Peripheral Artery Disease: Underdiagnosed and Undertreated
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Paramjit Chopra, M.D.
Donald Norwacki

Introduction

Andrew Schorr:
Hello. I am so delighted to be here, folks. I've been traveling for almost a month. I've been in ten countries all along the Baltic, in Europe and London the last six days. Just got back last night. I have so much to tell you. And one thing I will tell you, particularly in London, is people smoke like crazy, and the British, god love them, they eat breakfasts that are loaded with fat, potatoes, bacon, etc. It is not the healthiest diet. So hopefully we in America, or wherever you may be listening are doing better. I'll have lots to tell you about my trip and some observations about health.

One thing I will tell you is I was on board a cruise ship for about 12 days and spent some time with the medical team there. It's amazing, these modern cruise ships now, at least the American ones or the ones that call in American ports have in a sense a floating hospital, and as so many seniors are traveling now, many people with chronic conditions who otherwise couldn't see the world, now they can, but you want to feel that there's medical care should you need it and that it's up to snuff, and I'll have to tell you it is. So I'll have a report on that soon.

Today we're going to move on as we continue our coverage of many of the chronic conditions that people face or the health issues. Again, there is no other program like this on the radio or on the internet or anywhere hosted, if you will, by someone who has lived it, an 11-year leukemia survivor in my case and fortunately doing well. And I also didn't even gain weight on the trip which I'm amazed about. You go on a cruise ship and do that, you have to hit the gym there, and they have great gyms just like they have great medical care in those floating cities.

Today we're going to talk about a condition we haven't really talked about before, and it's called peripheral artery disease. And the suggestion by the PR people who told us about this topic is they said, you know, it's underdiagnosed and undertreated and there may be eight to 10 million Americans who are living with it. It's a serious condition, but it's underdiagnosed and undertreated. Now, we think of clogged arteries leading to your heart, but they can also be elsewhere. It makes sense. If we have a high cholesterol diet or we're producing cholesterol on our own or other blockages, we're looking at all kinds of
hereditary connections to these cells that can clog the arteries as well, it doesn't just have to happen supplying your heart muscle. It could be in other parts of your body. Could that be serious? The answer is yes. What do you do about it, and there are some innovative approaches to it too.

So an expert has been suggested to it, it's Dr. Romi Chopra, and he has a longer first name. I'm going to get him to say it. He's an interventional radiologist, and we'll learn more about that specialty. And he is the medical director for the Midwest Institute for Minimally Invasive Therapies, and that's in Chicago.

Dr. Chopra, welcome to Patient Power.

Dr. Chopra:
Thank you, sir. Thank you very much. It's a privilege to be on the show.

Andrew Schorr:
Thank you, sir. Now, help me get your first name right. How do you pronounce your first name?

Dr. Chopra:
It's Paramjit, and actually other than my mother almost nobody calls me Paramjit anymore. Romi is my nickname and just about everybody seems to call me Romi. It's like Bob or Dick or something like that.

Andrew Schorr:
Okay. And I know you are originally from India, and I was in London, you know, the last week, and boy, there are a lot of people from India there in all walks of life. It was just fascinating.

Dr. Chopra:
That is correct. Yes.

Andrew Schorr:
Well, Dr. Chopra you decided to go to medicine, and of course for a while you were associated with Brigham and Women's Hospital and Harvard Medical School, and then you moved to the Midwest, and I think you're associated with Rush Medical Center now as well.

Dr. Chopra:
Yes. I'm associated professor at Rush University. But one of the things I realized soon was, yes, there are some of these high-powered academic centers, but, you know, people live in communities and so sometimes you just don't go to the mecca for everything. And what we did actually with our institute is we brought it down to the community level. So we are in many communities in the Midwest and the Chicagoland area, and we open an office in the community, and we serve the community.
And peripheral vascular disease is so prevalent people don't realize it.

