

KDBH Podcast #10: Lifestyle Management for Prevention of CVD

- Nathaniel Clark: 00:05 Welcome, and I really want to thank you for joining this podcast on cardiovascular disease and diabetes for healthcare professionals. The purpose of this ongoing series is to reduce cardiovascular deaths, heart attacks, strokes, and heart failure in people living with type 2 diabetes and is based on the collaborative initiative between the American Heart Association and the American Diabetes Association.
- Nathaniel Clark: 00:32 Know Diabetes By Heart, this series is brought to you by founding sponsors: Boehringer Ingelheim, and Eli Lilly and Company, Diabetes Alliance, and Novo Nordisk, and national sponsors: Sanofi and AstraZeneca
- Nathaniel Clark: 00:54 I am Dr. Nathaniel Clark, an endocrinologist and joining me is Melissa Magwire, a nurse and certified diabetes educator. We will be discussing lifestyle management for the prevention of cardiovascular disease. I will begin to go through some of the major points that I think I have found to be important in my practice in caring for those with diabetes. But first, because we're talking about lifestyle and the importance of lifestyle modification, we will talk about issues of weight and related to that activity.
- Nathaniel Clark: 01:34 As I think is clear to all, weight is really based on caloric expenditure as compared to caloric intake. And so if one wants to maintain a healthy weight or to reduce their weight, they need to focus on these two components. How many calories am I taking in and how many calories am I expending?
- Nathaniel Clark: 01:58 In terms of diet and the issue of number of calories in, I think the most important thing in my experience is not what you eat, but how much of what you eat. And I find most patients do best when they focus on issues of portion control as opposed to going on a very strict diet where they eliminate either entire groups of foods or specific foods, particularly when those foods are groups of foods or foods that they enjoy. If you are eliminating the foods that you are used to eating and you enjoy eating, it's likely to be a very short lived experience.
- Nathaniel Clark: 02:37 I think in terms of diet, the most important component in my mind is the issue of portion control. I think studies have shown that there probably has not any great advantage to any specific diet, whether it's low carbohydrate, high carbohydrate, low fat, high fat. It's really a matter of total calories in and finding a way to eat, which can be sustained for a lifetime as opposed to a diet, which for many people is a temporary change in the way they eat.

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- Nathaniel Clark: 03:09 In terms of exercise and the number of calories we burn, it's very important to see the difference between exercise and activity. Many people are very intimidated by the word exercise and they think exercise means you have to join a gymnasium and have special clothes and get on all sorts of machines. What we're really talking about is increasing caloric expenditure. One of the greatest ways to do that and the easiest ways to do that is simply to walk, to walk further than you normally would, park further away from a building, use the stairs instead of an elevator. Look for every way you can to expend more calories, and if the number of calories you expend exceeds that which you take in then weight loss will occur.
- Nathaniel Clark: 03:56 I think that's really the major points that I would make in regard to the importance of relative weight. Melissa, did you have any comments you wanted to make on that?
- Melissa Magwire: 04:07 Well, Dr. Clark, I think you summed that up fantastic. Those are some of the ways that we would go about certainly as a diabetic educator in finding a lifestyle change that actually fits each individual patient and finding something they can stick with. And we attempt to say that while we're giving you an eating plan and a diet per se, it's more of a way of eating and a way of life. Something that you can follow from now until you know 20 years from now that can really make an impactful change. Adherence is something that our patients struggle with and you are aware of that as well. And so setting them up with a plan that they can succeed in, rather than one that they can fail is huge and makes the biggest impact.
- Melissa Magwire: 04:49 The physical activity as well. I often tell my patients, I don't like to refer to that as exercise because patients often equate exercise as what you described; having to go to the gym, having to pay out a lot of money, having to run or do something that they can't physically do. So we say increase activity and just simply move. We liken it to the adage of the 150 minutes per week and I tell patients, I don't care what they do, they can stand in the middle of their living room and flap their arms, but as long as they're moving, they're doing something and then something measurable like steps per day, where you know currently they may be getting in 2,000 steps per day and we asked them to increase to three. So all of your tips and the ways that you're working with your patients really align with what we're doing here at my center as well, and I think really allow patients to achieve those goals.
- Nathaniel Clark: 05:37 Great. Well, I think the second point I wanted to make has to do with really the way that we now look at the management of

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diabetes and that we are traditionally, when focused exclusively on the control of blood glucose levels, which was referred to by as sort of a glucose centric approach. We now realize that that is really not the appropriate approach. It may be the right approach when you're talking about microvascular complications of diabetes: blindness, kidney disease, and such. But it clearly is not the right approach if you think about macrovascular disease such as heart attack, stroke, and a large part of lower extremity problems. And so we often refer to the ABCs of diabetes.

