

ADA: Ask the Experts Access Live
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Carla Cox:

Hello and thank you for joining us. Welcome to the 2023 American Diabetes Association Living with Diabetes Ask the Expert series. Today's topic is Now What? Life After Diabetes Complications. My name is Carla Cox, diabetes care and education specialist, registered dietician nutritionist, and your host for today's program. Our Ask the Expert series is all about answering questions from our listeners, so start getting your questions ready now. For those of you on the phone, press star three, that's star three on your keypad and an operator will collect your question and place you in a queue so that you may have the opportunity to ask your question live. To participate online, type in your name and question in the fields below the streaming player. Press the submit question button and your question will come directly to us. Stay with us through the hour and you will learn useful tips to help you live well on your journey with diabetes.

In addition, we invite you to provide us with your feedback in a survey at the end of the event. So please stay with us. Okay, now a little bit about why we're here today. Because of the link between diabetes and heart health, the American Diabetes Association in collaboration with the American Heart Association has launched Know Diabetes by Heart. With support from founding sponsor, Novo Nordisk, as well as national sponsor, Bayer, the Know Diabetes by Heart initiative provides tools and resources for people living with type 2 diabetes to learn how to reduce their risk of cardiovascular disease. As part of the initiative, the ADA is holding this free educational Q&A once a month. We'll cover information and tips to help you take charge of your health. When you have diabetes, it increases your risk of heart disease, stroke, and kidney disease. Make sure when you see your doctor, you talk about your risk and work towards prevention and visit knowdiabetesbyheart.org for more information and resources.

Okay, I am so happy to introduce our guest speaker today, Dr. Irl Hirsch. Dr. Hirsch received his medical degree from the University of Missouri School of Medicine and completed residency training in internal medicine in the University of Miami and Mount Sinai Hospital in Miami Beach, Florida and is a research fellow at Washington University School of Medicine in St. Louis. He's presently the Professor in Diabetes Treatment and Teaching Chair Professor of Medicine, Division of Metabolism, Endocrinology and Nutrition at the University of Washington. He has authored multiple research articles, editorials, book chapters, and books for both professionals and patients. And I have to add, he is well known in the international community as an excellent resource. So hello, Dr. Hirsch. I'm so glad you're here. Please add a few lines to the intro here.

Dr. Irl Hirsch:

Oh, I appreciate the introduction. Welcome to Seattle where I am right now located across the street from the Space Needle, in between the Space Needle and Amazon. And this is a big day for us here today. You can maybe see in the background my Seattle Mariners jersey as we have the All-Star game in a few hours and I will be going. Hopefully there won't be any diabetes emergencies at the stadium I'll have to deal with today.

Carla Cox:

Thank you. Thank you for joining us on this busy day. As we are waiting for our callers and online listeners to chime in, I'm going to go ahead and kick off the first question, what is the most common complication of diabetes and are there treatments to lessen the problem?

Dr. Irl Hirsch:

Yeah, it's an important question and I'm going to give that in two different answers because it really depends on which type of diabetes we are talking about and the numbers have changed over the years.

For both type 1 and type 2 diabetes, and I will assume the listeners are quite familiar with the two different general types of diabetes. The answer is cardiovascular disease. And the good news is that the absolute numbers are going down because of various treatments. But this is a big deal. And the good news is there are things that we have done and that we can do moving forward to make this less of a burden on people with diabetes. In the type 1 diabetes world, cardiovascular disease still remains the number one cause of mortality. It's between 22 and 25% depending on the study. But the overall numbers are going down simply due to the fact that we are doing more of the right things. And in this case, it's controlling the cholesterol. And we can talk more about how much should we control the cholesterol in type 1 versus type 2 diabetes, mostly by using statins and certainly diet.

It has to do with the fact that as a country here in the United States anyway, we see less smoking. We certainly see overall better blood sugar control than we did 30 or 40 years ago. And extremely importantly, we are seeing less hypertension. The blood pressures are controlled and that also results in less kidney disease. And what's interesting about these statistics in type 1 diabetes is a lot of people don't appreciate that the number two cause of mortality in type 1 diabetes is malignancy. We don't see end stage kidney disease as a cause of mortality like we did 50 years ago. Now in the type 2 world, cardiovascular disease is still the number one problem and the cause of death of cardiovascular disease in type 2 diabetes is much higher. We generally see more obesity. We see more other risk factors of low dense LDL. So the LDL is more atherogenic.