**Diagnosing Peripheral Vascular Disease**

**Andrew Schorr:**
Help us understand that. Help us understand, because, again, as you heard, we talked about a lot about clogged arteries that are supplying the heart, but I imagine that same condition sets itself up in other parts of the body.

**Dr. Chopra:**
Absolutely. You know, when we think of vascular we think of blood vessels. Blood vessels are arteries that take blood from the heart to different parts of the body. And at the same token you have veins that take blood from the different parts of the body back to the heart. Now today we're talking mainly about artery disease. And the artery is a pipe. It's the pipes. It's the natural pipe system of the body. And just like in a garden water has got to go to every part of the garden, the body, every part needs blood, and the blood carries all the nutrition that has to go to it.

The blood vessels, especially the arteries, obviously have muscle. They can contract as well as expand as needed, and they also regular the blood pressure. As with whether genetics or different types of injuries caused especially by smoking, eating fatty foods, high cholesterol, etc., the inside of these pipes gets clogged. Like it's nature's way. Any pipe that you see, water pipe will develop some kind of clogging inside. At home we put Drano and other things, and sometimes you change the pipe. In the body you can't change the pipe.

And so now what's happening, in the past people were not living this long. It's not uncommon for me to have patients in their 80s and 90s. I have a 91-year-old lady, who if you saw her you would say she's not a day older than 65. And she obviously has done very well in life but now has some blockages in her artery, and we need to make sure her quality of life is good. So with cholesterol and mainly especially diet and then smoking, smoking is one of the worst things you can do. Diabetes is also very common and the prevalence is going up. That also hurts the arteries, and these arteries get clogged.

So if you had a four-lane highway and there are trucks taking supplies to whatever site we're going to, if that got blocked and the highway can't take food any more, the people on the other side of the highway are going to starve. The same way when the arteries get blocked. Nutrition doesn't get to the other side.

**Andrew Schorr:**
Right. Dr. Chopra, we're going to learn as we go along what do you do about it, how do you diagnose this, and what do you do about it. But let's meet one of your patients who didn't know he even had this condition, and then as they got to you we found out that it was one of these conditions. Donald Norwacky, are you with us?
Donald Shares His Story

Don:
Yes, I am.

Andrew Schorr:
Donald, now, what's the correct pronunciation of your last name? I want to make sure I get it right.

Don:
You said it correctly, Norwacky.

Andrew Schorr:
Okay. And you're 66 years old.

Don:
That's correct.

Andrew Schorr:
And you're not far from Chicago, West Dundee, Illinois?

Don:
Yeah, I'm about 35 miles west of Chicago, West Dundee, Illinois.

Andrew Schorr:
Okay. And are you retired now, Donald?

Don:
Yes, I am. I've been retired for five years now.

Andrew Schorr:
Well, we're going to take a short break, and when we come back, Donald, we want to learn about your story and how the tightness in your calf that you thought maybe was just a muscle pull turned out to be exactly what we were talking about and then problems with blood flow in the leg. So we'll be back and learn more about peripheral vascular and peripheral artery disease when we come back with more Patient Power right after this.

Andrew Schorr:
Back with Andrew Schorr live broadcasting from rainy, what else is new, Seattle. Normally it doesn't rain now, but we got a good drenching a little while ago. Really excited to be back live on HealthRadio network, and while I was away the Big Kahuna in HealthRadio Network sent out an e-mail just how many thousands of people are listening across the US and around the country and finding HealthRadio Network. And then so many people listening to Patient Power and recognizing how unique it is as part of the HealthRadio Network programming. Thank you. I just got an e-mail today from a guy
from my synagogue, and he said, I stumbled across it. I didn't know you did this and now I listen every day. So Ralph Goodman, thanks for writing me.

Today we're talking about a chronic condition that affects maybe eight to ten million people, whether you want to call it peripheral artery disease or in some cases peripheral vascular disease, whether it's the arteries or the veins, they can get clogged, as Dr. Chopra from Chicago was just explaining, as you get older. So let's go back and continue our discussion with 66-year-old Donald Norwacky, who retired from the Federal Reserve Bank in Chicago.

