**Depression After a Cardiac Event Or Cardiac Surgery**

**Webcast**

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Kim Lebowitz, Ph.D.

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**Introduction**

**Andrew Schorr:**
How is depression connected with cardiovascular disease, and what effect does it have for some people after a cardiovascular event?

Hello and welcome to Patient Power. I'm Andrew Schorr. Every two weeks we do these programs on significant medical topics sponsored by Northwestern Memorial Hospital.

Now, one topic that we're well familiar with, we thought, is depression. We've done programs on depression and certainly related to chronic illness and particularly cancer. And as a cancer survivor we've talked about depression affecting people diagnosed with cancer and also family members, and we've treated that very seriously. But you know what? We've never talked about it related to cardiovascular disease. So for instance does depression play a role in increasing someone's risk of cardiovascular problems, and certainly what about if you've had a heart attack or heart surgery, some other kind of chronic heart problem does depression creep in, and can it play a role in your recovery? Or could it if it persists and is untreated even increase your risk of more serious problems continuing or even death? And there's a lot to be said there.

Well, the Bluhm Cardiovascular Institute at Northwestern is perhaps the only place where there is a psychologist who specializes in helping people with this, and a team, and they're helping the heart patients all the time and the families. I'd like to introduce you to her, and that's Dr. Kim Lebowitz. Dr. Lebowitz is director of cardiac behavioral medicine at the Bluhm Cardiovascular Institute. She's also assistant professor of surgery and psychiatry at the Feinberg School of Medicine at Northwestern University.

Dr. Lebowitz, welcome to Patient Power.

**Dr. Lebowitz:**
Thank you. It's really an honor to be here, and I'm very excited to talk to all of your listeners and patients about how our mind and body are connected, particularly when it comes to our cardiovascular health.
Why Should One Be Evaluated?

Andrew Schorr:
So there is a connection, and this is not a trivial matter. Let's talk about it related to a man or a woman who has had a heart attack or maybe they had a percutaneous interventions through the groin or they have had bypass surgery or maybe they've had other heart problems, what is our concern about depression, and why do people need to be evaluated for it? What's the concern?

Dr. Lebowitz:
Well, there are several concerns, so the answer is multiple fold. First is depression is very common among cardiac patients as it is among other medical populations or individuals with a chronic medical illness. When you look at the cardiac population as many as 20 to 40 percent of cardiac patients are going to be presenting with symptoms of clinical depression, and that might be compared to about four percent of the general population at any one given time having symptoms of depression. So the first part, to answer your question, is that depression is common among cardiac populations, and that's obviously concerning because depression can lower quality of life and can make it difficult to sustain relationships and to continue functioning at the same level that individuals were previously functioning at.

Second, depression is a concern because of its relationship with cardiovascular health. So there's a lot of research indicating, one, that depression can lead to the development of coronary heart disease, and two, among individuals who have had a cardiac event, specifically those who have had a heart attack or those who have undergone a coronary bypass graft surgery or other kind of open heart surgery, the presence of depressive symptoms after that cardiac event can actually predict a poorer outcome. So individuals who are depressed for example after a heart attack might be more likely to have subsequent surgeries, repeat hospitalizations, and they're actually more likely to die compared to individuals who are not depressed. And these findings are all independent of cardiac severity, other traditional risk factors for heart disease, age, gender, smoking status and so forth. So depression has really emerged as an independent risk factor for both the development of heart disease and cardiac outcomes following a heart attack or cardiac surgery.

Andrew Schorr:
Dr. Lebowitz, let's go over this for a minute. So it's not a good thing. It's independent of your heart status, can make things worse. So how can the patients themselves or a family member notice this and what evaluation do you do at the Bluhm Cardiovascular Institute to see if this is at work for somebody you're treating with a heart procedure or heart medicines?

Dr. Lebowitz:
That's a great question, and what you bring up which is really important is first of all recognizing whether someone has symptoms of depression. When we talk about depression we're talking about clinical depression, otherwise known as major
depressive disorder. We're not talking about acute fleeting emotions. So emotions are healthy, and undergoing a cardiac event or having a chronic illness, it's very healthy to have a range of emotions. So feeling sad or angry or even anxious at certain points, that's healthy and appropriate.