In type 2 diabetes, we see low, so we see low HDL, we see more general hypertension. Obesity is the big one, although the type 1s are doing everything they can to catch up with the type 2s with obesity, again, something else we can talk about. But all of these things can be treated to prevent these very late complications. And the big thing in type 2 diabetes that we don't yet have in type 1 is we have these novel diabetes drugs that we have learned are also extremely beneficial and potent for cardiovascular disease and kidney disease for that matter. And that's the GLP-1 receptor agonist, drugs such as Ozempic, Mounjaro. Although we don't have the final data on Mounjaro yet, we will soon. Trulicity, all of these drugs are beneficial for cardiovascular disease. The SGLT2 inhibitors such as Farxiga and Jardiance, extremely helpful for cardiovascular disease, but in particular, heart failure and kidney disease.

In fact, these drugs are so effective that they are now approved for use for heart failure and kidney disease for people without type 2 diabetes. But the big problem with these drugs right now, and again, I'm happy to talk about this in detail, is neither of these classes of drugs are approved for use in type 1 diabetes. And one of the things that I hope we see within the next three to five years, if not sooner, is one or both of these classes of drugs approved for type 1 diabetes because these drugs are extremely effective. That's sort of a general global discussion, Carla, but I'm happy to dive into the weeds there with more specifics if you want to.

Carla Cox:

Thank you. If you're just joining us, welcome to today's Ask the Experts Now What? Life After Complications. As a reminder for those of you on the phone, press star three, that's star three on your keypad and an operator will collect your question and place you in the queue so that you may have the opportunity to ask your question live. To participate online, type in your name and question in the fields below the streaming player, press the submit question button and your question will come directly to us. Let's remember to focus on today's topic, Now What? Life After Diabetes Complications when asking questions. Now let's take the first question. I'd like to start with Layla. And Layla, you are from Georgia and she is on the line. Layla, you're on the line. Oops. No you're not. There you are. There we go.

Layla:

I was asking a question about kidney and the drug you have. A drug you have where you can take, where you won't have to go on dialysis because more people who are diabetic, they usually go on dialysis.

Dr. Irl Hirsch:

Well, I really appreciate the question. It's extremely important and let's think about this. So here's the good news. If one does develop kidney disease and if it's caught early, one does not need to go on dialysis. And this is one of the huge public health problems with diabetes, especially type 2 diabetes in the United States, is that by the time somebody is found to have kidney disease, it's extremely late in its course. And so the first treatment for diabetic kidney disease is to find it early. And even before finding it, here's the other piece of good news, one can prevent this from ever happening with good blood glucose control and blood pressure control before the kidney disease ever presents. Now the big caveat with that discussion is the fact that by the same time some people even find out they have type 2 diabetes, they may already have kidney disease either early or late.

And this is why the American Diabetes Association recommends screening for people who are at high risk, even at young ages, very young ages. But I think that once one has diabetes, the first thing one has to do is know about how do you screen for early kidney disease. And it's by a simple urine test. One can measure the amount of albumin, which is a type of protein in the urine. And if that number is above 30, that means that there is early kidney disease. And what's important is that that number does not show up on a dipstick. If one's going to just dip for protein in the urine, that number is generally over 500. So the bottom line is that you want to catch the kidney disease before it ends up on the urine dipstick. That's number one. Number two of course is the American Diabetes Association not only recommends that the urine protein gets screened every year, but that the blood test for kidney function also gets screened every year.

And that's called a serum creatinine, because the creatinine lab usually but not always starts to show kidney disease. The creatinine goes up while the kidney function goes down and usually protein is in the urine first but not a hundred percent of the time. So if early kidney disease is found, it's time to get aggressive with all the things that we know that work. Now let's talk about what we know that works once kidney disease is either present, whether it's early kidney disease, late kidney disease, or even preventing kidney disease. And the first thing is in no particular order, blood glucose control. Now the blood glucose control is especially important if the kidney disease is early or if the kidney disease hasn't happened yet. But right up there neck and neck with blood glucose control is blood pressure control. If the blood pressures are well controlled, minimally 140 over 90, ideally 130 over 80, the risk of progression of the kidney disease is much worse.

And this is why doctors like myself, we are so focused on the blood pressure because the research clearly shows that the blood pressure control makes a huge difference. Now the other thing that we learned about 30 years ago, both in type 1 and type 2 diabetes is that all blood pressure medicines are not created equal in terms of how they help diabetic kidney disease. And the other piece of good news about this is that virtually all of these blood pressure pills that we use now, not a hundred percent of them but close to are generic, so they don't cost a lot of money. The two drugs that appear to be the most important for diabetic kidney disease are drugs called ACE inhibitors.

