

ADA: Ask the Experts Access Live
February 13, 2024

Susan Weiner:

Hello, everyone, and thanks for joining us today. A warm welcome to the 2024 American Diabetes Association's Living with Diabetes Ask the Expert Series. So glad that you're all joining today. Today's topic is how to lower your Risk of heart disease if you live with Type two diabetes. My name is Susan Wiener. I'll be your host for today's event. I'm a certified diabetes care and education specialist and a registered dietician and a nutritionist. Our Ask the Expert series is all about you, all about your questions, so make sure you start to put together what questions you want to ask today during a live event, and we will try to get to all of your questions or as many of them as we can today.

For those of you who are on the phone, press star three. That's star three on your keypad, and an operator will collect your question, and place them in a queue so you'll have the opportunity to ask them live during today's event. If you're participating online, please type your name and questions in the field below the streaming player, and remember to please hit the submit button, and then your question will come directly to us. I will read it live during the event. Please stay with us throughout the hour. We're going to provide some great tips, resources, and some great conversation to help you live your best life with diabetes. At the very end of today's event, we'll have a short survey, and we'd really appreciate you staying on and providing your feedback. It's so important for us to formulate future programs based on what's important to you.

So, 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 the support of founding sponsor Novo Nordisk as well as national sponsor Bayer. The Know Your Diabetes by Heart Initiative provides excellent tools, resources, and education for people living with type two diabetes to learn how to reduce risk of cardiovascular disease. As part of the Know Your Diabetes by Heart Initiative, the American Diabetes Association is hosting free educational live events like the one we're having today every month. We'll cover a lot of information to help you take care of your health.

When you live with diabetes, it can increase your risk of heart disease, stroke, kidney disease, and it's very important to make sure to discuss prevention of heart disease when you're living with diabetes with your physician, your certified diabetes care and education specialist, and your healthcare provider. Bring up the topic. It's an important discussion to have. Please remember to visit knowdiabetesbyheart.org for more information and resources. I am delighted and super excited to introduce our guest speaker for today. This is Dr. Chiadi Ndumele. He is the director of Obesity and Cardiometabolic Research, and the director of Heart Failure Prevention Program, and associate professor of Medicine and Epidemiology in the division of cardiology at Johns Hopkins University.

Dr. Ndumele received his MD from Harvard University, and his internal medicine training at Brigham and Women's Hospital. He's just incredible. He's done research to support so much around heart disease. He is also the chair elect of the Council on Lifestyle and Cardiometabolic Health of the American Heart Association, past chair of the American Heart Association Obesity Committee, and co-chair of the American Heart Association Cardiovascular-Kidney-Metabolic Health Initiative. A warm welcome to you. Thank you so much for joining today.

Chiadi Ndumele:

Thank you so much for having me, Susan. It's wonderful to be here.

Susan Weiner:

Absolutely. Absolutely. While everybody is getting their questions together, February is American Heart Month. What is the connection between living with type two diabetes and heart disease, and what can

people do? What can everybody who's listening today do to reduce their risk of heart disease when living with type two diabetes?

Chiadi Ndumele:

That's a really important question, Susan. I think it's really important to understand first of all that diabetes is a pretty powerful risk factor for the development of heart disease. Now, when we say heart disease, we usually use that as one term, but it really doesn't just mean one form of heart disease. It can mean a heart attack or a need for bypass surgeries or stents. It can mean congestive heart failure. It can mean a stroke. It can mean peripheral arterial disease, blockages in the arteries leading to the arms and the legs, and it could also mean atrial fibrillation. It's really important. It causes risk through multiple different pathways or mechanisms, but I think the most important thing is that that risk for heart disease is not inevitable. It's very strong, but it's not inevitable.

There are actually several different ways to prevent the development of heart disease related to diabetes, and that's something that I think is important for us to discuss today. Controlling your sugar is one part of that, but that's really just one part. There's a broader array of things that we need to think about with regards to our cholesterol, our blood pressure, other kind of medications we can take to reduce risk that I think are really... and of course most importantly also our lifestyle that are really important to consider as we take what we would call a holistic approach to preventing heart disease related to diabetes.

Susan Weiner:

I think that that's such an important piece that you just mentioned that in addition to nutrition, physical activity, getting enough sleep, reducing stress, that there are a number of other treatment options that one can take, including medications. Can you speak a little bit about that?

Chiadi Ndumele:

I want to emphasize what you just mentioned first, which is the importance of lifestyle. When we talk about lifestyle, it's important to say, I think, something really important. There's not really a blaming to the lifestyle component. So much of what we do from a lifestyle standpoint is really governed by a lot of different forces around us that in terms of what foods we have access to, how much time we have to exercise, and various other life stressors. So, there's a lot of challenges to overcome, but lifestyle changes are really, really important, and are really the foundation, so exactly what you said, eating foods that we know are healthier, getting regular exercise. We really emphasize getting to that 150 minutes per week of exercise.

It doesn't have to be getting all suited up at the gym. It could be walking around a neighborhood. It doesn't have to be a large event, but there's multiple ways of getting that exercise, and then thinking about sleep, thinking about stress and really addressing those are really key and fundamental at first. But in terms of medications, there's a few different places that we can go. I think the first thing I will say is that one of the most powerful... Obviously, controlling your blood sugar is important. It has a particularly high impact on whether you're going to develop these microvascular complications from diabetes like neuropathy, retinopathy in the eyes, or nephropathy in the kidneys. But then on top of that, we really want to be thinking about blood pressure control.

