

THE GUT-THYROID CONNECTION

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Did you know that many diseases can be traced to a breakdown in the gastrointestinal tract? 70 percent of your immune system resides in this area – your gut, and the GI tract has many important functions for your health including digestion, nutrient absorption, elimination, detoxification, hormone metabolism and energy production. 99% of the neurotransmitters in your body are actually created in the intestine (part of your GI tract), and every brain chemical known as a neurotransmitter is found there. This means the GI tract, or gut, plays a *very* important role in achieving optimal thyroid health.

For proper thyroid function, 20% of the thyroid hormone in your body must be converted into its active form, which is done in the GI tract. In order for this conversion to happen, healthy colonies of beneficial bacteria must be present in the GI tract. An imbalance in the bacteria ratio (of good vs. bad) in the GI tract (dysbiosis) can lead to low thyroid function. This explains why so many patients with thyroid hormone imbalance also have digestive problems and normal thyroid blood chemistry panels.

How to Determine if You Have a Digestive Problem

If you are having digestive problems, there is a good chance that it is affecting your thyroid function. Bloating after meals, gas, cramping, loose stools, constipation, burping, heartburn, and inconsistent stool formation can all be signs of a digestive problem. You can begin to see if you have digestive problems by doing an easy test at home. This is known as the transit time test.

Performing the Transit Time Test

Food should pass through your intestines in 18-24 hours. If it takes longer than twenty-four hours, there is something wrong with your digestive tract. This easy to do test can be done at home to measure food transit time.

1. Purchase a product called “activated charcoal” which is an inert substance and will turn your stool black or dark gray.
2. Swallow four capsules with a meal and write down the day and time that you take the capsules.
3. Observe your stool until you see black or dark gray stool appear. At this point, write down the day and the time. Look at the time that you originally swallowed the capsules and the time that you see the dark stool and write down the total time it

took for this to happen. If it took longer than twenty-four hours, you have some work to do on your digestive tract. If it took less than 18 hours, that may also be a problem meaning that there is something irritating the digestive tract causing increased peristalsis.

Get a Full Analysis

The best way to determine if you have problems in your digestive tract is to complete a stool analysis. This will be ordered by your functional medicine physician. I recommend testing through Metametrix laboratory. They offer a profile called a GiFX Comprehensive Stool Analysis. Metametrix uses cutting edge technology for microbe detection in stool. This test will tell you if you have any infections that could be affecting the thyroid gland. It also tells you how well you are digesting food, if you are absorbing the food you are eating, if you have any yeast overgrowth, parasites, fungus, and/or mold and whether you have an inflammatory bowel versus an irritable bowel. It even tests for gluten intolerance. This test will also reveal if you have intestinal dysbiosis which is basically an imbalance in the bacterial colonies in the gut. This test is vital for everyone who has autoimmune thyroiditis because of the possible infectious triggers in the gut.

How to Address Imbalances in a Stool Analysis

If there are any imbalances found in the stool analysis, the following guidelines should be followed:

The "4 R's" to Repair Gastrointestinal Dysfunction:

- **Remove:** Eliminate known food allergens such as gluten, dairy, eggs, soy, peanuts, etc. Blood testing can pinpoint food reactions. Alcohol, caffeine and NSAIDS should be avoided as well. A stool analysis will diagnose infections that can be eliminated with natural medicines or medications.
- **Repair:** Supplements to repair the intestinal barrier are taken.
- **Replace:** Hydrochloric acid and pancreatic enzymes offer digestive support.
- **Reinoculate:** Probiotics that contain friendly bacteria such as lactobacillus and bifidobacteria are taken to reinoculate proper bacterial colonies.

Cortisol's Role in Thyroid Imbalance

In addition, there is another mechanism in the GI tract that can lead to low thyroid function. Your digestive tract is lined with lymph (immune) tissue known as GALT (Gut-Associated Lymphoid Tissue). Stress to the GALT can be caused by food sensitivities, undigested proteins, leaky gut, and infections from bacteria, yeast and parasites. These GALT afflictions can cause a major stress response which raises the cortisol production by your adrenal glands. Cortisol will cause a shift in thyroid hormone metabolism –

increasing the inactive form of T3 and causing an imbalance. Chronic elevations in cortisol from stress will suppress the immune system in the GI tract. This can lead to dysbiosis, parasites, yeast and leaky gut – creating a vicious cycle that further disrupts thyroid function. As you can see, a healthy and balanced GI tract is extremely important in optimizing thyroid hormones and function. I have even seen many patients whose thyroid function normalized after simply treating imbalances in the GI tract.

Estrogen's Role in Thyroid Imbalance

Excess estrogen in the body can suppress thyroid hormone function by binding to thyroid hormone receptor sites. The GI-Estrogen-Thyroid relationship is very important in optimizing thyroid function. The GI tract contains an enzyme called beta glucuronidase that can reactivate estrogen that has been metabolized in the liver. The metabolized form of estrogen would normally be excreted in the feces but in the face of too much beta glucuronidase, it can be reabsorbed into the bloodstream. This enzyme is dependent on optimal nutrition and healthy gut bacteria ratios. Once again we see how important healthy gut bacteria are to the health of the thyroid. Poor diet, stress, toxins, unresolved psychological issues, inadequate stomach acid production and digestive enzymes can lead to dysbiosis (abnormal bacterial ratios).

The Liver's Role in Thyroid Imbalance

Hormones and toxins are metabolized in the liver and excreted in the feces through the GI tract. Remember that a majority of thyroid hormone is converted into its active form in the liver. When the GI tract is out of balance from dysbiosis, inflammation, leaky gut, infections or too many food allergies, this puts a major strain on the liver's ability to metabolize hormones and thyroid-disrupting chemicals. This leads to a toxic liver impairing its ability to activate thyroid hormone. This scenario also increases the chances of thyroid-disrupting chemicals recirculating and impairing thyroid function. This continues the vicious cycle of the enzyme beta glucuronidase which undoes what the liver has done to metabolized hormones which may be reactivated and reabsorbed into the bloodstream and the liver.

When the intestinal barrier is broken, autoimmune thyroid may result. Infections such as candida, parasites and bacteria are a constant stress on the adrenal glands and also contribute to chronic inflammation. These infections must be eliminated in order to have optimal thyroid function. Your natural physician will order a stool analysis to diagnose GI infections. These tests will also tell you how well you are digesting and absorbing food, if there is inflammation and if you have sufficient beneficial bacteria to convert some of your thyroid hormone into its active form.

