

ARCHIVED NOTE: For Informational Purpose To Provide An Overview Of Low Thyroid Issues



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WOMEN'S HEALTH ACTIVIST JANUARY/FEBRUARY 2007 FEATURE ARTICLE

Hypothyroidism: A Women's Health Issue

By Jacqueline Horwitz and Judy Kaplan

We believe that hypothyroidism should be added to the women's health advocacy agenda. A very common medical condition, hypothyroidism is often undiagnosed and, when diagnosed, is often undertreated. Both lack of treatment and inadequate treatment result in unnecessary suffering and disability for millions of individuals, most of whom are female.¹

The thyroid gland, located at the base of the neck, produces hormones that regulate metabolism, thereby affecting every organ system in the body. *Hypothyroidism* occurs when the gland produces an insufficient quantity of hormones; when the bodies' cells are unable to use thyroid hormones; or when the gland is surgically removed. One major cause of hypothyroidism is an autoimmune process in which the immune system attacks thyroid cells; this condition is called Hashimoto's thyroiditis. Other causes include radiation treatment, certain medicines (e.g., lithium), inflammation, too little or too much iodine, pituitary gland dysfunction, and inborn defects of the thyroid.² Heredity also appears to play a role.³ In addition, some industrial chemicals can disrupt the normal functioning of thyroid hormones. These include polychlorinated biphenyls (PCBs) (coolants and lubricants that are no longer legally manufactured but continue to be found in fish, meat, dairy products, and well water^{4,5}) and perchlorate (a salt used in explosives and rocket fuel that is found in drinking water, milk, and certain foods⁶).

Estimates of the prevalence of hypothyroidism in the U.S. differ widely. One professional organization, the American Thyroid Association (ATA), estimates that 12–18 percent of the population is hypothyroid.² Thyroid medications are among the most widely prescribed drugs in the U.S.; in 2005, thyroid medications *Synthroid* and *Levoxyl* ranked 4th and 24th, respectively, among all brand-name prescriptions filled nationally.⁷

A Women's Health Issue

Women's health advocates should focus on hypothyroidism for several reasons. First, hypothyroidism is disproportionately a woman's disease. The American Association of Clinical Endocrinologists (AACE) estimates that women are five to eight times as likely as men to be hypothyroid.⁸ Using this estimate and the ATA prevalence estimate cited above,² we calculate that 30–48 million women and girls in the U.S. have hypothyroidism.

Second, hypothyroidism can have serious health consequences for girls and women at all stages of the life cycle. The condition's many symptoms include fatigue, weight gain, depression, sleep difficulties, muscle aches and stiffness, hypertension, high cholesterol, and forgetfulness. Hypothyroidism can delay menarche and cause menstrual problems and early menopause. It can threaten the well-being of both pregnant women and their babies: potential consequences include spontaneous abortion, gestational hypertension, premature delivery, postpartum depression, and impaired cognition in the child.^{8–10} For this reason, the AACE recommends that pregnant women be screened for hypothyroidism before pregnancy or in the first trimester.¹¹

Hypothyroidism can interfere with work and other productive activities and add stress to relationships. "Anna," a nonprofit executive, describes her experience: "There were times where I couldn't carry my briefcase from the car into the house. I was a CEO of an international organization, and having to stop work would be devastating. I thought about going on disability insurance because I wasn't able to continue my job.... You sense that your entire life has changed, and it's been imposed on the person you

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married.... Once you lose your normal life, you lose so much.”

Third, the large number of undiagnosed cases and widespread undertreatment of the disorder not only harm women's health but also result in a discounting of women's experiences of their own bodies. Both ATA and AACE estimate that half of all cases of hypothyroidism remain undiagnosed, leaving millions of people untreated.^{2,8} We believe that this stems, in large part, from the reliance on a single blood test with inconclusive diagnostic criteria.

A hypothyroid diagnosis is typically based on the blood level of thyroid stimulating hormone (TSH). A person with a TSH value higher than a specified cut-off point is defined as hypothyroid, yet controversy exists among endocrinologists over what that cut-off should be.¹²⁻¹⁵ In 2002, AACE recommended lowering the cut-off point to 3.0 mIU/L from the higher values typically used by clinical laboratories (4.0–5.5 mIU/L).¹⁶ In 2003, the National Academy of Clinical Biochemistry recommended an even lower cut-off value of 2.5 mIU/L.¹³ Nonetheless, many clinicians continue to rely on higher cut-off points, limiting accurate diagnosis. Moreover, TSH levels can vary over a day and/or season, and are influenced by a number of variables that include levels of some other hormones. For these reasons, some clinicians believe that the thyroid hormone system is too complex to be measured by a single lab test and may conduct additional testing, e.g., for thyroid autoantibodies and/or levels of the hormones thyroxine (T₄) and triiodothyronine (T₃) that are available for the body to use (free T₄ and free T₃).