We want to be thinking about cholesterol control with the first line medication therapies there being the statin medications. We also want to think... Usually in diabetes, we have a little bit more of a thought about potentially taking some of the antiplatelet medications, aspirin that can prevent the development of heart attacks and strokes. Then we have a series of newer medications that not only are helpful for

diabetes, but also specifically are helpful for preventing cardiovascular disease and in some cases kidney disease. Those two classes of medications are sodium glucose cotransport proteins or SGLT2 inhibitors or the GLP-1 receptor agonist. Those are medications like ozempic and wegovy.

They have various effects that which we can talk about, but both of them favorably reduced the risk of cardiovascular disease events, and also reduced cardiovascular mortality or death from cardiovascular disease in people with diabetes.

Susan Weiner:

That is so much to consider, isn't there? We have a lot of questions coming in online, so let me start off by asking some of the questions from our callers. The first one is from Lorita who is in San Diego, California. Lorita, please go ahead and ask your question.

Lorita:

Okay, can you hear me? I have APLS. Last year, I had, they said, a mini stroke in February. I turned around. I had another one in July, and so I'm trying to figure out how does that affect my diabetes?

Chiadi Ndumele:

That's a very good question. In that situation, APLS, which is a little bit different, antiphospholipid syndrome, we're bringing in two different components. One, there's an inflammatory component to that disease, and there's also, as you just described, there's a higher risk for blood clots, what we call thrombotic component. Those blood clots are a little bit more likely to occur in the arterial circulation, so in the blood vessels leading away from the heart and going to vital organs like the brain. So, that can actually lead to an increased risk of clots and increased risk of strokes. So, for APLS, it's actually any inflammatory condition. This is true for APLS, but it's also true for things like rheumatoid arthritis or things like psoriasis.

These can all worsen the insulin resistance. That is really a key part of diabetes. So, getting better control of that inflammatory condition is really helpful for helping to control the diabetes. Those two things go hand in hand. Working with a rheumatologist, that's an inflammation doctor, is a really important way to help with that. There's an additional consideration in antiphospholipid syndrome, which is those blood clots. So, there's often some need while inflammation's being controlled to also be on blood thinning medications to reduce your risk of stroke because of that. So, those are all related.

Diabetes, of course, is associated with some things like atrial fibrillation that can cause increased stroke risk. It's associated with the insulin resistance. So, these things, the APLS can worsen the diabetes, but with better control of the inflammatory condition and also treating the blood with blood thinners to prevent blood clots, you can get that under good control.

Lorita:

Okay, thank you.

Chiadi Ndumele:

Of course.

Susan Weiner:

Thank you so much for your call. We have another call coming in from Linda in Queens. Linda, please go ahead and ask your question.

Linda:

Yes, hi. Thanks for taking my call. When I went for the checkup for my legs, he said I had a little plaque in both legs, but nothing major to worry about. What I was curious about, does that mean there's plaque developing in the rest of my body, liquid in my heart and all that? I see by the toes are a little numb, so I don't know if I have a little neuropathy. Is that from the plaque?

Chiadi Ndumele:

Those are great questions and really important questions. There are actually two different issues there that are likely going on. So first, you raised a really important question. Plaque in the arteries of the legs is the beginning of what's called peripheral artery disease or peripheral arterial disease. That's something that can progress and can cause blockages in the arteries to the legs, and that can cause poor blood flow, and poor blood flow can cause symptoms like leg discomfort. It can cause other complications like wounds in the leg that are harder to heal, and other injuries to the tissues down in the legs. So, it's really important to address that by itself.

There's things that are really key for that. So, smoking, avoiding smoking is very key, addressing cholesterol because that's really a big contributive plaque buildup. So, lower your cholesterol. Lower the likelihood of those plaques building up further. Good blood pressure control is also going to be really key to that as well. Then often, particularly when it's more advanced, then we have these platelet blocking medications that prevent clots from forming. But to your very important question, yes, plaque buildup in the legs also often reflects plaque buildup in other parts of the body, most notably in the arteries to the heart. So, we want to be the same aggressive therapies to control cholesterol, control your blood glucose, control your blood pressure, and avoid smoking.

All of those have the same beneficial effects on the arteries for the heart as they do for the arteries in the arms and legs. So, those two things are related, but those same therapies... It should be almost a bit of a warning sign that there should be even more aggressive therapy to prevent more plaque buildup from occurring. So, that's really important. You also asked the question about numbness in the legs. The numbness is probably more reflecting neuropathy, and that's basically microvascular disease. That's where the very small blood vessels that supply the nerves. It's the same process that can occur that can affect the eyes. That's called retinopathy. Also, small blood vessels in the kidney, that's called nephropathy. The thing that's really helpful for preventing microvascular disease complications is better blood sugar control.

We know that the risk of those microvascular complications really goes up quite a bit. It can happen for people even with mildly uncontrolled diabetes, but it really goes up when we see blood sugars. Hemoglobin A1C is greater than 9% that are uncontrolled for a period of time. So, the general goal is to have your hemoglobin A1C less than 7%, which really helps to reduce those microvascular complications to confirm that that's what's going on. Your doctor endocrinologist or diabetes educator or even your primary care physician can perform some testing with you at the bed, at the examination table to confirm that there may be some decreased sensation go along with that numbness that you're describing. But from what you're describing, that's most likely what it is. Those are two different processes related, but two different processes, and both addressable.

