

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/programs/heart-matters/managing-cholesterol-and-triglyceride-levels-targeted-nutritional-approaches/37599/>

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Managing Cholesterol and Triglyceride Levels: Targeted Nutritional Approaches

Announcer:

You're listening to *Heart Matters* on ReachMD. On this episode, we'll hear from Dr. Robert Eckel, who's a Professor Emeritus of Medicine with a primary appointment in the division of endocrinology, metabolism, and diabetes with a joint appointment in cardiology at the University of Colorado Anschutz School of Medicine, where he was previously the Charles A. Boettcher II Chair in Atherosclerosis. He'll be discussing practical nutrition strategies in managing hyperlipidemia. Here's Dr. Eckel now.

Dr. Eckel:

Cholesterol has a modest influence on LDL cholesterol levels, but not a tremendous influence. But dietary saturated fat has a much more important role to play. And I think in general, there's a bit of controversy as to whether population data that reflects saturated fat intake really is important in terms of cardiovascular disease. But there's absolutely no question when we take diets that are high in saturated fat those diets with polyunsaturated fats like plant sterols, ultimately, LDL cholesterol levels fall.

So I think in general, the recommendation for patients with hypercholesterolemia would be to restrict their dietary saturated fat. Now, carbohydrate relates to VLDL triglyceride production, but ultimately the major contributor to VLDL production is the presence of fatty acids that are released from adipose tissue and are delivered to the liver to give rise to triglyceride biosynthesis and VLDL secretion.

Now, in patients with hypertriglyceridemia, let's say levels are 250 or 300, when they're elevated, then dietary carbohydrate may have some influence on VLDL and total triglyceride levels, and that's much more directed towards simple carbohydrates or sugars in the diet and dietary fructose. That's another simple sugar in the diet. So in people with moderate degrees of hypertriglyceridemia, dietary simple sugars should be restricted.

And I think another point to make about triglyceride metabolism is alcohol can also relate to hypertriglyceridemia. So in patients who have high triglycerides, they often should not be drinking at all because alcohol can contribute to more production of triglycerides by the liver and hypertriglyceridemia. Now, almost all patients who are hypertriglyceridemic who may respond to simple sugar restriction and alcohol restriction, if they get much more severely impacted in terms of their metabolism, and I'm thinking now here of acquired causes like certain medications or certain conditions such as type 2 diabetes with poor control, or ultimately thyroid disease, et cetera.

Sometimes they can get severely hypertriglyceridemic, and that's a whole different medical problem that we're concerned with clinically, and that's the risk of very high triglycerides causing pancreatitis. But keep in mind, that's a much more unusual situation in the clinic. But over the years, I've seen hundreds of patients with severe hypertriglyceridemia who need more rapid attention to lower their risk of pancreatitis, which can be a seriously and potentially fatal disease.

So that brings up the issue of dietary fat. So in those patients with severe hypertriglyceridemia, we don't want them to make any more chylomicrons than they need to. So we restrict dietary fat to very low levels until those triglyceride levels can fall enough that some of the drugs we might utilize to treat triglycerides now can be much more effective.

So I've gone to the extreme there in terms of dietary fat, but we don't need in most individuals to restrict dietary fat. Dietary fat should be at about 35 percent of total calories, and that should be mostly monounsaturated fats or polyunsaturated fats, not the saturated fat variety, which contribute to levels of LDL cholesterol. Only in the patient with severe hypertriglyceridemia do we need to restrict dietary fat. But for hypercholesterolemia, there, it's the saturated fat restriction that we're most concerned about patients following—a diet that is restricted in saturated fat.

Announcer:

That was Dr. Robert Eckel talking about nutritional considerations for patients with hyperlipidemia. To access this and other episodes in our series, visit *Heart Matters* on ReachMD dot com, where you can Be Part of the Knowledge. Thanks for listening!