Coronary Artery Stents Versus Bypass Surgery: What Are the Considerations?

Webcast

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Introduction

Andrew Schorr:

What about coronary artery disease? What do you do? If your arteries are narrowed or blocked do you have stents put in? Do you have coronary artery bypass surgery? Can medications do the trick? We will help sort that out with a leading expert from Northwestern Memorial Hospital and two very knowledgeable and inspiring patients on Patient Power coming up next.

Hello. Thank you for joining us this evening. I'm Andrew Schorr broadcasting live. Thanks to Northwestern Memorial for sponsoring webcasts we do every two weeks connecting you with leading Northwestern Memorial experts, inspiring patients and always a significant medical topic. And our topic today applies to so many now, and that is coronary artery disease. As we get older, as the typical American having blockages, narrowing in their arteries, what do you do about it? Now we have a variety of approaches. Certainly we've had bypass surgery around for a number of years. We also have coronary artery stents, and in recent years they've been coated with drugs that can help keep things open. What about those? When can medications be the way to go, or if you take medications after any of those procedures how do you make sure it's working right for you? We're going to talk a leading expert, a cardiologist from Northwestern, Dr. Charles Davidson, in just a minute. And you can call in, because it's a live webcast, with questions. Let me give you the phone number. 877-711-5611 Or you can send an e-mail right now with a question or comment. Send it to NMH, for Northwestern Memorial Hospital, nmh@patientpower.info.

All right. We always like to begin with a personal story. Today we have two. Two gentlemen, normally from the Chicago area. One of them is enjoying Florida you're going to meet in a second, and we're going to learn how heart disease presented itself for them and, and how in this case their doctor, our guest tonight, Dr. Davidson, helped, and also along the way we're going to learn what's really their message to you.
Patient Stories

First I’d like to introduce you to Thomas Owens. Now, Thomas usually is in Chicago, and he operates a charitable trust there, the Owens Foundation. He’s lucky enough to be in Siesta Key, Florida tonight, although while the weather was 81 degrees there today in Florida it was about 60 degrees in Chicago, so not the differential that one would normally expect now in wintertime.

Thomas, let me see if I got this right. You have a huge family, five children, 21 grandchildren, and you’re 72 now. But a number of years ago at age 58 you were with one of your daughters touring University of Illinois, right?

Tom:
Right.

Andrew Schorr:
And what symptoms did you begin feeling during that tour?

Tom:
Well, unfortunately my daughter kept me out very late that night, and we were walking, oh, I guess in the early morning hours back to her house, and I felt this pain in my wrist. And as we walked faster I got the shortness of breath, and I had to stop a couple of times. And it was the first time that anything like that happened to me. And so when I got back home in Chicago I got on my treadmill to try and duplicate the sensation, and sure enough I was short of breath. And that's when I contacted Dr. Davidson.

Andrew Schorr:
All right. Now, this was a number of years ago. And I understand there was a history of heart problems in your family that you were aware of.

Tom:
Yes. My father died at 62, and he had four brothers. They all died in their 50s or 60s, and most of their children, the male children in the family, died early as well. So I certainly had some concern.

Andrew Schorr:
Right. Now, I'm going to sound like a doctor taking a medical history for our audience for a second, but I know one of the risk factors is smoking. Did you smoke or had you previously smoked?

Tom:
I had smoked, but I had stopped in 1970.

Andrew Schorr:
And how about your weight?
Tom:
I was fluctuating, probably mostly overweight, about 20 pounds. Certainly not obese, but I always carried a little extra weight with me.

Andrew Schorr:
All right. Now, during that time I know you used to be with IBM, if I recall.

Tom:
That's right.

Andrew Schorr:
Would you say that was a high-stress job you were in?

Tom:
Yes, it was.

Andrew Schorr:
Okay. That would be all the things I'm sure Dr. Davidson asked you about too. Let's meet our other patient guest. I should mention, the intervention Thomas had 14 years was he had stents, we believe there were three, we'll check with Dr. Davidson, that were put in his coronary arteries to keep them open. And, Thomas, that went well, and you've been doing well since then, right?

Tom:
Yes.

Andrew Schorr:
All right. Let's meet another gentleman. Alan or Al Frisch joins us from Northbrook, Illinois. He owns a car dealership in Highland Park Illinois, Ford Lincoln Mercury. So we wish you well with that, certainly, Al. Al, so you are 61 now. Five and a half years ago what happened to you? As I recall from what you told me earlier you were hitting golf balls. Tell us that story.

Alan:
Yeah, I went to the driving range, and there was a guy there that was really hitting the ball far, and I thought I was going to mirror what he was doing so I really gave all my energy at the driving range. And I went home afterwards, and I was home for about 15, 20 minutes and sat down on the couch, and I started getting chest pains and pains in my arm.