Linda:

Thank you so much.

Susan Weiner:

Thank you so much, Linda. Thank you so much. This is really interesting. I see a question here from Stephanie, and she's asking this question online. How important is it for someone with type two to consult with an endocrinologist? That's a question that I get often as a certified diabetes care and education specialist when I'm working with people who are living with type two diabetes who are seeing their primary care physician. So, how would you address that?

Chiadi Ndumele:

It's a great question, and one thing that I'll say is that this question probably differs from region to region. There are some areas that have a much higher density or a number of subspecialists who can see more patients, and there are some areas where there's only a few endocrinologists for a larger number of patients. In general, the place where we really... I think as Susan just described, diabetes educators are a remarkably wonderful resource for helping individuals with learning how to manage their diabetes, how to monitor their blood sugars, how to look out for different complications. So, I think that they're a wonderful resource to start.

I often think about involving endocrinologists when I see particularly poor blood sugar control. So, hemoglobin A1Cs greater than nine are often a range where you start to see that really increased risk for those microvascular complications. So, that's someplace where I often think about engaging with endocrinologists if the blood sugar stay in that range. Also, if I see already some evidence of microvascular disease like retinopathy, neuropathy, nephropathy, kidney disease, or other end organ damage like cardiovascular disease or strokes, then those are also places where I'm going to be more likely to want to get an endocrinologist involved. The endocrinologist though can work hand in hand with diabetes educators where they can provide more consistent, I think, day-to-day or week-to-week care to help with managing your diabetes.

Susan Weiner:

That's absolutely so true. As a diabetes care and education specialist myself, I reach out to people all the time, and have these discussions, because it's collaborative. All the thoughts and feelings that you're having as a person living with diabetes, we want to hear from you, and we want to also hear your questions today. So, if you're just joining us now, welcome to today's Ask the Experts Q&A, and our topic is how to lower your risk of heart disease when you have type two diabetes. As a reminder, for those of you who are joining us by phone, if you have a question, please press star three. That's star three on your keypad. An operator will take your question and place you in the queue so that you can ask it live.

If you're participating online, please type in your name and your question in the fields below the streaming player, and please press the submit button. Your question will come directly to us. Let's remember that today's topic is how to lower your risk of heart disease when you're living with type two diabetes. We have some amazing questions coming through. So, let me bring Linda from Pennsylvania online. Linda, if you'd like to ask your question, please go ahead.

Linda:

Hi. Unfortunately, I had a sister who passed away from diabetes from complications. I'm having a real struggle trying to get information from the hospital where she was at as to what exactly happened. She was in the hospital from Monday to Thursday, and her diabetes wasn't the best managed. Although a couple of months before that, her A1C was in the seven range, which actually is very good for a person with diabetes one, but what happened was she was in the hospital from Monday to Thursday. She'd gone there for DKA, and then, I don't know, she was really tired. We thought it was from the hospital

stay. Turns out on that Saturday, she wasn't really feeling very well. She was having a lot of symptoms, things like that.

She ended up collapsing, and she actually collapsed as the ambulance was on their way to pick her up. But when she got to the hospital, her blood pressure was really low. There were problems with breathing, so they had to put her on ventilator, things of this sort. What they said was she had actually gone into sepsis shock or whatever. What I'm trying to get at is is that a normal thing? She's had DKA a number of different times and things like this. What would happen is she wasn't really unconscious or comatose, but she would end up coming out of it. This last time, that didn't work of course, and all these other organs were starting to fail.

Then they found that she actually had a gallbladder infection, and they think that that was part of what created a lot of these problems. It's a complex kind of a thing, I think, but I'm trying to figure out if that's normally what you would see for a person. Then she also has psychological issues from diabetes one.

Chiadi Ndumele:

First of all, I'm very sorry for your loss. That's obviously a very challenging thing for you and your loved ones to be going through. So, I just want to express my condolences. Obviously, it's a very complicated case. I'm not directly involved, so I can only comment on so much, but what I will tell you is that when the blood pressure is low, which sounds like was the main issue here of shock, shock can occur for three reasons. It can occur because of a cardiac reason. It can occur because of low blood volumes from severe dehydration or blood loss, or it can occur because of an infection. An infection is actually the most common cause of shock overall.

It sounds like in this situation, there was a finding of not only they described septic shock. They also described that they found a source for the reason for the infection from the gallbladder, which is a place where bacteria can go into the bloodstream. I think to answer your question, I think, is septic shock something that can occur to individuals with diabetes? The unfortunate answer is yes. So, infections are more common or more likely in the setting of diabetes. It can lead to some more compromise of the immune system. There's many people unfortunately who can pass away from septic shock who don't have diabetes. So, it doesn't necessarily mean that the diabetes was the only cause of that in this situation, but if you're asking the question of can diabetes make you more susceptible to infection, unfortunately that is the case.

It does importantly... For something like a gallbladder infection, it's harder to predict that or be vigilant about that. But in general, it's important for individuals with diabetes to be vigilant about the wounds and other potential sources of infection they can see often in the lower extremities and other regions. Again, I'm sorry for your loss.

Susan Weiner:

Thank you so much for your call, Linda. We have another question that is coming to us online, which I think a lot of people who are listening today might be very interested in. This question is from Rose. Rose asks, "My doctor recently told me that my LDL used to be in the 90s." Maybe we should go back and discuss what LDL is. "Used to be in the 90s, but now it's suggested that it should be under 55. Why the change, and what should I be taking along with my type two medication?"

