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Clinical Thyroidology® for the Public

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

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Editor's Comments

Welcome to another issue of *Clinical Thyroidology for the Public*! In this journal, we will bring to you the most up-to-date, cutting edge thyroid research. We also provide even faster updates of late-breaking thyroid news through X (previously known as Twitter) at @thyroidfriends and on Facebook. Our goal is to provide patients with the tools to be the most informed thyroid patient in the waiting room. Also check out our friends in the **Alliance for Thyroid Patient Education**. The **Alliance** member groups consist of: the *American Thyroid Association®, Bite Me Cancer, the Graves' Disease and Thyroid Foundation, the Light of Life Foundation, MCT8 – AHDS Foundation, ThyCa: Thyroid Cancer Survivors' Association,* and *Thyroid Federation International.*

We invite all of you to join our **Friends of the ATA** community. It is for you that the American Thyroid Association® (ATA®) is dedicated to carrying out our mission of providing reliable thyroid information and resources, clinical practice guidelines for thyroid detection and treatments, resources for connecting you with other patients affected by thyroid conditions, and cutting edge thyroid research as we search for better diagnoses and treatment outcomes for thyroid disease and thyroid cancer. We thank all of the *Friends of the ATA* who support our mission and work throughout the year to support us. We invite you to help keep the ATA® mission strong by choosing to make a donation that suits you — it takes just one moment to give online at: www.thyroid.org/donate and all donations are put to good work. The ATA® is a 501(c)3 nonprofit organization and your gift is tax deductible.

May is International Thyroid Awareness Month.

In this issue, the studies ask the following questions:

- Does hypothyroidism in pregnancy increase risk of autism spectrum disorder in children?
- Do weight loss drugs cause growth of thyroid cancer?
- Can the cholesterol-lowering drugs known as bile acid sequestrants be used to lower thyroid levels in thyrotoxicosis?
- Do liquid forms of levothyroxine need different doses in pregnancy than tablet forms?
- Is surgery to remove the entire thyroid gland always necessary for treatment of medullary thyroid cancer?
- Do all thyroid cancer patients need to have their TSH levels suppressed?

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

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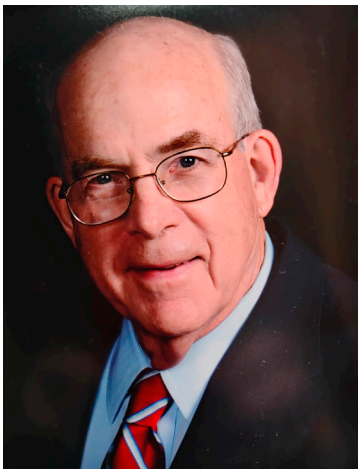
IN MEMORIAM — LAWRENCE CRANE WOOD, MD

Honoring the passing of a giant in thyroid patient education.

EXCERPTED FROM

Cooper, DS and Farwell, AP, "In Memoriam: Lawrence Crane Wood, MD, 1935-2026"
Thyroid EPub 2025 April 8 https://doi.org/10.1177/10507256261440399

On January 30, 2026, we lost a true giant in the world of thyroid patient education when Dr. Lawrence (Larry) Crane Wood passed away at the age of 90 after a long illness. Throughout his almost 40 year career practicing as a general internist at Massachusetts General Hospital, Larry had a particular interest and passion for the care of patients with autoimmune thyroid disease (AIT). He was particularly fascinated by conditions associated with AIT as potential clues to a possible diagnosis of thyroid disorders. Aware that prematurely gray hair could be a sign of an underlying thyroid problem, Larry approached a consortium of hairdressers in Boston, asking them to provide educational pamphlets on thyroid disease to their clients with prematurely gray hair. He also had an interest in possible links of AIT to learning disability and confirmed that men with AIT had higher rates of left-handedness and traits suggestive of dyslexia compared to a control group of men without AIT.