Andrew Schorr:
All right. If you'd been home alone you'd sort of see if it passed. Did you say anything to your wife, who was home?

Alan:
Yeah, I was telling my wife that I was having chest pains, and I have a daughter that's in the medical industry so she called my daughter up. She ran over to the
house, she lives close by, and the next thing I knew I was on my way to the hospital. And like I told you when I talked to you earlier, had I been home alone I probably would have done nothing. I would have just laid down or gone to sleep, or I would have just blown it off as being nothing.

Andrew Schorr:
Or maybe being dead.

Alan:
Yeah, or maybe, nothing, I wouldn't be here.

Andrew Schorr:
Thank god for women, that's what I want to say. I have a wife at home, 25 years. It's almost Valentine's Day as we do this program. We have to be thankful for them. So often men, and we'll talk about this during the program, often, all too often ignore the symptoms of an acute heart situation, and hopefully today's program can correct that a little bit.

Now, Thomas, there he is down in Florida and doing well. Thomas, have you had any more symptoms since you had the stents, or have you been in the clear, if you will?

Tom:
Yeah, I've been pretty much in the clear through Dr. Davidson's good offices he's kept me on a number of statins and other drugs that have kept my cholesterol, my triglycerides down to a manageable level. I exercise daily. I'm on either the treadmill or I power walk outside for 45 minutes or so every day, and I've tried to keep my weight in check as well. So then with yearly checkups, and Dr. Davidson has done at least on one occasion an angiogram just to make sure that everything was still good. And I'm in very good shape.

Andrew Schorr:
Great, and enjoying Florida.

Tom:
Yes, I am.

Andrew Schorr:
Now, Al Frisch made some big changes. Al, now, first of all we talked about family history. Thomas was aware of his family history. You were aware, but there was a family history on one side but not on the other and you made some assumptions that maybe were wrong. Tell us about that, your mom's side, your dad's side.

Alan:
Yeah. My mom's side has good longevity. Her, her brother and all of her first cousins all seem to go in their 90s before they pass. On my father's side, my father had heart disease. He had a bypass operation. His father died at 60. His brother
died at 40 on the train going to work, so there always was family history of heart problems. And I made a stupid assumption because I looked more like my mother that I had her genes and that I would never be sick.

Andrew Schorr:
Well, you had her good looks but maybe on the inside some of the heart plumbing wasn't from your mom. But also let's mention you were a smoker. Tell us about that.

Alan:
Well, I smoked for 40 years, up until the heart attack. After that I haven't had a cigarette since.

Andrew Schorr:
Right. And I think you told me earlier it was like a pack and a half a day, so it was substantial. I know my brother for years used to smoke those Camels with no filters for years and years, and he had heart problems too, and I'll mention that as we go on about what intervention he had. Okay. You sort of got religion as well, Al, made huge changes. Tell us about the changes you made.

Alan:
Well, I went to a cardiac rehab program after we did the stents and they said I'd be ready to exercise. And really did no exercise before. And it was just a matter of time before I really kind of got into working out, taking care of myself. I never really thought that I'd be kind of an exercise person, but now I exercise at least four to four days a week at a minimum of about two hours, starting with treadmills and elliptical machines. What I'm trying to do is really get that heart beat going and get all of the arteries and valves and veins moving and open so everything is flowing smooth.

Andrew Schorr:
And you see Dr. Davidson as well every year or so. And how have those exams been going?

Alan:
He tells me that I'm doing terrific. He always says that I've been doing the right things. I give him my update on how I take care of myself. I never really had a bad diet. I never was really overweight. Actually when I had my issues I was smoking instead of eating a lot so I was really kind of underweight. I was the reverse of Mr. Owens.

Andrew Schorr:
All right. And we should mention that now you, years later, I think it was about nine years later after Mr. Owens, you had stents put in as well, and we're going to understand that approach, but by then they had developed them where there was
drug coating or drug eluding stents they call them. We're going to learn about that, and that's gone well for you, too. Now, in each case, Mr. Owens mentioned that he has medications he takes. Do you some take medications as well?

Alan:
Yes. I take Vytorin, a whole aspirin, and Toprol XL, 25 milligrams. That's it.

Andrew Schorr:
All right. Let's meet the gentleman with his skill and the whole team at Northwestern has helped you both so much, our medical expert tonight, Dr. Charles Davidson. Dr. Davidson is medical director of the Bluhm Cardiovascular Institute Center For Coronary Disease and Cardiac Catheterization Lab of Northwestern Memorial. He's a professor of medicine in the division of cardiology at Northwestern University's Feinberg School of Medicine. Dr. Davidson, so here are two patients who you've helped, but you must be proud of the changes they made so that that health continues.