- Nathaniel Clark: 06:26 A being A1C, the major measure of blood glucose control. B being blood pressure, and the incredible importance of management of hypertension and the maintenance of a normal blood pressure. And C being cholesterol, which is measured in a lipid profile and has many components where we look at not only a total cholesterol, but obviously at levels of LDL and HDL and triglycerides.
- Nathaniel Clark: 06:56 I think the important point here is that we really need to break this habit in terms of diabetes management of solely focusing on blood glucose levels and instead expand it if we are concerned about what really takes the lives of our patients, which is macrovascular disease, heart attacks and strokes to really focus on not only blood glucose, but also blood pressure and cholesterol.
- Nathaniel Clark: 07:24 And in that context, it's all too important when you begin to think of what medication groups to use in terms of managing patients with diabetes to realize now that we're very lucky that we do have groups of medications that not only do a very good job of reducing blood glucose levels, but also in very, very impressive clinical trials have been shown to have distinct benefit in terms of cardiovascular disease. And so that also is an important thing to consider. Did you have any comments on this point, Melissa?
- Melissa Magwire: 07:59 I do actually. You summed it up quite nicely. Having been a certified diabetic educator for close to 30 years, I've really seen how we approach this disease evolve. Recently, just within the last year and a half to two years, actually joined a cardiology office as a master's prepared diabetic educator, working with cardiologist alongside of our patients that have diabetes.
- Melissa Magwire: 08:24 The International Diabetes Federation noted that in 2015 over 5 million people died from complications of diabetes, and the majority of that was related to cardiovascular complications. Whereas I started my career in cardiology, I quickly switched to

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endocrinology because I realized all my heart patients had diabetes. And now 30 years later, I'm back in the cardiology field. So they really are commingled together and we are teaching our patients that cardiovascular disease and diabetes tend to be risk factors to each other, and that we can no longer look at them in siloed ways and that the whole care team needs to sort of evolve in this.

- Melissa Magwire: 09:05 As far as the medications that you spoke of, we do now have more tools than we ever have in our toolbox to treat not only the historical glycemic preferences, or the importance that we have, but also then hit some of these macrovascular changes as well. So I think now as it really exciting time in really making sure that not only as providers we understand the correlation between type 2 diabetes and heart disease, but that we're educating our patients to understand that correlation as well.
- Nathaniel Clark: 09:35 Exactly. One other point I wanted to make before I move on to my third area, and that is that again we are as ... Not only when we think about what medications to use in treating our patients with type 2 diabetes in regard to, are there cardiovascular benefits of this particular drug class, it's also important to think in terms of the first topic I discussed and that's weight. To realize that whereas when we used to be sort of stuck in this problem that the only medications we had for the treatment of type 2 diabetes lowered blood glucose, but also had a tendency to raise weight.
- Nathaniel Clark: 10:16 We now can group the treatment of diabetes in terms of medications into those that promote weight gain, those are weight neutral, and those that earn fat, weight reducing. So that's another consideration, which certainly has become a part of the guidelines of the major endocrinology and diabetes organizations that when you're thinking of which drug to use in succession, to think about the issue of weight effects.
- Nathaniel Clark: 10:43 The last point that I wanted to discuss, and I think it may be that this falls more in Melissa's category than in mine, but it has to do with the issue of promoting adherence to medication management. I think this is the sad truth. This is probably an old sort of adage, but-
- Nathaniel Clark: 11:00 ... and truth. This is probably an old sort of adage. But I remember I was taught that of all the prescriptions written, a third never get filled, a third are filled but are not taken, and perhaps at best a third are actually filled and taken as

prescribed. So we have to always remember as providers that writing a prescription, or nowadays sending a prescription electronically, that does not accomplish the goal. Drugs not taken have no effect on blood glucose or cardiovascular risk, et cetera. So we have to always think about, are there ways that we can help our patients to increase their adherence? A few that I found to be useful have to do with making sure that patients put the medications near something which they do every day. So if it's a once a day medicine that's going to be taken in the morning and the person is a coffee drinker, put it near the coffee pot or put it near the orange juice.

Nathaniel Clark: 12:03 If we're talking about mealtime insulin, I always tell patients particularly that are using insulin pens, when you set the table, you have your fork, your knife, your spoon, and your insulin pen, and then when you sit down to eat, it's a reminder that, "Oh, I'm about to eat, this as a time to take my insulin." I have so many patients who tell me, "Oh, I completely forget. I sit down and then it's been an hour after the meal and I suddenly remember." That's one. There are obviously a lot of other little tricks. There are pill packs where they can put their pills in for every day of the week. There are calendars that people use, whatever patients will find to be helpful. But the point that I'm trying to make is that it's so easy as a provider to think, "Oh, I sent him the prescription, what more do I need to do?"