Lawrence Crane Wood, MD
1935 – 2026

Early on in his medical training, Larry realized that patients who were better informed about their medical problems had greater adherence to their medical regimens and commitment to ongoing follow-up. He also believed that educated patients were less anxious about their diagnoses and were more likely to become active participants in their care. This concept led Larry to publish Your Thyroid, the first book on thyroid disease written specifically for patients. This pioneering book, co-authored by E. Chester (Chip) Ridgway and David Cooper, was first published in 1982, and was subsequently published in two additional editions. A quotation from the first edition preface remains relevant today, almost half a century later:

"*You, as a patient, have the right and the responsibility to know what is going on when you get sick—to know the cause of your illness, what tests and treatments you should have, why these tests and are necessary, and what the course of your illness is likely to be.*"

Writing Your Thyroid propelled Larry to pursue his enthusiasm for patient education and advocacy, which became his lifelong passion. Larry's next endeavor was forming the groundbreaking patient education group, the Thyroid Foundation of America (TFA), in 1985. Working out of the downtown Boston YWCA, the TFA produced a patient-centered newsletter called Thyroid Today that contained articles written by thyroid experts as well as patients themselves. The TFA also sponsored meetings (patient forums) in the Boston area where thyroid patients could interact with one another and have questions related to their care answered by thyroid disease specialists and supported a dedicated patient help line.

In 1989, the TFA hosted First Lady Barbara Bush, who was recently diagnosed with Graves' disease (President Bush would be diagnosed in 1991) at a special event in conjunction with the 1991 ATA meeting in Boston. Ms. Bush gave a direct, honest, and engaging account of her illness, stressing the importance of a close working relationship between patient and physician. Another major milestone for TFA occurred at the International Thyroid Congress in Toronto in 1995, when Larry became the founding president of the Thyroid Foundation International (TFI). TFI is a consortium of international thyroid patient groups that initially included the TFA, Thyroid

IN MEMORIAM — LAWRENCE CRANE WOOD, MD, continued

Foundation of Canada, British Thyroid Foundation, T.E.D UK, National Graves' Disease Foundation (NGDF) and the Netherlands. TFI now has >30 patient education groups from 6 continents.

Seeking to expand the outreach of the TFA thyroid patient forums, Larry conceived of the idea of holding patient forums whenever and wherever a group of thyroid specialists gathered. This came to fruition in collaboration with the American Thyroid Association (ATA) at the ATA 1997 annual meeting in Colorado Springs. TFA-ATA patient forums were also held in 1998 and 1999. Continuing with his trademark collegiality and partnership, Larry and the TFA joined with the ATA, the NGDF, the Thyroid Cancer Survivors Association (ThyCa), and Light of Life to form the ATA Alliance For Thyroid Patient Groups, with the goal to provide accurate and reliable information for patients about the diagnosis, evaluation and treatment of thyroid diseases. The ATA Alliance thyroid patient forums have been held annually at the ATA annual meetings since 2003, with Larry directing these forums with his ATA colleagues until he retired from medical practice.

Larry was honored at the 2007 ATA meeting with a special award for "*his pioneering work in thyroid patient education and advocacy*". Currently, Larry's vision of providing patient forums whenever thyroid specialists come together carries on with the ATA Alliance thyroid patient forums, which are now virtual and occur several times a year. With Larry's retirement from medical practice, the TFA merged with the NGDF to form the Graves' Disease and Thyroid Foundation (GDTF). This group carries on Larry's legacy as a primary provider of general thyroid education to the public.

As Kimberly Dorris, CEO of GDTF, remarked on learning of Larry's passing, *"It was Larry's unique ability to instantly connect with people that I'll most remember him for"*.... *"The thyroid community has lost a great advocate and friend, and he will be greatly missed."*

We could not agree more.
Alan P. Farwell, MD
Editor in Chief

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THYROID DISEASE AND PREGNANCY

Does hypothyroidism in pregnancy increase risk of autism spectrum disorder in children?

BACKGROUND

Thyroid hormone plays an important role in the development of the baby during pregnancy, including brain development. The baby's own thyroid gland does not start making enough thyroid hormone until about 4–5 months of pregnancy. Therefore, thyroid hormone needed during the critical period of development in early pregnancy comes from mothers' thyroid hormone crossing the placenta to baby. Abnormal thyroid function, especially low thyroid hormone levels (hypothyroidism) in mothers during pregnancy have been associated with poor development in children, such as lower IQ.

Autism spectrum disorder is a complex condition that is likely affected by many different factors, including genetic and environmental factors. With its important role in brain development, thyroid function has been of interest as one of the potential factors that contribute to the risk of autism spectrum disorder in children. However, studies have not yet shown a clear link between hypothyroidism in mothers during pregnancy and children's diagnosis of autism spectrum disorder. The current study investigated possible association between abnormal thyroid function in mothers during pregnancy and children's risk of developing autism spectrum disorder.