Donald, I know you're a pretty active guy, so as you were having pain in your leg you thought it was something athletic first, huh?

Don:
Actually, I was walking on the treadmill. I do this about five days a week. And I noticed that after a while that my left calf was tightening up on me, and I thought this might be some type of a muscle pull or something. But after a while it came back again, came back again, so I would get off the treadmill five minutes, the pain would go away, or the cramp would go away, get back on the treadmill, and it would come back. So I had a feeling it wasn't a pull in the calf or anything like that, so I thought maybe I should call my doctor, my GP up and see what he had to say about it. I talked to him on the phone and he suggested I see Dr. Chopra because he felt it was more than a pull.

So I went to see Dr. Chopra who had me take two tests. One was a Doppler, and the other test was an ultrasound, and after he got the results with that we had a consultation, and at that time I found out that one of my arteries in my left leg was almost a hundred percent plaque.

Andrew Schorr:
What did you do about that?

Don:
Yeah, this was causing the pain in the calf obviously. We talked about what needed to be done and what could be done. And he suggested that I go through the procedure to have a stint put in. And he explained the procedure to me, what he was going to do, how it was going to be done, what to expect, and we went from there.

Andrew Schorr:
How are you doing now?

Don:
I'm doing fantastic now. I go to see the doctor approximately every six months to see how everything is as far as taking the Doppler test and the ultrasound test, and things have been coming out positively. Dr. Chopra put me on medication, Plavix. I've been exercising, try to do a little bit more exercise, a little bit more walking. And so far everything is looking good.
Andrew Schorr:
Well, I think it's important that we have this discussion. Like you mention, Plavix and other drugs like that, normally people think of taking it related to occlusions or blockages to their blood vessels to their heart, but as we'll learn today this can be many other parts of your body.

So Dr. Chopra, first of all, I've been around some of these ultrasound exams so today with some modern ultrasounds you can sort of have a little wand that's on top of the skin and go along blood vessels and really see today what's going on inside, the velocity of the blood, the direction of the blood, and look at whether the structure are occluded, right?

Dr. Chopra:
Absolutely. We did two things actually. One is we used the ultrasound to see the blood vessel, and also to look at the flow, as Donald said, he had a Doppler study. And the Doppler looks at the blood flowing, and you can measure the velocities of the blood. Just as if you took a garden hose with a pipe with water that's flowing through, and you squeeze it, the water, the velocity of the water coming out of the tip would increase. It becomes a jet. We see that under ultrasound in the blood vessel, then we know it's starting to get narrowed.

But the other thing we also do is just as you take a blood pressure in the arm you can take a blood pressure in the leg. And if you think of it, the heart is pumping blood out, and all the arms and legs should have the pressure. It's going the same distance. And we measure the blood pressure in the arm, and we measure the blood pressure in the legs or the ankle and the thigh, and they should be the same. We call it the ankle brachial index. And we do pressure measurements along the leg as well, and we see if the pressure drops anywhere. That gives us what we call the physiologic information.

Because somebody could have a narrowing but have enough. If the person's is not running and not walking a lot, it's enough for them. But for some it's not. So we measure the pressure and with ultrasound, they're both what we call noninvasive. There's no injections. We're just looking with that. With the ABIs and the segmental pressures with the cuffs we just measure the blood pressure, and we map it out. That itself gives us a lot of information.

Some folks we actually do it at rest and after exercise because you get the pain after you start walking. And we call that intermittent claudication. So when somebody like Donald comes in with the symptoms of, you know, I walk a short distance, I cramp up and then I feel better, what it tells us is that the muscles are asking for more oxygen. The blood has to increase the, the traffic has to increase, but it can't because there's a narrowing there.
Andrew Schorr:
Let's talk about the downside of this now. Couldn't somebody have this fatty material, the material that may clog the artery or the blood vessel, isn't this the same material that could otherwise go to the brain or cause a stroke?

