

Unraveling the Mysteries of Thyroid Health

Analysis by [Dr. Joseph Mercola](#)

January 26, 2025

STORY AT-A-GLANCE

- › Thyroid health is intricately linked to iodine intake, genetics and overall metabolic balance, challenging the conventional "empty tank" model of treatment
- › Autoimmune thyroid disease has a unique mechanism distinct from other autoimmune conditions, primarily driven by your body's reaction to iodine
- › Accurate thyroid testing requires adherence to specific guidelines, including timing, fasting, biotin avoidance, medication timing and consideration of the menstrual cycle
- › Gut health, fatty liver and other hormonal imbalances, such as estrogen dominance, are closely intertwined with thyroid function
- › A holistic approach, including dietary adjustments, lifestyle changes and careful consideration before relying on hormone therapies, is necessary for optimizing thyroid health

Dr. Alan Christianson is a leading expert in the field of thyroid disorders, and his insights on this topic are invaluable. In fact, his expertise is so insightful that I've invited him to be the lead consultant for our upcoming health coaching program. This program will offer comprehensive protocols and practical steps for various health concerns, with a strong emphasis on thyroid health. I want to ensure the information we provide is top-notch, so we're taking our time to get it just right.

In my previous interview with Christianson, we explored information about [excess iodine and thyroid health](#). These principles are fundamental and will remain relevant for years

to come. Before speaking with him, I felt lost when it came to understanding thyroid issues. I knew the conventional approaches, both in conventional and alternative medicine, were missing something important.

They didn't address the root causes of thyroid problems. It became clear to me that the solutions were much simpler than I had imagined.

I even applied Christianson's advice to my own health. At the time of our first interview, I was taking a significant dose of thyroid medication, including desiccated thyroid and Cytomel. I was operating under the common misconception that my thyroid issues stemmed from low thyroid hormone production. I was relying on outdated lab tests like thyroid-stimulating hormone (TSH) and basal body temperature.

After understanding the true nature of thyroid autoimmunity, I was able to completely stop all thyroid medications within two weeks. My basal body temperatures are now completely normal 98.4 to 98.8. All my thyroid hormones are normal but my TSH is elevated, which is what you'd expect because my body is now producing its own thyroid hormone and that requires TSH to activate it. It should remain elevated for the next few months.

I'm incredibly grateful for Christianson's expertise. So, let's recap some of the key points from our latest discussion. Thyroid problems are incredibly common, and autoimmune thyroid disease is the most prevalent autoimmune condition.

Sadly, thyroid cancers are also on the rise. Conventional and even many natural approaches often assume the problem is simply a lack of thyroid hormone. However, this "empty tank" model doesn't address the underlying cause. Christianson revealed that thyroid disease is closely linked to an individual's genetic tolerance to iodine. By managing iodine intake within a safe range, many people actually reverse their thyroid issues.

The Unique Nature of Thyroid Autoimmunity

One of the biggest misconceptions I had before interviewing Christianson was that all autoimmune diseases have the same origin. This is simply not true. While many **autoimmune conditions**, like rheumatoid arthritis, multiple sclerosis and inflammatory bowel disease, are often linked to a leaky gut, thyroid autoimmunity has a different mechanism.

In these other conditions, proteins leak through your damaged gut lining, triggering an immune response. However, thyroid autoimmunity is driven by a different mechanism.

The key difference lies in your body's interaction with iodine. We need iodine for proper thyroid function, but our bodies are adapted to different levels of intake based on our ancestry. People with coastal ancestry generally tolerate higher amounts of iodine, while those with inland ancestry thrive on lower levels. Many people today, even those with inland ancestry, consume too much iodine.

This **excess iodine** matches the thyroid globulin and distorts the molecule to something your body is not typically expecting. This new protein structure then creates antibodies against it, causing your immune system to mistakenly attack the thyroid tissue.