Dr. Davidson:
Yes, absolutely. What we do as far as opening the arteries when they've been blocked to a severe degree as both Mr. Frisch and Owens have had is only a small piece of the puzzle, if you will. The lifestyle modification that occurs afterwards, the cholesterol control, blood pressure control, the exercise and diet are the ones that really help carry the day for the long term and give you the nice sustained durable results of angioplasty in these patients. And really to neglect the medical therapy on the back end and just concentrate on the angioplasty or vice versa is often not really providing the patient with their optimal care.

Andrew Schorr:
What we're going to do is we're going to take a little break. When we come back we're going to learn more about diagnostics and treatment, also discuss some controversies that have come up along the way and where they stand now related to stents and bypass surgery, and medical therapy, where that fits in, in place of or after. And also the importance of screening, if you should be screened and when and then also aftercare as these gentlemen have been doing, great follow-up, great work by themselves. We'll be back with much more of our live webcast on coronary artery disease, what to do about it, when we continue right after this.

Angioplasty and Stents

Andrew Schorr:
Thanks for joining us tonight for our live webcast. And here's a phone number to call if you have a question about coronary artery disease detection, treatment, the whole ball of wax. Our leading expert from Northwestern is with us, Dr. Charles Davidson. The phone number is 877-711-5611. And you can send an e-mail to nmh@patientpower.info.
Dr. Davidson, so I'm thinking back about in my own family, my dad, who lived to be 92, and did play golf all the time and exercise and I think eat right, but he did develop coronary artery disease, so I'm sharing that with my doctor of course. He had years ago balloon angioplasty, and this was before stents, so I want to ask you where does that stand now. And also back in the 70s I interviewed a pioneer in the field of I guess bypass surgery, maybe the inventor, Dr. Michael DeBakey, and so I know we've had bypass surgery around for a long time and that continues. So let's set the foundation. Bypass surgery, does that still continue and for whom? Balloon angioplasty, is that still used? And then we'll go on and talk about stents as well.

Dr. Davidson:
Okay. Balloon angioplasty was developed in 1979 actually by Dr. Gruentzig in Switzerland and then soon brought the technique over to the US, and unfortunately Dr. Gruentzig passed in a plane accident, a private plane, but that technology basically began the development of angioplasty in general of the coronary arteries. And that technology has evolved very much so over the years. When I first got involved with this in the 80s we were faced with the problems of, the acute success of the procedure was only about 95 percent. About five percent of the time people would need emergency surgery. We had reclosure rates, renarrowing rates of 30 to 40 percent with a balloon. So while it was a way of avoiding surgery it lacked the durability. It also lacked some of the predictability that we would desire in a procedure to treat coronary artery disease.

And as time evolved stents became available in the early 90s. In fact, Mr. Owens received one of the first ones in the Chicago area. And stents basically improve the predictability of the results, so there was no longer a problem. If you had a tear in the wall of the artery which we got from a balloon the stents basically repaired that tear and tacked it up against the wall of the artery so that there wasn't a problem with necessarily the need for emergency surgery, and that became a major breakthrough, if you will, with angioplasty procedures.

The other thing that stents did at that time was improve the durability, so it took recurrence rates that were 30 to 40 percent with balloons down to about 20 percent with the bare-metal stents. But again you're still dealing with one in five patients that had to come back for a repeat procedure. And so in the early 2000s drug-eluting stents became available. In fact we were the first to implant those in Chicago and were involved with two of the most widely used ones before they were actually ever approved. And those stents basically had a medication placed onto the stent surface that then gets eluted or put into the wall of the artery that prevents the kind of the rec-scarring process that caused what we call restenosis or renarrowing of the artery.

So the big leap forward at that point was that we now took renarrowing rates that typically would as I said about 20 percent with the bare-metal stents suddenly came down to about five percent, so now we had a procedure that was not only very high degree of acute success but also had long term durability. And we know from all of our stent usage over the years that if arteries don't tend to renarrow in
the first nine months that they generally don't renarrow at all, that that scarring process basically stops after about a nine-month period of time. So that really changed the playing field. And if you look what's happened over the years, you ask about bypass surgery, the number of bypass surgeries throughout the country have been steadily downward over the last 15 years, and by no means though has ever, will bypass surgery probably be eliminated in our lifetimes. It still remains a very good treatment for specific people who have severe narrowings particularly in multiple arteries or in the main artery of the heart where we typically don't like to use stents or if they have total occlusions of arteries, so there's where bypass surgery has maintained a strong foothold and still is an important treatment option for patients with extensive disease.