Chiadi Ndumele:

That's a very good question. LDL cholesterol is one of the key indicators of your risk for atherosclerotic cardiovascular disease. It's the bad cholesterol that tends to be able to build up plaque in your arteries. We know that the higher the LDL, the higher the risk for developing heart attacks, and the need for

stents or bypass surgery. We also know that lowering LDL is associated with lower risk of heart attacks, and particularly for people who have existing heart disease, lower risk of mortality from heart disease. The way we've generally approached LDL lowering is that we're most aggressive about LDL lowering in individuals who have the highest risk for developing heart disease.

So, if you either have existing heart disease, or your risk is estimated at being in the next 10 years, for example, being intermediate or high, then we're more likely to say, "Hey, you're somebody who would benefit a lot from being on an LDL lowering medication." The first line medication is typically one of the statin therapies. Those are the therapies that are most studied and are most shown to have a substantial impact on lowering rates of cardiovascular disease. Now, in individuals who are at very high risk, so often individuals who have existing cardiovascular disease, then we tend to be even more aggressive about LDL lowering, because we know that we're going to get even more benefit in terms of heart disease risk, and in those individuals who are at very high risk, they're going to see more benefit.

The next thing that we often will think about adding in that scenario is a generic medication called ezetimibe. That medication is usually one that we think about for people who have existing cardiovascular disease or are at high risk for cardiovascular disease to really get the LDL... We usually want to drop it by about 50% from where we start. So, that's a good starting point. Now to your question, there's still some discussion about what's the exact level that we want to get people's LDL cholesterol to, but for people who have diabetes and also have existing cardiovascular disease, there is some more recent data supporting the idea that they may get more benefit from having even lower LDLs closer to that 55 range that you just described. Not everybody has to get there.

Definitely, less than 70 is going to be beneficial, but in people who have what we call very high-risk CVD, sometimes we think about even adding another agent, and the agent that's most commonly considered there... There's one agent for people with cardiovascular disease called a PCSK9 inhibitor, which together with a statin and ezetimibe can really get that LDL down to less than 70. There's other agents that we sometimes think about as well that are beneficial, but again, I would say that most physicians right now would say getting that LDL lower than at least 70 is going to be beneficial. Then it's not unreasonable if you have all of that category of very high-risk CVD cardiovascular disease that we're going to be even more aggressive and think about getting it closer to 55.

Susan Weiner:

To follow up on that excellent response, if a patient came to you, if an individual came to you, and said, "I've been told that my LDL cholesterol is high, but it's genetic. Both of my parents had high cholesterol and high LDL cholesterol. Are they then destined to continue to have high cholesterol, or are these things that we can..." There's so many things that we can do to lower it. It's not a predetermined destination to also have very high cholesterol.

Chiadi Ndumele:

No, that's a very important question. What you're referring to is something called familial hypercholesterolemia. That's a scenario where you can actually get quite high LDL levels, sometimes greater than 190 or even in the 200s to start. That carries a very high risk of cardiovascular disease and recognizing that earlier is really helpful for reducing rates of cardiovascular disease. That is a population where we're going to be more aggressive about lowering their LDL cholesterol, and the combination of diabetes and familial hypercholesterolemia is a little bit of a tender box. That's two powerful risk factors together. So, if we see that, we're going to be even more aggressive about LDL lowering.

Now, I take care of a lot of patients who have familial hypercholesterolemia, and I can tell you that even though... Medications are certainly necessary in that condition, because of the genetic component

there, lifestyle alone won't be sufficient to get that LDL cholesterol down. However, the lifestyle component and having a healthier diet that's lower in saturated fat does play a key role. So, my patients with familial hypercholesterolemia who are on medications, when they make some very significant lifestyle changes, we see even much better control. So, the lifestyle component and the dietary component is still really, really important there, but there's always going to be a need for medications. That group, by the way, with familial hypercholesterolemia is one where we're most likely to think about therapies that are added onto statin.

That group is the one that's the most likely to get that PCSK9 inhibitor therapy, which is another really powerful way of lowering cholesterol along with statin therapy, because we... Particularly if they have existing cardiovascular disease, their risks are quite high. So, we're really going to want to have their LDL cholesterol lower, and it takes often a lot of medication therapy to get them to those.

Susan Weiner:

Often, people may start on a certain medication, and they may be changed to a different dosage of medication or other medications as well. So, it's not always at the first time that you try somebody on something that it works, right?

Chiadi Ndumele:

That's absolutely right. But the one thing that often happens for familial hypercholesterolemia rather than... Yes, sometimes we have to switch, but often, it's the case that we have to add on. So, individuals with familial hypercholesterolemia often need a combination of LDL-lowering therapies to get that LDL cholesterol into that good range where we want it to be. It's often they need not just statins and ezetimibe, but often that plus a PCSK9 inhibitor, or if one of those doesn't agree with them, an alternative medicine, but there's usually a need of combination of therapies to get them to go.

Susan Weiner:

Fantastic. Thank you so much for that. We have another question that came in online from Alexis. Alexis asks, "Is all exercise equal? I ride my bike year-round. Do I get extra credit for riding uphill and in headwinds?" I love that because what she references is that we're asking people to try to aim for the 150 minutes of exercise per week. So, I think it's a really important question. Everybody is so different.