Nathaniel Clark: 12:53 The answer is we need to do a great deal more to really make sure the patients understand why they're taking it and make sure that they are taking it. I'll now turn the major part of the program back to Melissa to make any comments on this third point and then to go on with some points she wanted to make.

Melissa Magwire: 13:12 Thanks, Dr. Clark. I applaud your approaches to adherence. So those are some of the same tricks and tools that I use. I sort of approach adherence with my peers as asking them to consider three things. Is your patient educated enough to understand why they need to take the medication you're prescribing? Do they have the financial means? Or is there some psychosocial issues to why they're not taking it? Usually, I have found that there is one or maybe a combination of all three of these reasons that might be keeping our patients from being adherent to medication. Truly I think, and you hit this with your last bullet point, having the patient understand why I'm prescribing the medication I'm prescribing, what it's going to do for them, what any potential side effects could be, and ways to mitigate those before they even start the drug is probably one of the biggest keys, because most of the time these patients have multiple,

multiple comorbidities and really have a background of polypharmacy and multiple medications to take.

Melissa Magwire: 14:09 That ties in to financial issues. If you're adding one more pill burden or one more copay, there better be a really good reason for it in the patient's eyes. So really educating the patient to understand why we're prescribing it, how to take it, how to lessen any potential side effects, what to expect, those are all key things. Then actually making sure there are no other psychosocial issues tied in with that. If you address all three of those things, we really have seen a lot more increase in adherence and a lot better chance of making sure our folks take the things we're prescribing. So I agree with you on that. One of the next things we're going to talk about is really making the connection between diabetes and heart disease, and that really trying to understand how many of those living with diabetes have ever really even had a conversation with a healthcare practitioner about the connection and what is heart disease.

Melissa Magwire: 15:03 Talking to our patients and making them understand that it's not just the typical MI that they may think about, or heart attack that they may think about, that this also includes peripheral arterial disease, cardiovascular disease, heart failure, all of those things that are all wrapped into sort of this mysterious thing we call heart disease that our patients may not understand. Again, the International Diabetes Federation had a beautiful study called, Taking Diabetes to Heart, that really looked at patients and talked to them and said, "How many of you ever really had a conversation with your practitioner regarding the link between type 2 and diabetes?" Only one in four patients with type 2 had ever discussed or could remember having discussed their cardiovascular risk with any health professional in their care team. Only one in four had really talked to their professional about what they could do about it.

Melissa Magwire: 15:55 And really, three out of four said they relied on the information given to them by health professionals. So it appears maybe we're not hitting the mark or at least some of us aren't. We may have every well-intention and a plan outlined in our lovely note that we dictate on the chart, but if the patient doesn't understand the connection between heart disease and diabetes, we're really not going to make any kind of a change in the problems that we're seeing and the lack of really improvement or decrease in heart disease is that... actually has been brought about another study, is that actually heart disease and those with diabetes is on the rise again, unfortunately. So I'd be interested to hear your thoughts on that, Dr. Clark, about

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how you think maybe we're not making that connection and some steps in order to do that.

- Nathaniel Clark: 16:41 Well, I think that it's a very difficult problem to solve. Unfortunately, I think a large part of it is that the medical community is so segmented in terms of different specialties that patients sort of fall into this, that when they go to their cardiologist, they talk about their heart, and if they go to their endocrinologist, they talk about diabetes. If they go to the podiatrist, they talk about their feet, et cetera. What we need to work on, and I know this is a point that you also put down that we would be discussing, is we need to come up with much better strategies so that we're presenting a unified approach to the patient from the perspective of the endocrinologist, the cardiologist, the nephrologist, the diabetes educator, et cetera, so that we're all sort of speaking from the same script. We just have to keep reinforcing, as you've said, to these patients that diabetes is not an isolated problem. It is overlapping with the same issues that they're talking with about other providers.
- Melissa Magwire: 17:51 Yeah, I agree with that. That is one of the things we were going to talk about, is there a lack of care coordination when it comes to diabetes and heart disease? I can tell you that's why I'm currently in the position I am in within this cardio-metabolic clinic, is to see if we can bridge that gap. With every patient we see, we've referred to their healthcare team as their team and we make sure to tell them that we would be reaching out to their endocrinologist, we'll be reaching out to their primary care and that all of us are their team. Then you need to consider that, that we are no longer practicing in silos. And while we may be prescribing a medication that historically was thought to just lower glucose, we may be prescribing it today for that, but also cardioprotective means. And we explain what that means.
- Melissa Magwire: 18:37 Then we make sure to reach out to the other members of their care team, be that their endocrinologist or their primary care, and we use verbiage such as, our shared patient was seen today. We are seeing a lot more interaction between our care partners by referring to our patients as shared patients and making sure we keep everyone on the same page. I don't know if there's anything different you're doing in your area or any thoughts you have on that, but are you starting to sort of see that bridge come about?
- Nathaniel Clark: 19:04 Well, I think I'm a good example of the problem because my nurse practitioner and I, we've read all the heart association guidelines and the diabetes guidelines and we really want to follow them in terms of issues of use of statins for example. We