But what has happened has been a large growth in the number of angioplasty procedures, stents being the primary one, over the last 20 years. And now over a million stent procedures per year are being done in the US and really reflect about three times the number of those being done than the number of bypass procedures. Again angioplasty is more for people with disease of maybe one or two arteries, but sometimes if there's a third artery and the blockage can be approached easily with stents that would be an opportunity.

Andrew Schorr:
Let me ask you one other question. I know my brother and others listening, I brother Tony, heavy smoker, smoked those Camels with no filters throughout his life, got into his late 50s and then I think he had quadruple bypass. So it sounds like with a number of arteries that need to be worked on then that was appropriate.

Dr. Davidson:
Right. So that becomes a major factor often in determining whether bypass or angioplasty is the preferred option. And what we've really seen change over time in addition to the technology of angioplasty has really been the medical therapy of patients with coronary disease. And your brother's scenario is very similar to what we experienced a few years back where we didn't have the good cholesterol lowering-medicines like the stronger statins, we didn't have ace inhibitors or beta blockers, or people where not changing their lifestyle. And so you add all that together, and although we were able to treat a blockage or two here or there that they had what we call progressive disease in the other arteries, the point is that surgery was really their only option at that point.

And now once people get into the system and have been identified as having coronary disease and we can address these risk factors in an appropriate fashion the number of patients that have this severe progression that you're describing is a lot less frequent than what we had in the past. In fact if you look at the number of heart attacks nationwide it's actually less than what it was about 10 years ago, which is, actually some good news is that some of the awareness and some of the treatments have really impacted on people's longevity.
The Stenting Procedure

Andrew Schorr:
All right. I've got a couple of questions. I think you started to answer one when we talked about balloons. So the balloon, and of course folks all of this is inserted up through the groin. We should cover the basics, inserted up through the groin in a cath lab, a catheterization lab. But are the balloons used at all anymore?

Dr. Davidson:
So the way the procedures is done, and thanks for bringing me back to that, is a small tube about the size of a pencil is put into the artery usually in the leg, in the groin and then through x-ray guidance we can manipulate the catheters and the wires and stents in order to treat the coronary artery. And then at that point the catheters are taken out, the stent is left in place, and the people are left to recover and generally can go home the following day.

Now, the balloons are really not used very frequently in and of themselves today as the definitive therapy. So we may start with a balloon to pave a little bit of a path in the artery in order to allow us to place the stent in there, but stents make up about 95 plus percent of the angioplasties that are done today. In fact, the stents are delivered as they're mounted on a balloon, so the balloon is actually used to implant the stent. But as far as just doing the balloon alone it's really used infrequently in today's era and mainly because of the problems of recoil, in other words the artery collapsing down again, or the problem of tears, what we call dissections in the artery, and again the problem of this restenotic or proliferation process of scar tissue that we notice with balloons. So they've become adjunctive therapy but not necessarily the definitive therapy for treatment of coronary artery disease by what we call percutaneous options or interventional options.

Andrew Schorr:
Dr. Davidson, you're the professor at Feinberg. Let's see if I get this right. I'm not a med student but just to describe this for people. So as I look at a picture of a stent it looks to me like kind of a wire mesh, and I would imagine when it gets into the artery it's kind of like a scaffolding that holds the artery open. Did I describe it correctly?

Dr. Davidson:
Yeah, that's an excellent description. Sometimes I use the analogy of a spring in your pen to give people a flavor of what they're actually looking at there. But it is kind of a matrix of stainless steel, generally. Sometimes cobalt is used, another metal, and these are implanted in the artery again with the balloon as you described.

Andrew Schorr:
All right. Let me just pop a quick question on Al Frisch. Al, so you had this procedure five and a half years ago but with the drug-eluting stents, and Dr. Davidson was saying they've got it so you can often go home the same day.
Was it a big deal for you, and what about your recovery?

Alan:
I went home the same day, and other than being tired I really had no pain. Actually the biggest problem was with the healing of the groin area where they went in. I had more problems there than I did with anything else.

Andrew Schorr:
All right. Well, they keep getting better about that too. What we're going to do is we're going to take another quick break. And what we come back I want to touch on something with Dr. Davidson. Now, of course I'm sort of a news reporter kind of guy so I look over all the background, but some people will recall that there were FDA hearings just a few years ago to take a look at drug-eluting stents, kind of evaluating them, but there was a lot of research that came out of that new including at Northwestern, so we'll answer those questions for people if there are any lingering questions and then go on and talk more about treatment. And we invite your questions, of course, for this live webcast sponsored by Northwestern Memorial Hospital. We'll be right back with Dr. Charles Davidson, our patient guests and much more. Stay with us.