Chiadi Ndumele:

That is a great question actually. The good answer actually is all kinds of exercises are important. So, aerobic exercise, which is the exercise that gets your heart rate up a little bit, gets you breathing a little bit faster, that does have a lot of what we call metabolic benefits. That certainly directly impacts your weight and blood sugar and your general metabolism. So, that's really helpful. Exercising, the biking that you described is a one important form of aerobic exercise. What I will say is that we generally will tell individuals to try to achieve 150 minutes per week at least of moderate-intensity exercise. That could be a little bit more casual biking than what you're describing. If you spread that out over the week, most of the time for my patients, I talk about trying to get 30 minutes a day for five days or more a week, and that's often very manageable.

But again, as I said earlier, taking walks, brisk walks around the neighborhood can count as well. You don't have to have a really fancy mountain bike or a bunch of a nice gym membership. There's lots of ways to get that exercise. Now, it is true that the more vigorous exercise, so if you're able to do really vigorous exercise uphill as opposed to jogging or walking, running, then that does give you more energy expenditure and does count for more. So, we actually do say that in that scenario, up to 75 minutes of

vigorous exercise a week is also sufficient to meet that exercise goal. So, it is true that the intensity of exercise can matter. Now that being said, doing more exercise, either of the moderate or vigorous kind or a combination, you get even more benefits. It doesn't mean you have to stop at that threshold of 150 minutes of moderate exercise a week.

The other thing I want to mention is that while aerobic exercise is very important, resistance exercise, so that's lightweights, that can help to tone your muscles, and improve your skeletal muscle energy capacity. That also has actually a very nice beneficial effects on metabolism, on inflammation, on your vascular function. It actually does a lot of other beneficial things. So, what's really great is a combination of aerobic exercise. Most people can engage in moderate exercise, but congratulations if you're able to do more. Resistance exercise to some degree, some lightweights, the combination of those two has been shown to have the greatest impact on not just diabetes, but also a lot of the other accompanying comorbidities that often go along with diabetes.

Susan Weiner:

Absolutely. For those of us who sit a lot during the day for work, I have to remember to get up about every 30 minutes, and just walk around. So, while it might not seem like exercise, it's just an increase in physical activity, and it sure does make me feel better. So, I hope that everybody does that.

Chiadi Ndumele:

Susan, that's actually a really important point. There's physical activity exercise, but there's also sedentary time, and those are two separate concepts. Basically, how long you spend sitting and sedentary time is also a contributor to cardiovascular risk. A lot of the times, our sedentary time is screen time, and that does contribute. So, the idea of getting up on a regular basis, and often if you have a Fitbit or some other kind of activity device, it can trigger you to say, "Hey, you've been sitting for an hour. Maybe you should get up and move around a bit." That also has its health benefits as well. So, that's a very important point, Susan.

Susan Weiner:

Absolutely. Absolutely. Let's take another live question from Deborah in Washington D.C. Deborah, please go live with your question.

Deborah:

Hi, thanks for taking my question. I was recently diagnosed with Afib. Then when I went to my doctor, she told me to go to the emergency room, and I was in the hospital for almost two weeks. So, what can I do as far as diet and exercise?

Chiadi Ndumele:

That is a very good question. Atrial fibrillation is the most common abnormal heart rhythm, and particularly as people get older. So, it's basically a rhythm where usually we have a good coordination between the top part of the heart, the pacemaker on top, and the bottom part of the heart, the pumping chamber on the bottom. The top part contracts a little bit, and then the bottom part contracts after that. In atrial fibrillation, the top part is doing its own thing. It's fibrillating and basically can often be going quite quickly. The bottom part sometimes doesn't go as fast as the top part, but it's, a, not coordinated with the top part, and b, sometimes that bottom part can go fast. That's what we call atrial fibrillation with a rapid heart rate or rapid ventricular response that can go fast.

The atrial fibrillation, when it lands you in the hospital, it could be... There's a few things that can be going on there. Number one, it could be that the heart rate is going very fast, and there's a need to get that under control. Number two, the atrial fibrillation, because the top part of the heart is not contracting normally, it can lead to the blood staying still in the top part of the heart, and that can increase the risk of having a stroke. Now, when you have atrial fibrillation, we also look at what are your other conditions? Among those conditions, diabetes or high blood pressure or advanced age or heart disease, but diabetes is a key risk factor for who's more likely to have a stroke. So, we're going to certainly be thinking about being on blood thinning medications if you have diabetes and atrial fibrillation.

Then the third piece that you mentioned is... Well, actually before I say that, I'm going to say heart disease is also something to look out for with atrial fibrillation. So, having dysfunction of the heart, what we call the heart failure and atrial fibrillation, can go hand in hand. So, heart failure can make atrial fibrillation more likely, and atrial fibrillation can make heart failure more likely. So, it's good to make sure that you're being checked out by a heart doctor, and they're making sure that your heart function overall looks good, but the good thing about atrial fibrillation is it's very, very manageable. Number one, the blood thinners we talked about, there's ways to get the heart rate under control, but to really reduce the burden of atrial fibrillation make it more likely that you spend less time in that rhythm.

