

Diabetes Remission with Weight Loss - Frankly Speaking EP 49

Transcript Details

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Dr. Frank Domino:

Julie is a 51-year-old female, who comes in for a routine follow-up of her hypertension and diabetes. And she saw an article on the television that described a major newspaper in the United Kingdom that had the headline: Type Two Diabetes and the Diet That Cured Me. She wants to know if her diabetes can be cured and how to be started on that kind of diet. Joining me today is Alan Ehrlich, Clinical Associate Professor at the University of Massachusetts Medical School and Senior Editor at DynaMed. Welcome to the show, Alan.

Dr. Alan Ehrlich:

Thanks, Frank.

Dr. Domino:

Wow, cure type two diabetes. I am so pleased to hear that we've finally reached that. What can you tell me about curing diabetes?

Dr. Ehrlich:

When you talk about curing diabetes, Frank, what we're talking about is the disease going into remission. If you think about some other condition where it manifests, and then the symptoms are gone, then it doesn't mean that it can't ever come back. But it means the person is unaffected for a long period of time. How do we define that? Well, it turns out, if you look at the research papers where they are doing this, they define it differently in different papers. But typically, it

either means that you have a hemoglobin A1c under 6%, when you've been off of all medications for at least two or three months, or you have pre-diabetes, you meet the criteria for pre-diabetes off of all medications for two or three months. Either one can be used, depending upon the trial that you're looking at.

Dr. Domino:

Remission is what these research papers were shooting for. It wasn't necessarily a cure, but it was just getting people off medication and having what are believed to be normal sugars.

Dr. Ehrlich:

Right. And so it is believed that, if you get to that point, then there's much less likelihood of the complications of diabetes. But these same people could have rising blood sugars over time, as the pancreas ages or they put on weight, if they've lost weight to get to that point, things like that.

Dr. Domino:

So tell me, what are they doing in the UK? Or what are they doing anywhere, to help people go take their diabetes into remission?

Dr. Ehrlich:

Well, this trial that was done in the UK was called the DiRECT trials, published in Lancet, and what it showed was that, if you had a very low calorie diet and you were able to lose significant amounts of weight, then your diabetes could go in remission. And so they compared, based on different health centers, they would randomize one health center to standard guideline-directed therapy, and the other got this very low calorie diet. And the very low calorie diet was a complete replacement. All food was replaced by this liquid diet. They gave about 600 to 800 calories per day. And the people who were using this would be on it for three months. They could extend it for up to five months if they wanted to, and then gradually, food was re-introduced, and then they got to some improved way of eating.

What they found was that, if you lost at least 10 kilograms, your chances of the diabetes going to remission was very high, upwards of 70%. And if you lost 15 kilograms, it was over 80%. Now, what you have to understand is, who's in this trial? First of all, it's people who've only had diabetes relatively a short period of time. It had to be less than six years and the median was about three years.

Dr. Domino:

Okay.

Dr. Ehrlich:

In addition, nobody who was in this trial was already on insulin. This is for people who have diabetes that's typically being managed by one or two medications, probably metformin, things like that. And if you are a relatively new onset diabetic, then substantial weight loss can cause you to go off of all medications.

Dr. Domino:

That's pretty remarkable. You said 10 to 15 kilograms. That's about 25 to 30 pounds. That doesn't seem much to someone who's morbidly obese. And yet, they were able to come off all their meds. That's quite remarkable.

Dr. Ehrlich:

Yes. If you think about the causes of type two diabetes, essentially, before the diabetes becomes manifest, the insulin resistance is appearing. The pancreas is pumping out more insulin, and diabetes really only starts to become evident by rising blood sugar, when the pancreas can no longer keep up enough production to overcome the insulin resistance. If you lose weight and your insulin resistance drops, suddenly, your pancreas is going to be able to meet the body's insulin needs once again. Now, what that means over the long run, whether someone regains the weight, or if the pancreas ages and loses some of its insulin-producing capability, that remains to be determined.

Dr. Domino:

Well, I have had the same experience, or a similar type of experience, with my patients who I send for bariatric surgery, where they'll lose their weight, they'll come off all their meds, and then gradually, over time, whether it's their pancreas giving out or the fact that they often regain weight, that they have to go back on something. How does this very low calorie approach compare to doing something like bariatric surgery?

Dr. Ehrlich:

They haven't been compared head to head. There was a trial that compared bariatric surgery to a less intensive weight loss diet. They used what was called the Look Ahead Diet, which was focused more on about 1,200 to 1,500 calories per day, so you didn't have the degree of weight loss. In general, bariatric surgery can achieve remission in patients with diabetes. It's hard to compare studies when they're not head to head, because of differences in populations and other factors. I would say the key thing is, in all these studies, the remission of diabetes correlates with the weight loss. The more you can lose weight, the better. And bariatric surgery is more effective at losing weight than very low calorie diets, partly because there are adherence issues over time with the very low calorie diets.

Dr. Domino:

I think it's really remarkable that we now have two options that we can offer our patients. But as a clinician, I think it's very important that I remember that bariatric surgery, or in this case, meal replacement shakes, have to be started relatively early in the illness, within the first six years of the diagnosis. Because my suspicion is, after that period of time, the pancreas has a much higher risk of not being able to ever recover, and you'll probably need some medication assistance going forward. Would you agree?

Dr. Ehrlich:

I think I would. But you know what this trial makes me think about, is we've always said the first line of therapy for patients with diabetes is diet and exercise, and this really drives that home. Don't just jump to metformin as the first thing. "Oh, you have diabetes. You need to go on pills."

And we know, and this is certainly true when we were practicing earlier, and it wasn't metformin, and you just had sulfonylureas, this notion you didn't want people to think, "Okay, I can just take a pill, and I don't have to worry about the diet and exercise." This shows how effective diet and exercise can be, especially when you're first talking to people about their diagnosis of diabetes.

Dr. Domino:

I couldn't agree more. I think we've been pressured, both externally as clinicians, and possibly internally with our own sense of success, by beginning with medications. And this is a great study that builds on many other bits of research, that shows diet and exercise has to be our first step in preventing and in treating type two diabetes.

Dr. Ehrlich:

Let me give you one caveat, just to wrap things up. In this trial, the patients who had high blood pressure, had all their blood pressure medicine stopped at the onset of the trial, because the very low calorie diet can lead to drops of blood pressure and they didn't want people passing out. In this trial, they also stopped all their anti-diabetic medications at the start of the trial, and then only added them if needed, based on blood sugar results.

Dr. Domino:

What a great help for motivation to say, "Listen, I wanna help you not have diabetes. I wanna also get you off all of your other medicines, especially your high blood pressure medicines that have side effects, if we can get you to comply." Now, how long were people on these weight loss meal replacement drinks again?

Dr. Ehrlich:

The complete meal replacement was three months, with the option of extending up to five months, if the patient wanted to.

Dr. Domino:

Wow, that's terrific. Well, Alan, thank you for bringing this paper forward and this concept

forward. I think it's highly pertinent to all of our patients, especially as we start the new year.

Dr. Ehrlich:

Thanks, Frank.

Dr. Domino:

Practice pointer: Type two diabetes can be made to go into remission using meal replacement or bariatric surgery in patients who are diagnosed and treated within the first six years of their disease. Consider this first-line treatment when working with patients who meet the criteria for type two diabetes. Join us next time, where we will be discussing the new Varicella zoster vaccine for the prevention of shingles.