

Clinical THYROIDOLOGY FOR PATIENTS

VOLUME 6 • ISSUE 10 • 2013



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Walker JN et al. A thyroxine absorption test followed by weekly thyroxine administration: a method to assess non-adherence to treatment. *Eur J Endocrinol* 2013;168:913-7.

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Andersen SL et al. Smoking reduces the risk of hypothyroidism and increases the risk of hyperthyroidism: evidence

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Hypothyroidism in the mother is associated with complications in both the mother and the baby. Guidelines for testing and treatment of pregnant women with hypothyroidism have been developed. This study was done to investigate whether Sweden, a country with a national health care system, but with strong regional control of health care decisions, conforms to these internationally recognized guidelines for management of hypothyroidism and pregnancy.

Granfors, M et al. Thyroid testing and management of hypothyroidism during pregnancy: a population-based study. *J Clin Endocrinology Metab* 2013;98:2687-92

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Pre-pregnancy care and patient education are essential in women with thyroid disease in order to prevent pregnancy complications

Thyroid disease is common during pregnancy and can lead to many complications in the baby and the mother if not treated. The aim of this study was to evaluate pregnancy complications associated with thyroid disease.

Männistö T et al. Thyroid diseases and adverse pregnancy outcomes in a contemporary US cohort. *J Clin Endocrinol Metab* 2013;98:2725-33. Epub June 6, 2013.

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www.thyroid.org

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Clinical Thyroidology for Patients

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CLINICAL THYROIDOLOGY **FOR PATIENTS**

A publication of the American Thyroid Association

VOLUME 6 • ISSUE 10 • 2013

EDITOR'S COMMENTS

Welcome to **Clinical Thyroidology for Patients**, bringing to you, the patient, the most up-to-date, cutting edge thyroid research. What you read here as research studies will likely become the accepted practice in the future. *Clinical Thyroidology for Patients* is published on a monthly basis and includes summaries of research studies that were discussed in a recent issue of *Clinical Thyroidology*, a publication of the American Thyroid Association for physicians. This means that you, the patients, are getting the latest information on thyroid research and treatment almost as soon as your physicians.

We will be providing even faster updates of late-breaking thyroid news through **Twitter** at [@thyroidfriends](https://twitter.com/thyroidfriends) and on **Facebook**. Our goal is to provide you with the tools to be the most informed thyroid patient in the waiting room. Also check out our friends in the **ATA Alliance for Thyroid Patient Education**. The Alliance member groups consist of: the *American Thyroid Association*, the *Graves' Disease and Thyroid Foundation*, the *Light of Life Foundation*, *ThyCa: Thyroid Cancer Survivors Association*, *Thyroid Cancer Canada* and *Thyroid Federation International*.

In this issue, the studies ask the following questions:

- Are "thyroid support" supplements safe and effective?
- Is once weekly dosing effective in hypothyroid patients that have difficulty taking daily doses?
- Does smoking in pregnancy lead to hypothyroidism?
- Can pregnancy complications in hypothyroid women be prevented?
- How frequently are national guidelines followed in the treatment of hypothyroid women during pregnancy?

We welcome your feedback and suggestions. Let us know what you want to see in this publication. I hope you find these summaries interesting and informative.

— Alan P. Farwell, MD



THYROTOXICOSIS

“Thyroid support” supplements contain significant amounts of thyroid hormone

BACKGROUND

Dietary supplements, which by law have little or no regulation by the Food and Drug Administration, are widely used in the United States. Many of these supplements are used with the idea that they may provide energy or weight loss, although most claims in this regard are unproven. Since symptoms of hypothyroidism may include fatigue and weight gain, a number of supplements are marketed for the purpose of “thyroid support”, to maintain thyroid health and to help the thyroid to function better. As noted above, most of these claims are unproven and are not medically indicated. Prior studies have shown that some dietary supplements included thyroid hormones which could potentially cause symptoms of hyperthyroidism with their use. The present study examined the thyroid hormone content in some of the “thyroid support” supplements.

