

Essential Guide to Understanding and Optimizing Thyroid Health

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Thyroid dysfunction is extremely common, affecting up to 70% to 80% of people by age 60, with symptoms including fatigue, weight gain, depression and low body temperature

Body temperature and pulse rate are indicators of thyroid health, with optimal morning temperature being 98 degrees F and midday reaching 98.6 degrees F with a pulse of between 60 to 100 beats per minute

Conventional T4-only treatments like Synthroid may be insufficient; many patients benefit from balanced T3/T4 therapy through natural glandular supplements or timed-release T3 formulations

Progesterone and adrenal health directly impact thyroid function, making it essential to address these hormones together rather than treating thyroid issues in isolation

Supporting thyroid health requires a comprehensive approach including iodine supplementation, gut health optimization, stress reduction and minimizing exposure to environmental toxins

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Maintaining optimal thyroid function is necessary for overall health, yet it remains one of the most misunderstood and mismanaged aspects of endocrine health. In my recent in-depth interview with pharmacist and health coach Carol Petersen, we explored the complexities of thyroid health, uncovering insights that challenge conventional medical practices.

Your thyroid gland, though small, plays a pivotal role in regulating your metabolism, energy production and overall hormonal balance. Just as progesterone, which we discussed in our [last interview](#), is essential for balancing estrogen and supporting various bodily functions, thyroid hormones are indispensable for maintaining metabolic rate and cellular energy.

Petersen pointed out the intricate relationship between progesterone and thyroid health: "Progesterone is so pivotal to good thyroid activity. You can't uncouple the two things." This connection underscores the importance of addressing hormonal balance holistically rather than in isolation.

Progesterone supports adrenal function, which in turn supports thyroid activity. Without adequate progesterone, your thyroid cannot function optimally, leading to a cascade of metabolic issues.

Understanding this relationship is important because many individuals may experience thyroid dysfunction symptoms without realizing that progesterone imbalance is the underlying cause. By ensuring that progesterone levels are sufficient, you create a supportive environment for your thyroid to operate effectively, enhancing overall metabolic health and energy levels.

The Prevalence of Hypothyroidism

Hypothyroidism is alarmingly common, with estimates suggesting that by age 60, up to 70% to 80% of the population may experience low thyroid function. Petersen noted, “There’s hypothyroidism all over the place,” highlighting the silent epidemic that many suffer from without proper diagnosis or treatment. This high prevalence is often masked by the subtlety of symptoms and the inefficacy of conventional testing methods, which fail to capture the full picture of thyroid health.

Most people remain undiagnosed because they do not seek medical advice until their metabolic rate is severely compromised. Symptoms such as fatigue, weight gain and depression are often dismissed as normal aging processes rather than indicators of thyroid dysfunction. This widespread underdiagnosis contributes to the ongoing struggle many face in maintaining energy levels and overall health.

Hypothyroidism presents a broad spectrum of symptoms that significantly impact daily life. Recognizing the symptoms early leads to more effective interventions and prevents the progression of thyroid-related health issues. Key indicators include:

- **Fatigue** — Persistent tiredness that’s not alleviated by rest.
- **Weight gain** — Unexplained increases in body weight despite no changes in diet or activity levels.
- **Dry skin and hair** — Skin becomes rough and dry, and hair may fall out or become brittle.
- **Constipation** — Reduced gut motility leading to infrequent or difficult bowel movements.
- **Inability to sweat** — Decreased sweating can lead to overheating and discomfort.
- **Depression and anxiety** — Mood swings, feelings of depression, and heightened anxiety levels.
- **Low body temperature** — A consistently low body temperature may indicate a sluggish metabolism.
- **High cholesterol** — Elevated cholesterol levels are often a marker of hypothyroidism, as the thyroid plays a crucial role in lipid metabolism.

The Importance of Body Temperature and Pulse Rate

Conventional medicine typically relies on a basic thyroid panel measuring T4, T3, and thyroid-stimulating hormone (TSH). However, this approach often misses the nuanced aspects of thyroid function. Advanced panels that include free hormones and reverse T3 provide a more accurate picture of thyroid health but are seldom utilized in mainstream practice.

One of the simplest yet most effective screening tools for thyroid health is measuring your body temperature and pulse rate. This approach is effective because T3 levels are generally

higher in the morning and decline as the day progresses.