ACE inhibitors have a cousin, and this is a long name, angiotensin receptor blockers, ARBs. Let me give you examples of both. For the ACE inhibitors, the ones we usually use are lisinopril, enalapril, and benazepril. Anything that ends with pril, that's all you have to remember. That's very good for diabetic kidney disease. And the other angiotensin receptor blockers or ARBs, these are the tans, TAN. So losartan is the one that we most commonly use. Valsartan is another one that we usually use. But these

drugs seem to be pretty much the same because of the way they work on the blood pressure inside of the kidney. These drugs work virtually the same, but the biggest point I want to make here other than the blood pressure control is you want to use these ACE inhibitors or ARBs when the kidney disease is early. The earlier you treat it, the better off you will be in avoiding the dialysis.

Now the other thing that I mentioned a few minutes ago, which we know works for type 2 diabetes, we don't have the studies yet for type 1 diabetes are the SGLT2 inhibitors. And these are the drugs such as Jardiance and Farxiga. These drugs independently will help preserve kidney function and the research is very conclusive on that. And then the final drug that we can use to hopefully avoid the horrible problem of dialysis is a new drug, a new drug which is expensive because it is new and the name of the drug is called Kerendia. And Kerendia has been out a few years. It is not yet approved for type 1 diabetes. We do use it in type 2 diabetes. But the biggest point is we now have these three drugs that we can use all with different mechanisms to help prevent kidney disease. And even for people who are diagnosed with moderate kidney disease, these drugs can dramatically delay the progression of the need for dialysis or transplantation. Now you asked a simple question and I gave a very long answer, but I felt that kidney disease is such an important problem in the United States. I wanted to give a more complete answer. And Carla, I hope that was okay.

Carla Cox:

You bet. So we do have another question coming in from Ike. And Ike has a question on kidney disease for himself. So Ike, you're on the line.

Ike:

Yes. Ike Siton from Conklin, New York. I have a problem with my blood pressure running high and my sugar running high. They removed me off all diabetic medicine trying to find out why. But I'm concerned about my kidneys. They just ordered me up to take Farxiga and I look at the side effects on that and I am concerned about that. So how can I get my blood pressure down and my sugar down?

Dr. Irl Hirsch:

Okay, so let's start with the Farxiga. If you look at any medicine, even over the counter aspirin or Tylenol and you read the side effects, you're going to say, why do I want to take that medicine? Every medicine looks very dangerous. But Farxiga like Jardiance has conclusively proven that it can slow down the progression of kidney disease. The hope is that if your kidney disease is early enough, it can actually stop it. Now I don't know enough about your particular case, but I do want to also point out what I pointed out before because it's so important. You do want to have your blood pressure controlled ideally with either an ACE inhibitor or an ARB because those drugs have been shown to be beneficial not only for the blood pressure which is important for the kidney disease, but they have an added benefit.

Now as far as your blood pressures are concerned, we'll just continue that. Many people need three different drugs for their blood pressure. Now the Farxiga is probably going to have minimal, if any effect on the blood pressure, it's a diabetes pill that helps the kidneys. We'll get to the diabetes in a moment. But some people can't control their blood pressure even on three different types of pill. And when that happens, one has to think about is there another reason for the high blood pressure? Usually there aren't. But if your blood pressure needs four or five different medicines to control it, then your doctor has to start thinking, is there another reason that your blood pressures are so high? And there are a bunch of examples. One example is you are making too much of a hormone called aldosterone. That's actually relatively common and it's relatively easy to diagnose and it's even easier to treat with another generic drug.

Another reason is, and it can be diagnosed with a type of vascular ultrasound, one of the arteries to the kidneys is narrowed. And that is more common in people with diabetes if they have blockages of an artery. There's another more rare reason which we see in diabetes just like we see in people without diabetes, and that is one of the hormones. Another hormone from the adrenal gland is making too much of that hormone and it makes the blood pressure high all the time. And so certainly if somebody is on four or five medicines, you think about that. One final point about the blood pressure. We have seen many, many people over the years with what we call resistant hypertension. And no matter what medicines we give them, the blood pressures are not controlled and we work up for all these other rare reasons for high blood pressure and we can't find anything.