THE FULL ARTICLE TITLE

Kang G et al. Thyroxine and triiodothyronine content in commercially available thyroid health supplements. *Thyroid*. June 13, 2013 [Epub ahead of print].

SUMMARY OF THE STUDY

The thyroid hormone content was measured in 10 thyroid health supplements purchased from stores or through the internet. The label of five herbal supplements did not disclose any thyroid hormone content; the other five

indicated that they contained raw thyroid tissue or powder from a beef source. A total of 9/10 products contained triiodothyronine (T_3) and 5 contained thyroxine (T_4). A total of 4/5 with beef extract had T_3 and 2 also had T_4 . Only one did not contain either. All of the herbal capsules contained T_3 and 2 contained T_4 . The amounts of thyroid hormone in several of the products were sufficient to potentially cause elevated thyroid hormones in the blood and symptoms of hyperthyroidism. The herbal capsules also contained substantial amounts of iodine.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The majority of the dietary thyroid supplements tested contained clinically significant amounts of thyroid hormones. The use of these supplements could potentially increase thyroid function tests and thyrotoxicosis along with its risks for clinical symptoms, arrhythmias and bone loss.

— Glenn Braunstein, MD

ATA THYROID BROCHURE LINKS

Hyperthyroidism: <http://www.thyroid.org/what-is-hyperthyroidism>

Thyroid Disease and Complementary and Alternative Medicine (CAM): <http://www.thyroid.org/thyroid-disease-and-complementary-and-alternative-medicine-cam/>

ABBREVIATIONS & DEFINITIONS

Thyroxine (T_4): the major hormone produced by the thyroid gland. T_4 gets converted to the active hormone T_3 in various tissues in the body.

Triiodothyronine (T_3): the active thyroid hormone, usually produced from thyroxine.

Thyrotoxicosis: The signs and symptoms resulting from excessive amounts of thyroid hormones. The excessive thyroid hormones may come from the thyroid gland (hyperthyroidism), or from the ingestion of too much thyroxine or triiodothyronine.

continued on next page



HYPOTHYROIDISM

Use of a weekly dose of levothyroxine may be effective in patients that have difficulty taking daily medications

BACKGROUND

Hypothyroidism is a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills, usually in the form of levothyroxine (L-T₄). While most patients do well on a stable dose of L-T₄, some patients can have a lot of difficulty finding the best dose. For example, an elevated can be seen even after they have a normal serum TSH while taking the same dose of L-T₄ previously. This may be due to taking L-T₄ at the same time as food, calcium, iron or certain drugs that decrease the absorption of the thyroid hormone or due to GI problems that prevent the usual absorption of the hormone. However, varying dose requirements may also be due to missing doses on an intermittent or regular basis. The current study had patients in whom this was a possibility take a weekly dose of L-T₄ under observation to determine if this was an effective alternative to daily doses.

THE FULL ARTICLE TITLE

Walker JN et al A thyroxine absorption test followed by weekly thyroxine administration: a method to assess non-adherence to treatment. *Eur J Endocrinol* 2013;168:913-7.

SUMMARY OF THE STUDY

A total of 23 patients in the United Kingdom were identified who had an elevated serum TSH despite seemingly adequate daily doses of L-T₄ and no evidence of interfering drugs or diseases. Patients had baseline measurements of FT₄ and TSH; then each patient received an oral weekly dose of L-T₄ with periodic blood draws after the dose. They continued on the same weekly dose of L-T₄ given under supervision for 4 weeks with serum TSH measurement 1 week after the final dose.