Elevated T3 levels in the tissues correlate with a more active metabolism, leading to increased body temperature and pulse rate. A morning body temperature of approximately 98 degrees Fahrenheit signifies healthy thyroid function. By midday, a temperature around 98.6 degrees Fahrenheit combined with a pulse rate between 60 and 100 beats per minute typically indicates a normal metabolic response.

When consulting your doctor about your thyroid function, a common test they may order is the TSH test, which measures the level of thyroid-stimulating hormone in your blood. It's important to recognize that while a low TSH level is generally considered desirable, it's sometimes suppressed by cortisol and adrenaline. Petersen explains:¹

"TSH is your pituitary signal to the thyroid to be stimulating the release of more thyroid hormone. And we have these accepted ranges, again, pretty much by committees, of a normal TSH is 0.35 or 0.5, can be to 3.5, 4.5, 5.5 depending on the lab. Although the Endocrine Society has recommended 3.5 as an upper limit ...

So, we have the situation where conventional medicine doesn't recognize your hypothyroidism until you're way off that range. And I zero in on around 0.8 to 1.0 as a more optimal range."

Dr. Ray Peat considered a normal TSH below 0.5. Furthermore, even if your lab results are within normal ranges, unusual body temperature and pulse readings still suggest subclinical hypothyroidism. "Take your temperature before you get up in the morning ... you should have gotten a temperature of 97.8 to 98.2," Petersen notes, referencing Dr. Broda Barnes' work.

You can use the basal body temperature thermometer to measure your temperature as they are more accurate and measure it to 100th of a degree.

A consistently low body temperature indicates a sluggish metabolism, while monitoring pulse rate offers insights into metabolic rate, as thyroid hormones play a key role in regulating heart rate and overall energy expenditure. An elevated pulse rate may reflect an overactive thyroid. These physiological signs are often overlooked in conventional medical settings but provide valuable information about your thyroid's operational status.

Critiquing the Conventional T4-Only Therapy

Your hypothalamus secretes thyrotropin-releasing hormone (TRH) that triggers your pituitary gland to release TSH that then causes your thyroid to release T4. Nearly 90% of your [thyroid hormone](#) is released in an inactive form of T4. Your liver then converts T4 to T3 with the help of an enzyme.

The most common thyroid medication in the U.S. is Synthroid (levothyroxine), a synthetic form of T4. "Conventional wisdom says our thyroid gland makes about 80% T4, and therefore we should treat with T4. But T4 is relatively inactive till it's converted to T3," Petersen explained.² Relying solely on T4 therapy downregulates the enzyme responsible for converting T4 to the active T3 form, worsening hypothyroid symptoms.

This highlights a fundamental flaw in conventional treatment paradigms. By focusing only on T4, doctors may create a situation where patients remain symptomatic despite appearing to receive adequate thyroid hormone replacement. “Using T4, in some patients you actually make them more hypothyroid,” Petersen noted, emphasizing the need for a more balanced approach that includes lifestyle changes and active T3 supplementation when necessary.

Safe Dosing Strategies for T3 Supplementation

For those requiring T3 supplementation, timed-release formulations offer a more stable hormone level throughout the day. This method prevents the spikes and crashes associated with conventional dosing, ensuring a steady metabolic rate and hormone balance. Using timed-release T3 formulations or compounding T3 to create a steady release throughout the day is another option.

Petersen advises cautious dosing when using T3 supplements: “Use multiple times per day, a smaller dose ... Just not really over 20 to 25 micrograms per day.” This method ensures that your body receives a consistent supply of T3, supporting optimal metabolic function without the negative side effects associated with high-dose, single-time administrations.

Exploring Natural Glandular Supplements as Alternatives

Glandular supplements, such as Armour Thyroid, offer several advantages over synthetic thyroid medications. They provide a natural balance of T4 and T3, which leads to better overall thyroid function and symptom relief. However, sourcing and quality control remain critical factors in their effectiveness.

“Armour used to be good. I personally use ERFA. It’s available in Canada and other countries,” Petersen shared, advocating for high-quality glandulars sourced internationally. She explains that over-the-counter thyroid glandulars in the U.S. have undergone regulatory changes that require the extraction of T3, leaving only T4 in the supplements. This alteration diminishes their efficacy, as T3 is the active form of thyroid hormone crucial for metabolic processes.