THE FULL ARTICLE TITLE

Elbedour L et al. Maternal thyroid hormone imbalance and risk of autism spectrum disorder. J Clin Endocrinol Metab. Epub 2025 Nov 25:dgaf596; doi: 10.1210/clinem/dgaf596. PMID: 41288361

SUMMARY OF THE STUDY

This study included 51,296 pregnant women seen in one hospital in Israel from 2011-2017, of whom 8.6% (4,409 women) had abnormal thyroid function. Participants had at least one thyroid hormone level measurement during pregnancy. Women who had hypothyroidism (low thyroid hormone levels) and hyperthyroidism (high thyroid hormone levels) diagnosed before pregnancy were categorized as having "chronic thyroid dysfunction." Women who had any abnormal thyroid hormone levels during pregnancy were categorized as having "gestational thyroid dysfunction." Diagnosis of autism spectrum disorder in children born to these women was assessed from a national database.

There was no significant difference in the number of children diagnosed with autism spectrum disorder between those of mothers with normal thyroid function and those of mothers with either chronic or gestational thyroid dysfunction. However, if women had both chronic and gestational thyroid dysfunction, especially hypothyroidism, their children had about 2.7-fold higher risk of autism spectrum diagnosis compared to children of women without thyroid dysfunction. In contrast, children of women who had chronic thyroid dysfunction but had normal thyroid hormone levels throughout pregnancy did not have a higher risk of autism spectrum disorder compared to children of women with normal thyroid function. Similarly, children of women who only had gestational thyroid dysfunction, but not chronic thyroid dysfunction, did not have a higher risk of autism spectrum disorder compared to children of women with normal thyroid function. In addition, having persistently low thyroid hormone levels during pregnancy in more than one trimester was associated with an increased risk of developing autism spectrum disorder in children.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The authors concluded that inadequately treated hypothyroidism, as in cases of hypothyroidism in the mother diagnosed before pregnancy with abnormal thyroid

THYROID DISEASE AND PREGNANCY, continued

hormone levels during pregnancy, may be associated with increased risk of autism spectrum disorder in children. If hypothyroidism in the mother diagnosed before pregnancy was well-controlled during pregnancy, risk of autism spectrum disorder in children was not increased. The longer maternal hypothyroidism remains inadequately controlled during pregnancy, the higher the risk of autism spectrum disorder in children.

The findings of this study suggest that appropriate levothyroxine treatment of hypothyroidism in the mother to maintain normal thyroid hormone levels during pregnancy would be able to decrease or eliminate potential risk of autism spectrum disorder in children with hypothyroid mothers.

— Sun Y. Lee, MD, MSc

ATA THYROID BROCHURE LINKS

Thyroid Disease in Pregnancy: https://www.thyroid.org/thyroid-disease-pregnancy/

ABBREVIATIONS & DEFINITIONS

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

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.

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

Autism Spectrum Disorder: is a condition related to brain development that affects how people see others and socialize with them. The term "spectrum" in autism spectrum disorder refers to the wide range of symptoms and the severity of these symptoms.

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THYROID CANCER

Do weight loss drugs cause growth of thyroid cancer?

BACKGROUND

The weight loss medications known as glucagon-like peptide-1 receptor agonists (GLP-1RAs) have emerged as effective therapies for both obesity and diabetes since their approval by the US Food and Drug Administration (FDA) in 2005. However, the FDA has warned against using these medications in patients with a personal or family history of medullary thyroid carcinoma (MTC). This is because animal studies with these drugs showed that GLP-1RAs could increase the growth of the parafollicular C cells, which can develop into MTC, in mice. To date, despite human studies that not shown an increase in MTC cases among patients treated with GLP-1RA drugs, these drugs continue to have the Black Box warning about a possible association with MTC.

MTC is a rare thyroid cancer (<5% of thyroid cancer cases) that may run in families. The most common type of thyroid cancer is papillary thyroid cancer, which arises from the thyroid follicular cells. Thyroid follicular cells also contain GLP-1 receptors, raising the question of whether GLP-1RA exposure could increase the growth of papillary thyroid cancers. This is especially important since small papillary thyroid cancer can be watched by serial ultrasounds rather than removed by surgery, known as active surveillance. The aim of this study was to evaluate the impact of GLP-1RA exposure on cancer growth and progression in patients with low-risk papillary thyroid cancer undergoing active surveillance.

THE FULL ARTICLE TITLE:

Patrizio A, et al. Effect of GLP-1 receptor agonists on patients with thyroid carcinomas undergoing active surveillance. J Endocr Soc.2025;10(1):bvaf182; doi: 10.1210/jendso/bvaf182. PMID: 41376649.