The average TSH before the study was 41 mU/L. In 19 of the 23 patients, the maximal rise in serum FT₄ occurred by 120 minutes after taking the L-T₄, with almost a

doubling of FT₄ at this time. The 3 patients with the most severe hypothyroidism had the lowest rise in FT₄ at 120 minutes. At the final blood test after 4 weeks of treatment, TSH was reduced in 17 of 23 patients. In 6 patients, the 4-week TSH was higher than the baseline.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study showed that taking weekly L-T₄ can adequately treat hypothyroidism. Further, measuring FT₄ 2 h after the dose can help determine if any absorption problems exist. Weekly L-T₄ dosing may be helpful for patients that have difficulty taking medications on a daily basis.

— Alan P. Farwell, MD

ATA THYROID BROCHURE LINKS

Hypothyroidism: <http://www.thyroid.org/what-is-hypothyroidism>

Thyroid Hormone Treatment: <http://www.thyroid.org/thyroid-hormone-treatment>

ABBREVIATIONS & DEFINITIONS

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

Levothyroxine (L-T₄): the major hormone produced by the thyroid gland and available in pill form as Levoxyl™, Synthroid™, Levotheroid™ and generic preparations.

TSH: thyroid stimulating hormone – produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.

**THYROID AND PREGNANCY****Smoking during pregnancy increases risk of subsequent hyperthyroidism in mothers****BACKGROUND**

Cigarette smoking has been shown to have several effects on the thyroid. Many studies have shown that cigarette smoking is associated with hyperthyroidism, specifically Graves' disease. The association between smoking and hypothyroidism is less clear. Normal thyroid hormone levels are especially important during and after pregnancy for both the mother and her baby. This study was done to determine the risks of smoking during pregnancy on mothers' thyroid function (hyperthyroidism and hypothyroidism) following pregnancy.

THE FULL ARTICLE TITLE

Andersen SL et al. Smoking reduces the risk of hypothyroidism and increases the risk of hyperthyroidism: evidence from 450,842 mothers giving birth in Denmark. Clin Endocrinol (Oxf). July 1, 2013 [Epub ahead of print].

SUMMARY OF THE STUDY

This was a study using the medical charts of women in the national birth, hospital, and prescription registries in Denmark from 1996-2008. Of over 450,000 mothers, almost 20% smoked cigarettes during their first pregnancy. After delivery, women who had smoked were more likely to develop hyperthyroidism, especially in mothers over 30 years old and less likely to develop hypothyroidism. In particular, smoking during pregnancy increased the risk of developing two common forms of hyperthyroidism, Graves' disease and toxic nodular goiter.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This was a very large study and confirms previous data showing that smoking is associated with hyperthyroidism. However, the results suggesting that smoking protects against hypothyroidism are surprising since cigarettes contain substances which increase the risk of hypothyroidism. One potential explanation might be that the study did not look at the level of thyroid antibodies, which may affect hypothyroidism. Also, the study did not determine the possible risks of mothers' smoking on babies' thyroid function. It is well known that smoking during pregnancy has been associated with complications such as low birthweight babies, preterm delivery and infant death. This study suggests that the increased risk of developing hyperthyroidism is yet another reason to counsel women not to smoke during pregnancy. Finally, clinicians should follow women who smoked during pregnancy closely for possible thyroid dysfunction, especially in the first 2 years after delivery.

— Angela Leung, MD

ATA THYROID BROCHURE LINKS

Thyroid and Pregnancy: <http://www.thyroid.org/thyroid-disease-and-pregnancy>

Hyperthyroidism: <http://www.thyroid.org/what-is-hyperthyroidism>

Hypothyroidism: <http://www.thyroid.org/what-is-hypothyroidism>

ABBREVIATIONS & DEFINITIONS

Hyperthyroidism: a condition where the thyroid gland is overactive and produces too much thyroid hormone. Hyperthyroidism may be treated with antithyroid meds (Methimazole, Propylthiouracil), radioactive iodine or surgery.

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

Graves' disease: the most common cause of hyperthyroidism in the United States. It is caused by antibodies that attack the thyroid and turn it on.



