



# Help! My Thyroid Is Making Me Sick

A Primer On What You Need To Know!



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## ***Part One-Introduction***

The word thyroid comes from the Greek word "shield". Perhaps it was named this because it looks like a little like a shield or maybe it is because a good functioning thyroid shields the body from many problems.

Thyroid problems can cause many symptoms. That's because the thyroid gland sends out messages that affect every cell in the body!

This reaction is similar to the way people understand radio. The radio station sends out a signal on WCTR at 99.8 FM. That radio signal goes everywhere. How do we know that? Turn on any radio within the range of the station; tune the radio to 99.8 and you will hear the station. It doesn't matter what building you are in, what floor you are on or if you are driving in a car—tune in and listen. Of course, that means that those radio waves are available in all the spaces between the people who are listening as well. They are everywhere, but only those tuned in, will receive the sounds.

The thyroid send out signals just like the radio waves. These signals are chemicals called hormones. Hormones are messengers that carry a message from the organ they come from-in this case the thyroid- and circulate everywhere. However, only those cells that are tuned to receive the message get influenced.

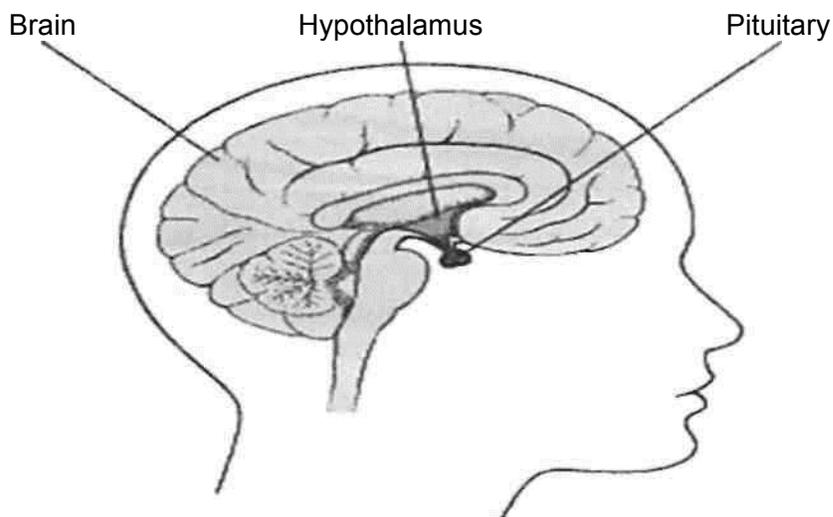
Now some hormones carry messages to specific cells. For example, the pituitary gland sends messages called ACTH that are received only by the adrenal glands, although they circulate the entire body. Only the adrenals are tuned in to receive ACTH.

The thyroid sends hormone messengers all over the body but their message is able to be received by EVERY cell. That is why they have such a huge influence and also the reason that a thyroid problem can influence and cause many different kinds of problems.

## ***Part Two- How it Works-the brain basics***

Let's start at the beginning, and cover all the essentials to understand the basics of thyroid function.

Inside the brain, around the middle, there is a gland called the pituitary gland.



Next to the pituitary is the hypothalamus, which is a part of the brain that sends messages to the pituitary gland.

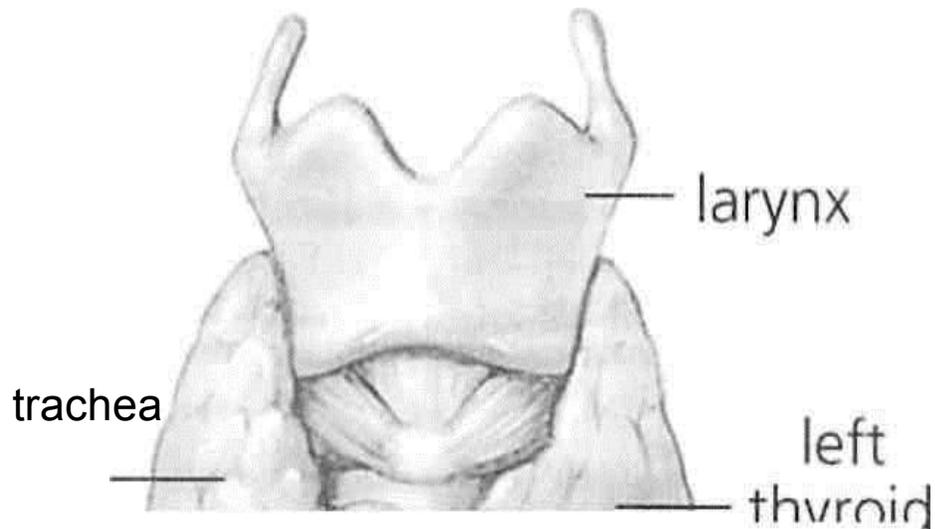
The hypothalamus is like the inventory clerk. It receives messages from the body and knows what is needed. When it gets a message that more thyroid hormone is needed it sends a message to the pituitary telling it that more thyroid hormones are needed in the body. The pituitary then sends a message to the thyroid telling it that it needs to make and send out more hormones.