Drug-Eluting Stents

Andrew Schorr:
Welcome back to our live webcast. We're talking about now interventions for people with coronary artery disease, and Dr. Charles Davidson, who is one of the experts from Northwestern Memorial, joins us tonight. We've been talking about balloons earlier and how they're still used to help out, but we have now drug-eluting stents, bypass surgery for people who may have several blocked arthritis relies and maybe a more complicated situation.

Dr. Davidson, I wanted to ask you about stents. So what was that FDA panel reevaluation of drug-eluting stents all about? And when the dust settled, where did things come out?

Dr. Davidson:
Right. So the drug-eluting stents work by preventing the scar tissue from regrowing within the artery. What was found was that over time, particularly in that first year's time, that typically we would only use blood-thinning medicines for three to six months, double blood-thinning medicine, Plavix and aspirin, for three to six months after a drug-eluting stent was put in, and what was found out was that in that first year really the need for additional blood-thinning medicine was more important with the drug-eluting stents, and it wasn't really well known until the stents became widely available to a large number of patients and were being used really outside what was even the initial testing in the clinical trials that went on.

So a couple years back the news broke, if you will, or papers started to be published including some that we published showing that when you applied these
stents to a wide variety of problems and lesions in patients, many of which weren't treated in the randomized trials, that there was about a half a percent increased difference in the blood clotting with these stents compared with the bare-metal stents. So where we would have let's say a number of patients would be around one and a half to maybe two percent would develop a clot with the bare-metal stents we were dealing with two to two and a half percent with the drug-eluting stents. So that became a concern obviously because when these clots form they can cause a heart attack and can be a very serious condition beside in a heart attack can be a near fatal condition.

So basically what occurred at that time was a general recommendation from the medical community as well as the FDA was that the people that received the drug-eluting stents and particularly those who received them for the more complex disease that they be maintained on two blood-thinning medicines for at least a year and some people, depending on the anatomy, indefinitely. So to really sum that up, what happened at that time it became a little bit of a backlash against drug-eluting stents and the use of them in this country which at one time was 90 percent of the stents dropped down to somewhere around 60 percent at that point in time until, if you will, we had some more information.

What we're seeing now is that the drug-eluting stents are being used in about 70 to 80 percent of patients, and about 20 to 30 percent receive the bare metal. And what we try to do when we're deciding which one to place in a patient we want to know what their ability to comply with the medications is going to be particularly in that first year, what their risk may be if they have to be continued on two medications, will those patients be possibly a need for another procedure or an operation during that first year. And so we try to factor those into the equation when we select the proper treatment for the patients.

I guess I want to take it back to sum this up, is that the drug-eluting stents clearly took renarrowing rates down a lot. They took them from 20 percent down to five percent, a net difference of 15 percent, if you will. The trade-off was about a half a percent increase in blood clotting, but even that could be overcome with the proper use of antiplatelet medicines like aspirin and Plavix. So the trade-off I think for most of us, we believe that it is worth the trade-off but it has to be selected in the right patients because if they cannot take both medications their risk of clotting becomes much higher.

**Andrew Schorr:**
Okay. Thank you for that very complete answer.

Thomas, I haven't forgotten you. I just wanted to ask a quick question of Al because he had the drug-eluting stents. Al, you had some medication changes. You take daily medication, but you had some changes, and I would always tell people you've got to have an active conversation with your doctor. Why did you request a change?
Alan:
Well, it was the Plavix which I was using, after about a year Dr. Davidson said that I could go off it. I didn't really like it because I was bruising all the time. I just felt that I didn't want to have that situation. And we also had changed the statin drug too because Vytorin, for me anyways, we got a better response and it lowered my cholesterol even further than the first drug that I was on, which I don't recall what the first one was.

Andrew Schorr:
And you take aspirin as well?

Alan:
I take a whole aspirin every day.

Andrew Schorr:
Okay. So let me ask but that, Dr. Davidson. So not everybody responds to a medicine the same way, and some have side effects on one medicine where another person doesn't, but I guess it's very important for a coronary artery disease patient who has had an intervention to have an active dialogue with their cardiologist so that they do take the medication that can help even if they need to be switched to a different one. Wouldn't you agree?

Dr. Davidson:
Yes, absolutely, and he's excellent example. While we try to carry this out for a year because we feel that that's the most critical time frame, but just as in his case many patients start developing some side effects. And the bruising can be more than just a nuisance when patients are having this very frequently, so on those patients we may opt to drop one of those medications at that time frame. Again with the cholesterol we're driving to get that LDL cholesterol under 80, and we really want to use whatever medications that are necessary, and in his case the dual medications seem to work the best in getting him to a target level of LDL.