And then someone comes in, Carla, often a dietician and says, let's just cut out some of the salt. And the salt is cut way down and you're not putting the salt shaker on everything you eat. Guess what? The blood pressure comes way down, way down by eliminating salt both from the shaker on the table and the salt that comes in many processed foods. And that actually is an extremely effective way of reducing blood pressure in many, many people. I've seen patients, one, a relative of mine, we actually have to have the doctor take away blood pressure medicines once the salt shaker was taken away. So that is that situation. Let's talk about blood sugar for a moment. You are on Farxiga, which is a diabetes drug. It works by making you lose sugar in your urine. It doesn't work as well as other drugs.

It works okay, but here's the thing to know if you have diabetic kidney disease, the drug makes you lose sugar in your urine, but you don't lose as much sugar in your urine if you have more advanced kidney disease. We generally grade kidney disease by the estimated GFR, which is on the lab test. It's measured by the creatinine level in your blood. If it's below 60, you start to get to an effect where the Jardiance is not going to have much more of an effect on your blood sugar, but it still has a great effect on your kidney. You get to an estimated GFR less than 45, you're going to get minimal effect of losing glucose in your urine from the Farxiga. And once you get below 30, you may have no effect of the Farxiga on your blood sugar. And so what you and your doctors need to do is you need to find out what are the right drugs for you.

I can tell you that the drugs in the GLP-1 receptor agonist class, these are the drugs such as Ozempic and Trulicity. We see the studies for them and they appear to have a beneficial effect on the kidneys. We are going to get a study released next year called FLOW. FLOW is a study looking at Ozempic specifically as a primary endpoint kidney disease. And the reason why Ozempic and Trulicity and Mounjaro, we can't technically say they improve kidney disease yet because all the studies showing they improve kidney disease are done as looking at blood sugar control or heart attacks or something else. And lo and behold, they see by the way the kidney disease is also improved. And so now they're doing a study called FLOW with Ozempic specifically looking at kidney disease to see if we only look at kidney disease and look at blood sugar as a secondary endpoint, does the kidney disease get better with the Ozempic?

And we're going to get those results out next year and we all anticipate it will. But the most important thing to know about diabetes other than the fact that the drugs like Ozempic, Trulicity and Mounjaro will improve the blood sugar, they will improve the weight. And in fact in the American diabetes standards of care, it is recommend the first injectable medicine one takes if the blood sugar control is not at target, is to take one of these GLP-1s even with understanding that many people still require insulin and the insulin is usually effective if we can't get it with these other drugs such as the GLP-1 receptor agonist. One final point Carla I want to make about this when looking at blood glucose control is one has to be very careful about hemoglobin A1C and using that as the metric to decide are the blood sugars controlled or not.

We did a study here in my clinic where we showed that the estimated A1C on the continuous glucose monitors in 22% of the people, the estimated A1C read a point away from the measured A1C from our

lab. And what that means is that if the estimated A1C from the continuous glucose monitoring is 7%, in 22% of the people it was going to read above 8% or below 6%. And the other thing that we know from another study from my colleagues Rich Bergenstal in Minnesota and Roy Beck in Tampa is that on average, on average, if you're an African American, your A1C is going to read between 0.4 and 0.5% higher than a white population for the same blood glucose on average. And so this is the reason why I don't like to use hemoglobin A1C as the best metric. It is a metric to look at blood glucose control, but it may be whether you are African American or not, the A1C is very misleading.

And as a matter of fact, if you look at people with more advanced kidney disease, estimated GFRs, especially under 45, but even under 60, the A1Cs tend to read low, they tend to read falsely low and the A1Cs look like they come down as you get older and as the kidney function goes down, that's not the case at all. The A1C is just a biomarker for the blood sugar, which is why I would rather look at the continuous glucose monitoring. I would rather look at the glucose itself than the biomarker for the glucose which may be misleading. Again, I think I went way overboard with my time Carla, but I tried to answer the question as best as I could.

Carla Cox:

That's great. So couple things. You brought up continuous glucose monitors. Why don't you speak to that a little bit. This is largely a type 2 population, so what does that mean to people that don't know?

Dr. Irl Hirsch:

Okay, so we are very excited about what we have learned and what we have researched over the past really 15 years with continuous glucose monitor. And there are actually four on the market. Most people will use either the Abbott Libre. Right now in the U.S. available is Libre 2 or Libre 3 or the Dexcom, which in the U.S. is available as G6 and G7. One of the reasons I was a little bit late, I was on a Zoom call with somebody from Canada. I learned that the G7 was just approved in Canada like last week, which is good news. But what these sensors do is they are inserted under the skin, and with the fluid under the skin, it measures the glucose continuously. And so instead of doing a finger stick two or three or four times a day to see the blood sugar at that point in time, one is looking at the blood glucose every five minutes if one wanted to look at their sensor every five minutes.