Ensuring that glandular supplements contain adequate levels of both T4 and T3 is essential for maintaining optimal thyroid function and preventing the pitfalls associated with T4-only therapy.

The Essential Role of Adrenal Health in Thyroid Function

Thyroid function is intricately linked to [adrenal health](#), a connection often neglected in conventional treatments. “Before you’re supplementing thyroid, you have to look at how is this person doing with their adrenal glands? Because the adrenals support the thyroid,” Petersen emphasized.³ Without adequate adrenal support, thyroid treatments may exacerbate symptoms, leading to issues like palpitations and anxiety.

Assessing adrenal function involves more than just looking at thyroid levels. Petersen advises monitoring blood pressure as an indicator: “If your [systolic] blood pressure is running ... 100 or less, they don’t have the adrenal support to take thyroid. They’re going to have a problem with it.” Low blood pressure signifies insufficient adrenal function, which undermines the effectiveness of thyroid therapy.

Supporting adrenal health through supplements like progesterone and DHEA, as well as lifestyle modifications, is important for ensuring that thyroid treatments are effective and do not lead to adverse side effects.

Chronic stress also undermines adrenal health, which in turn impairs thyroid function. Consider stress-reduction techniques such as meditation, adequate sleep, and relaxation practices as part of your comprehensive thyroid health regimen, ensuring that both adrenal and thyroid functions are supported and optimized.

Iodine Supplementation: Balancing Essential Nutrients

[Iodine](#) is fundamental for thyroid hormone production, yet its role is complicated by the presence of halides like chlorine and bromine. Petersen recommends using Lugol's solution to ensure adequate iodine intake: "I've been recommending two to four drops of Lugol's solution in water daily. So, one drop is 6.25 milligrams (mg), so basically 12.5 to 25."

Proper iodine supplementation supports thyroid hormone synthesis, but it must be balanced to avoid adverse reactions, especially in individuals with high halide exposure. Halides such as chlorine, fluorine and bromine interfere with iodine uptake by the thyroid gland.

"We know the halides, chlorine and fluorine, interfere with our thyroid. And bromine. It interferes with that thyroid function," Petersen explained. These halides replace iodine in thyroid hormones, leading to dysfunctional molecules that impede thyroid activity.

Chlorine is commonly found in tap water, while bromine is present in various industrial chemicals and consumer products. Reducing exposure to these halides involves adopting practices such as using filtered water, avoiding chlorinated pools and being mindful of the products you use daily.

Ensuring adequate iodine intake while minimizing exposure to halides is essential for maintaining optimal thyroid function. This balance is best achieved through careful dietary choices and targeted supplementation, as recommended by Petersen.

Progesterone and Coconut Oil for Thyroid Health

[Progesterone](#) plays a vital role in supporting both adrenal and thyroid function. By addressing progesterone deficiency, hormonal balance is restored, creating a supportive environment for thyroid activity. Progesterone supports adrenal function, which in turn supports thyroid function. Without adequate progesterone, your adrenal glands cannot effectively support the thyroid, leading to a cascade of metabolic issues.

Supplementing progesterone helps stabilize hormonal balance, reduce anxiety, improve sleep quality, and enhance overall thyroid function. Incorporating progesterone into a thyroid health regimen is essential for ensuring that all aspects of hormonal balance are addressed, thereby optimizing thyroid function and overall metabolic health.

Coconut oil, rich in medium-chain triglycerides and steroidal molecules, aids in the conversion of T4 to the active T3 form, thereby enhancing thyroid function and overall energy metabolism. Including coconut oil in your diet can be a simple yet effective strategy to support thyroid health. Its unique composition not only provides a source of healthy fats but also supports the biochemical processes necessary for optimal thyroid hormone activity.

Addressing Autoimmune Thyroiditis: Beyond Standard Treatments

Autoimmune conditions like [Hashimoto's thyroiditis](#) complicate thyroid health but may be managed effectively with the right strategies. Petersen highlighted the importance of testing for thyroid antibodies: "60% of us have antibodies to thyroid peroxidase and thyroglobulin. You can have these tests run." Elevated antibodies indicate autoimmune activity that impairs thyroid function, requiring a targeted approach to manage and reverse the condition.

Conventional medicine often overlooks the role of autoimmune activity in thyroid dysfunction, focusing instead on hormone replacement without addressing the underlying immune response. By identifying and addressing thyroid antibodies, it's possible to mitigate autoimmune attacks on your thyroid gland, improving thyroid function and overall health.