Lifestyle changes, better blood sugar control, regular exercise, and weight loss all have a really great impact on lowering your burden of atrial fibrillation, really powerful. So, one of the big things that is a focus is if you have atrial fibrillation, focusing really intensely on changing lifestyle, moderating your regular activity, moderating your diet, supporting weight loss, and then also controlling risk factors like diabetes control, blood pressure control, those have a really great impact on atrial fibrillation, and can make your symptoms, and your quality of life much, much better.

Deborah:

Thank you.

Susan Weiner:

Thank you so much for your call, Deborah. In all of these discussions today, and these fantastic calls, I'm wondering as a physician, do you have any advice for people who want to bring up questions to their doctors, to their healthcare providers, but they may be a little shy about it, or not know how to phrase, bringing up the topic of how to reduce their risk of heart disease when they're living with diabetes? What's the best way to get that point across?

Chiadi Ndumele:

Absolutely. I actually think that what's really powerful, and the way I like to frame things with my patients, but I think what's really powerful is just starting the conversation with your doctor saying, "I know I have diabetes, and I know it increases risk for heart disease. Please help me understand the ways in which I can reduce my risk." I think an open-ended question like that is a really good starting point for understanding or having a partnership with your physician for reducing your heart disease risk, and really making sure that they're describing that to you in a way that's helpful, and that you can really start in that journey together. Optimally or the best way of addressing diabetes risk is really going to hinge on these things we've been talking about.

Number one is the lifestyle measures, and it's really helpful if that's identified as a key issue to get some additional support for lifestyle, because that's often what's necessary to do that effectively. Number two is blood pressure. Getting your blood pressure well controlled has a really, really big bang for your buck

in terms of lowering your risk from heart disease and diabetes, and the blood pressure goals now have been updated. We really like to get people's blood pressure less than 130 for the top number, and less than 80 for the bottom number. That's a really great way to help lower your risk. The cholesterol that we've talked about is really important as well. As I said, we do that cholesterol lowering therapy most times in people who are at at least intermediate risk or high risk for heart disease, or have heart disease, because most people with diabetes are at least at intermediate risk for heart disease.

Then as a result, we are often recommending statin therapy in diabetes. Then sometimes we'll think about aspirin therapy in those individuals who are particularly high risk for heart disease or have heart disease, but we want to make sure the bleeding risk is low when we're thinking about that. Now, there's another new class of therapies that we're increasingly thinking about in diabetes. These are what I tend to call the cardioprotective or the heart protecting diabetes therapies, and there's two of them, the lower risk of heart disease events and also heart disease mortality. These SGLT2 inhibitors like... They're called dapagliflozin or empagliflozin. Jardiance is one name for them, or there are these GLP1 receptor agonists like Wegovy or semaglutide.

These agents really have some really great effects. For the Wegovy, as everybody I'm sure has heard, it can help with lowering weight, lowering A1C, and reducing the need for insulin doses, but it also reduces the risk of heart disease. Then for the SGLT2 inhibitors, like Jardiance, we see an improvement in actually kidney measures. It actually has a big impact on heart failure. Then we also see an improvement in cardiovascular mortality. So, that's the fifth additional thing that we'll start thinking about in diabetes, but opening the conversation by saying, "I want to understand my risk in diabetes, and I want you to help me understand what I can do to lower that risk," I think is a really powerful way to start that conversation with your physician.

Susan Weiner:

I totally agree, and it goes back to what you and I always say, and as a certified diabetes care and education specialist, it's kind of our mantra. It's using a person-centered approach to care. So, speak up, and we want to hear what you have to say. It helps us as clinicians to help you, so that's very important. We have-

Chiadi Ndumele:

Can I say one more thing, Susan?

Susan Weiner:

Of course. Of course.

Chiadi Ndumele:

One more quick thing. Recently, the American Heart Association launched a new initiative called Cardiovascular-Kidney-Metabolic Health, and that was... I played a leadership role in that, and that was really one that focused on exactly what you're just describing. Diabetes rarely happens just in isolation. There's usually other things that are going on as well. So, whether it's overweight or obesity, which is very common, high blood pressure, elevated cholesterol, and chronic kidney disease, there are these other factors that go along with diabetes. It's not just a patient with diabetes. It's a whole patient who is suffering from different related health challenges.

So, what we want to start doing is having physicians thinking about the whole patient, thinking about the whole clinical picture, and not just thinking about their one specialty or this one problem, because

that's how we as individuals experience that. So, that patient-centered approach, I think, is very important, and hopefully we're going to see more and more of that from our providers.

Susan Weiner:

Absolutely, and that's the way that we have to be treated as individuals and as people. So, that really makes care and quality of care go way up once we do that. We have a question here that a few people are asking. This question was asked from Daniel in South Carolina, "What types of snacks should I be eating as a person with diabetes who is concerned about reducing risk for heart disease?" He's also asking, "What can I do about having a reduced appetite?"

Chiadi Ndumele:

Those are two really good questions. I'm going to also welcome you, Susan, as our diabetes educator to talk about the appetite piece as well, and also the snacks. What I often will tell patients is that it's really important to... I really love the snacks that are higher in fiber and introduce more complex carbohydrates as opposed to just the simple carbohydrates that you see in sweets or candies or even certain types of grains that are very enriched. I like those, because they last longer. They actually are more likely to make you more full, and they're less associated with the ups and downs that can make you feel hungry again in just a short period of time. They're more stable from an overall glycemic control standpoint.