There is a name given to the messenger going from the pituitary to the thyroid—Thyroid Stimulating Hormone, also known as **TSH**. That is the messenger

going from the pituitary to the thyroid based on what the hypothalamus told it to do. And the hypothalamus gave its message based on the needs of the body.

**Body > Hypothalamus > Pituitary > Thyroid**

### ***Part Three- What does the Thyroid Make?***



The thyroid makes two hormones that are important to us here. One is called thyroxine also known as T4—and the other is called triiodothyronine or T3. T4 and T3 sound similar and they are. But it is how they are different that is so important.

T4 is a hormone made by the thyroid that is made with 4 iodine molecules. T3 has 3 iodine molecules. T4 is larger, in fact too large to get inside the cell, where it needs to be to do its job. What happens is that, under the right circumstances, T4 has one iodine cut off and it turns into T3.

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In essence, T4 is the storage form of the hormone—too large and inactive and only becomes activated when it turns into T3.

So, the simple story goes like this—the hypothalamus finds out that more hormone is needed, it tells the pituitary which tells the thyroid that makes the hormone, partly in the active form (T3) and partly in the storage form (T4). T3 goes to the cell and turns the cell on, doing its job and T4 waits to see if it is needed and if so, it is turned into T3 and then does its job.

Simple—yes, if it is all working right—unfortunately, there are a few places where things can go wrong. And if you want things to work correctly, we must find out **exactly** what has gone wrong.

## ***What Can Go Wrong?***

There are many possibilities Here  
are a *few* of the most common

1. Your thyroid is just not putting out enough hormones, everything is working fine—all messages are getting where they need to be, but the thyroid is exhausted and incapable of doing its job. This is a scenario where a person is prescribed a medication and they feel well, all symptoms resolve and they live happily ever after.

2. Your thyroid is making enough T4 and T3 but your body is not doing a good enough job of converting the storage form (T4) into the active (T3) as needed. This generally happens when the organs where this conversion is supposed to take place-primarily the liver and intestines are not healthy enough to do the job. The answer is to work on the health of those areas. People in this group generally feel worse or the same when given hormones. They may feel better for a short while, but it doesn't last long.
3. Your body has been making too much thyroid hormone for too long and your cells are tired of letting all those excess hormones into the cell. Your cells become resistant to the hormones. They are there but the cells won't let them in. This is a situation where a person feels worse when given even more medication. Cell resistance needs to be addressed.
4. When the thyroid sends out these hormones, they have to be carried to their destinations by a protein carrier. Think of them like a taxi cab. Some people, particularly women, may have too many taxi cabs. In this case, the first taxi brings the hormone to the cell and just as its being dropped off to enter the cell another cab rushes by and picks it up, not allowing the hormone to enter. This is generally caused by an excess estrogen hormone.
5. Fire! This is a very common cause which may show up along with another causes at the same time-but it is the primary problem. If a person's immune system is constantly attacking the thyroid, the thyroid will not be able to function. In this case, the reasons why the thyroid is being attacked have to be addressed so the thyroid can go back about doing its job. This is called an autoimmune condition related to the thyroid known as Hashimoto's Syndrome.
6. Stress! If a person is under too much stress they may make too much of the hormone known as Cortisol. When there is too much Cortisol present, the body will take T3 which is ready for action and convert it into ReverseT3 which is an unusable. In this situation correction involves the adrenal glands and balancing the body's energy.

7. Too many others to list—the above are the most common, but problems with other hormones can interfere with thyroid function as well as imbalances with neurotransmitters like serotonin and dopamine. ALL things must be considered when the thyroid is involved.

## ***So Many Symptoms-So Many Causes!***

Since the thyroid is involved with virtually every cell of the body, any symptom can be affected by a thyroid imbalance. Common problems include fatigue, inability to lose weight, depression, cold hands and feet, thinning hair, insomnia, heartburn and other digestive disturbances, and so on.

## ***But My Blood Tests Are Normal?!***

Many times people are told their thyroid is ok because their blood tests are normal. There are so many potential problems here! First, what blood tests were done? The commonly run tests include only TSH and maybe T4. No T3, no reverse T3, no thyroid antibodies, no liver or intestinal analysis... So yes, perhaps the one or two things tested were "normal" but what about everything else?

Secondly, what is normal? The major labs evaluate blood work like an average consensus. The numbers used for normal are based on the averages of everyone who had similar blood tests over the last few years. If you are "normal" that may simply mean that you are doing as well as your neighbors—who have thyroid problems and are on medication! Not good enough! There are functional numbers available which often show an abnormality in tests when a person had been told everything was ok.

## ***So Thafs The Short Story***

I had wanted to write a short article on thyroid imbalance for a long time-it's just that other things got in the way and I never got it done. Why now?

I had a new patient yesterday who was in such bad shape as a result of the treatment she has been given that it got me motivated. Not only that-she was put on Prozac and told there was nothing wrong with her thyroid (despite being on two medications) and she should quit complaining. She is virtually unable, in just a few months' time, to perform her normal household and life responsibilities.

And I have seen this many times. So, here is a brief analysis—leave no stone unturned when dealing with any health problem-including the thyroid.