The Role of Genetics and Other Risk Factors

Andrew Schorr:
Thomas Owens, you're down there in Florida, but wherever you go in the country or when you're back in Chicago you've got those children and you've got those grandchildren. Do you ever talk about this or what they eat or whether they exercise for them to be mindful of their heart health?

Tom:
Well, I think with my children it certainly is a topic of conversation. The grandkids are still a little too young to talk about it, but I think my children have benefited greatly from the experience that I've had, and they're largely into exercise and keeping their weight in trim and having regular checkups. So I think it's been very fruitful in terms of what they've learned from this.
Andrew Schorr:
Al, what about you? You told me earlier today that your daughters are very proud of you, but it sets an example, doesn't it? And of course you're going to the gym like crazy, but I mean you can be a real mentor for people who know you. Have you been talking about this to others?

Alan:
Well, your body is your temple. Everything in your life is built around your body. When we're young we kind of don't really think about it the right way, and you have to be a little bit more mature and realize how important your body is, that you take care of it, that you respect it and you treat it the right way because we've only got one. We don't get a second one. So you need to take care of your body, and I send that message out to everybody that I talk to. Some people say get off the soup box every once in a while, but people need to hear it.

Andrew Schorr:
They do. I want to ask Dr. Davidson. So let's go over the risk factors. So clearly our friend Al here was smoking for 40 years, pack and a half a day. Our new president, President Obama smokes. We all have to help him quit. Thomas smoked years ago, but he had a high-stress job, and he had some weight. And also we have an epidemic of diabetes in this country as well. So first of all about risk factors and then help us understand where diabetes comes in too.

Dr. Davidson:
All right. So we have what we call modifiable and then the nonmodifiable risk factors, and family history is always a strong predictor of subsequent coronary disease in the rest of the family, particularly if parents or brothers and sisters have had coronary disease in their 50s or younger. That becomes a strong predictor. Unfortunately there's not much you can do about the genes you've inherited. At least there's not much we can do today to modify those genes.

But then comes these modifiable risk factors which include smoking and cholesterol and blood pressure, all of which we can have a strong impact on with lifestyle modification and if necessary medications to help with that. Certainly weight loss and exercise help to improve hypertension and cholesterol levels. And some people can do it all on their own, but some just have such a genetic predisposition to this that despite their best efforts they still need a little help with medical therapy on those.

Diabetes, as you point out, is an ever-increasing epidemic not just in this country but really throughout the world. If you look at numbers in Asia are increasing 50 to 70 percent, in Europe increasing 30 percent, South America up over a hundred percent increase are predicted in the next ten years. So this epidemic has really spread to be a worldwide epidemic. Part of the probably has been really dietary indiscretion in diabetics, particularly the type 2 diabetes or the adult-onset diabetics where overweight and poor dietary habits have contributed to the this epidemic of diabetes.
In our typical angioplasty population at least 25 to 30 percent of those patients will have diabetes, and good control of the blood sugars have been shown to impact on late events. So when they do have diabetes obviously again, diet, exercise, but control of it if necessary with diabetic medications, if necessary insulin, are also important. We just finished a study at Northwestern, an eight-year study looking at diabetics with coronary disease. It was a National Institute of Health sponsored study which evaluated over 2000 patients, and this year we'll have some information as to what is really the best strategy for treatment of diabetics with coronary disease. Is it angioplasty, is it medical therapy, is it bypass, or what's the best way to control their diabetes as well? And that should be coming out in the spring time at the American College of Cardiology.

Andrew Schorr:
Okay. We're going to be talking a lot more. I've been getting some e-mail questions in for you that we will pose. I want to mention our phone number if someone wants to call in. 877-711-5611. You can send an e-mail right now to nmh@patientpower.info. We're visiting with Dr. Charles Davidson, who is one of the leaders at the Bluhm Cardiovascular Institute and the Center For Coronary Artery Disease, and the cardiac cath lab there. He's the director of that, and of course he's a professor of medicine in the division of cardiology at Northwestern's Feinberg School of Medicine. We'll be right back with much more, your questions and some comments from Thomas and from Al too. We'll be right back.

Listener Questions

Andrew Schorr:
Welcome back to our live webcast. Andrew Schorr here. Forgive my scratchy throat and cold. It happens in the winter for some of us but gives me a deep, booming voice, right? I want to mention we do this every two weeks, and so in two weeks we're going to look at another side of cardiac events and even cardiac surgery. We're going to have with us Dr. Kim Liebowitz, and we're going to discuss depression after a cardiac event. Now, that doesn't happen to everybody, but it can happen, and so we're going to address ourselves to that. That's in two weeks coming up on Patient Power and the ihealth area of nmh.org.