The good news is that this process requires an ongoing trigger. By reducing excessive iodine intake, you break this cycle. Your immune system then recognizes that the thyroid is not the enemy, and the autoimmune process often reverses. This reversal often happens surprisingly quickly, within a few months, unlike many other autoimmune conditions that take years to improve. In my own case, I saw significant improvement very rapidly.

While antibody levels are an indicator of thyroid autoimmunity and useful for screening, they don't always tell the whole story. Some people with autoimmune thyroid disease never have measurable antibodies, while others with mildly elevated antibodies have no thyroid problems at all. Therefore, focusing solely on antibody levels isn't always the most accurate approach.

The Thyroid-Gut Connection and Other Autoimmune Links

A fascinating connection exists between thyroid disease and certain gut issues. A condition known as thyrogastric syndrome, also called atrophic gastritis or autoimmune gastritis, is found in a significant percentage of people with autoimmune thyroid disease. This condition involves your immune system attacking your stomach's parietal cells, which leads to poor absorption of important nutrients like iron, B12 and zinc.

While this connection isn't directly related to iodine intake, it suggests a broader genetic predisposition to autoimmunity. It seems that some genes are more specific to thyroid autoimmunity, while others are associated with a general increased risk of various autoimmune conditions. This could explain why people with thyroid disease are more likely to experience other autoimmune problems as well.

Another common co-occurrence is fatty liver, now often referred to as metabolic dysfunction-associated fatty liver disease (MAFLD). Thyroid hormones play a role in regulating liver function, metabolism, body weight and blood sugar. Therefore, hypothyroidism significantly contributes to the development of fatty liver.

Understanding Fatty Liver and Metabolic Fuel

My understanding of fatty liver has evolved over time. I previously believed it was primarily caused by an excess of omega-6 fats like [linoleic acid](#) (LA). While these fats certainly play a role, Christianson offered a more nuanced explanation. He explained that fatty liver is fundamentally a problem of fuel balance within your body.

Various fuel molecules, including carbohydrates, fats (like LA) and even alcohol, are processed into acetyl-CoA. When your body exceeds its capacity to use these fuel molecules, it shifts into storage mode.

Where the body stores this excess fuel varies from person to person. Some people store it primarily as subcutaneous fat, while others accumulate it in their liver. The liver has two main storage compartments: triglycerides and glycogen. A healthy balance between these two is essential for proper liver function. In fatty liver, the proportion of

triglycerides becomes excessively high, creating a vicious cycle that makes it difficult for the liver to reverse the process.

This explanation helps to understand why alcohol also contributes to fatty liver. Alcohol, like excess fats and carbohydrates, is ultimately converted into acetyl-CoA. Therefore, both excessive consumption of certain fats and **alcohol** overload your liver's capacity to process fuel, leading to fat accumulation. This also explains why some people are more susceptible to fatty liver than others.

The Role of Gut Bacteria and Short-Chain Fatty Acids

Our conversation also touched on the crucial role of gut bacteria and short-chain fatty acids, particularly butyrate. Butyrate is often touted as the primary fuel source for colonocytes, the cells lining your colon. However, recent research has revealed a more complex picture. While butyrate is important, it only makes up about 20% of the short-chain fatty acids produced by gut bacteria.

The majority, around 60%, is acetate, a precursor to acetyl-CoA. Propionate makes up the remaining 20%.

This raises the question of whether the focus on butyrate has been misplaced. It's possible that the initial research on short-chain fatty acids created a bias toward butyrate, overlooking the important roles of acetate and propionate. Clinically, butyrate is often administered in ways that are ineffective. Oral butyrate is poorly absorbed, and while rectal administration is more effective locally, it doesn't reach the entire colon.

I've developed a novel time-release delivery system that effectively delivers substances, including beneficial bacteria and short-chain fatty acids, directly to the colon. This technology allows us to bypass the stomach's harsh acidic environment and the small intestine, ensuring targeted delivery to the colon where these substances have the greatest impact. This new technology opens the door for new research into the optimal ratios of short-chain fatty acids.