Dr. Chopra:
Yes.

Andrew Schorr:
So this is not trivial. It's not just the blood flow to your legs. It could cause major problems and even death, right?

Dr. Chopra:
Absolutely. So I'm considered a vascular specialist, an endovascular specialist, so my expertise is that with imaging guidance, just as these days with the military they have night vision equipment, etc., and they can look in the dark, the same way I can look through the skin with imaging equipment, whether it's ultrasound, CTs, x-rays. And with that you can focus some treatment. And one of the things that happens is obviously the blood vessels are the blood vessels the same all over the body. And when cholesterol deposits it doesn't know where it's going. The commonest is that it gets deposited in the heart and people hear of heart attacks all the time.

The same thing happens with the legs, and the same thing happens with the carotid arteries, the arteries that go up to the head. So people who have peripheral vascular disease are at high risk for having heart disease from the same cause as well as from the carotid arteries and having a stroke. Some people pass out. Some people get what they call a transient ischemic attack, a TIA. So we always check everybody for all these things. But as Donald came in, he's otherwise healthy, and it really affected his legs more than anything else but the other parts also checked out.

Andrew Schorr:
But it's kind of, he was lucky, in a way, to have pain. That sort of a warning sign to be followed up.

Dr. Chopra:
Absolutely. Absolutely. And one other thing, just in addition to just fixing the plumbing, people ask me a lot of times as you asked me earlier, What do you do as an interventional radiologist, and I say I'm a plumber. I'm a human plumber. It's one of the things I do. I do image-guided surgeries or image guided interventions, different ways to describe it. The best way I describe it is to be a minimally invasive physician or minimally invasive surgeon.

Andrew Schorr:
Well, minimally invasive sounds good to me.
We're going to take a short break and we're going to come back with our guest Dr. Romi Chopra, who's medical director of the Midwest Institute for Minimally Invasive therapies and his patient, Donald Norwacky. And we're going to learn more about peripheral artery disease, peripheral vascular disease and some new innovations and what you can do about it to help you be healthy and live a long life. We'll be back with more Patient Power right after this.

Andrew Schorr:
Welcome back to Patient Power live on HealthRadio Network. Tomorrow we're going to talk about a whole other thing and equally as fascinating, and that's depression, and for people who are not responding to medicine how can something called vagus nerve stimulation therapy help. We're going to talk to Dr. Darin Dougherty at Mass General, which is generally believed to have the top psychiatric department in the country. We're going to talk with him about how they're using that, so we'll learn more about that tomorrow on Patient Power.

But let's go back to all the problems of plumbing in your arteries and veins, particularly in your arteries and find out more about it from Dr. Romi Chopra, who is the medical director at the Midwest Institute for Minimally Invasive Therapies. And also along with him is his patient, Donald Norwacky, 66 years old, who was helped with the implantation of a stint in his leg I believe to open things up and give him the blood flow he needed.

So first of all, Dr. Chopra, you are an interventional radiologist. I think most of us when we think of radiologists think, well, the radiologist is the physician who looks at your chest x-rays or if a woman has a mammogram, they're looking at pictures. But you're an interventional radiologist, so help us understand what that means.

Dr. Chopra:
Absolutely. Well, just as we think, right now, with this war going on you think of military, and you think of military in the old sense where there were people who just shot what they saw on sight. But these days with imaging and advanced equipment that they have you can look in the dark, you can look out way long distances with missile guided systems.

The same way, a diagnostic radiologist is a physician who just looks at the images and comes up with, I see this picture, this is what it means. An interventional radiologist is using those same images to guide therapy. So for example if I see a cancer in the lung, a diagnostic radiologist would say, I see a cancer in the lung. This is what it looks like. An interventional radiologist can guide a fine needle through the chest wall, through the lung, into the tumor and puts out some heat at the tip of this needle and burn the tumor. We do that in the liver. We do that in kidneys.

