

Transcript Details

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Exploring the DINE-CD Study & the Importance of Diet for IBD Patients

Dr. Buch:

Coming to you from the ReachMD studios, this is the *Crohn's and Colitis Foundation's Perspectives*. I am Dr. Peter Buch and joining me today is Dr. Caren Heller, Chief Scientific Officer at the Crohn's and Colitis Foundation. Together, we're going to talk about the approach the foundation is taking to answer questions about diet and nutrition, and specifically about the Diet to Induce Remission in Crohn's Disease study, otherwise known as the DINE-CD study. Dr. Heller, thanks for joining us here, today.

Dr. Heller:

Thanks so much for having me and for focusing in on this important topic of diet and IBD.

Dr. Buch:

Now, before we dive into the DINE-CD study, Dr. Heller, let's start with some background. Can you give us a brief overview of the Crohn's and Colitis Foundation's work and research on nutrition?

Dr. Heller:

Happy to do so. First of all, we know that this is a very important topic for patients. Just about the first question a patient asks after receiving the diagnosis of Crohn's disease or ulcerative colitis is, "What should I eat?" And it's the third most asked question at our patient help center. So, that we have developed a lot of patient educational resources for patients and caregivers. We've also realized that there's a need to do a lot of research in this area. Considering how heterogenous Crohn's disease and ulcerative colitis are, how individually patients respond to food, we recognize that to get to the best diet advice for each patient, we really needed to launch a Precision Nutrition initiative and we did so in 2019. We're funding four projects, and each looks at a different diet, the components of that diet, and then looks to see how the patient's body responds to those diets, looking at them clinically, as well as with measures of inflammation and changes in the microbiome.

Dr. Buch:

And we know nutrition is so important for IBD patients, but it can also present some of the toughest challenges, so what are some of those main points between IBD and diet and how has the Foundation's Precision Nutrition effort met those challenges?

Dr. Heller:

You know, I like to say that you are what you eat, whether you have Crohn's disease, ulcerative colitis, or another condition. And in IBD, I really base this on the findings that food is at the center of IBD pathology. Food affects the microbiome and vice versa. And we know that changes in the microbiome are central to developing inflammatory bowel disease. Not only that, but a patient's genetic disposition is key to developing IBD. And it also influences how one metabolizes food and then how the food influences the epigenetics to modulate the gene expression.

Thirdly, there are pro-inflammatory and anti-inflammatory foods that interact with one's immune system, and it's critical to the disease course of IBD. So, food interacts with the three pillars underlying the onset and progression of IBD, the genes, immune response and microbiome. And our research projects will be studying all of these parameters to understand how specific foods or specific diets impact each of these factors and then how that rolls up to an understanding of the impact of diet on the specific patient to give us some guidance on which foods to promote and which to avoid. And our goal is to eventually enable dietary recommendations that are customized to each patient based on their underlying microbiome, genetics, and immune response.

Dr. Buch:

Thank you. Dr. Heller let's turn our attention now to the DINE-CD study. Can you tell us what the goal of this study was and how it was designed?

Dr. Heller:

So, as you mentioned earlier, the Diet to Induce Remission in Crohn's Disease or DINE-CD study was designed to compare the effectiveness of a Mediterranean diet versus a Specific Carbohydrate Diet for the treatment of Crohn's disease patients with mild-to-moderate symptoms. It was a multi-center study. It was randomized by patient and to compare these two diets. It included adult patients with Crohn's disease and mild-to-moderate symptoms were defined as a short Crohn's Disease Activity Index or sCDAI score that was between 176 and 399. The patients were stratified by use of biological medications. And then patients were randomly assigned to receive and consume either the Mediterranean diet or the Specific Carbohydrate Diet for twelve weeks. For the first six weeks, participants received prepared meals and snacks according to their assigned diet. And then for the following six weeks the participants were instructed to follow the diet independently with the option to purchase prepared meals.