So we've got some questions for Dr. Davidson. Along the way we'll talk with Al Frisch and Thomas Owens as well. Here's one that came in, and people wonder about side effects. You know, is it a side effect of the medicine or putting in the stents? And I know it's hard for you to be their doctor over the internet but Beth from Minneapolis wondered, Dr. Davidson, she said, "I had two stents put in in August of 2008," and she took Plavix and aspirin as you were describing. "And within the first few weeks I started to have confusion and short-term memory loss." Now, is that a side effect connected with the drug therapies at all?

Dr. Davidson:
Actually the angioplasty has been shown to have a lower incidence of stroke and mental problems than bypass surgery, and it's very unusual for that to have
occurred as a result of the angioplasty itself. So I would be looking for other causes in this situation than angioplasty as a cause for her complaints.

**Andrew Schorr:**
Okay. And here’s another one, Kathy from Chicago wrote in and she says, "My husband has had a metallic taste with everything he eats. This has been going on for almost a year." And so she wonders, he’s had four stents put in back in 2005 and then he had another one put in in 2006, so they thought, well, can that come or does that come with any of the medicines, a metallic taste.

**Dr. Davidson:**
Yes, so some medicines can cause a metallic taste, and I would be concerned that it would be one of those. It's not from the metal in the stent. That would be pretty unusual, something that's not even been reported. But some medications can cause a metal taste, and that's where I would have her doctor review her medications with her.

**Screening**

**Andrew Schorr:**
Dr. Davidson, one of the things I was wondering about was screening. So who should be screened and when? And at the Bluhm Cardiovascular Institute tell us about the different procedures you might do to do screening.

**Dr. Davidson:**
Kind of getting back to what we were talking about earlier is that people with risk factors for heart disease, diabetes, high blood pressure, smoking, family history of disease, those people would be the ones that would be best suited for routine screening procedures, which I’ll describe in a second. Obviously people who have symptoms of chest discomfort, breathing difficulties, those obviously deserve screening, but even the asymptomatic patients that are at risk should be screened as we know that maybe up to 20 to 25 percent of patients do not have the typical symptoms or even symptoms of heart disease. It's particularly true in diabetics and in females that don't have the typical textbook symptoms, if you will.

The best screening test really is talk with your doctor about your symptoms if you have any, and then going and getting a stress test, particularly the ones that use imaging like a echocardiogram or a thallium nuclear type stress test. Some of the newer modalities that have come on have been the CT scans of the heart, what we call the coronary CT angiograms, and those are useful in certain populations. I think in very low-risk population that's a reasonable screening test. In people that have let's say a minimally positive stress test but we’re not sure that we want to do an angiogram or a cardiac cath on, this may be a useful way to try to answer the question for them.

But that test again is a fairly new test. The indications for it I think are still fairly limited. We do offer all of these at Northwestern. In fact, I read the CT
angiograms along with our radiologist at Northwestern and do think it has a role but does not really replace cardiac cath nor a really good exercise stress test in your average patient.

**Andrew Schorr:**
One quick question for you and that is, I don't see them so much anymore but there used to be all these TV and radio ads just for anybody in the public, come in and have a 64-slice CT, and they have the story of John or Mary who is alive today because something that wasn't suspected was discovered. Any comment on that?

**Dr. Davidson:**
Again the CTs that I quickly alluded to are a useful screening technology. I think as we have them today in a low-risk population it is a useful test. In a patient that is looking to just get an overall estimate of what their coronary disease burden might be it's a useful test. I would caution people to make sure they check with their insurance companies ahead of time because there are certain indications that are being paid for and others that are not since it is a fairly new test and kind of finding its way through.

But there are clearly success stories with this technology where people, let's say the stress test didn't show something but the physician or patient were concerned enough to get more imaging and therefore showed something that really had changed that patient's outcome. So I think again it's worth discussing with your physician before you go invest the time, effort and radiation dose, but it is a useful adjunct to our screening methods for coronary artery disease.

**Advice and Hope for the Future**

**Andrew Schorr:**
Thomas Owens, I've got a question for you. Now, you heard Al basically tell us that if his wife hadn't been there and his daughter in the healthcare field hadn't jumped on it maybe he would have stayed on the couch and god knows what would have happened. You did jump on it yourself.

**Tom:**
Yes.

**Andrew Schorr:**
What would you say, whether it's other men who tend to try to put their head in the sand and say this really isn't happening to me, or even women, certainly there are big heart problems there, as far as just if you worry about something, something is going on as far as seeking care, because it certainly worked out for you.