I also really like good old-fashioned vegetables. I personally am a big fan of vegetables. You really can't go wrong with that, honestly. So, if you can find something that makes you really enjoy that, so whether it's vegetables with hummus or vegetables with certain kinds of dips, that's a really beautiful way of both filling yourself up, having almost minimal effect on your blood sugars, and giving you that really great high fiber approach. Some things that are good in moderation, so nuts, things that have lean meats, so sometimes we like tuna fish on a whole grain cracker or sardines or things along those lines are helpful. There was a second question as well. Oh, the appetite piece.

I just want to make a point that I do things like the nuts. I'm a big fan of unfortunately some nuts like cashews, so I have to do those in moderation. I take those and put those in these self-contained packets, so I don't go too far with those. They're great, but great in moderation. The hunger piece can be... It's interesting. It's hard to... I don't know exactly what the full symptoms are, so I can't get the full clinical picture, but sometimes there are some issues with motility of the gastrointestinal system that can sometimes occur in diabetes. I don't know if that's quite what's going on, but that can sometimes require medical attention.

In general, though, most of these things, the better we do in terms of not having higher fat content and higher saturated fat content, and our snacks make that less likely to be as much of an issue for us. I know if you have some of those motility challenges, the kind of snacks you eat can actually make an impact on that as well. But, Susan, I'd welcome you as the diabetes educator to share your thoughts.

Susan Weiner:

Thank you so much. That was really an excellent answer. I was going to say the same thing about the potential problem of delayed gastric emptying. Sometimes when we see a precipitous drop in blood sugar, or a really quick drop in blood sugar when diabetes management may go from not being well managed to being very well managed, and if there's a very quick drop in blood sugar, we may see gastroparesis or other issues involved with that. So, in which case, that needs to be checked out, and the nutritional management of what you're eating may need to be changed, whereas we may be typically

suggesting having plenty of fiber in the diet. That may change if you're in the acute stages of having a delayed gastric emptying.

So, please check that out, and speak not only with your clinician and your physician but reach out to a registered dietician who's also a certified diabetes care and education specialist. They will be able to help you individualize a care plan to help you address those specific needs. Then the other thing I was going to add is that I very rarely start with somebody and give them a whole new eating plan. Work with what you're currently doing and tweak it so that it can be something you're comfortable with, works with you, within your budget, within your schedule, et cetera. That's very important.

Chiadi Ndumele:

Absolutely. Sustainability is absolutely key for this.

Susan Weiner:

Absolutely. That's one of the most important things. Let me just check to see if we can go to one or two more questions that we have here. Barbara asks online, "Will venous insufficiency cause problems with your heart?"

Chiadi Ndumele:

Oh, that's a really good question. I was actually just having this discussion with a patient yesterday. Venous insufficiency, so the veins, one of their jobs is to bring blood back after it's been used to the heart. We often see venous insufficiency manifests in the lower extremities, where we see the veins not doing quite as good of a job at bringing back blood from the lower extremities from the legs. That's because if the veins are not doing quite as well, usually, actually, that means that the valves, the veins have valves that help blood go one way and not go backwards, but they become a little bit less competent, a little bit more leaky. Then when you're working against gravity in the lower extremities, you're more likely to see the consequences of that venous insufficiency.

Venous insufficiency is not a heart problem, so there are heart reasons why you can have buildup of fluid in the leg. So, congestive heart failure where you're not doing a great job of pumping bloodwood or to the body and to the kidneys can result in buildup of fluid in the body, and you can see swelling in the legs. That's a more, I would say, a cause of fluid buildup in the leg that's more dangerous, and it reflects heart dysfunction. The venous insufficiency does not reflect a heart issue itself. It just reflects the fact that the veins may not be doing as good of a job of bringing blood back to the heart. Now that being said, venous insufficiency can carry some consequences, because if you have fluid buildup that stays down in the leg for a long period of time, and you get some compromise of the skin down there, particularly in the setting of diabetes, that can sometimes cause a higher likelihood of infections.

It can also cause ulcers that can occur down there as well. So, you don't want to have that get out of control. Even though it's not a heart issue, it is important to consider things like... Well, sometimes just activity is really helpful, because when you're moving, the calf muscles pump the veins, and help blood go backwards. Sometimes if you have a lot of swelling, elevating the legs when you're sedentary, so when you're sitting can be helpful so that you're not just having them go down and have gravity do its job on making fluid buildup there. Then sometimes we have a need for things like compression stockings that can press on the fluid there and make it a little bit more likely the fluid stays in the veins rather than building up in the tissues. In some more severe cases, if we have a lot of swelling, it's causing you a lot of discomfort or difficulty, we sometimes use diuretics to help get rid of some of that fluid, but venous insufficiency by itself is not a heart issue.

Susan Weiner:

Well, thank you so much for that, and thank you so much for all of this incredible information. This has been a really quick talk that we've had over the past hour. We've covered so much information. Thanks, everybody, for your calls and your questions, but please stay tuned because we're going to continue on with the presentation for a few more minutes. Then we're going to conclude with a survey at the end, which is extremely important. Do you have any final thoughts that you'd like to share before we move on?

Chiadi Ndumele:

Well, first of all, I want to say that I love what an engaged and thoughtful audience we have today. I think just being engaged in wanting to understand your heart health and understand ways to prevent heart disease is really such a powerful starting step. Then we have so many great tools right now that can reduce the risk of heart disease in diabetes that, I think, it just really leads to much better outcomes. So, I think that that's really important. Congratulations, everybody, who's here today in that regard. I just want to say, I think one thing that we've illustrated and that's really important to take home is that diabetes, we think about it in terms of blood sugar, and that's certainly important. Controlling blood sugar is important for reducing many of the complications, but reducing cardiovascular risk in diabetes is about more than the sugar.

