene Depledge
Calgary AB

Phyllis Payzant
Halifax NS

Roger Wales
Napanee ON

Enid Whalley
Winnipeg MB

Please contact the Chair at the address below if you are interested in serving on the executive committee or as a member-at-large or assisting on a national committee. Nomination forms are available from your chapter, nominating committee members or the national office.

Forward completed forms to:

Margaret Burdsall
Nominating Committee Chair
960 Killarney Crescent
Kingston ON K7M 8C6
Tel: 613-531-8948
Fax: 613-389-3691

Deadline: Friday March 15, 2002

Chapter news

Burlington/Hamilton

We are pleased to let our members know that as our chapter approaches its 2nd birthday we now have over 200 members. In 2001 over 700 people attended out education meetings, with support and interest continuing to grow.

This has created a need for more volunteers, with a special need for volunteers in St. Catharines and Brantford this fall. If you would like to help with these education meetings or any other event please contact Tammy at (905) 549-1464 or contact the chapter office. Some positions on the chapter executive are still vacant. For more information on these positions please call (905) 637-8387. We wish everyone a healthy and happy 2002.

Montreal

The Montreal chapter held two very successful meetings. On October 24, Dr. Daniel Pomerantz conducted a seminar on *Stress: The total story*. His knowledge and expertise were most valuable and greatly beneficial to the audience. On November 26, Dr. Alan Gold spoke on *Obesity, causes and management.* This was a topic close to many people. The chapter has also been busy selling entertainment books.

Thunder Bay

At a public education meeting, Tuesday November 20, Dr. Abu-Bakare presented an overview of the thyroid, followed by a question and answer period, to an audience of over 85. A big thanks goes to Lynn Lecocq, one of our volunteers, and her husband who donated two wooden reindeer to be raffled, with the entire proceeds going to the chapter. Also thanks to the many people who signed up as volunteers. We look forward to working with them.

Thunder Bay Chapter wishes all a Happy New Year.

Nora Hockin

Ottawa chapter members and the national board were saddened by the untimely death of Nora Hockin on November 26, 2001. President of the Ottawa area chapter for five years, from 1996 to 2001, she more than fulfilled her responsibilities excelling in leadership and accomplishments. One project, dear to her bilingual heart, was the introduction of an element of French into chapter activities, including a public education meeting for francophones held at the Centre hospitalier régionale de l'Outaouais in Hull, Québec.

Nora also served on the national board as Vice-President Education and Research from 1998 to 2000. We will miss not only what she did but what she was – a woman of keen intellect and integrity.

Many of us in the Ottawa chapter were able to attend her wake. We met her husband, John Kleins, her parents and other members of her large family, with whom we were able to express our sympathy and share our memories.

Nora left us all much too soon. We mourn her passing, we celebrate her life.

June Rose-Beaty
Past President Ottawa Chapter

A Tribute to our Volunteers

V aluable is the work you do

O utstanding is how you always come through

L oyal, sincere and full of good cheer

U ntiring in your efforts throughout the year

N otable are the contributions you make

T rustworthy in every project you take

E ager to reach your every goal

E ffective in the way you fulfill your role

R eady with a smile like a shining star

S pecial and wonderful –that's what you are.

Anonymous

Thank you

The Board of Directors of the Thyroid Foundation of Canada gratefully acknowledges a generous grant by **Abbott Laboratories, Limited** which covered the cost of production & mailing of this issue of *thyrobulletin.*

Acknowledged also are the generous contributions by **Knoll Pharma Inc.** and **Theramed Corporation** toward the cost of the May, 2001 Annual General Meeting, in Montréal, Québec

Urgent message from the membership chair

The survival of any organization, including our own, depends upon a strong and vibrant membership. Regrettably I must report that our membership is on the decline. This situation could be reversed if each of us renewed our membership and attracted at least one new member.

Over the past few years, the Foundation has had to face the challenge of increasing costs combined with government funding cuts. The president and the editor made reference to the Foundation's critical financial situation in the Education & Services Fund (page 3). Donations are urgently needed.

As membership chair I urge you to:

- renew your membership
- consider a donation
- consider a gift membership
- ask a friend to join

Your membership expires on the date that is printed on your thyrobulletin address label on the last page. Renew early, using the form below. You will be credited with renewal on your renewal date. If you have access to the Internet, we now have the capability to renew memberships, accept new members and receive donations on line. Please visit our website at www.thyroid.ca/English/Membership.html if you wish to use a credit card on our secure payment system.

Remember . .
the only gift too small
is no gift at all!

Thank you for your past support.
Your help is needed more than ever.

Nathalie Gifford
Member-at-large, Membership

Donation/Membership Form

Awareness ♥ Support ♥ Research

New memberships run for one or two years from the receipt of this membership application.
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	$ _____
❑ Student	$15.00	$25.00	$ _____
❑ Family	$25.00	$45.00	$ _____

Total: $ _____

I will be paying my donation/membership by:

❑ Personal Cheque (enclosed and payable to Thyroid Foundation of Canada) or,

❑ Visa or ❑ MC #: _____ Expiry Date: _____

Signature: _____

Name: _____

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City: _____ Province: _____ Postal Code: _____

Tel: _____ Fax: _____ E-mail: _____

Type of Membership: ❑ New ❑ Renewal • Language Preferred: ❑ English ❑ French

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

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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

Tel: (613) 544-8364 / (800) 267-8822 • **Fax:** (613) 544-9731 • **Website:** www.thyroid.ca

Chapter & Area Contacts/Liaisons pour les sections et districts

BRITISH COLUMBIA/COLOMBIE-BRITANNIQUE

Cowichan	(250) 246-4021
Vancouver	(604) 266-0700
Victoria*	(250) 592-1848

ALBERTA

Edmonton	(780) 476-3787

SASKATCHEWAN

Saskatoon	(306) 382-1492

MANITOBA

Winnipeg	(204) 489-8749

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Montréal	(514) 482-5266

NEW BRUNSWICK/NOUVEAU BRUNSWICK

Moncton	(506) 855-7462
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

NEWFOUNDLAND/TERRE NEUVE

Avalon/ St. John's	(709) 368-5068
Gander	(709) 256-3073
Marystown	(709) 279-2499

ONTARIO

Burlington/Hamilton	(905) 637-8387
Kingston	(613) 389-3691
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London	(519) 649-5478
Ottawa	(613) 729-9089
Petawawa/Pembroke	(613) 732-1416
Sudbury	(705) 983-2982
Thunder Bay	(807) 625-1419
Toronto	(416) 398-6184

The Thyroid Foundation of Canada appreciates the sponsorship of Abbott Laboratories, Limited in producing this issue of thyrobulletin.

Thyroid Foundation of Canada
La Fondation canadienne de la Thyroïde
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KINGSTON ON K7L 5J7

Has your membership expired? See Page 15

Awareness • Support • Research *Éclaircissement • Soutien • Recherche*