SUMMARY OF THE STUDY:

This study evaluated 18 patients on GLP-1RA therapy selected from the 441 patients with low-risk papillary thyroid cancer undergoing active surveillance at Memorial Sloan Kettering Cancer Center (MSKCC). According to the MSKCC protocol, the maximum cancer diameter of the papillary thyroid cancer in the study patients was ≤1.5 cm without evidence of extension of the cancer beyond the thyroid or spread to the lymph nodes in the neck. Additional inclusion criteria for this study were follow-up at MSKCC for ≥6 months with neck ultrasounds performed every 6 months for the first 2 years, yearly for the next 3 years, and then approximately every 2 years for ongoing follow-up, and GLP-1RA exposure for ≥6 months.

The 18 study patients who were exposed to GLP-1RA therapy and that had 19 low-risk papillary thyroid cancers were matched with 37 patients with 38 cancers with similar cancer size undergoing active surveillance at MSKCC who were never exposed to this group of medications. Cancer size changes and cancer volumes were then compared between the two groups. Significant cancer growth was defined as an increase of ≥3 mm in any diameter and/or >72% increase in the cancer volume during the study. Patients were followed for an average of 5.5 years, with an average GLP-1RA exposure of 25 months.

Most cancers in both groups remained stable over time, with a small percentage showing significant growth or shrinkage. There was no statistically significant difference in cancer growth between patients treated with a GLP-1RA and those who were not. In addition, starting or stopping the GLP-1RA did not change the rate at which the cancers were growing. Interestingly, a longer exposure to GLP-1RA was associated with a greater decrease in cancer volume during the study. No patients developed spread of the cancer outside of the thyroid or the neck, and none underwent surgery during the study period.

THYROID CANCER, continued

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Overall, the study suggests that GLP-1RA therapy does not induce cancer growth and does not affect the cancer progression in patients with low-risk papillary thyroid cancer. This study confirms that GLP-1RA therapy appears to be in safe in patients with papillary thyroid cancer. While larger studies are needed to confirm these findings, this study should be reassuring to patients with papillary thyroid cancer.

— Alina Gavrila, MD, MMSc and Elie Naous, MD

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): https://www.thyroid.org/thyroid-cancer/
Thyroid Cancer (Medullary): https://www.thyroid.org/medullary-thyroid-cancer/

ABBREVIATIONS & DEFINITIONS

GLP-1 receptor agonists (GLP-1RAs): medications that mimic the natural hormone GLP-1 (glucagon-like peptide-1). GLP-1RAs are effective metabolic drugs that help control blood sugar and weight, with a generally good safety profile.

Papillary thyroid cancer (PTC): the most common type of differentiated thyroid cancer. There are 4 variants of papillary thyroid cancer: classic, follicular, tall-cell and noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).

Medullary thyroid cancer (MTC): a rare type of thyroid cancer that often runs in families. Medullary cancer arises from the parafollicular C-cells in the thyroid.

Active Surveillance: following a small, low-risk thyroid cancer with ultrasound and deferring surgery until the cancer grows significantly.

Thyroid Ultrasound: a common imaging test used to evaluate the structure of the thyroid gland. Ultrasound uses soundwaves to create a picture of the structure of the thyroid gland and accurately identify and characterize nodules within the thyroid. Ultrasound is also frequently used to guide the needle into a nodule during a thyroid nodule biopsy.

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HYPERTHYROIDISM

Can the cholesterol-lowering drugs known as bile acid sequestrants be used to lower thyroid levels in thyrotoxicosis?

BACKGROUND

Thyrotoxicosis is a condition characterized by high levels thyroid hormone in the blood, specifically thyroxine (T4) and triiodothyronine (T3). It can occur when the thyroid gland is overactive and produces excess hormone, like in Graves' disease or "toxic" nodules, or when the gland becomes inflamed and leaks excess thyroid hormone into the bloodstream, as in thyroiditis. Symptoms of thyrotoxicosis include tremors, a fast heartbeat (tachycardia), sweating, heat intolerance, weight loss, anxiety, and insomnia. In severe cases, it can lead to serious problems like heart failure, irregular heart rhythms, or liver failure or even a lifethreatening condition called thyroid storm.