We have to be thinking holistically about various things to consider. That's the lifestyle component. That's the blood pressure component. It's the blood sugar component. It's where we need to think about those platelet medications to reduce heart attack and stroke risk, and then also sometimes using some of these additional protective therapies that can also reduce heart risk in diabetes. So, there's lots of great tools, but again, as we said, heart disease is a risk in diabetes, but it is definitely not inevitable.

Susan Weiner:

Thank you so very much. As we go to the next slide, so remember, as we talked about today, bring up to your doctors, the members of your healthcare team that you're interested in knowing more about heart disease, about stroke risks, about kidney disease. Go to knowdiabetesbyheart.org, and sign up for the free newsletter. Register for diabetes.org/experts. Sign up for diabetes self-management education support classes in your area. If you have any questions, you can call the 1-800-DIABETES number on your screen, or you can email askada@diabetes.org, and request a digital copy of How to Thrive Resource that can help you on your diabetes journey.

Your feedback is so important to us, so please remain on the line. In a couple of minutes, we're going to have a really short survey. Your feedback is everything. It helps us plan future programs, so please stay tuned. If you want to join us for future events, March 12th will be Type Two Diabetes and Kidney Health, what is the link? On April 9th, your medication questions answered, register at diabetes.org/experts. All events are at 2:00 to 3:00 PM Eastern Time. We really do hope that you will join us. We're very much looking forward to you joining us again. Thank you so much to Dr. Ndumele for joining us today. It was my privilege to host this event.

Email your questions to askada@diabetes.org, and in the subject line, please include ask the expert's Q&A so that we know that you're referring to questions regarding one of these events. Let's move on to our poll survey. I'm going to read a question, and then if you wouldn't mind answering it on your keypad, that would be excellent. The first question is for this Ask the Expert Event. This event met my expectations today. For yes, please press one. For no, please press two. If you're unsure, press three. Let me please read that again. Question one, this event met my expectations today. For yes, please press one. For no, please press two. For unsure, please press three.

While you're answering the question, if you feel that you can use some support for managing your diabetes, please check out diabetes.org. The website is chockfull of links and information that are really helpful for managing your journey with diabetes. Okay, excellent. So, let's move on to question two. Question two, I will attend another Ask the Expert event. For yes, please press one. For no, please press two. If you're unsure, please press three. Question number two, I will attend another Ask the Expert event. For yes, please press one. For no, please press two. If you are unsure, please press three.

I'm thinking about our discussion today as you're answering that question about food, which is, of course, as a registered dietician, something I discuss a lot. So, if you're looking to expand your recipe file, or you want to look at more menus that might be interesting, check out the website diabetesfoodhub.org. That's diabetesfoodhub.org. You'll always find something there that's really interesting to try. I know we're always looking for new things around nutrition and new recipes ideas. Let's move on to question number three. This event improved my knowledge of how to lower your risk of heart disease if you have type two diabetes. This event improved my knowledge of how to lower your risk of heart disease if you have type two diabetes. For yes, press one. For no, press two. If you're unsure, press three.

Again, this event improved my knowledge of how to lower your risk of heart disease if you have type two diabetes. For yes, press one. For no, press two. If you are unsure, press three. Please know in living with diabetes, you are not alone. There are over 38 million people who live with diabetes, so so many people have it. If you're looking for support, please consider to reach out to the ADA website, or you can get a lot of support and information there. As we're waiting for the poll to be collected on type two, let's move on to question three. Let's move on to question number four. I intend to use the knowledge I gained for yourself or for your loved one's next appointment with a healthcare professional. Question number four, I intend to use the knowledge I gained for myself or my loved ones at my next appointment with a healthcare professional.

For yes, please press one. For no, press two. If you are unsure, please press three. Again, question four, I intend to use the knowledge I gained for myself or my loved ones in the next appointment with a healthcare professional. For yes, press one. For no, press two. If you are unsure, please press three. In all the topics that we talked about today with Dr. Ndumele, which was such a great discussion, we also talked about the importance of checking on your blood glucose levels, your blood sugar levels, and how that's recommended for diabetes management. So, please remember to check your blood glucose levels as often as you need to.

Let's move on to question number five. Question number five, before this event, I felt confident talking to a healthcare professional about my or my loved one's increased risk of heart disease and stroke. Again, question number five, before this event, I felt 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, please press two. If you're unsure, press three. For yes, press one. For no, please press two. If you're unsure, press three. While you're doing that, I wanted to mention another great resource. Check out the heart disease risk calculator at www.cvriskcalculator.com. Let me repeat that. It's www.cvriskcalculator.com. You can use that and discover if you are at risk for heart disease.

We only have one more question to go, and we are ready for question number six. Ready? Question six, after this event, I feel confident talking to a healthcare professional about my or my loved one's increased risk of a heart disease and stroke. Question number six, 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. If you're unsure, please press three. I'll repeat that one more time. Question six, 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 if you're unsure, please press three.

We sincerely appreciate your time during today's event and taking this survey. I look so forward to engaging with you at the future Ask the Experts events. Please visit diabetes.org/experts to learn more about upcoming events. Thank you so much for your time and have a fabulous day.