The key to managing autoimmune thyroiditis lies in repairing your gut health. A healthy gut barrier prevents the leakage of proteins into your bloodstream, reducing your immune system's attack on thyroid tissues. The solution to this problem is extensively covered in my new book, "Your Guide to Cellular Health."

Implementing gut-healing protocols involves adopting a diet rich in anti-inflammatory foods, eliminating food sensitivities and supporting gut microbiota through probiotics and prebiotics. Your microbiome, the community of bacteria in your gut, is also crucial for converting the thyroid hormone T4 to its active form, T3. Certain bacteria produce enzymes necessary for this conversion, while others can inhibit it.

For healthy thyroid function, you need to make sure T4 is efficiently converted into T3. To encourage the conversion of T4 to T3, eat a diet of whole, unprocessed or minimally processed foods and make sure you include enough protein and healthy, easily digested carbs that won't cause intestinal irritation or endotoxin production, such as whole fruit.

Lifestyle Factors: Diet and Exercise for Thyroid Health

Beyond supplements and medications, lifestyle choices significantly impact thyroid function. A balanced diet rich in the right carbohydrates — and free of ultraprocessed foods — supports cellular energy production, which is necessary for thyroid health. Excess polyunsaturated fat (PUFA) intake, including [linoleic acid](#) in seed oils, is a major culprit, as PUFAs interfere with your cell's ability to use active thyroid hormone.

Incorporating a variety of nutrient-dense foods ensures that your body receives the essential vitamins and minerals necessary for optimal thyroid function. Additionally, consistent, moderate exercise enhances metabolic rate and supports thyroid function.

"Your metabolic rate is dependent on T3 thyroid, the active form of thyroid, plus your movement," Petersen explains. Regular physical activity not only boosts metabolism but also supports overall hormonal balance and energy levels. By maintaining a balanced diet and engaging in regular exercise, individuals can support their thyroid health and enhance their overall well-being.

Exposure to toxins like [endocrine-disrupting chemicals](#) (EDCs) in plastics also interferes with thyroid hormone production and function, leading to a range of metabolic and endocrine issues. Using filtered water, avoiding the use of chemicals in your home and being mindful

of the products you apply to your skin will help you reduce your exposure.

Avoiding these harmful substances will significantly improve thyroid health and prevent further hormonal disruptions. Sauna usage is another option for detoxification, which also helps to raise your body temperature.

Comprehensive Strategies for Thyroid Health

Thyroid health is a cornerstone of overall well-being, influencing everything from metabolism and energy levels to hormonal balance and immune function. The insights shared by Petersen offer a roadmap for those struggling with thyroid issues, advocating for a comprehensive, integrative approach that goes beyond conventional treatments.

For personalized support, consider reaching out to Petersen through her coaching program at [The Wellness By Design Project](#). Additionally, her YouTube channel offers a wealth of instructional videos to help you understand and manage your thyroid health effectively.

Optimal thyroid health is within your reach. With the right strategies and support, you can navigate the complexities of thyroid function, address underlying hormonal imbalances and achieve a state of vibrant health and well-being. To support your thyroid function, consider the following steps:

- **Comprehensive testing** — Move beyond basic thyroid panels to include free hormones and reverse T3 for a complete picture of thyroid health.
- **Balanced hormonal support** — Address progesterone and adrenal health to support thyroid function.
- **Iodine supplementation** — Use Lugol's solution to ensure adequate iodine intake while minimizing halide interference.
- **Natural supplements** — Explore high-quality glandular supplements and timed-release T3 formulations as needed.
- **Gut health** — Prioritize gut repair to manage autoimmune thyroiditis effectively and increase cellular energy.
- **Lifestyle adjustments** — Maintain a balanced diet, engage in regular exercise and implement stress management techniques to support overall thyroid health.
- **Minimize toxin exposure** — Reduce exposure to endocrine-disrupting chemicals to protect thyroid function.
- **Consistent monitoring** — Regularly monitor body temperature, pulse rate and thyroid hormone levels to ensure optimal thyroid function.

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Notes

^{1, 2, 3} [Youtube, Dr. Mercola, Essential Guide to Understanding and Optimizing Thyroid Health — Interview with Carol Petersen](#)

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