Broadly speaking, treatment of thyrotoxicosis may include medications, surgery to remove the thyroid (thyroidectomy), or radioactive iodine therapy. Most people begin treatment with antithyroid drugs (ATDs) such as methimazole or PTU. These medications block the thyroid from making too much hormone, and they work especially well when the thyroid is overactive, as in Graves' disease. But ATD drugs do not work when thyrotoxicosis is caused by inflammation, and sometimes they are not effective even when used correctly. When this happens, doctors may add other treatments to help lower thyroid hormone levels. One option is to use bile acid sequestrants, older drugs originally used to treat high cholesterol. Bile acid sequestrants bind bile acids in the intestine, removing them form the body and forcing the liver to convert cholesterol into new bile acids. Bile acid sequestrants also can bind other proteins, including thyroid hormones, and remove them from the body as well. They were shown in early studies to reduce T4 and T3 levels, and current guidelines recommend their use in certain situations. However, we still do not know how effective or well-tolerated this class of medication is when combined with standard antithyroid medications.

The purpose of the study is to determine whether adding bile acid sequestrants to standard hyperthyroidism treatment leads to a more rapid reduction in thyroid hormone levels than antithyroid drugs alone.

THE FULL ARTICLE TITLE

Moreno Watashi D et al. Efficacy and safety of adjunctive bile acid sequestrant therapy for thyrotoxicosis: a systematic review and meta-analysis of randomized controlled trials. Thyroid. Epub 2025 Dec 18; doi: 10.1177/10507256251409074.

SUMMARY OF THE STUDY

The researchers conducted a review of previously published clinical trials that examined whether adding a bile acid sequestrant to standard treatment for thyrotoxicosis results in a more rapid reduction in elevated thyroid hormone levels. Standard treatment included medications such as methimazole, PTU, and betablockers. After their initial literature search, they found five randomized controlled trials that met the inclusion criteria, involving 173 patients in total. Of these, 93 patients (54%) received bile acid sequestrants in addition to standard therapy, while 80 patients (46%) received standard therapy alone. Almost all patients—97 percent—had Graves' disease. All studies were short, lasting only two to four weeks.

After the 2 week mark, there was no meaningful difference in thyroid hormone levels (between the two groups. However, in the three studies that continued for 4 weeks, the group receiving the bile acid sequestrant showed a larger, statistically significant reduction in total T3 and free T4 levels compared with the control group. Side effects were uncommon; only five patients reported mild digestive symptoms. The authors concluded that in patients with thyrotoxicosis, adding a bile acid sequestrant to standard antithyroid medication may help thyroid hormone levels return to normal more rapidly.

HYPERTHYROIDISM, continued

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Although larger studies are still needed before this approach becomes widely accepted, bile acid sequestrants can be safely added to standard antithyroid medications to help lower elevated thyroid hormone levels in thyrotoxicosis, especially in Graves' disease. Because the benefits generally appear after about four weeks, clinicians may want to start bile acid sequestrants earlier rather than later in a patient's treatment, particularly for those with more severe thyrotoxicosis who require high doses of antithyroid drugs.

— Phillip Segal, MD

ATA THYROID BROCHURE LINKS

Hyperthyroidism (Overactive): https://www.thyroid.org/hyperthyroidism/

Graves' Disease: https://www.thyroid.org/graves-disease/

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.

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.

Thyroiditis: inflammation of the thyroid, most commonly cause by antibodies that attack the thyroid as seen in Hashimoto's thyroiditis and post-partum thyroiditis. It can also result from an infection in the thyroid.

Toxic nodular goiter: characterized by one or more nodules or lumps in the thyroid that may gradually grow and increase their activity so that the total output of thyroid hormone in the blood is greater than normal.

Bile Acid Sequestrants: cholesterol lowering drugs (cholestyramine and colestipol) that bind bile acids in the intestines and remove them from the body, forcing the liver to convert cholesterol into new bile acid. These drugs also bind other proteins, including thyroid hormones, and can remove them from the body as well.

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THYROID AND PREGNANCY

Different forms of thyroid medication may need different doses in pregnancy

BACKGROUND

The usual treatment for hypothyroidism during pregnancy is a medication called levothyroxine, which replaces the thyroid hormone that was previously made by the thyroid. During pregnancy, the goal is to keep the TSH level below 2.5 to help protect the baby's development. The dose of levothyroxine depends on the patient's body weight and the cause of the thyroid problem. Past studies showed that women who were already taking thyroid medication before pregnancy usually need to increase their dose by about 30-40% once they are pregnant. A simple way to do this is by taking two extra tablets per week. This increase should happen very early in pregnancy, because the baby depends completely on the mother's thyroid hormone during that time.

In addition to the standard tablets, levothyroxine is also available in liquid and soft-gel forms. These may be absorbed better and could be helpful during pregnancy. However, we do not have enough information about the exact dose change needed for these forms. This study was designed to compare how much levothyroxine is needed to keep the TSH below 2.5 in early pregnancy in women taking tablets versus those taking liquid or soft-gel forms.