One effect of these disagreements about how to define hypothyroidism is that many women are misdiagnosed and their lived experiences ignored. If a woman whose TSH is within “normal limits” complains of symptoms such as depression, difficulty losing weight, or muscle aches, she may be erroneously treated for depression, fibromyalgia, or other conditions. She may be told that nothing is wrong with her and that her symptoms are “all in her head.” “Vanessa,” a 47-year-old divorced mother, lived with undiagnosed hypothyroidism for 15 years: “You go in and say ‘Test my thyroid,’ and the doctor tests your TSH, says you’re normal, and sends you out the door. You walk out the door and you just cry because you know you’re not feeling normal.”

Treatment for Hypothyroidism

Most clinicians use TSH levels to guide their treatment decisions, with the goal of maintaining the TSH value within a given reference range. Women's symptoms may be taken into account, but a woman's experience is often less valued than her TSH level in determining treatment effectiveness.

Treatment for hypothyroidism involves hormone replacement and is not always straightforward. What works for one person may not work for another, and people with the same hormone levels may not have the same degree of symptom relief from a certain regimen. Treatment alternatives include:

- One of the synthetic T₄ drugs (brand names Synthroid, Levoxy, Levothroid, and Unithroid; generic name levothyroxine);
- Combination therapy: a synthetic T₃ drug (brand name Cytomel) plus one of the T₄ drugs;
- A single drug that includes both T₄ and T₃ (brand name Thyrolar);
- Desiccated thyroid, which includes T₄ and T₃ and is made from animal thyroid glands (brand names Armour Thyroid, Nature-Throid, and Westthroid).

Thyroid medication can take four or more weeks to stabilize in the body, although some people begin to experience symptom relief soon after beginning medication. For others, fine-tuning is needed over a period of months for optimal symptom relief. Switching brands sometimes helps; for example, a person who does not do well on one brand of T₄ medication might feel much better on another.

Some clinicians are unaware of treatment alternatives, including T₄/T₃ combination therapy and desiccated thyroid. Others mistakenly believe that research has shown the T₄/T₃ combination to be ineffective. In fact, only a few studies have compared combination therapy to treatment with T₄ alone. While limited conclusions can be drawn from these studies due to their small sample sizes and other methodological limitations, results consistently show that the T₄/T₃ combination is at least as effective as T₄ alone.^{17, 18}

An Advocacy Agenda

Women who are hypothyroid can be too overwhelmed—or simply too tired—to advocate for themselves.

Women's health advocates should be attentive to the damage caused to women's lives by the disorder and work with medical organizations and patient groups to create a climate in which people with symptoms of hypothyroidism are:

- *Educated* about the diagnosis and treatment of hypothyroidism;
- *Encouraged* to follow up on symptoms that could be caused by hypothyroidism;
- *Empowered* to become experts on their own bodies and to seek clinicians who are knowledgeable about the full range of diagnostic and treatment options.

At the national level, an advocacy agenda should include support for

- *Recognition* that symptom relief and improved quality of life are important treatment goals;
- *Inclusion* of tests for free T₄, free T₃, and antibodies in the standard thyroid protocol;
- *Reimbursement* for the costs of screening women during and after pregnancy and during menopause;
- *Recognition* of hypothyroidism's role in depression;
- *Better understanding* of the role of environmental exposures in hypothyroidism;
- *Increased* funding for research on thyroid disease with input from women's health advocates on research direction and design.

Working together, women can create a national momentum to broaden the scope of diagnosis and treatment and to help people who suffer from hypothyroidism get accurate diagnoses and regain their lives.

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REFERENCES

1. Shomon M. *Living Well with Hypothyroidism*. New York: HarperCollins; 2000.
2. American Thyroid Association Website. "ATA Hypothyroidism Booklet." Falls Church, VA: American Thyroid Association. 2003. Retrieved Nov. 14, 2006, from http://www.thyroid.org/patients/brochures/Hypothyroidism_web_booklet.pdf.
3. American Association of Clinical Endocrinologists Website. "'The Neck's Generation': Physicians Call for Better Understanding of the Link between Genetics and Thyroid Disease." Jacksonville, FL: American Association of Clinical Endocrinologists. Jan. 15, 2002. Retrieved Nov. 14, 2006, from <http://www.aace.com/newsroom/press/2002/index.php?r=20020115>.
4. Agency for Toxic Substances and Disease Registry Website. "ToxFAQs™ for Polychlorinated Biphenyls." Atlanta, GA: Agency for Toxic Substances and Disease Registry. Feb. 2001. Retrieved Nov. 14, 2006, from <http://www.atsdr.cdc.gov/tfacts17.html>.
5. U.S. Environmental Protection Agency Website. "Polychlorinated Biphenyls (PCBs)." Washington, DC: U.S. Environmental Protection Agency. April 18, 2006. Retrieved Nov. 14, 2006, from <http://www.epa.gov/opptintr/pcb/pubs/effects.html>.
6. Agency for Toxic Substances and Disease Registry Website. "ToxFAQs™ for Perchlorates." Atlanta, GA: Agency for Toxic Substances and Disease Registry. Mar. 14, 2006. Retrieved Nov. 14, 2006, from <http://www.atsdr.cdc.gov/tfacts162.html>.
7. "Top 200 Brand-Name Drugs by Units in 2005." DrugTopics: The Online Magazine for Pharmacists; March 20, 2006. Retrieved Nov. 14, 2006, from <http://www.drugtopics.com/drugtopics/data/articlestandard/drugtopics/102006/311294/article.pdf>.
8. American Association of Clinical Endocrinologists Website. "Thyroid Awareness Month 2004: Facts About Thyroid Disease." Jacksonville, FL: American Association of Clinical Endocrinologists. September 21, 2005. Retrieved Nov. 14, 2006, from