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have been completely thwarted because we talked to these patients and we tell them and then they go back to their primary care or even to their cardiologist and the cardiologist says, "Oh, your LDLs, 85, that's pretty good. I don't think you really need to worry about it." Or, "Gee, even though you've had a heart attack, your LDL is really quite good. So I think you can probably stop your statin." So we're constantly sort of feeling that we wish that we could have some ability in a community to get primary care and cardiology and endocrinology together sort of to sit down and say, "Look, let's come to some agreement here. Is this a reasonable guideline and how should we pursue it?"

Nathaniel Clark: 20:09

Because statins have a very bad reputation with many patients which is not justified. But I think it's not an easy thing if somebody is on a low dose of one statin and you say, "Oh, well, we're going to change the statin, we're going to increase the dose." They immediately are going to come back and say, "Oh, well, I'm having pains all over my body every time I move," et cetera. That's unlikely due to the statin, but that's not what the patient believes. So I think that I really struggle with this of not being in a cardiovascular heart center or anything like that, of really having difficulty trying to connect with these different specialties and with primary care, so the care really would be shared.

Melissa Magwire: 20:56

So I think we know that there's a change in the health system coming from that of a volume-based system to a value-based system. I think that's going to force a lot of change. I think that practitioners such as yourself that are very proactive on that may find themselves finding partners within their primary care and cardiology peers in the same area and really starting that dialogue. One of the things, like I said, that we found most helpful was not only reaching out to our peers, "Hey, we've made this change in our shared patient," but also making sure that we educate the patient as to why we're making the change, so that when they go back to see that other healthcare provider, they can say, "Well, Dr. Clark wanted me to change this because X, Y, and Z," and have an educated conversation with their practitioner.

Melissa Magwire: 21:44

So I encourage you to keep working on it. I know you will because it sounds like you're really trying to do the best you can for your patients. I think it will all fall in line. But honestly, the care team really starts with the patient and educating the patient as to why we're making those changes, and then it seems to evolve a little easier. So one of the other things we were going to talk about is, have those...

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- Melissa Magwire: 22:00 So one of the other things we were going to talk about is have those living with diabetes been given enough education on the relationship to cardiovascular disease prevention and what questions to ask their providers. So that really dovetails in very nicely to what you and I just spoke about is that are we arming our patients with enough information so that when they do see the other members of their care team, they can make a good choice or can come up with a good list of questions to talk to that other care provider about? So I'd be interested to hear your thoughts on that.
- Nathaniel Clark: 22:37 Well, I think there's no question that particularly we've said for years that diabetes is a self-managed disease and in some ways the person with diabetes really does need to be sort of the captain of the team and use providers appropriately in order to achieve goals. I think the answer to the question is no. I don't think patients are educated enough about the connection between their diabetes and its complication and specifically heart disease. I think that is something we really need to work on because diabetes, it suffers for the fact that there isn't an urgency.
- Nathaniel Clark: 23:16 It's generally not painful. There aren't lumps. People don't die of it in the short term, bleeding's not involved. When other health problems come up it gets pushed aside. When there are problems in the family, it gets pushed aside. When someone loses their job, pushed aside. I think we have to keep reminding people of the importance of diabetes because it's not in and of itself. It's because its relationship to heart disease and kidney disease and eye disease, et cetera. So I think it is a work in progress that we have to really work to empower our patients to ask the right questions of their providers.
- Melissa Magwire: 23:57 Yep. I agree with that. That really speaks to one of the next points I want to talk about is that I often say the same thing, that sometimes our patients don't react until they've already had a symptom of a complication and that we want to try to be proactive. One of the things that I have really found in sort of shifting my focus from a glucose-centric focus to an overall cardio-metabolic focus is this issue of heart failure. We often talk about heart disease and not only do my patients mostly correlate that with MIs, strokes, heart attacks, but even some of my peers. I was at a national convention not too long ago with a poster on the link between heart disease and diabetes, and to a T, almost every practitioner who walked by said, "Yes, I know my patients are more prone to coronary artery disease," but not a single one of them proactively brought up heart failure.