HYPOTHYROIDISM AND PREGNANCY

Evaluation and treatment of hypothyroidism in pregnancy does not always follow international guidelines

BACKGROUND

Guidelines for testing and treatment of pregnant women with hypothyroidism have been developed by two American endocrinology associations and have been accepted and are consistent with guidelines from many other countries. These guidelines recommend treatment with levothyroxine (L-T₄) to maintain TSH levels less than 2.5 in the first trimester and to less than 3.0 in the second and third trimesters. Some guidelines recommend an automatic increase in the L-T₄ dose during the first few weeks of a diagnosed pregnancy for hypothyroid women already treated prior to pregnancy even before tests have been performed. The guidelines also recommend close follow-up and retesting once inadequate treatment has been recognized. Hypothyroidism in the mother is associated with complications in both the mother and the baby. It is assumed that appropriate treatment of the mother as early as possible in pregnancy can reduce these risks and poor outcomes. This study was done to investigate whether Sweden, a country with a national health care system, but with strong regional control of health care decisions, conforms to these internationally recognized guidelines for management of hypothyroidism and pregnancy.

THE FULL ARTICLE TITLE:

Granfors, M et al Thyroid testing and management of hypothyroidism during pregnancy: a population-based study. J Clin Endocrinology Metab 2013;98:2687-92.

SUMMARY OF THE STUDY

There are 41 districts in Sweden which control their own health care policies. They develop their own guidelines for testing and treatment of hypothyroidism during pregnancy. A total of 5254 pregnant women were studied in these districts who delivered between 2009-2011. The guidelines of each of the districts were analyzed for consistency with the international guidelines for testing, early treatment and follow-up. The results indicated wide

variations in reasons to test pregnant women in early pregnancy for hypothyroidism, which tests to perform and frequency of follow-up when hypothyroidism was discovered. None of the guidelines contained recommendations for women treated for hypothyroidism prior to pregnancy to immediately increase the dose of L-T₄ once pregnancy was diagnosed and before initial testing. This accounts for the high frequency (50%) of women who were treated for hypothyroidism prior to pregnancy demonstrating inadequate therapy judged by TSH levels greater than 2.5 upon initial testing when pregnant.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The conclusion of this study is that even in a country with a national health care system, allowing regional control to determine and implement treatment guidelines for maternal hypothyroidism will not ensure uniform testing and treatment conforming to international standards. Whether this deficient care is due to the nature of the national health care system, the regional independence in decisions or the performance of the health care providers cannot be determined from this study. This study is important for patients because it emphasizes the need for patients to be proactive in their health care decisions, no matter what kind of system in which they receive their health care, either public or private.

— Jerrold M Stock, MD

ATA THYROID BROCHURE LINKS

Hypothyroidism: <http://www.thyroid.org/what-is-hypothyroidism>

Thyroid Hormone Treatment: <http://www.thyroid.org/thyroid-hormone-treatment>

Thyroid and Pregnancy: <http://www.thyroid.org/thyroid-disease-and-pregnancy>

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HYPOTHYROIDISM AND PREGNANCY, continued

ABBREVIATIONS & DEFINITIONS

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

Levothyroxine (L-T₄): the major hormone produced by the thyroid gland and available in pill form as Levoxyl™, Synthroid™, Levothroid™ and generic preparations.

Thyroid hormone therapy: patients with hypothyroidism are most often treated with Levothyroxine in order

to return their thyroid hormone levels to normal. Replacement therapy means the goal is a TSH in the normal range and is the usual therapy. Suppressive therapy means that the goal is a TSH below the normal range and is used in thyroid cancer patients to prevent growth of any remaining cancer cells.

TSH: thyroid stimulating hormone – produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.

The ATA is Getting Social



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www.twitter.com/@thyroidfriends



Facebook

www.facebook.com/ThyroidAssociation

Connect with us!