In the vascular treatment, what we are talking about today, is we use the same imaging technology to then put in devices, open up blockages, stop sites that are bleeding. We can take the x-ray of the part that is bleeding and find where it's bleeding from and
actually put in a small wire and a tube all the way down and put some glue over there, and we don’t have to have open surgery.

Just as in the old days if a plumber came to your house he had to rip open the wall and rip out the pipe and shut the leakage or open the blockage. Now we have equipment that imagine I can look through the wall with x-ray. I can see where the pipe is blocked. I go to the faucet and I put in a little wire through it and I open the blockage up, and I actually put a pipe inside the pipe.

And that's what we did for Mr. Norwacky. His artery in his thigh was blocked. That's why he wasn't getting enough blood down there. With x-ray guidance and by using what we call dye I was able to see where the blockage was. I then actually took a fine wire, we got into his artery from just above the hip and then got down into that artery, and the wire is actually the size of a human hair, got through it. Opened it with a balloon. It's like a little bulldozer. We pushed all the cholesterol and all the plaque aside and then actually put in this stint, which actually is a graft. It's made by W.L. Gore, and it's the same material that you have your Gortex jacket made from, it's expanded PTFE. That material is like a pipe, and we put that, it comes on a catheter, and we open it and put it inside the artery.

So now inside his artery he's got another pipe, and all the size of his incision was just about a millimeter and a half or two millimeters at best. So he had no incisions. And all of this is allowed by the advanced imaging technology and also the technology of the little devices and the wires and the catheters that we use with that. So an interventional radiologist actually are image guided surgeons, in a way. The diagnostic radiologists only read films. I hope that explains it.

Andrew Schorr:
Yes, it does. I've made various medical videos over the years and I vividly remember being with a vascular surgeon who did one of these endarterectomies, I think you call it?

Dr. Chopra:
Yes.

Andrew Schorr:
But basically one of the blocked vessels in the neck, right? And it was a major surgery.

Dr. Chopra:
Yes.

Benefits of Minimally Invasive Surgeries

Andrew Schorr:
So if you have these approaches that are minimally invasive it sounds good to me. Donald, what could you think? You've had it.
**Don:**
Yes, it was really amazing because if this procedure wasn't available I'm just trying to wonder or visualize what I would have had to have gone through to have this condition corrected.

**Dr. Chopra:**
Yeah, he would have had a bypass surgery. He would have ended up having his leg filleted open, have a vein graft put in. He probably would be in the hospital for several weeks, a month of recovery plus other complications from anesthesia, etc. In this case it was all just sedation, so he didn't have general anesthesia and he was actually able to go home a few hours later, but we usually keep them overnight to make sure everything is okay.

**Andrew Schorr:**
Wow.

**Dr. Chopra:**
Please go ahead, Mr. Norwacky.

**Don:**
Yeah, it was really amazing. Plus the doctor was communicating to me what he's doing and how he's doing it. It was just like 21st century technology or whatever you want to call it, but I couldn't believe the technology and the procedure, how well it went. And as the doctor said the next day I was almost back to normal. I just had a few restrictions.

**Andrew Schorr:**
Well, you're right, 21st century technology. So that's what we want. So how, Dr. Chopra, so you are an interventional radiologist, Donald quite frankly had the good fortunate with his general practitioner that that doctor knew enough to refer him to you. That doesn't always happen, so we want to create smarter patients here. So for the many people who may as they get older be having some blockages, not just in the arteries supplying their heart but where it could be an issue in their legs or in these peripheral blood vessels, what would you recommend so that they can have all the, if they need a procedure, the whole range of them, including these newest ones can be put on the table to see if it's right for them? How do they do that?

**Dr. Chopra:**
The first thing is, as you said, being a well-informed patient is very, very important, number one. Number two is to ask your primary care doctor, you know, geez, I would really like to try minimally invasive option first, and definitely there is an interventional radiologist in every community.