When we're talking about clinical depression we're talking about a number of symptoms that cluster together that last for a certain period of time and cause the individual some distress or impairment in the way they carry on their daily lives. So to review some of those symptoms, an individual presenting with clinical depression will present with either sadness or loss of interest or pleasure in most activities, which is important to note that individual do not have to feel sad to be depressed. If they are no longer interested in things, everything seems like an effort and they no longer want to do anything anymore that might be adequate.

In addition they need to have at least four other symptoms. Those symptoms might be somatic in nature, and that has to be with sort of a change in body routines. So difficulty sleeping, someone might have more sleep or less sleep than normal. Increased or decreased appetite. Change in weight without any effort. Individuals might also have cognitive symptoms of depression so that would be feeling hopeless, feel worthless, feelings of guilt, having trouble concentrating or staying focused on things, having thoughts about wanting to end your life or harm yourself. And then there are also obviously emotional symptoms of depression, feeling sad, feeling down, and so forth. Individuals with depression might also sort of have lower motivation to do things, like I mentioned, decreased interest in things, decreased sexual functioning.

**Andrew Schorr:**
Irritability.

**Dr. Lebowitz:**
Irritability, absolutely. So there is a long list. If individuals have at least five of those symptoms and they last most of the day for at least two weeks and again it causes distress for the individual or it interferes with their ability to function normally, that would be classified as clinical depression.

**Andrew Schorr:**
What do you do at Bluhm as far as evaluating people for this?

**Dr. Lebowitz:**
At Bluhm Cardiovascular Institute the cardiac behavioral medicine service tries to be as integrated at possible in routine cardiac care. So for example any individual who is coming in for coronary artery bypass graft surgery is going to meet with one of us cardiac psychologists so that we can review their behavioral risk factors for heart disease such as smoking, activity level, diet, weight, and we're also going to review with them their psychological risk factors for heart disease and assess whether or not things like stress, anxiety, hostility and depression are present and
whether or not they need to take any steps to reduce some of those risk factors. So we'll evaluate patients prior to surgery, and then we also see patients in the hospital after surgery or after a cardiac event, as well as any patient that a cardiologist or a cardiac nurse has identified as having possible depressive symptoms, they will sent our way for a clinical evaluation.

**Risk Factors and Screening for Depression**

**Andrew Schorr:**
Now, the American heart association just a few months ago came out with recommendations for all providers related to dealing with cardiac patients to be on the lookout for this and to ask questions. So are you throughout your team there, nurses, doctors, you're on the lookout for those factors and then try and help people be aware of it and then get help?

**Dr. Lebowitz:**
Yes. I absolutely advocate the screening of depression in all cardiac patients in all settings, so both in an inpatient setting like a hospital or an outpatient setting like at the doctor's office. You know, cardiologists and fellows and nurses, they're not mental health providers and they're not trained in diagnosing and treating depression, and that's really not what they should be doing, but it's very quick to sort of screen to see if someone presents with symptoms that could be depression, in which case I advocate that that medical provider educates the patient about the symptoms of depression, that's it's prevalent, why it's important to get it treated, and that they refer the patient to someone who can do a full diagnostic evaluation and then provide some appropriate treatment.

**Andrew Schorr:**
All right. Let's talk about people who have not come to the hospital, not had a heart procedure. You mentioned about smoking and other factors that a lot of people are doing, millions of people have not yet had heart problems that they know about. Tell us about depression going along with any part of their life.

**Dr. Lebowitz:**
Sure. Research has really emerged to tell us that depression is an independent risk factor for the development of heart disease. So lots of longitudinal studies have been done looking at individuals over the course of several years and several decades even. At the outset of the study these individuals, it varies by study, they might be individuals who are depressed, they might be individuals who have cardiac disease or who do not have cardiac disease. And basically across all these studies what we find is that individuals who have a history of depression or a history of depressive symptoms are two to four times more likely to development coronary heart disease or to experience a fatal or nonfatal ischemic event. So we know that there's something about the experience of depression that can lead to poor cardiac outcome.
It's very likely that the reason for that connection, one might be behavioral in nature. We know that individuals who are depressed are less likely to take care of themselves, so they're more likely to smoke. They're at greater risk of developing diabetes, they're more likely to live a sedentary and inactive lifestyle, and they're more likely to eat a diet that's high in calories and high in sodium. They're also less likely to comply with medical recommendations and to take medications as prescribed. So obviously if an individual doesn't engage in heart-healthy behaviors they're going to be at increased risk of developing heart problems.