**THYROID AND PREGNANCY****Pre-pregnancy care and patient education are essential in women with thyroid disease in order to prevent pregnancy complications****BACKGROUND:**

Thyroid disease affects up to 4% of pregnant women. Hypothyroidism due to Hashimoto's thyroiditis and hyperthyroidism due to Graves' disease are most commonly observed. Thyroid hormone requirements increase during pregnancy, therefore, patients with mild untreated hypothyroidism may require thyroid hormone treatment while hypothyroid patients already on treatment will frequently require increase in their thyroid hormone dose during pregnancy. Prior studies have showed that up to 60% of pregnant women on levothyroxine had an abnormal TSH test during pregnancy, indicating the need for a dose change. Untreated or inadequately treated hypothyroidism and hyperthyroidism can result in complications both to the baby, such as miscarriage, premature birth, low birth weight, goiter, and brain development problems as well as to the mother, such as gestational diabetes, hypertension, heart failure, anemia, preterm birth, and excessive bleeding after delivery. The aim of this study was to evaluate pregnancy complications associated with thyroid disease.

THE FULL ARTICLE TITLE:

Männistö T et al. Thyroid diseases and adverse pregnancy outcomes in a contemporary US cohort. *J Clin Endocrinol Metab* 2013;98:2725-33. Epub June 6, 2013.

SUMMARY OF THE STUDY:

The study included 223,512 pregnancies from the Consortium on Safe Labor study from the United States from 2002–2000). Pregnancy outcomes of 6,611 women with documented thyroid disease and 216,901 women without thyroid disease were compared. Information regarding the patients' history of thyroid disease and pregnancy outcomes was collected from electronic medical records. Primary hypothyroidism was found in

3,183 women (1.5%) and was associated with increased risk of preeclampsia, gestational diabetes, preterm birth, induction of labor, cesarean section and admission to the intensive care unit due to critical illness. Hyperthyroidism occurred in 417 women (0.2%) was associated with increased risk of preeclampsia, preterm birth, induction of labor admission to the intensive care unit due to critical illness.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Thyroid disease was associated with multiple complications in this study, similar to results from other studies. However, prior studies in pregnant women with clinical hyperthyroidism and hypothyroidism showed that adequate treatment of thyroid dysfunction decreases maternal and fetal complications. It is important to educate women with thyroid disease regarding possible complications of uncontrolled thyroid disease during pregnancy. Ideally, women should make sure their thyroid problems are controlled prior to getting pregnant and they should have regular thyroid tests throughout pregnancy and postpartum.

— Alina Gavrilă, MD, MMSC

ATA THYROID BROCHURE LINKS

Graves' disease: <http://www.thyroid.org/what-is-graves-disease>

Thyroid Hormone Treatment: <http://www.thyroid.org/thyroid-hormone-treatment>

Thyroid and Pregnancy: <http://www.thyroid.org/thyroid-disease-and-pregnancy>

Postpartum Thyroiditis: <http://www.thyroid.org/postpartum-thyroiditis>

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THYROID AND PREGNANCY, continued

ABBREVIATIONS & DEFINITIONS

Hashimoto's thyroiditis: the most common cause of hypothyroidism in the United States. It is an autoimmune disease caused by antibodies that attack the thyroid and destroy it.

Graves' disease: the most common cause of hyperthyroidism in the United States. It is an autoimmune disease caused by antibodies that attack the thyroid and turn it on.

Hypothyroidism: a condition where the thyroid gland is underactive and does not produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

Primary hypothyroidism: the most common cause of hypothyroidism caused by failure of the thyroid gland.

Hyperthyroidism: a condition where the thyroid gland is overactive and produces too much thyroid hormone. Hyperthyroidism may be treated with antithyroid meds (Methimazole, Propylthiouracil), radioactive iodine or surgery.

TSH: thyroid stimulating hormone – produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.

Miscarriage: this occurs when a baby dies in the first few months of a pregnancy, usually before 22 weeks of pregnancy.

