

## Module 5 Lesson 4

### Transcript

I'm so excited to speak to you today about the connection between cholesterol and the thyroid. I know it doesn't sound super glam or exciting to talk about, but here's where you can really do some amazing learning and of course future educating about the connections between food, hormones and deepening your understanding about just how much our environment influences our chemistry. I think it's super fascinating. I love my science, but I hope you do too. I think you will. In this lesson we're going to cover a summary of the latest research on dietary cholesterol and how that translates to dietary recommendations. The thyroid's role in cholesterol production and utilization and the connection between thyroid function and cholesterol in the blood.

Cholesterol is one of those things that when I think about it, it really reminds me that nutrition is such a new science. One of the reasons it's so exciting and why you're all so important, it's confusing to so many people out there. We're learning new things, improving our understanding and clarifying research all the time. So, what I mean by that is when I was studying to become a dietician years ago, so much that we talk about now had not been discovered. There was barely mention of phytochemicals in my textbooks. We didn't chat about obesogens and chia was something we planted and grew as pets only, not something that we even thought about adding and eating for fiber and fatty acids.

Our study of cholesterol has grown so much in the past 20 years. The cholesterol and thyroid connection is not mature research at all, so we don't understand it perfectly. We're still building our knowledge all the time, but again, this is one of the things that makes this field so exciting. Keeping up on all this information is truly important because recommendations are going to change and evolve a lot, and it's also why your roles are so important. Cholesterol has a history of being tricky to understand. We used to think that eating dietary cholesterol raised serum cholesterol, so we told people not to eat eggs and a whole host of other foods with cholesterol on them.

I distinctly remember in the very early days of being a registered dietician, educating clients to limit foods that had dietary cholesterol and that since cholesterol is made in the liver to limit intake of animal foods, because animals have livers too. If it had a liver, it had cholesterol as a rule of thumb, limit intake was a takeaway. Just one or two years later I had to tell my clients, oops, more research actually reveals that eating cholesterol in foods doesn't raise cholesterol in the blood, so go ahead and enjoy your sunny side ups. I've been saying this now for years and years and still people are eating egg whites. Actually, it's trans fats and saturated fats that raise artery clogging, heart damaging cholesterol. That science hit home and we scrambled to get trans fats out of the food

supply as much as possible in direct response to this really good research, so see you later hydrogenated fats.

To make it even more confusing, we know you need a little bit of saturated fat in your diet, but not all saturated fats are equal. People ask me about this all the time. This is super important for you to have a really good understanding of, coconut oil is proving to be a better for you saturated fat than let's say saturated fat found in the skin on chicken. Even though the trans fat findings and removing trans fat from the food supply was several years ago now, it really does feel like such a win for all of us in the war on obesity and heart disease. I could go on, but I'm going to switch gears again now.

Don't even get me started on educating about HDL, LDL, triglycerides and cholesterol lowering medication progress. The evolution has been so dynamic here and I can't even imagine what the recommendations are going to be in 10 years. Again, it's something we really got to stay on top of. All this to say, we've been looking super closely at cholesterol, food, diet and heart disease, but we haven't seen as much attention focused on the role of the thyroid and cholesterol, so I'm taking this moment and this lesson to weigh in on the 411.

In earlier lessons, I reviewed that the thyroid is a gland at the base of the neck. It releases hormones that control metabolism and it plays a key role in organ and heart and brain functioning. The thyroid is also essential. I told you it's really important in making cholesterol and breaking it down. Remember, cholesterol is not all bad. We need cholesterol in the body for a whole host of reasons. Mostly, it helps to create hormones and plays a big role in digestion. We have the good guy, HDL cholesterol that protects the heart, and then we also have the bad guy, LDL cholesterol that damages arteries and causes heart disease. A balance of HDL and LDL are essential to homeostasis, weight maintenance and good health.

Triglycerides come into play because they're carried in the blood by the very low density lipoproteins, otherwise known as VLDL, whereas cholesterol is carried by the LDLs. Now, if the thyroid is underactive, so hypothyroid and thyroid levels are low, even the tiniest bit of subclinical hypothyroidism, the body doesn't break down and remove the bad cholesterol and it can build up in the blood and cause plaque and heart disease. We see a strong correlation between people with low thyroid levels or even just low TSH levels and elevated LDL, the bad cholesterol. The plaque buildup in the blood increases risk for stroke, heart attack, and blood clots.

The opposite is also true and people with overactive thyroids who experience hyperthyroidism can remove too much cholesterol and cause abnormally low cholesterol levels, which is linked to raciness, shaking, nervousness, weight loss, trouble sleeping, and heat intolerance.

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A really good cardiologist or endocrinologist is going to likely put someone with really mild hypothyroidism with elevated cholesterol on a Statin. If the hypothyroidism is more present, the intervention is usually Synthroid or levothyroid, and hyperthyroid will most often be treated with surgery or radioactive iodine.

As a health practitioner, what are the most important things to know? If a client comes to you with symptoms of a thyroid condition along with recommending, of course thyroid hormone testing that we discussed in another lesson, it's also good practice to take a look at cholesterol levels. If there is something up with their cholesterol and thyroid hormone levels, their cardiologist or endocrinologists will be the one to recommend any medications of course. Working with their medical care provider, you can help this client manage cholesterol levels through balanced diet and exercise of course.

So, let's review the key points from this lesson. Cholesterol plays an important role in the body. Not all cholesterol is bad, namely to make hormones and aid in digestion. The thyroid is essential in making cholesterol and breaking it down, so if the thyroid isn't functioning properly, cholesterol levels can go haywire too. Hypothyroidism, will typically result in an excess of cholesterol in the blood while hyperthyroidism can lead to too little cholesterol. If a client presents with a thyroid condition, be sure to recommend blood work to take a look at cholesterol levels, then make the appropriate lifestyle advice to help manage cholesterol.

Our bodies are amazing. Our breathing, digesting, heart beating muscle work and minds are constantly humming along and doing all this hard work without really thinking about it. Think about it, our bodies are incredible. Our bodies work on their own with so much going on inside without our conscious effort. Hormones are the mastermind behind almost all these systems that keep us in balance. In there is our thyroid, which is so underrated in the attention it gets when it comes to managing our weight and cardio functions. Now you know, cholesterol management isn't just about your food, exercise, genetics and behaviors. I will see you in the next lesson.