But it also seems that there's a physiological connection between depression and heart disease and that individuals who are depressed have a lot of things going on inside their body that might lead to the development of cardiac events. And that might be through increased inflammation in their heart, increased sympathetic activity which can affect heart rate, blood pressure, electrical stability of the heart and those sorts of things. So that is some of the reasons that might explain why depression is associated with poor cardiac outcome.

Andrew Schorr:
Dr. Lebowitz, it sounds like you're quite the believer in the mind-body connection.

Dr. Lebowitz:
Absolutely. Absolutely. And when it comes to cardiac health I think that not only can our mood and emotions affect our cardiac health and especially for those listeners out there who have experienced a cardiac event or undergoing cardiac surgery can certainly impact our emotions as well. So I think the relationship is very much bi-directional.

Treatment Options

Andrew Schorr:
All right. Let's talk about what you do about it. So when somebody gets to Bluhm, and maybe they're seen in the mix by yourself or one of your colleagues there who are making an evaluation, what do you offer them to do for themselves and their family?

Dr. Lebowitz:
Well, there's a bunch of different ways to treat depression. The first thing that I do want to make sure that your viewers understand is that depression is treatable and that the treatment for depression is safe for cardiac patients and that effective treatment can improve their quality of life, can improve their mood and the way they feel and their ability to function. It can also improve their ability to take care of themselves.

What we do not know at this point from a research standpoint is whether reducing depression or treating depression has any impact on cardiac outcomes. So whether the presence of depression at one point in time does that already cause poor...
outcomes, or if we reduce depression does that sort of improve cardiac outcomes, and we don't have the answer to that. But I still absolutely advocate the treatment of depression because it makes people feel good, and no one really deserves to feel depressed when they can feel better.

So what are the treatment options available? One line of treatment is pharmacological. So there's a lot of antidepressants, and ones that have been found to be safe for cardiac patients typically lie within the category of antidepressants called SSRIs, selective serotonin reuptake inhibitors. Another effective line of treatment for depression has to do with therapy, predominantly cognitive behavioral therapy, so meeting with a psychologist or a mental health provider such as myself and learning techniques to really change the way you think and change the way you behave so that your mood ultimately improves.

Andrew Schorr:
Just two weeks ago now we did a program with one of your leaders in cardiology there, Dr. Charles Davidson, and we had two of his patients on, both of whom after having a heart attack and then they had stents put in their heart, they made a lot of changes. Now, one guy used to smoke. Al Frisch used to smoke a pack and a half a day, did that for 40 years. Well, he quit smoking, which is a very big and positive thing. And he also started exercising regularly, which he had never done before. It would seem like those two steps are great steps in a positive direction, and these would be indications of somebody who is not depressed, who is really trying to take control, I would think.

Dr. Lebowitz:
Absolutely. Making behavior changes is sometimes impressively difficult, so I certainly applaud his efforts and his success at that. Unfortunately when individuals are depressed or stressed anxious it can be much more difficult to initiate those changes and to maintain those changes. So individuals who are depressed have a much more difficult time quitting smoking, and part of that is because they're more likely to experience physiological symptoms of withdrawal and they're also more likely to relapse after they quit. And if you recall the symptoms of depression too, individuals who are depressed, they don't retain as much information because they have deficits in their concentration or their memory. They're also not motivated to do things. Things don't seem exciting. They might not even feel like they're worth living or that life is worth living. So if you think about those symptoms of depression, if someone is depressed it becomes a lot harder to initiate very difficult lifestyle changes, and some individuals might not have the motivation or desire to do that.

So when individuals are depressed and they need to stop smoking or make other lifestyle behavior changes it's actually really important to address the depression first because trying to have someone make a behavioral change when they don't have the emotional strength or motivation can set them up for failure. So when I see individuals in that situation I'll actually spend time treating their depression.
Once their depression is resolved they're usually much more successful at being able to stop smoking, start exercising, losing weight or whatever their behavioral goals were.

**Family Involvement**

**Andrew Schorr:**
All right. So for many people they have loved ones who care about them so much, maybe were shocked when there could well have been a sudden cardiac event and then the need to treatment, unblocking arteries or bypass surgery, whatever it may be, and so then they celebrate when the MD says, well, we were able to unblock the arteries, the blood flow is better, we've saved much of the heart muscle, whatever the result may be, and they're not prepared for this whole sort of physiological, psychological side of it, and now they are noticing it. What can they do that is positive?