THE FULL ARTICLE TITLE

Scappaticcio L, et al. Adjustments during pregnancy differ between users of tablet and nontablet formulation? A real-world study. Endocr Pract. Epub 2025 Dec 30:S1530-891X(25)01350-3; doi: 10.1016/j.eprac.2025.12.021. PMID: 41478457.

SUMMARY OF THE STUDY

The study was done at a single institution. The researchers looked back at the records of pregnant women with hypothyroidism who started levothyroxine either before or during the first 3 months of pregnancy. They included patients whose TSH was within the normal range during pregnancy, had their blood test for TSH done every 30-40 days until at least 20 weeks, took their medication correctly and regularly, and did not have major pregnancy complications. Women who had problems absorbing medications, switched between different forms of levothyroxine or gained more than 25% of their starting weight during pregnancy were not included in the study. Levothyroxine treatment was started if TSH was above 2.5 and thyroid antibodies were present, or TSH was above 4 even without antibodies. Each patient's endocrinologist chose whether to use the tablet or liquid form. The dose was adjusted at each visit based on the test results.

A total of 335 pregnant women started treatment with levothyroxine and 212 were included in the study. About 75% had hypothyroidism before pregnancy. About 25% were diagnosed during pregnancy. In 13% of women, the cause was surgical removal of the thyroid. More women (62%) took levothyroxine tablets, while about 38% used the liquid form. Women taking the liquid form were more likely to keep their TSH levels in the target range. Both the dose and the type of formula played an important role in reaching the goal. Also, women taking the liquid form needed a lower dose to reach the target TSH, averaging 1.5 mcg/kg/day compared to the tablet 2.4 mcg/kg/day.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

In this study, liquid and soft-gel levothyroxine controlled thyroid levels better during early pregnancy and required lower doses than tablets. These forms may be especially helpful for patients with absorption problems, but dosing needs to be handled more carefully. These findings are important because if a liquid formula is used, a lower dose may be needed to avoid taking too much. Thyroid levels need to be monitored frequently, since both low and high levels during pregnancy can affect the baby.

— Ebru Sulanc, MD

THYROID AND PREGNANCY, continued

ATA THYROID BROCHURE LINKS

Thyroid Disease in Pregnancy: https://www.thyroid.org/thyroid-disease-pregnancy/
Thyroid Function Tests: https://www.thyroid.org/thyroid-function-tests/
Thyroid Hormone Treatment: https://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 (T4): the major hormone produced by the thyroid gland and available in pill form as Synthroid™, Levoxyl™, Tirosint™ and generic preparations. Of these preparations, Tirosint™ is available in either liquid or soft gel form. The other brands and generic preparations are solid tablets.

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.

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THYROID SURGERY

Is surgery to remove the entire thyroid gland always necessary for treatment of medullary thyroid cancer?

BACKGROUND

Medullary thyroid cancer (MTC) is a relatively rare cancer type that can develop in a person's thyroid gland, a butterfly shaped organ located in the front of the neck. The thyroid gland makes a critical hormone, called thyroid hormone, that controls a person's energy balance (metabolism). There are two forms of MTC; hereditary MTC (inherited), in which multiple family members will develop this cancer because of increased risk in their family, and sporadic MTC, which is not inherited and so develops without increased risk of this cancer in associated family members. MTC often already involves multiple areas of the thyroid gland at the time it is first diagnosed (called multifocality) and it may also have already spread out of the thyroid into neighboring neck lymph nodes. For these reasons, to completely remove this cancer, surgery to take out the entire thyroid gland (called a total thyroidectomy), as well as the neck lymph nodes located next to the thyroid (called a prophylactic central neck dissection) is generally recommended.

Recent studies have shown that, for some other types of thyroid cancer, removing just that part of the thyroid where the cancer is located (called a thyroid lobectomy) is as good as removing the entire thyroid gland for treatment. Moreover, thyroid lobectomy has a lower risk of complications than does total thyroidectomy. Finally, the remaining thyroid tissue left behind after a thyroid lobectomy will continue to make at least some thyroid hormone (which must be taken as a pill every day of a person's life after surgery if total thyroidectomy is performed). On the other hand, if only part of the thyroid is removed, cancer may be left behind in the part of the thyroid that remains or might develop in this remaining tissue at some point in the future. The goal of the study described here was to test whether thyroid lobectomy alone, instead of total thyroidectomy with central neck dissection, might be safe and effective treatment for people diagnosed with MTC.