Our practice is slightly different in that we are more community based rather than hospital based, so we go to multiple hospitals in different communities. We have a website which is mimit.org, m–i–m–i–t .org. We have a lot of information on peripheral vascular disease there. But there's the Society of Interventional Radiology, it's called SIR, s–i–r, web.org.
That's a great place to go there. You can actually put in your zip code and you find your interventional radiologist in your area.

Plus there are other endovascular specialists who do the same as well, not only the interventional radiologist, but primarily interventional radiologist treat a lot of this. But your primary care doctor will know in your community who does this and how they can treat you. And surgery is an option, but you want to make sure that you exhaust all your minimally invasive options first and then go to some of these. There is a lot of material available on the web now to go ahead and read about this and understand that.

**Candidates for Minimally Invasive Surgeries**

*Andrew Schorr:*
Now, let's put all this in perspective. So first of all there's an up side and a downside to everything. So we talked about how it's worked out for Donald. Who is this procedure not right for?

*Dr. Chopra:*
Obviously we want to make sure that this is something that the patient is a candidate for. So there are sometimes blockages that cannot be crossed and the endovascular options just don't work. So if the plumber comes in and says, listen, this blockage is too extensive. I can't get through it. I need to put in a new pipe from where the water is coming in to where it needs to go. So a bypass surgery is good over there.

Similarly, but there are very, very few patients who are not candidates for this only because, one, it's like I said, there's not even general anesthesia involved for this so it really becomes a very simple procedure. We use contrast agent that has iodine in it basically. It's called radiographic contrast. In layperson's terms, it's called dye. Some people are allergic to it. Unless somebody has a very severe reaction to it, you can give some medications like Benadryl and other antihistamines, and also some steroids before that, corticosteroids, and prevent the reaction. But other than that almost everybody who, at least will have an angiogram and kind of go from there. And there are many other diseases that can be treated with the same techniques too.

*Andrew Schorr:*
Oh, what are those? What other conditions?

*Dr. Chopra:*
For example some people have aneurysms. As the population is aging, and like I said earlier it's not uncommon to have very active people in their 80s and 90s. I have patients in their 90s who live alone, who drive and are very, very coherent and have a very good life. And some of them, the arteries just give kind of with wear and tear become aneurysms, so we treat those. And we can actually put what we call an endograph inside. It's the same kind of material, but it prevents the artery from rupturing. So that's another one. And there's aortic aneurysm, what we call an abdominal aortic aneurysm, very common condition as well.
Carotid arteries, when they get blocked people end up getting strokes. One of the newer options is you can actually put a stint over there as well. We work, one of the key things that we do is we work as a team with all the other specialties, so whether there's a surgeon involved, some blockages may be too much for the stint, or the risk of an embolization would be too high, then they can go ahead and have surgery. So but we can treat that as well.

**Andrew Schorr:**
Okay. I just want to make sure I understand this for the millions of people who are affected by this. So if they have a discussion with their doctor what you're recommending is they say is there a minimally invasive approach and the approach that Donald had was where you were able to in a very minimally invasive way, just small little incision and using the fine wire and all that, put in a sort of pipe within the pipe to keep the artery open. And what do you call that again?

**Dr. Chopra:**
It's an endovascular stint. And this one, this particular one that we put in was–it's a Viabahn endograft, basically. W. L. Gore makes it. It comes on a catheter. It's graft material with a stint wire around it. And we measure it to fit the size of the artery. And if you literally think of a pipe in your wall, we put a pipe inside a pipe.

**Andrew Schorr:**
Now, one of the things we mentioned just briefly earlier was Donald had a warning. He had pain upon exercise. But we have many older people who are more sedentary. They don't do the treadmill like you do, Donald, five day at week, you know. So maybe they don't get to that pain, but they are reducing the blood flow in their legs or other areas. So how do we check for that? So when they get a physical would you do a blood pressure at their ankle, or how would you know?