**Dr. Lebowitz:**
You know, I applaud you for mentioning family members because so much falls on family members and caregivers, and they're often in the role of medication managers and cheerleaders and support givers, and really I think patients can't do as much as they do without them. So I applaud their efforts. And it's often much more difficult to be a family member than it is to be a patient because there's more out of their control, and to see a loved one hurting physically and emotionally can be really tough.

So the first thing is understanding what the symptoms of depression are and looking for them in the patient or in the loved one. Once they're recognized I think certainly bringing that to the attention of the medical provider, whether that be the doctor or the cardiologist, the internist or even the psychologist or medical provider so that that individual can get treatment for their depression so that their depression doesn't interfere with their medication compliance or their motivation to live or their ability to rehab appropriately.

Other things to do is to sort of increase recreational activities. We sort of know that when an individual is depressed they might not want to do certain things, but if they can be pushed to sort of initiate that behavior they usually end up enjoying socializing or going out for a meal or going out for coffee or taking a walk outside. So initiation is often the hardest, but if family members can encourage their patients to sort of engage in other activities so that they're less likely to ruminate and think about all the negative thoughts they're having in their head, that's really helpful. Also helping with distracting activities. For example if they're recovering from a cardiac event they might not be able to engage in sort of the physical activities they enjoy, like exercising or golfing or going to work, so surrounding them with other things they might enjoy, whether that's reading magazines, watching movies, listening to music, having things where they can engage in arts
and crafts or painting or writing so that the individual can still feel productive and have activities to distract them and help relax them, those are some things that family members can do.

**Andrew Schorr:**
And also I would think to give them hope because as you were saying if you can deal with the depression it can get someone on the road to making other changes or positive effects from their therapy and then seeing a brighter future, but yet I guess when you are depressed it just seems like such a heavy load.

**Dr. Lebowitz:**
Absolutely. And like I said family members and loved ones too often play the role of cheerleaders, which I think is wonderful and necessary at times. And when someone is depressed and their thinking is so negative it's helpful to have someone point out sort of how far they've come and everything they've accomplished, just sort of help their mind set become a little bit more positive.

I should also point out through, it's very appropriate and healthy and okay for cardiac patients to have emotions, and some of those emotions are going to be negative at times. So, you know, family members and loved ones don't need to constantly always be a cheerleader. It is okay at times just to let the loved one feel sad and to kind of sit there and say, yeah, I know that this is hard and this is difficult and I understand. But if an individual is feeling sad and down for several days and not pulling themselves out of it that's really when family members and the medical team should probably intervene.

**Andrew Schorr:**
I know my brother had I think it was quadruple bypass surgery, and he would make small steps. So he went in a cardiac rehab program, and then he started walking, which he never really did, and he did quit smoking. And so we were really working with him and saying, you know, look, you walked a mile. You walked a mile and a half. You haven't had cigarettes for two weeks. All of this, and these were big steps, really, but also celebrating everything incremental change, and I think he got a lot of strokes for that, and it seemed to help him.

**Dr. Lebowitz:**
And I think that is so important and wonderful, and I hope he's doing well, is to break down what seems like insurmountable tasks ahead on the road to recovery. Break it down into small steps day by day. You were able to get out of bed and go for a walk today. That's fantastic. Maybe next week you'll be able to go for two walks each day. And so really breaking it down, focusing on the moment is a way where patients might feel less overwhelmed than when they look at the whole big picture of everything that needs to be accomplished. Step by step, day by day, week by week is absolutely the way to do it.
Raising Awareness

Andrew Schorr:
Why have we not talked about this more, just generally? We've talked about depression more over recent years, and that's a great thing just in the population, and we've talked about it related to some other devastating diagnoses like a cancer diagnosis, but we haven't talked about it really enough it seems related to heart disease and then after heart events and procedures. How come, do you think? And there at the Bluhm Cardiovascular Institute you are full-time doing this, and you all have the recognition. Why haven't we done this more?

Dr. Lebowitz:
You know, I have no idea, and I really hope that things will change from here on forward. I think that might be a couple of component in that. First of all, I think that there is not enough education out there. So the American Heart Association just this past fall has sort of recognized that depression is a risk factor in individuals with coronary heart disease, but a lot of that research has been longstanding and pretty consistent for years and even decades. So I think it's first coming to the forefront, and I think that not enough individuals are knowledgeable about it, and so it's not being talked about in doctors' offices. And I just really hope that if cardiologists and nurses aren't bringing it up the patients certainly are.