- <http://www.aace.com/public/awareness/tam/2004/fact.php>.
9. Wier FA, Farley CL. "Clinical Controversies in Screening Women for Thyroid Disorders During Pregnancy." *Journal of Midwifery & Women's Health* 2006;51:152-158.
 10. Bonds DE, Freedberg KA. "Cost-Effectiveness of Prenatal Screening for Postpartum Thyroiditis." *Journal of Women's Health and Gender-Based Medicine* 2001;10:649-658.
 11. AACE Thyroid Task Force. "American Association of Clinical Endocrinologists Medical Guidelines for Clinical Practice for the Evaluation and Treatment of Hyperthyroidism and Hypothyroidism." *Endocrine Practice* 2002;8:457-469. Retrieved Nov. 14, 2006, from http://www.aace.com/pub/pdf/guidelines/hypo_hyper.pdf.
 12. Lee SL. "When is the TSH Normal? New Criteria for Diagnosis and Management." In: American Association of Clinical Endocrinologists. *New Dimensions in TSH Control*. ThyroidToday.com 2003. Retrieved Nov. 14, 2006, from <http://www.thyroidtoday.com/TTLibrary/current/AACENewsletter.pdf>.
 13. Demers LM, Spencer CA. *Laboratory Support for the Diagnosis and Monitoring of Thyroid Disease*. Washington, DC: National Academy of Clinical Biochemistry. 2002. Retrieved Nov. 14, 2006, from http://www.nacb.org/lmpg/thyroid/3c_thyroid.pdf.
 14. Wartofsky L, Dickey RA. "The Evidence for a Narrower Thyrotropin Reference Range is Compelling." *Journal of Clinical Endocrinology & Metabolism* 2005;90:5483-5488.
 15. Surks MI, Goswami G, Daniels GH. "The Thyrotropin Reference Range Should Remain Unchanged." *Journal of Clinical Endocrinology & Metabolism* 2005;90:5489-5496.
 16. American Association of Clinical Endocrinologists Website. "Thyroid Awareness Month 2004: Detecting Mild Thyroid Failure with a Sensitive TSH Test." Jacksonville, FL: American Association of Clinical Endocrinologists. 2004. Retrieved Nov. 14, 2006, from <http://www.aace.com/public/awareness/tam/2004/tsh.php>.
 17. Escobar-Morreale HF, Botella-Carretero JI, Escobar del Rey F, Morreale de Escobar G. "Treatment of Hypothyroidism with Combinations of Levothyroxine plus Liothyronine" [Review]. *Journal of Clinical Endocrinology & Metabolism* 2005;90:4946-4654. Epub 2005 May 31.
 18. Grozinsky-Glasberg S, Fraser A, Nahshoni E, Weizman A, Leibovici L. "Thyroxine-Triiodothyronine Combination Therapy versus Thyroxine Monotherapy for Clinical Hypothyroidism: Meta-Analysis of Randomized Controlled Trials." *Journal of Clinical Endocrinology & Metabolism* 2006 Jul;91:2592-2599. Epub 2006 May 2
 19. "Organ System Manifestations of Hypothyroidism." In: Braverman LE, Utiger RD. *Werner & Ingbar's The Thyroid*. Philadelphia: Lippincott Williams & Williams. 2000.
 20. The Hormone Foundation Website. "Hypothyroidism." Chevy Chase, MD: The Hormone Foundation. 2006. Retrieved Nov. 14, 2006, from <http://www.hormone.org/public/thyroid/hypothyroidism.cfm>.
 21. American Association of Clinical Endocrinologists Website. "Thyroid Fact Sheet." Jacksonville, FL: American Association of Clinical Endocrinologists. 2006. Retrieved Nov. 14, 2006, from <http://www.aace.com/public/awareness/tam/2006/pdfs/ThyroidFactSheet.pdf>.