**Dr. Chopra:**
Well, the first thing is that you'll always get pain, so it's not that there won't be pain. The second thing that happens is that even though they're sedentary but if they just have to get up to walk to the mailbox or to the bathroom they'll get pain. If the blockage is too much then they will have pain even while they are resting. There's not enough blood, it's going to hurt all the time. If it gets to that point that means the blood is really low, and the pain will happen right, it wakes them up at night, and they start getting what we call rest pain.

By that time things become critical. They are now into the category of what we call critical limb ischemia. That almost becomes an emergency. If you have pain that's keeping you awake all night and your foot is cold and numb, that is a bad sign. You want to go to the emergency room right away and have it checked out and if you have an acute blockage. So people sometimes who ignore this for very long get to the point where this becomes critical. And now if you don't do anything about it you'll end up losing your leg. You're looking at an amputation.
In Donald's case it was very early on. It was just stopping his lifestyle and from him doing normal things. We call that lifestyle limiting claudication. And the word "claudication" comes from a term where it means to limp, actually, in Latin. And it's intermittent, so as you walk your muscles need more oxygen and it then causes pain. That causes them to stop, and it's intermittent. But if it gets to the point where there's pain all the time, we call that rest pain. And rest pain obviously is a bad sign. You want to have that checked out right away.

**Are Drug Therapies Reducing Recurrence?**

**Andrew Schorr:**
So Dr. Chopra, as you did with Donald, though, so one was you did the physical intervention, in this case in a minimally invasive way, but these problems can show up elsewhere in the body and be also chronic. So is drug therapy to reduce the recurrence of plaque in the blood vessels typical after that?

**Dr. Chopra:**
Yes. Actually it doesn't reduce the plaque, but one of the first things if you are smoking you've got to stop smoking. It's one of the worst things you can do to yourself. If you're diabetic you've got to make sure your diabetes is under control. It especially blocks the blood vessels at the knee and below the knee. Then after that the third thing is to make sure your cholesterol is under control because high cholesterol will cause a cholesterol get deposited. So you want to have all these things to get checked out. Obviously you don't want to be overweight. Regular exercise and healthy living is very important. Exercise keeps the blood flowing. We're designed to be very active mechanisms, and so the blood has to keep flowing. That helps.

And then an aspirin a day, what it really helps is the blood from getting too sticky so if you do develop a plaque, whether its in your heart, whether it's in your neck or in the thigh or leg, the blood won't clot as fast, and it helps keep it open and it can save some time before it becomes critical. And for some patients who have this but it's not very critical yet we use drugs like Plavix, and it allows and, for example, with Donald we have him on Plavix. We'll have him on it for life. It allows the blood to become less sticky. These are some of the key things.

**Andrew Schorr:**
Donald mentions he comes and sees you every six months or so. So would typically follow up be like an ultrasound exam or something, checking versus critical points to see whether the pipes are open, if you will?

**Dr. Chopra:**
Yes. The first thing definitely is that I exam him, and obviously he knows how to reach us, and if there's any problem he'll ask to come right in and we'll check him out. The second is that we do a physical exam. I check his leg and make sure his pulses are good and that the foot is warm, etc. Then after that every six months we do an ultrasound and
the segmental pressures, and what this allows us to do is catch anything that is hiding but is looming in the background waiting to become a disaster. The body tries to react to whatever is in there and it tends to form a narrowing around what we have, so we can catch that very early on so it doesn't become a crisis. So we'll follow him like this for years.

Just like anything in life it has a certain amount of time it will work. We now have data over five years where if you do a hundred patients at about five years you have 60 to 70 percent of them staying open. And everything grafts, etc., obviously things fail at some point. We can catch them before they fail and keep them open. And so there's a good chance he'll live into his 90s. He's only 60–something now, and this will buy him enough time so that he doesn't get to that critical point, and we can keep can it open. And with him being careful, exercising, not smoking, managing his diet, he otherwise is very healthy; he could have this stay open for a very, very long time.