Another thing that I think happens is that depression ends up being dismissed as a typical adjustment after a heart attack or after cardiac surgery, and what we know now is that that is not a part of a healthy adjustment, that symptoms of depression actually are indicative of poor outcomes. So I applaud you for bringing me on the show and getting the conversation and the dialogue started, and I hope this is a dialogue that will continue for quite a long time.

Andrew Schorr:
I hope so too. Now, Dr. Lebowitz, let's just do a little role playing for a minute because we've got a question in from Jeff in Chicago, and maybe we can give him a specific tip. He said, "My father recently had a minor heart attack. Although he's made some major changes in his life he seems to me to be depressed. What's the best way for me to approach him about this?"

Dr. Lebowitz:
You know that's an excellent question. I don't know if there is one good answer, and that will probably depend on his father. If his father is open to information and isn't defensive about his mood then I think approaching it openly and honestly and sort of pointing out what the symptoms of depression are and asking him if he thinks that he endorses some of those symptoms. And if that doesn't work I think that Jeff definitely and appropriately can bring it up with his father's medical provider so that then the medical provider can sort of screen for depression and take it from there.
Andrew Schorr:
Yeah, I thought so too. I know it often has to be handled delicately. And for someone who we worry is at risk, they are just down, maybe they're high stress, there are signs of irritability, they're just not happy and maybe have those signs of lethargy or not sleeping well and then other aspects of their life, overweight, if they're smoking, so what about there? Because people are often resentful. They don't want to be told so we're often in a quandary. What can we do when we love someone to help them avoid being on the freight train towards a heart attack?

Dr. Lebowitz:
I think that role modeling is definitely something that can help. You know, we're always looking to change individuals that we love, and we don't really always have control over changing them but we can always change ourselves. So if they change sort of the environment and the culture in the home in which maybe a depressed, unmotivated person lives, they tend to react to that. So by us changing our diet or the food in the house or the energy in the house by listening to more music and having a more relaxed environment and by structuring more recreational activities, those are things that might help an individual's mood a little bit.

I think one place where it really needs to start in terms of removing the stigma of depression and mental health problems is in the doctor's office. If the cardiologist can be very up front and educate their patients that depression is very common among cardiac patients and that it's very treatable and that its presence can impact how they take care of themselves and it can impact their cardiac health, then I think removing that stigma and encouraging that patient to seek treatment will hopefully result in depression not being so underdiagnosed and undertreated as it is today.

Andrew Schorr:
Right. And just to sort of come full circle now, this again is not something to be ignored because you've been seeing in your career now, Dr. Lebowitz, and with your peers in studies, is that if we don't address it that the complications for someone and even the very serious risks are really there and well documented.

Dr. Lebowitz:
Absolutely. And just to give you a couple examples, we know that individuals who are depressed after a heart attack, they are less likely to take their medications, they're more likely to drop out of cardiac rehab programs, and they're less likely to follow up with their doctors appointments. So those are big steps, but I mean even those small daily behaviors of being able to take an aspirin every day are remarkably difficult for someone who is depressed. So if you want to take care of someone's heart health and help them take better care of themselves it's really important to address the emotional aspects.
Andrew Schorr:
Well, I think we've covered a lot of ground. And I want to really congratulate you and your team and the leaders at the Bluhm Cardiovascular Institute Northwestern Memorial for really being the leader nationally in making this connection, having you and the staff there evaluating people because it seems like it's the way we need to go nationally.

Dr. Lebowitz:
I absolutely hope so. I hope that lots of other hospitals and clinics follow suit shortly.

Andrew Schorr:
Well, thank you so much for being with us, Dr. Kim Lebowitz, who is director of cardiac behavioral medicine at the Bluhm Cardiovascular Institute the Northwestern Memorial Hospital and an example of the really quality care that they give there for people in the Chicagoland area and wherever they may come from. Thanks again for being with us, Kim.

Dr. Lebowitz:
Thanks so much for having me. It was a pleasure.

Andrew Schorr:
Well, this is what we do on Patient Power every two weeks sponsored by Northwestern Memorial. And in two weeks we will be back with discussion with Dr. Svena Julien about the management of multiple births. So that's been very much in the news. We'll be talking about that with her. I'm Andrew Schorr. Remember, knowledge can be the best medicine of all. Thanks for joining us.

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