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- Melissa Magwire: 24:51 Heart failure is one of those conditions that's often not spoken about or educated on with our patients with Type II, but really is seen in huge number of patients and also one of those things that if we wait until you have symptoms of heart failure, we've lost a lot of valuable time that by the time you have the classic symptoms of heart failure, there's quite a bit of degree of that going on. So when speaking to your patients about heart disease, have you found that you're making that transition from just speaking about coronary artery disease but also now talking about it globally and including things like heart failure as well?
- Nathaniel Clark: 25:31 I think absolutely, but I think this is a case where when I see a new patient for diabetes, I'll look at the problem list and heart failure generally does not appear on the list even though when you then look under the section of hospitalizations it will say, "Oh, hospitalized for congestive heart failure." So I think it's not top of mind from any endocrinologists. We do tend to look and we say, "Oh, well has there been a heart attack and is there hyperlipidemia and what about hypertension, et cetera?" It's not the easiest thing when I'm interested in this to look at a chart and tell whether [inaudible 00:26:07] has had a problem with heart failure. So I think that's a case where particularly as we now have drugs that are getting new indications from the FDA, drugs for the treatment of diabetes that are getting indications that are based on issues of heart failure, that I think endocrinologists really have to step up to figure out how do we get this information on the patients so we can talk to the patient about that very important connection.
- Melissa Magwire: 26:34 Yeah, and I agree. Often when I start to talk to my patients about heart disease, they'll say, "Oh, well I've not had a heart attack yet. My cholesterol may be good." When I say, "Well, there are other things that can happen to your heart besides actually having a heart attack," a lot of patients have no idea about the connection between heart failure and diabetes. Then taking it further than the heart, peripheral vascular disease and diabetes. So I think overall, globally we need to not only do a better job in educating about the link, but then also expanding the breadth of knowledge that we give our folks, our patients as to what all that really does entail. So that was it on my questions. Do you have anything else that you think we could talk to our peers about regarding lifestyle management for the prevention of cardiovascular disease?
- Nathaniel Clark: 27:21 No, I think we've covered a lot of important points in this podcast. I just think the overriding issue is to really ramp up our efforts to make this connection for providers and for patients between heart disease and all of its different entities and

diabetes because there's no question that that link really has to be made so that when we look at the patient we're not focusing on blood glucose and that's the only thing we focus on diabetes, but that we're thinking at the same time in terms of the medications we choose and in terms of the strategies we use to really think about that patient in terms of what their risk factors are for a cardiovascular disease and when we're talking about a new medication to say, "Oh, by the way, in addition to this medication being excellent in reducing your blood glucose levels, it's also been shown in a major study to reduce the risk of heart disease both in those that have not had a prior myocardial infarction and then those that have." Then also to talk about issues of heart failure.

- Nathaniel Clark: 28:37 The issue of peripheral vascular disease I think is also an unexplored area where I think patients don't really see that connection and providers are not focusing enough on the issues of peripheral arterial disease and getting the appropriate studies even though it's relatively common for people to verbalize the pathognomonic issue of I walk, I get pains in the backs of my legs. I stop, pain goes away. I walk, the pain comes back, you know, which is sort of the cardinal feature for arterial disease in the lower extremity. So I think we've covered a lot of material and we really hope very, very much that this will be useful to you in terms of caring for your patients. So in closing, I would really like to thank you very much for listening and please stay tuned for any upcoming podcasts.
- Melissa Magwire: 29:34 Thanks so much for taking your time tonight to listen to this podcast Know Diabetes By Heart: Lifestyle Management For Prevention Of Cardiovascular Disease. We hope you find this as interesting as we do, and that potentially you've taken away some pearls that you can apply and practice. I'd like to thank Dr. Clark for his insights and time as well. Thanks Dr. Clark.
- Nathaniel Clark: 29:53 My pleasure. The one final comment I'd like to make is that we've talked a lot about the connection between diabetes and heart disease, but I hope that you'll also glean the connection between physicians such as endocrinologists and diabetes educators such as Melissa in really accomplishing the goals that we're trying to accomplish. Doctors cannot do it alone. Educators cannot do it alone. The power of a team, of having physicians, nurse practitioners, or physician's assistants and diabetes educators all working together really is a very, very powerful combination.