Goiter: a thyroid gland that is enlarged for any reason is called a goiter. A goiter can be seen when the thyroid is overactive, underactive or functioning normally.

Gestational diabetes: diabetes that develops during pregnancy (gestation).

Preeclampsia: disorder characterized by development of hypertension and large amount of protein in the urine in the second half of pregnancy. If left untreated, it can progress to eclampsia and severe life-threatening complications.

Anemia: low blood count, specifically low levels of red blood cells which carry oxygen around to all of the cells in the body. Fatigue is a common symptom of anemia.



ATA Alliance for Thyroid Patient Education

WELCOME

The American Thyroid Association is pleased to welcome our two newest members, **Thyroid Federation International** and **Thyroid Cancer Canada**, to the Alliance for Thyroid Patient Education.

GOAL

The goal of our organizations is to provide accurate and reliable information for patients about the diagnosis, evaluation and treatment of thyroid diseases.

We look forward to future collaborations and continuing to work together towards the improvement of thyroid education and resources for patients.

WHO WE ARE (in alphabetical order)

AMERICAN THYROID ASSOCIATION

www.thyroid.org

ATA Patient Resources: <http://www.thyroid.org/patients/>

Find a Thyroid Specialist: www.thyroid.org

Phone (toll-free): 1-800-THYROID

e-mail: thyroid@thyroid.org

ATA Mission: The ATA leads in promoting thyroid health and understanding thyroid biology.

ATA Vision: The ATA is the leading organization focused on thyroid biology and the prevention and treatment of thyroid disorders through excellence and innovation in research, clinical care, education, and public health.

ATA Values: The ATA values scientific inquiry, clinical excellence, public service, education, collaboration, and collegiality.

To further our mission, vision and values the ATA sponsors "Friends of the ATA" online to advance the information provided to patients and the public such as this publication, *Clinical Thyroidology for Patients*. We welcome your support.

GRAVES' DISEASE AND THYROID FOUNDATION

www.gdatf.org

Phone (toll-free): 1-877-NGDF-123 or 643-3123

e-mail: Gravesdiseasefd@gmail.com

Founded in 1990, the Graves' Disease Foundation offers support and resources to Graves' disease patients, their families, and health care professionals. Their mission is to find the cause of and the cure for Graves' thyroid disease through research, to improve the quality of life for persons with Graves' disease and their caregivers and to educate persons with Graves' disease, their caregivers, healthcare professionals, and the general public about Graves' disease and its treatment. The web site features a monitored bulletin board.

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ThyCa: Thyroid Cancer
Survivors' Association, Inc.SM
www.thyca.org



Thyroid Cancer Canada
Cancer de la thyroïde Canada





ATA Alliance for Thyroid Patient Education

Continued...

LIGHT OF LIFE FOUNDATION

www.checkyourneck.com

email: info@checkyourneck.com

The Light of Life Foundation, founded in 1997, is a nonprofit organization that strives to improve the quality of life for thyroid cancer patients, educate the public and professionals about thyroid cancer, and promote research and development to improve thyroid cancer care.

THYCA: THYROID CANCER SURVIVORS' ASSOCIATION, INC.

www.thyca.org

Phone (toll-free): 877 588-7904

e-mail: thyca@thyca.org

ThyCa: Thyroid Cancer Survivors' Association, Inc., founded in 1995, is an international nonprofit organization, guided by a medical advisory council of renowned thyroid cancer specialists, offering support and information to thyroid cancer survivors, families, and health care professionals worldwide.

THYROID CANCER CANADA

WWW.THYROIDCANCERCANADA.ORG

Phone: 416-487-8267

Fax: 416-487-0601

e-mail: info@thyroidcancercanada.org

Thyroid Cancer Canada is a non-profit organization founded in 2000. The organization works towards creating an environment in which people who are dealing with thyroid cancer, especially the newly diagnosed, are met with support and information. Their goals & objectives include facilitating communication among thyroid cancer patients, providing credible information about the disease, providing emotional support, and assisting thyroid cancer patients with voicing their needs to health care professionals and those who are responsible for health care policy.