I plan to explore different combinations, including a formulation with the natural ratio of 60% acetate, 20% propionate and 20% butyrate, to see which approach is most effective.

The Thyroid-Estrogen Connection and the Importance of Prolactin

We also discussed the intricate relationship between thyroid hormones and estrogen. I've long believed that testing estrogen levels in the blood is misleading, as estrogen is primarily stored in tissues, not your bloodstream. This leads to inaccurate information and harmful treatment decisions, especially for post-menopausal women.

Christianson agreed, noting that women are often treated for low estrogen based on serum levels, even if they are not experiencing symptoms. This approach, based on flawed data, is unlikely to produce positive outcomes. The problem is often not low estrogen, but rather **estrogen dominance**, which is indicated by elevated prolactin levels.

Christianson shared a surprising insight: taking exogenous thyroid hormones actually raise prolactin levels. This is due to a feedback loop between the hypothalamus, pituitary gland and thyroid. The same signal that tells your pituitary to produce thyroid hormone also stimulates prolactin production. This explains why my own prolactin levels increased when I was taking thyroid medication. This information highlights the complexity of hormonal interactions within your body.

This led to a discussion of how various factors influence prolactin levels, including hormone replacement therapy, oral contraceptives, xenoestrogens and reactions to thyroid medications. This highlights the importance of considering the context when interpreting prolactin results. My own experience with progesterone lowering my prolactin levels suggests a clear estrogen connection.

The good news is that prolactin testing is relatively inexpensive and accessible, making it a valuable tool for monitoring hormonal balance.

As our conversation continued, we further discussed the complexities of thyroid health, the connection between thyroid and other hormones and broader implications for metabolic health. We also cover information about accurate thyroid testing. As Christianson explained, your body has intricate mechanisms for regulating hormone responses. It adjusts the number and activity of hormone receptors to maintain balance.

However, when you introduce external hormones, you disrupt these finely tuned systems. This is where the wisdom of nature comes into play. When do we support the body's natural processes, and when do we intervene? In cases of complete gland removal, like thyroidectomy, intervention is necessary. However, many people have abnormal lab results without a true inability to compensate. It's important to distinguish between compensation and true dysfunction.

The Five Golden Rules for Accurate Thyroid Testing

Christianson shared five essential rules for accurate thyroid lab testing. These rules are key for obtaining consistent and reliable results but are often overlooked, leading to inconsistent and confusing lab results. Implementing these guidelines significantly improves the accuracy and reliability of thyroid testing.

- 1. Time of day** – Thyroid hormone levels fluctuate throughout the day. The most consistent results are obtained between 6:00 a.m. and 9:00 a.m. Blood spot testing makes it easier to adhere to this timing.
- 2. Fasting** – Fasting status significantly impacts thyroid hormone levels. It's important to fast before testing.
- 3. Biotin** – Supplemental biotin interfere with lab analyses. It's recommended to avoid biotin supplements for three days before testing. Surprisingly, this effect is primarily seen with supplemental, not dietary, biotin.
- 4. Thyroid medications** – If you take thyroid medication, take your lab tests before taking your medication that day. Testing shortly after taking medication will produce inaccurate results, especially for T3 and T4 levels.

5. Menstrual cycle – For menstruating women, thyroid hormone levels vary throughout the cycle. The most consistent results are obtained during days one to nine and 20 to 28 of the cycle. Testing during days 10 to 19 produces inconsistent results.

Rethinking Thyroid Screening and the Value of Clinical History

Our discussion then turned to the value of conventional thyroid testing, specifically TSH. I expressed my evolving view that TSH is not an effective screening tool. Christianson agreed, emphasizing the importance of considering treatment options. In conventional medicine, the primary treatment for thyroid issues is synthetic thyroid medication. However, with the powerful influence of diet and lifestyle, other approaches are available.