So, the primary outcome, which was the symptomatic remission score, or sCDAI, less than 150 was at week six. So, this was following the period of time where they received the prepared foods. And then the secondary outcome, including the symptomatic remission was at week twelve. So, after another six weeks, where they were more or less on their own to follow the diet.

Dr. Buch:

For those just joining us, this is the *Crohn's and Colitis Foundation Perspectives* on ReachMD. I'm Dr. Peter Buch and I'm speaking with Dr. Caren Heller about the recent DINE-CD study and its impact on nutrition for IBD patients.

Let's move on with the DINE-CD study, what were the results?

Dr. Heller:

92 people were assigned to the Mediterranean diet and 99 to the Specific Carbohydrate Diet. Within these groups, from zero, so when they started to week six, in both groups, there was an improvement in the sCDAI. So, it was significantly improved for all outcomes in both arms. So, that is that both diets were comparably effective. In other words, both groups of patients and each group from baseline to the six weeks showed significant improvement. For example, the percentage of participants who achieved symptomatic remission at week six were 43.5 percent with the Mediterranean diet and 46.5 percent with the Specific Carbohydrate Diet and those did not differ significantly. And nor did they differ significantly at week twelve when they continued on the diet on their own; about 40 percent had the symptomatic remission on the Mediterranean diet and 42 percent on the Specific Carbohydrate Diet. Both diets were well-tolerated despite the consumption of fruits and vegetables. However, neither diet was associated with normalization of the C-reactive protein concentrations. So, in this particular study, they did not seem to have an impact on the level of inflammation as measured by the C-reactive protein.

Dr. Buch:

And how do those results relate to the foundation's Precision Nutrition efforts?

Dr. Heller:

Well, first of all, they reinforce the road we're taking that diet can influence how patients feel and that some patients can get into symptomatic remission while maintaining their current medications with a change in diet. And I do want to emphasize that most patients

will continue to need to stay on their medications even as they move to diets that help them feel better.

And then secondly, this information gives doctors and patients some guidance now as we wait for more results on other diets and therapeutic responses to those diets.

Dr. Buch:

With that being said, are these diets right for all patients with IBD? Or are there certain precautions we should keep in mind?

Dr. Heller:

Each patient with Crohn's disease and ulcerative colitis is so unique in so many ways that no one diet will be right for everyone. At this point in time, regarding diet, it's still trial and error. What we have learned from the DINE-CD trial is that for patients with mild-to-moderate Crohn's disease, while staying on their medications, it may be worthwhile to have them try out either the Specific Carbohydrate Diet or the Mediterranean diet and the Mediterranean diet, which has been found to be healthy for many other conditions and is probably easier for patients to implement, may be the preferred diet to start with.

And as I mentioned, it is really important that patients understand that they need to stay on their medications as they try out these diets because they will most likely need to stay on their medications even when they find a diet that is right for them.

Dr. Buch:

That's great. Dr. Heller, can you tell us what other nutrition education the Crohn's and Colitis Foundation offers for both healthcare providers and patients?

Dr. Heller:

We have developed a lot of patient educational resources, which can be found on our diet and nutrition landing page at the [CrohnsandColitisFoundation.org](https://www.CrohnsandColitisFoundation.org), and we also have important material for children and teens on our pediatric web resources page, also at the [CrohnsandColitisFoundation.org](https://www.CrohnsandColitisFoundation.org) website.

Dr. Buch:

Well, this recent study has certainly presented some interesting findings that will hopefully help improve symptoms for our IBD patients. But as that brings us to the end of today's program, I want to thank my guest, Dr. Caren Heller for joining me to discuss the recent DINE-CD study and its findings. Dr. Heller, it was great having you join us on the program today.

Dr. Heller:

It was my pleasure. Thank you for having me.

Dr. Buch:

For ReachMD, I'm Dr. Peter Buch. To access this and other episodes in our series, visit ReachMD.com/Foundation where you can Be Part of the Knowledge. Thanks for listening and see you next time.