

### Transcript Details

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### Dissecting Diabetes: Key Considerations for Low Protein Intake

Dr. Wysham:

In the United States alone, 34.2 million people suffer from diabetes. And while researchers have studied the role of sugar consumption in these patients, should we also examine the effect of low protein intake on people with diabetes? Welcome to *Diabetes Discourse* on ReachMD. I'm Dr. Carol Wysham, and here to speak on this topic is Dr. Christopher Taylor, Professor of Medical Dietetics at the Ohio State University School of Health and Rehabilitation Sciences. Dr. Taylor recently completed a study in partnership with Abbott on the association between low protein intake and diabetes. Dr. Taylor, welcome to the program.

Dr. Taylor:

Thank you. Thank you for having me.

Dr. Wysham:

Our pleasure. To start off, with, Dr. Taylor, can you tell us what inspired you to study the relationship between protein intake and diabetes?

Dr. Taylor:

So my group at Ohio State, we do a lot of work on dietary patterns and we've partnered with Abbott in the past, looking at some various nutritional gaps around different health concerns. And one of the aspects we were looking at was within diabetes and our goal was really to understand the impact of nutritional and diabetes outcomes. So we know that getting enough lean protein and key nutrients can be challenging for everyone, whether or not you have diabetes. But we wanted to understand how many people with diabetes are doing in meeting their daily nutrient goals, as well as protein. Protein plays a critical role in overall health including, physical functioning, preventing sarcopenia, muscle wasting with age. We've seen some differences in protein intakes with aging, as well as, physical limitations and these weren't just limited to the older adults as they were also seen in middle-aged adults, where we were not quite meeting our protein intake recommendations and having some more of those physical functioning limitations. So we really wanted to explore how this might play within diabetes, especially with such a focus, as you mentioned, around carbohydrate metabolism and added sugars as the focus in nutrition education, but really looking at that broader diet quality question.

Dr. Wysham:

Well great. Well, let's dive right into your study. Can you give us some insight into your study design?

Dr. Taylor:

Yes. So, what we were using was the National Health and Nutrition Examination Survey, or NHANES, which is a fairly robust assessment that the federal government collects through the CDC and they go around throughout the country and collect data and it's their way of keeping their finger on the pulse of the health and nutritional status of Americans. So they collect data on individuals about 10,000 people every two years and they collect these in two-year cycles. So, we use data from 2005 to 2016 on more than 23,000 adults. As a part of this survey, they go to individuals' homes and recruit and collect some demographic information. But then they go to

these mobile examination centers that are set up around the country and communities and they do a dietary interview with these individuals. So, all the foods that they've eaten over the last 24-hour period. So, we get the individual foods that they consume, they also do physical assessments, and they collect laboratory values. So, it gives us this real sweet spot of the ability to look at what types of foods people are actually eating, their dietary intakes and match those up to those physical assessments and the questionnaires that help us get to the limitations that they report. But also having the blood values to determine not only did someone say they were previously diagnosed with diabetes, if they remembered, but we were able to rely on the lab values to tell us that they have the hemoglobin A1C that gives us the indication of their glycemic or diabetes status.

Dr. Wysham:

For those just tuning in, you're listening to *Diabetes Discourse* on ReachMD. I'm Dr. Carol Wysham and I'm speaking with Dr. Christopher Taylor about low protein intake and the implications it has for people with diabetes.

Dr. Taylor, let's take a look at the results. What did your study find?

Dr. Taylor:

Well, somewhat surprisingly, we often hear Americans don't have a problem getting protein and we always are over-consuming protein. What we did find was at least 50 percent of adults with diabetes did not meet their individual protein recommendations on the day of intake. And for those that didn't meet their protein intakes, they had a lower overall diet quality. They had a higher carbohydrate intake, and they also had more physical limitations. So, we're, kind of, seeing that network of symptoms that we were, kind of, talking about before coming together around less protein intake and how that then may lead to some of these less than functional outcomes. So, we were seeing that. And across the individuals regardless of diabetes status, those that didn't meet their protein recommendations were more likely to show more physical limitations. And it was even more so in individuals with diabetes.

Dr. Wysham:

Do you think there should be a different protein intake recommendation for patients with type 1 diabetes as compared to those with type 2 diabetes?

Dr. Taylor:

So, the way that we have established what our protein intake recommendations from the dietary reference intakes, are really based on grams of protein for pound of body weight. So that's 0.36 grams of protein for a pound of body weight. So for 150-pound person, that would be 54 grams of protein in a day. There really isn't a particular difference established for individuals with different chronic conditions like diabetes, everyone's needs will be different and we will need to take that into account but there isn't anything specific to diabetes that would lead to the need for a different type of recommendation. But what we do have to think about within this is a lot of the focus on diabetes education, especially nutrition education, provided for patients with type 1 or type 2 diabetes is really focused on that controlling carbohydrate intake, making carbohydrate intake consistent, avoiding excessive amounts of added sugars, so all of these ways to really, kind of, keep the blood sugar within control. But a lot of times when we get really focused on those myopic aspects of it's really focused on the carbohydrate, we lose sight of the broader diet quality picture. We lose sight of when you start to take out other things, we have to talk about what the substitution is that comes in. So, if you're going to reduce carbohydrate intake, we need to focus on how is that going to come in from carbohydrate or fat? How are the food choices that we're going to make help us impact so we can still meet our nutrient needs?

So, I don't know that that I would say that it's specifically a differing recommendation for individuals with diabetes, as it is not losing sight of that broader picture around diet quality. For our individuals who didn't meet protein recommendations, their overall diet quality was, in general, poorer. So, it becomes, kind of, a symptom of a broader problem that we're managing in terms of overall diet quality. Protein is linked to many of these other aspects and then that's why we need to take a more holistic approach and not just focus on carbohydrate intake.

Dr. Wysham:

Well, that's very interesting. With that in mind, do you have any recommendations for the audience on how we can better help our patients with diabetes meet their dietary needs?

Dr. Taylor:

Yeah. And I think it goes to, there's a lot of work in the protein area around limiting carbohydrates and limiting those spikes. But the ability for protein as an essential nutrient that can help prolong our meals, from that, kind of, quick digestion. Making sure that we are spreading our protein out throughout the day and that's a way to help us be more cognizant of our protein intakes. Looking for protein sources that we can include. So, nutrition education is gonna be critical for successful management. So, looking at ways to include protein-rich foods like eggs and cottage cheese, and tuna, lentils, and almonds. So, we have animal-based sources of protein, but we also have plant-based sources of protein that we can use together to really facilitate people being able to have protein choices in their diet. And really to, kind of, bring awareness around the impact of nutrition and managing diseases like diabetes through mindful food choices throughout the day.

Dr. Wysham:

Well, this new information will definitely help us better care for our patients living with diabetes. I want to thank my guest, Dr. Christopher Taylor for joining me to discuss his research in protein intake in diabetes. Dr. Taylor, thanks so much for joining me, today.

Dr. Taylor:

Thank you, so much for having me. It's a pleasure.

Dr. Wysham:

I'm Dr. Carol Wysham. To access this and other episodes in our series, visit [ReachMD.com/DiabetesDiscourse](https://ReachMD.com/DiabetesDiscourse) where you can Be Part of the Knowledge. Thanks for listening.