And you can see the ups and the downs, how different foods, how different exercises impact the glucose and how different medicines impact the glucose. And where we are right now in the United States is that if one is a Medicare patient, up until a few months ago, one needed to be on three or four injections a day of insulin before Medicare would pay for the continuous glucose monitor. Many of the insurances would also pay if they were on multiple injections or even one injection. But it all depended on the insurance. But what happened earlier this year based out of a very large study that was headed in Minnesota, Carla, as you know, Medicare now approves for people to be on continuous glucose monitoring for only basal insulin alone. And that is tremendously good news for Medicare patients because one doesn't really know how to best treat their diabetes until they have all of the tools available to look at what impacts their blood sugars.

Now in the 1980s and 1990s when we were moving into finger stick glucose testing, that was the best technology at the time. But now here in 2023, the best technology is looking at glucose levels continuously. And right now for people with type 2 diabetes, if you are on even one injection of insulin, Medicare and most of the insurance companies will pay for it. But we still have a huge, huge number of patients who are not on insulin where Medicare will not pay for the CGM. And by the same token, the commercial payer will not pay for the CGM. So there's good news and bad news. The bad news is they don't pay for it. The good news is I predict within a few years with studies that are starting, they will pay

for it, number one. And number two, many people can afford the sensors, if not all the time, some of the time.

I actually saw a patient yesterday and he's a patient who is with type 2 diabetes. He does not take insulin, but he loves his CGM but he can't afford to wear it all the time. And he happens to wear a Libre 3. He has to pay for it himself. And what he does is he wears it once a month, which is 14 days a month he will wear that and he finds it incredibly helpful for him. He can afford wearing it one time a month, which is 14 days a month. And the cost of these are not prohibitively expensive. You should check with your pharmacy, you should check to see if you would apply for one of the rebate cards that the pharmacies often have. But the point is, even if it is not covered, many, many patients are using this technology.

Carla Cox:

Absolutely. And just to put it in financial realm, it is the cost per month generally if you get some of these sensors of a nice dinner for two. So it is not excessively high depending upon which sensor you get. So totally agree with you, it's great because it's probably feasible for many people.

Dr. Irl Hirsch:

I'll just add to that, I have many patients who over the years did not think they could afford it and they would try it once. And between they and their family members they would say, we have to have this and they do it. And my final comment about this is where the system does not work well. Even for some patients in the country on insulin, even children or adolescents, especially in states that can't afford it for the Medicaid population and states that don't have Medicaid expansion, those are the populations that I fear for the most because they don't have access to the tools that can help them the most.

Carla Cox:

So there are two writing questions that are somewhat related, so I'm going to ask them both. And one is, is it inevitable that type 2 patient will inject insulin even if they are diagnosed early in life? And the second on insulin is, in general, do insulin injections adversely impact a patient with diabetic retinopathy?

Dr. Irl Hirsch:

Okay, two wonderful, wonderful questions. 33 years ago when the clinic I'm sitting in now started, our understanding was once you develop type 2 diabetes, the ability of your own pancreas, the beta cells in the eyelets to make insulin is going to continue to go down. And as it goes down, you eventually will need insulin. And we would tell people, no matter how hard you try, you are going to need insulin. And what we now know for a variety of different reasons, that's not accurate. First of all, we have all of these other medications now in addition to more of the medications that I talked about, the SGLT2 inhibitors and the GLP-1 receptor agonist that we have all these other medications that one can control their blood glucose very well with some of these newer medications, number one. But I think even more importantly than that is that we have learned, and we don't quite understand this in everybody, but not everybody's ability to make their own insulin goes down.

And over the years, I've had numerous patients on old generic drugs, Metformin and the Sulfonylureas such as glyburide or glipizide, and they were just sitting there doing fine for 10 or 20 years. Now I have to acknowledge that is the exception to the rule and why are those patients different than others? I don't know the answer to that. But what I do know is that, and I'm going to preface my comment by saying I'm an insulin guy, I've never seen a patient with type 2 diabetes that insulin didn't work so I'm

not afraid to use it if I need to. But with that being said, the GLP-1 receptor agonist such as Ozempic, Trulicity, and Mounjaro, these drugs, if you use them while there's still a bit of beta cell function to make insulin, these drugs can work for a long, long time before somebody needs insulin, a very long time.