THYROID FEDERATION INTERNATIONAL

[HTTP://WWW.THYROID-FED.ORG/](http://WWW.THYROID-FED.ORG/)

e-mail: tfi@thyroid-fed.org

Thyroid Federation International (TFI) was established in Toronto in 1995. Thyroid Federation International aims to work for the benefit of those affected by thyroid disorders throughout the world by providing a network of patient support organizations.



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ThyCa: Thyroid Cancer
Survivors' Association, Inc.SM
www.thyca.org



Thyroid Cancer Canada
Cancer de la thyroïde Canada



Light of Life Foundation
checkyourneck.com





ATA Alliance for Thyroid Patient Education CALENDAR OF EVENTS

Educational forums, patient support groups and other patient-oriented meetings

ATA Conferences www.thyroid.org

October 16–20, 2013 — San Juan, Puerto Rico

83rd Annual Meeting of the American Thyroid Association (ATA)

www.thyroid.org

October 19, 2013 — San Juan, Puerto Rico

FREE Public Health Forum: Thyroid Disease and You (See flier on next page for more information.)

Sheraton Puerto Rico Hotel and Casino, 200 Convention Center Boulevard, San Juan, Puerto Rico 00907

Phone: 787-993-3500 • www.thyroid.org

Graves' Disease and Thyroid Foundation www.gdatf.org

October 26, 2013 — Baltimore, MD

Baltimore “Mini-Conference”

A single-day “Mini-Conference” on Saturday, October 26th in Baltimore, MD
at the Mt. Washington Conference Center. Details at www.gdatf.org

ThyCa Conferences www.thyca.org

Every Month

**ThyCa Support Group Meetings around the United States and in Canada,
Costa Rica, and Philippines.** Complete list of groups, meetings, and contacts at www.thyca.org

FREE Public Health Forum

Thyroid Experts from the American Thyroid Association and thyroid patients join together to inform the general public, other thyroid patients, and their friends and families about:

Thyroid Disease and You



®

AMERICAN
THYROID
ASSOCIATION

FOUNDED 1923

Concerned about low energy?...Memory loss?...Fatigue?...
Depression? ...Rapid heart beat?...Restlessness?...Infertility?...
Weight or hair changes?... A lump on your neck?... Could it be
your thyroid?

Saturday, October 19, 2013

1:00 pm – 3:00 pm

San Juan, Puerto Rico

Sheraton Puerto Rico Hotel and Casino

200 Convention Center Boulevard, San Juan, Puerto Rico 00907

Phone: 787-993-3500

Physician experts will discuss thyroid disorders.

This program is free and all are welcome, including walk-in-attendees. Reservations are encouraged to ensure we have enough seating. For more information and to register, please e-mail ThyCa at thyca@thyca.org.

Who should attend?

Anyone who has had an overactive or underactive thyroid, thyroiditis, a thyroid nodule, thyroid cancer, or a family history of thyroid problems or related disorders, including rheumatoid arthritis, juvenile diabetes, pernicious anemia, or prematurely gray hair (starting before age 30) Please come if you have questions, symptoms, or concerns about a thyroid problem. Receive free educational materials.

Reservations requested. Walk-ins welcome.

E-mail thyca@thyca.org to RSVP

(Please indicate in your message the thyroid condition you are most concerned about.)

Online educational information for patients is provided by all members of the ATA Alliance for Patient Education co-sponsoring this forum: ThyCa: Thyroid Cancer Survivors' Association, Graves' Disease and Thyroid Foundation, Light of Life Foundation, Thyroid Cancer Canada and Thyroid Federation International. Go online to www.thyroid.org and click on "Public and Patients" to access the resources you need.