THE FULL ARTICLE TITLE

Cappagli V et al. Multifocality and bilaterality in medullary thyroid cancer: basis for a proof-of-concept safety of lobectomy. Eur Thyroid J 2025;14(5):e250074

SUMMARY OF THE STUDY

The authors studied 389 people diagnosed with MTC who underwent total thyroidectomy, with central neck dissection, at their hospital between 2005 and 2018. In each case, the removed thyroid gland was examined to see if multifocal cancer was present and genetic testing was performed to see if the MTC for each patient was hereditary or sporadic. All patients in the study were followed over time with neck ultrasound imaging and blood testing to see if they were cured after surgery or if MTC subsequently returned (called recurrence).

The study results showed that multifocal MTC was present 22% of the time, overall, after total thyroidectomy. Hereditary MTC was identified for 78 of the 389 patients and, for the hereditary MTC patients, multifocal MTC was much more likely to be present (56.4%) than for patients diagnosed with sporadic MTC (14.5%). Although approximately 66% of the study patients were found to be cured after surgery, multifocal MTC was found to be associated with more aggressive MTC, including direct spread out of the thyroid into surrounding tissues and spread to neighboring lymph nodes, as well as incomplete cancer removal during surgery.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The results of this study suggest that there may be a subgroup of sporadic MTC patients for whom thyroid lobectomy would be a safe and effect treatment option. Unfortunately, this study was unable to identify any preoperative characteristics among the sporadic MTC patients studied that would predict which of these patients

THYROID SURGERY, continued

would be adequately treated with thyroid lobectomy alone. The study results are additionally useful for decision making among patients who undergo thyroid lobectomy for reasons other than MTC and for whom sporadic MTC is then discovered when the removed thyroid lobe is evaluated by a pathologist after surgery. Specifically, these data suggest that if such an unexpected MTC is small, completely contained within the removed thyroid tissue and there is no evidence of multifocality, additional surgery to remove the remaining thyroid tissue (called a completion thyroidectomy) may be safely avoided in favor of monitoring for future MTC recurrence. Finally, given the high rate of multifocality found for cases of hereditary MTC, this research confirms that total thyroidectomy remains the appropriate treatment for such cases.

— Jason D. Prescott, MD PhD

ATA THYROID BROCHURE LINKS:

Thyroid Hormone Treatment: https://www.thyroid.org/thyroid-hormone-treatment/
Thyroid Cancer (Medullary): https://www.thyroid.org/medullary-thyroid-cancer/
Thyroid Surgery: https://www.thyroid.org/thyroid-surgery/

ABBREVIATIONS AND DEFINITIONS:

Medullary thyroid cancer: a relatively rare type of thyroid cancer that often runs in families. Medullary cancer arises from the C-cells in the thyroid.

Cancer metastasis: spread of the cancer from the initial organ where it developed to other organs, such as the lungs and bone.

Total thyroidectomy: surgery to remove the entire thyroid gland.

Partial thyroidectomy: surgery that removes only part of the thyroid gland (usually one lobe with or without the isthmus).

Completion thyroidectomy: surgery to remove the remaining thyroid lobe in thyroid cancer patients who initially had a lobectomy.

Lymph node: bean-shaped organ that plays a role in removing what the body considers harmful, such as infections and cancer cells.

Cancer recurrence: this occurs when the cancer comes back after an initial treatment that was successful in destroying all detectable cancer at some point.

Prophylactic central neck dissection: careful removal of all lymphoid tissue in the central compartment of the neck, even if no obvious cancer is apparent in these lymph nodes.

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

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Clinical Thyroidology® for the Public

THYROID CANCER

Gaps between guidelines and clinical practice on decreasing thyroid hormone suppression in low and intermediate risk thyroid cancer patients

BACKGROUND

Thyroid cancer is common but, fortunately, has an excellent prognosis and the vast majority of patients survive their thyroid cancer. This is because we have very effective treatments. Surgery to usually the first treatment and is often curative. For advanced cancer, radioactive iodine therapy serves as a "magic bullet" to seek out and destroy thyroid cancer cells. Finally, thyroid hormone therapy is often required as thyroid cancer patients are hypothyroid after their thyroid cancer surgery.

For many years, thyroid cancer patients were treated with doses of thyroid hormone aimed at suppressing TSH levels to decrease the risk of thyroid cancer recurrence. Indeed, long-term TSH suppression was the standard of care for patients with thyroid cancer. However, guidelines from both the American Thyroid Association (ATA) and the National Comprehensive Cancer Network (NCCN) now advise reducing TSH suppression for those who are at low risk of recurrence and who remain cancer-free for several years. The recent guidelines include many studies showing that the risk of recurrence does not increase with less suppression and that excessive long-term TSH suppression can cause harm, including, but not limited to, increased risk of abnormal heart rhythms such as atrial fibrillation and thinning of the bones (osteoporosis).