It doesn't mean that person won't need insulin, but the bottom line is once you get diabetes, it doesn't mean you are going to have to go on insulin. And for some people we just can't predict why they do and why they don't. My final point about that is that for some people, if they are successful with their weight loss, no matter how they lose the weight, that does a lot of benefit for the beta cells and not requiring insulin therapy. Carla, help me, the second question. Oh, insulin in the eyes. So there's a lot of misinformation in the community about starting insulin and the eyes going bad. And it's not just the eyes by the way, it's the kidneys, it's heart attacks. And the number one reason, and it's a much more complicated discussion, but the number one reason is by the time somebody goes on insulin, a lot of the time it's somebody who didn't want to go on it early enough.

They've had years and years of high blood sugars and high A1Cs and they go on insulin. And a lot of these things were about to happen anyway because the blood sugars had been so high for so long. And the research is very clear about that. Now there is another situation that we've known about from the 1980s where you take somebody with very high blood sugars, typically a hemoglobin A1C in double digits, that is a hemoglobin A1C above 10%. And they go on insulin and the blood sugars come down very quickly, and we see the eyes getting worse in terms of the retinopathy. And we've seen this since the 1980s. Mostly the original research was actually done in type 1 diabetes, but we've seen it in type 2, and what we've learned, it's not the insulin, it's the blood sugars coming down very fast when there's already preexisting diabetic retinopathy that's advanced.

Let me repeat that. You have somebody with a high A1C, typically above 10%, there's already advanced retinopathy. The blood sugars come down very fast with insulin and the eyes get worse. And the reason is thought to be that the eyes are not getting enough oxygen when the blood sugars come down that quickly, specifically the retina. And what we learned more recently, it's not just insulin, it's any medicine. This was a huge discussion a few years ago recently with Ozempic because the same thing happened in one of the big trials with Ozempic that was published in the New England Journal of Medicine. And that the patients that got the Ozempic, their eyes, their retinopathy got worse. And when they went back and they looked at the data more closely, it was those people with the highest A1Cs. But nevertheless, when you see the advertisements for Ozempic on TV, even today, they talk about the eyes getting worse with Ozempic.

And it's not the Ozempic, it's the fact the blood sugars came down so fast and there's previous retinopathy. And this is again getting back to the American Diabetes Association standards of care. This is why eyes need to be looked at regularly, generally once a year in most people with type 2 diabetes. And when I have somebody with a double-digit A1C above 10% and I'm about to start them on insulin or Ozempic or Trulicity or Mounjaro, I am probably not even going to start the medicine because I know the blood sugars are going to come down until they've had an eye exam, especially if it's been more than a year and a half since their last eye exam. Again, I apologize I took so long to answer that question, but that was really an important question and I thank the listener for asking.

Carla Cox:

Your answers are very thorough and we appreciate that. I have an interesting question coming in from Gary. It's on insulin. So Gary is from St. Louis. Gary, you're on the line.

Gary:

Thanks for taking my call. First, I want to say this is very educational about diabetes. I've been a diabetic since I guess around 1992. And my question is sometime doctor, I think that I'm taking too much insulin. I take four shots a day. I take the Lamertil morning, midday and night, and I take, what is that? Pin needle, I guess Tresiba. And I also take the one shot per week that you took, I guess the Ozempic. I take that once a week. And my question, sometime my blood pressure do run high. I just took it before I talked to you. It was like 178 over 60. It was 177 over 68 and the heart rate is 83. So now I would like to say I'm visually impaired. I'm legally blind. So I have a talking blood pressure thing. And I take a medication called, it's a hydralazine. I take three of those a day, 50 units and I take other medication.

But my question is I know I need to lose some weight and I know that I'm overweight, but what can I do to keep from getting on dialysis? And also am I taking too much insulin? Because I know sometime my doctor changes my doses from I'm taking 14, morning, midday, then 12 at night with the Lyumjev insulin. So I'd like for you to answer that question for me and I'd like to try to improve my health. Thank you.

Dr. Irl Hirsch:

Well, first of all, I greatly appreciate your question. What's your name again? Your first name?

Carla Cox:

I'm sorry. He's been discarded.

Dr. Irl Hirsch:

Oh, I was going to ask him. I was going to ask him which high school. That's the funny joke for all of us from St. Louis because I'm from St. Louis also. So the answer is if it's too much insulin is you take as much insulin as you need. People with type 2 diabetes are insulin resistant, even those who are not overweight. I see a lot of people who are non-obese with type 2 diabetes here in the Seattle area. And typically because we see so many Asian Americans in Seattle and they are not obese, even by the Asian standards. And so people with type 2 diabetes do need more insulin. And what the issue is, what can you do? The most important thing you can do right now without any hesitation is get those blood pressures controlled. Hydralazine is a wonderful drug and it's been around for at least 40 years, maybe 50 years.