**Tom:**
Well, I think we all have a lot of friends who don't want to confront reality. I have a number of friends who have had symptoms and they have gone out of their way not to report them to somebody and not to go to the doctor, and I think the
philosophy that a majority of us embrace is that it's better safe than sorry. And I was concerned because I had never had the symptoms of shortage of breath before as well as the arm and wrist pain, and I wanted to do something about it. And I think with the potential of today's medicine people who avoid it or want to tuck it under their arm and worry about it tomorrow as opposed to today are making a very, very bad judgment about the potential for a real rescue.

I know that in my case Dr. Davidson not only gave me the right solution with the stents but over the years he has treated me with different forms of statins that I probably have changed my medicine five or six or seven times. Some of the side effects of the statins is leg cramps and pain, and he's been very much a proponent of changing the statins to find one that is embraced by your system without any bad side effects. So I'm very grateful for that as well.

Andrew Schorr:
I have a question for Dr. Davidson, just looking ahead, and then we're going to give the last word to Al. So, Dr. Davidson, you have seen tremendous change in this field. Obviously we want to get people not to smoke, control their weight, hopefully avoid type 2 diabetes if they can, be mindful of their history, exercise, and we say that time and time again. But on your end in treatment there have been a lot of innovations. Do you see these moving forward? Are there things at work that can help people even further?

Dr. Davidson:
I think the technology of angioplasty has continued to evolve, and we're getting more ability to treat more complex disease that in the past was being refer to do surgery, so I think that is going to clearly move forward. I do think also we're getting a variety of newer medications that seem to be helpful in both thinning the blood. One was recently approved in panel by the FDA, some others to also treat cholesterol as well, and some of the medications to treat blood pressure have changed. So I think those become the tried-and-true method we have right now. We're looking at people with more end-stage disease using stem cell therapy to try to help with their coronary artery disease, and we're involved with several programs to do that at Northwestern. With people with valvular disease we're starting to put in valves from the leg arteries as well so that they don't need conventional valvular replacement therapy. So the technology has really continued to evolve.

I would just like to finish one thing, and I think maybe Tom said one of the more important things that came out here tonight which is if you're having something that doesn't seem right to you the worst thing people do is to ignore their symptoms. We know that over half of people that die of heart attack die before they actually ever get to a hospital, and those are people who probably could have been saved if they had got there sooner. And also we find that people who go on to have heart failure with weakened ventricles may have waited too long when they had symptoms of chest pain or shortness of breath and the damage was done to the heart muscle that could not be reversed by our usual treatments. So if you're
really not feeling well the worst thing you can do is to kind of what we call deny it and hope that it's going to go away because it could be either a fatal mistake or certainly a life-altering mistake in your long-term outcomes.

**Andrew Schorr:**
Dr. Charles Davidson, medical director of the Bluhm Cardiovascular Institute Center for Coronary Artery Disease and the cardiac cath lab there at Northwestern Memorial, thank you for being with us, sir. That's a wonderful final comment from you. And I'm always impressed with the work at Northwestern, being an academic medical center that you have state-of-the-art, full range, you're committed of course to prevention, and also you have programs for rehab on the other side, and then research. And there will be some patients, as you said, who where even a clinical trial and a new approach that's investigational might be considered as well.

Al Frisch, we wish you well, first of all with your Ford Lincoln Mercury car dealership in Highland Park, but also you have really changed your life. Any final comment that you would say to someone out there who may be still smoking, maybe we'll get the President to listen, or their weight isn't right, or they're not mindful of their family history, not exercising, and maybe develop some symptoms. What would you say to them? Maybe we can save a life tonight, Al.

**Alan:**
Well, the sooner you realize your own mortality the better off you'll be because you've got to take care of your own body. There's nobody going to do it for you. You have to do it for yourself. And if I can get just one last thing in, I'm just thankful that I was able to find a caring doctor like Dr. Davidson that I was able to work with over the years, and he's been a big help in my getting where I am today.

**Andrew Schorr:**
Okay. Thank you, Al. It's a pleasure to meet you from a distance. And Thomas Owens is down there in Siesta Key, just enjoy yourself in the 81 degree sunshine, but Chicago with 60 degrees in the middle of winter, you can't complain about that. All right. Thank you, gentlemen, so much for being with us in a very educational webcast we've done on coronary artery disease. But prevention is the key and certainly mindful of your family history if things show up as well. And thanks to Dr. Charles Davidson and all the folks who have been on the program from the Bluhm Cardiovascular Institute.

Remember, we'll have a replay up one day after the live webcast. We'll add a transcript. There's a whole host of programs we've done previously, many in cardiology in the ihealth area of nmh.org. I'm Andrew Schorr. Remember, knowledge can be the best medicine of all. Good night.

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