Christianson emphasized the value of antibody testing as a screening tool, as it's more predictive of symptoms than TSH. While some individuals with overt hypothyroidism have negative antibodies, antibody testing still provides valuable information. It's important to remember that normal antibody levels do not necessarily rule out thyroid disease.

This perspective aligns with the approach of clinicians like Broda Barnes, who effectively identified thyroid issues based on clinical history and symptoms, even before the advent of modern thyroid testing. It's important to remember that while thyroid hormone levels are important, the correlation between those levels and symptoms is much looser than most people realize. In fact, many people with significantly abnormal thyroid hormone levels are surprisingly asymptomatic.

Dietary Considerations for Thyroid Health

We also discussed the importance of diet in thyroid health. I mentioned my red, green and yellow food system from my book, "Your Guide to Cellular Health," and how it differs from Christianson's approach in "The Thyroid Reset Diet." While my system focuses on

general metabolic health, Christianson's is specifically designed for individuals with autoimmune thyroid disease.

I expressed concern about some of the "green" foods in Christianson's diet, such as seasoned nuts. While nuts can be healthy, they're high in LA and are best consumed in moderation, especially for those with high levels of stored linoleic acid. I also noted that my own food system is not suitable for thyroid health due to the inclusion of high-iodine foods.

Christianson explained that his dietary recommendations are not intended as a universal diet for everyone but rather as a specific tool for a specific situation – autoimmune thyroid disease. He also acknowledged the contamination of otherwise healthy foods, such as raw milk, with iodine due to modern agricultural practices. The dairy industry commonly uses iodine-based disinfectants to clean teats and equipment.

Although a hot water rinse helps mitigate iodine residues, the pervasive use of iodine teat dips introduces an additional, often unnoticed source of iodine into dairy products.

Diabetes and Metabolic Health

We also discussed diabetes, another major endocrine issue. Christianson described diabetes as a problem of fuel partitioning, where excess fuel accumulates in the bloodstream. He cited research showing that even small amounts of fat accumulation in the pancreas significantly impacts diabetes development.

I shared my understanding, influenced by the work of Ray Peat, that glucose is the preferred fuel for most cells, although some cells, like colonocytes and heart cells, primarily use fatty acids. I also emphasized the dangers of overly restrictive low-carb diets, which trigger the release of stress hormones like cortisol. Christianson agreed, explaining that your body requires glucose and will produce it through cortisol-mediated muscle breakdown if dietary intake is insufficient.

We discussed the ideal daily glucose intake, agreeing that 200 to 250 grams is a reasonable range for most individuals. We also discussed the dangers of excessive

cortisol production, whether from dietary restriction or emotional stress, and its impact on sleep and overall health.

We also touched on the parathyroid gland, a tiny gland nestled near your thyroid. This gland plays a role in maintaining calcium balance in your bloodstream. Christianson argues that even slightly elevated calcium levels, especially if recurring, warrant investigation, particularly if accompanied by symptoms like fatigue, anxiety or joint pain.

He emphasizes that conventionally accepted reference ranges for calcium are overly broad. Further, conventional medicine is limited in addressing parathyroid issues. Surgery is typically the only offered solution and there's a lack of focus on root causes.

Finally, we touched on hormone replacement therapy, with both of us expressing caution regarding long-term use. Christianson emphasized the importance of considering both the benefits and risks of any intervention, particularly when it involves manipulating hormone levels. He stressed the need for strong evidence of net benefit before recommending such interventions.

Prioritizing Outcomes and Minimizing Harm in Thyroid Health

This in-depth discussion with Christianson illuminates the complex web of factors influencing thyroid health. By understanding the unique nature of thyroid autoimmunity, the importance of accurate testing and the interconnectedness of various bodily systems, we move beyond simplistic solutions and embrace a more holistic and effective approach to thyroid care.

This conversation emphasizes the importance of informed decision-making, prioritizing long-term health outcomes and supporting your body's innate capacity for healing. By focusing on supporting your body's natural processes and minimizing harm, you achieve true and lasting improvements in health.