It's an old drug, but it works very well and it's a very strong drug. And my guess is that if you're on a hydralazine, you are probably seeing a kidney doctor because it's not a drug that we use much anymore. And by the way, it's a great drug, but if your blood pressures are not controlled, that tells me that your kidney disease is progressing quickly. And the reason why this is so important is that the high blood pressure leads to more kidney damage and more kidney damage leads to higher blood pressure. So it's a vicious cycle. And the best way to stop the kidney damage is to be more aggressive with the blood pressure. So whether you're seeing a nephrologist which is a kidney doctor or not, you need to get the blood pressures down. Now will losing weight help with the blood pressures and the kidney disease? The answer is yes.

If I recall correctly, you were on Ozempic. I would want you to be on the highest dose of Ozempic, which is two milligrams a day. But here's the important part about Ozempic. For reasons that we don't understand, about 20% of people lose minimal or no weight with Ozempic or Trulicity, whereas that number is we think closer to 5% with Mounjaro. I've been talking about Mounjaro as a GLP-1, but it's actually two different drugs. It's a GLP-1 and a GIP. What they stand for isn't important. What's important is they're two different hormones and two hormones are better than one. And people generally do better with both glucose control and weight loss with Mounjaro. And just to make this

point even more definitive, Carla, on the last day of the ADA scientific sessions, there was a long symposium about another one of these drugs, which is a GLP-1 receptor agonist, and it's a GIP like Mounjaro, but there's another G, it's a glucagon agonist.

And you put these three drugs together, it's better than the two drugs. And the two drugs appear to be better than the one drug. And so if insurance wasn't an issue, if pre-authorizations weren't an issue and you could do be on any drug possible right now, if you're not on the highest dose of Ozempic, I would go to the highest dose. If you are on the highest dose, I would see about getting you on Mounjaro. And then the final point, which I made earlier in this program was if the kidneys are impacted, the medicine Kerendia is another medicine that has been clearly shown to help kidney disease in type 2 diabetes.

Carla Cox:

Great. As a reminder at the conclusion of this Q&A, you're welcome to complete a short survey when we complete the event. Your feedback is very important to us and will help us to inform future planning. You've been asking great questions and unfortunately we only have room for one more. And it's a write in question I'm going to ask. And that is, is it normal to feel down and out after a diagnosis beyond diabetes? And what would be your suggestion? Do you think a social worker would be helpful or what if you're feeling down and out?

Dr. Irl Hirsch:

Yeah, thank you for the question, Carla, because this is such an important question. Depression, anxiety disorders, I mean we see the whole gamut here of different mental health issues. And in fact, we see more depression in people with diabetes than we do in the general population. And if you think about it, we see more seasonal affective disorder in a place like Seattle where I am right now, where we have less sunny days, especially in our winter months. And so if you look at the chronic medical conditions such as diabetes, which is going to impact one's lifestyle, and you look at the overall general frequency of depression and anxiety. And then you look at our weather, we at one time 30 years ago, were called the Prozac capital of the world. And for good reason.

I think you want to talk to your primary care physician because it may not come up if you don't ask. What many primary care clinics are now doing is they are doing surveys when you come into the clinic to sort of reflect what is your depression scale. And there are a variety of different surveys that primary care clinics are doing. But if your clinic is not doing that and this is a problem, you need to ask for help. In our clinic, this has been such a big problem. We actually have both a psychologist and a psychiatrist, but many healthcare situations don't have that available. And so in that case, hopefully your provider will know what is available. Ideally, there is somebody in the community who is very sensitive about diabetes. That's not always the case. Frequently there are social workers who are just outstanding in helping people with or without diabetes when they're feeling down and under.

We see it every day. And the issue is that not every community has somebody who really understands about the depression associated with diabetes and I get that and that's okay. You can do whatever is available in your community. My final comment, Carla, is we did studies 25 years ago and we were using the drug in the study Zoloft for depression. And it was a study where people were feeling down, they were feeling depressed, and one group got the Zoloft, the other group got the placebo. We of course, as the people doing the study, it was blinded, so we didn't know who was getting which. And what we found was when we looked at their depression, their depression was clearly better even in dark and gloomy Seattle in the winter. But more importantly than that, or as importantly as that, their blood sugar control was better, their A1Cs were better, they were better able to self-manage their diabetes

when their depression was improved. So there are a lot of reasons once one gets the diagnosis of diabetes to try to nip the depression in the bud, especially if it was there prior to the diagnosis.