Although clinical practice guidelines include the most current evidence to prove the best patient care, their inclusion into routine practice is frequently delayed and inconsistent. A previous study focused on physician practices regarding TSH suppression and showed that almost 50% of physicians were still recommending TSH suppression for low-risk thyroid cancer. The current study was performed to assess the barriers to physicians in reducing TSH suppression in thyroid cancer survivors.

THE FULL ARTICLE TITLE

Francis-Levin N, Tan CY, Gay BL, et al. A qualitative study of clinician barriers and facilitators to de-escalation of thyroid stimulating hormone suppression in thyroid cancer survivors. Endocr Pract. Epub 2025 Dec 17:S1530-891X(25)01334-5; doi: 10.1016/j.eprac.2025.12.009. PMID: 41419177.

SUMMARY OF THE STUDY

This study included 8 endocrinologists and 7 primary care physicians to determine barriers to reduce TSH suppression in recurrence-free, low- or intermediate-risk thyroid cancer survivors. Each physician participated in a focus group following a standardized interview guide. Within the focus group, 14 open-ended questions regarding the knowledge, beliefs, practices, and emotions in relation to thyroid hormone dose reduction were recorded. Participant response transcripts were then coded and analyzed to separate identified barriers and facilitators by patient, clinician, and system levels.

The primary reported patient-level barriers included patient distress or anxiety, patient misinformation, and lack of familiarity or trust surrounding the concept of reducing thyroid hormone doses. Physician-level barriers focused on difficulty understanding thyroid cancer risk stratification, variable use of ATA guidelines among primary care providers (PCPs) and endocrinologists, and unclear responsibilities for long term care of thyroid cancer survivors. Limited clinic visit time to manage and discuss thyroid hormone dose reduction was the main system-level barrier.

The main themes to increase thyroid dose reduction included building a trusting physician–patient relation-

THYROID CANCER, continued

ship while using patient-centered language to dispel patient anxiety. Physicians focused on improved access to guidelines regarding reduction of TSH suppression therapy. They also highlighted the importance of communication between PCPs and endocrinologists, along with using new strategies to better understand thyroid cancer risk stratification. Lastly, endocrinologists focused on the best timing for discharging patients back to primary care while PCPs expressed interest in a more effective handoff process for continued thyroid cancer survivorship care.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

While thyroid cancer guidelines have supported limiting thyroid cancer suppression to advanced thyroid cancer patients, there are still many barriers to implementing these guidelines into clinical practice. Building a trusting physician–patient relationship, improving access to guidelines and better communication between PCPs and endocrinologists were common themes that would improve reducing TSH suppression for low and intermediate risk thyroid cancer patients.

— Alan P. Farwell, MD

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): https://www.thyroid.org/thyroid-cancer/
Thyroid Function Tests: https://www.thyroid.org/thyroid-function-tests/
Thyroid Hormone Treatment: https://www.thyroid.org/thyroid-hormone-treatment/

ABBREVIATIONS & DEFINITIONS

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 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 advanced thyroid cancer patients to prevent growth of any remaining cancer cells.

Papillary thyroid cancer: the most common type of differentiated thyroid cancer. There are 4 variants of papillary thyroid cancer: classic, follicular, tall-cell and noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).

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ATA® 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 toward the improvement of thyroid education and resources for patients.

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GRAVES' DISEASE & THYROID FOUNDATION

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

Light of Life Foundation
checkyourneck.com

MCT8 - AHDS Foundation

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Thyroid Federation International

American Thyroid Association®
www.thyroid.org
ATA® Patient Resources:
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(Toll-free): 1-800-THYROID
thyroid@thyroid.org

Bite Me Cancer
www.bitemecancer.org
info@bitemecancer.org

Graves' Disease and Thyroid Foundation
www.gdatf.org
(Toll-free): 877-643-3123
info@ngdf.org

Light of Life Foundation
www.checkyourneck.com
info@checkyourneck.com

MCT8 – AHDS Foundation
mct8.info
Contact@mct8.info

Thyca: Thyroid Cancer Survivors' Association, Inc.
www.thyca.org
(Toll-free): 877-588-7904
thyca@thyca.org

Thyroid Federation International
www.thyroid-federation.org
tfi@thyroid-federation.org

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