Andrew Schorr:
Hey, Donald, how does that sound to you? There is your doctor saying you are going to live a long time if you are just a good boy there.

Don:
I'm going to be collecting Social Security for a while then. We'll have other issues to talk about then.

Andrew Schorr:
Former federal employee hopefully with a good pension, so there you go.

Donald, so what would you say to other people listening? There's some other guy, and he's got leg pain, and he says, oh, it is a pulled muscle, or it will go away. You took action upon it. What would you say to those listeners who maybe aren't those kind of proactive people?

Don:
Well, I think one of the important things is you have to start being attuned to your body once you get a little bit older, and you should have a physical at least once a year by your GP. And anything out of the ordinary, I think, if you don't feel right, whether it be the leg or any other thing, you should get some medical advice from your doctor.

Andrew Schorr:
I agree. And be an informed patient, as we heard here. I think Donald was very fortunate. His GP was really well informed as far as the range of options that could be available for what could be a more serious problem than a pulled muscle. If you ask the right questions you can get at that information. And so what we're now discussing today is we know eight to ten million people affected by peripheral artery disease, maybe it's in their veins, peripheral vascular disease, and that could lead to a heart attack or stroke or certainly cutting off or limiting blood supply to other vital things like your legs. And certainly in diabetes that would be bad news, and we know that there are people with
diabetes ending up with having amputations. So you don't want that to happen. So how do you get to somebody who is really a specialist like Dr. Chopra, interventional radiologist?

So, Dr. Chopra, I want you to repeat those websites. For your own practice there in the Chicago area I know you're at the Midwest Institute for Minimally Invasive Therapies. So is website m-i-m-i-t .org? Is that right?

**Dr. Chopra:**
Yes, that is correct.

**Andrew Schorr:**
M-i-m-i-t .org. And what's the one for your medical society, which will also have information?

**Dr. Chopra:**
S-i-r, SIR, web, w-e-b, .org. Society for Interventional Radiology.

**Andrew Schorr:**
Okay. Well, I think that's great information. I want to thank both of you for being with us today. And, Dr. Chopra, I think this is one of those really happy stories in medicine. Where certainly on Patient Power we've discussed some very nagging, scary medical problems where we haven't been able to make the progress we want to, but it sounds like with peripheral, vascular peripheral artery disease we are making progress, and it makes a huge difference to patients who can have minimally invasive procedures, just get on with their life and feel confident that they'll do well.

**Dr. Chopra:**
Absolutely. Absolutely. And thank god Donald is doing well.

**Don:**
And it did make a huge difference to me.

**Andrew Schorr:**
Yeah, no kidding. When he said earlier that otherwise the procedure is to sort of fillet your leg, I can imagine, I mean, it's needed in some cases, but it's great when you can have a more modern approach to get at the problem and solve it you can do that.

Donald Norwacky. We wish you well in your requirement, your active requirement.

**Don:**
Thank you.

**Andrew Schorr:**
And many years on that treadmill pain-free, okay?
Don:
Thanks very much.

Andrew Schorr:
Okay. And Dr. Romi Chopra at the Midwest Institute For Minimally Invasive Therapies, best to you sir. Thanks for your groundbreaking work there and bringing it, as you say, to the community so that people can go to a center like yours, whichever hospital they may go in that Chicagoland area, and you and your term can help.

Dr. Chopra:
Thank you very much. Thanks for having us on.

Andrew Schorr:
Well, this is what Patient Power does, folks.

And I want to talk a little bit about what we've got coming up this week and move forward. As I mentioned there are people with depression, depression affects millions of people, but in some cases it is resistant to treatment, treatment with a traditional drug therapy. So tomorrow we're going to discuss this vagus nerve stimulation and how can that help.

And then also the following day, on the 22nd, we're going to look at fighting for your life with prostate cancer and how people with going to bat against the FDA to get some promising therapies available to them. It's all coming up on Patient Power. Remember, knowledge can be the best medicine of all. Have a great day.

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