Carla Cox:

Thank you. So you've given us lots of good insight. If you were to give one key takeaway message for today, what would that be?

Dr. Irl Hirsch:

I would look at the standards of care for the American Diabetes Association and make sure they were all checked off. Your eye exam, your urine protein, your blood pressure control, your A1C, your LDL cholesterol. And as part of this global summary of somebody with diabetes, you need to make sure your physician knows that if you have any symptoms of potential heart disease, whether it's chest pain, many people with diabetes don't get chest pain, they get shortness of breath, whereas before they didn't when walking up a hill, walking up a flight of steps. But any change in your tolerance when you're walking, that needs to be provided to your doctor. We didn't talk about peripheral vascular disease, but that would also include letting your doctor know if you're getting cramps in your legs while you're walking too after walking a short distance. That's also very important. But the one advice is you will lead a healthier life if you can understand what these general standards of care are from the American Diabetes Association. You and your provider together, make sure that you have all the boxes checked.

Carla Cox:

Thank you for all the great questions you called in and wrote in with. We are so sorry we're unable to get to all your questions. There were a lot left. We're going to have to have you back. If you have questions about the event, you are welcome to contact us at askada@diabetes.org or by calling 1-800-342-2383. Please stay on the line for our survey to help us with future planning for our events. Thriving with diabetes takes a team and we're here to support you. Special thanks to our expert Dr. Hirsch. I am Carla Cox. On behalf of the ADA team, we want to thank you for joining us today and we look forward to connecting with you on our next event, August eight, Lifestyle Choices Matter, How to Quit Bad Habits. And September 12, Healthy Eating When Juggling More Than Diabetes. Please visit our website for more information at diabetes.org/experts and register today.

Thank you so much for participating in the American Diabetes Association Ask the Experts event. We hope you stay on the line for the next five to seven minutes to share your honest and valuable feedback to help us improve upcoming events. All responses will remain confidential. Please let us know your level of agreement with the following statements. Question one, this event met my expectations today. For yes, press one. For no, press two. And for unsure, press three. Question one again, this event met my expectations today. For yes, press one. For no, press two. And for unsure, press three. If you feel you could use some support for managing your diabetes, check our Living with Diabetes program where you can receive information through emails and booklets and tips on eating, physical fitness and emotional health. Check out our registration page at diabetes.org/experts.

Okay, question number two, I will attend another Ask the Experts event. For yes, press one. For no, press two. And for unsure, press three. Once again, question number two, I will attend another Ask the Experts event. For yes, press one. For no, press two. And for unsure, press three. You can find delicious and healthy recipes and menus to enhance your eating. Check out the website, www.diabetesfoodhub.org. Okay, questions on knowledge. Question number three. This event improved my knowledge of being able to cope with complications of diabetes. For yes, press one. For no, press two. And for unsure, press three. Question number three again, this event helped improve my

knowledge of coping and dealing with complications after diagnosis of diabetes. For yes, press one. For no, press two. And for unsure, press three. Did you know there are approximately 37 million people with diabetes? You are not alone.

Question number four, I intend to use the knowledge I gained in my loved one's next appointment with the healthcare professional. For yes, press one. For no, press two. And for unsure, press three. Question number four, again, I intend to use the knowledge I gained in my loved one's next appointment with healthcare professional. For yes, press one. For no, press two. And for unsure, press three. Keeping your glucose within target range of 70 to 180 milligrams per deciliter 70% or more of the time is the international recommendation for diabetes management. Considering asking your provider about getting a continuous glucose monitor to help you manage your diabetes. Okay, two more questions. Question number five. Before this event, I felt confident talking to a healthcare professional about my loved one's increased risk of heart disease or stroke. For yes, press one. For no, press two. And for unsure, press three. Question number five again, before this event, I felt confident talking to a healthcare professional about my loved one's increased risk of heart disease and stroke. For yes, press one. For no, press two. And for unsure, press three.

Check out the heart disease risk calculator at <https://www.cvriskcalculator.com> and discover if you are at risk for heart disease. And our final question, number six. After this event, I feel confident talking to a healthcare professional about my loved one's increased risk of heart diseases and stroke. For yes, press one. For no, press two. And for unsure, press three. And our final question number six again. After this event, I feel confident talking to a healthcare professional about my or my loved one's increased risk of heart disease and stroke. For yes, press one. For no, press two. And for unsure, press three. We sincerely appreciate your time and look forward to engaging with you on a future Ask the Experts event. Please visit diabetes.org/experts to learn about upcoming events. Thank you.