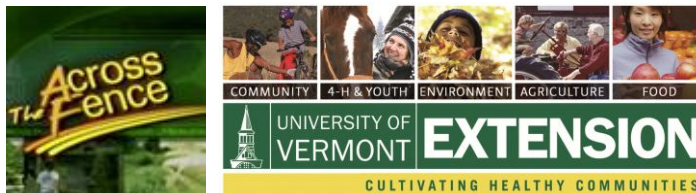


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TRANSCRIPT

EPISODE DATE: 8/18/11

EPISODE NAME: Connections between heart health and sexual function

Good afternoon and thanks for joining us I'm Judy Simpson. In the 1960's, the birth control pill changed the lives of women. In the 1990's, Viagra changed the lives of men. While the two pills are not connected, they serve as an introduction of sorts to today's program, in which we'll hear from medical experts about the connection between sex and heart disease. Before we meet our guests, I need to make two quick points. One, heart disease is the number one killer of Americans both men AND women. Keep that in mind throughout this program. Two, our discussion this afternoon is designed for a mature audience. We'll be talking about and showing male and female reproductive organs. We want to underscore that the program may not be suitable for everyone, but we also want to underscore that this is an important discussion and for some, it may be a life saver. Without further ado, let me introduce Dr. Ira Bernstein and Dr. Alessandra Rellini a psychologist in the UVM Department of Psychology and the Director of the University's Sexual Health Research Lab and Dr. Ira Bernstein is an OB/GYN and the Senior Associate Dean for Research and Academic Affairs at the UVM College of Medicine. Thank you both for being with us! Let us start talking about the connection between sex and heart disease.

Alessandra.: Yes there is plenty of evidence at this point that in man with erectile dysfunction which is the inability to have an erection are strongly connected with problems with heart disease later on. The evidence is so strong that in the United Kingdom there's a policy now in place from and where athletes over the age 30 having problems with erectile dysfunction they have to go through a very thorough assessment of the high rate because it is an association between blood flow in the genitals and also problems with blood flow in the heart as well.

Judy.: I know we have skills that are going to illustrate this and we've been talking mostly about men and erectile dysfunction I guess it would make sense if you're talking about blood flow.

Alessandra.: Yes let me explain how it works for men. As you seen the picture the erection happens because there's an increase in blood flowing in. When there's an increase in blood flowing in the arteries need to adapt to this greater capacity of blood and they need to expand. If the arteries are not able to adapt in expand then there's going to be difficulties for correction to occur. If there are problems with the artery to expand there might be an issue with endothelium health. It could be the same problem or a similar problem that happens associated with heart disease.

Judy.: I know Ira you want to talk about the artery as well?

Ira.: I think some people think of arteries as tubes that don't have much life or are fixed in their size but ultimately arteries are really very responsive and they open and close to response of different signals. Our trees around the body are very similar in their structure and this illustration shows you the primary layers that are associated with the artery first the inside lining of the artery discovered by a group of cells called endothelium the cells respond to the movement of the blood through the arteries and send out signals to the smooth muscle cells which surround them that allow them to open and close hyperbole to the signals that are there and finely you have some to shoot here called trunca adventitia but surround the arteries and control some of the dilation. Because the arteries around the body all have the same basic structure and responsible only abnormalities in some areas can actually represent abnormalities in other areas as well which brings us to the link of sexual dysfunction and cardiac disease.

Judy.: That seems to make sense.

Ira.: I think it's pretty clear and it's been well demonstrated for Males. Our interest is really in examining women in

trying to understand if the same relationships hold.

Judy.: Let me ask you that. Have you found that it is similar for women?

Alessandra.: We're conducting the first study to really look at this empirically in women. There have been no studies conducted on this issue yet however there is evidence that there's a lot of similarities can the physiology of women and the physiology of men in terms of blood flow. During sexual arousal for women there's also an increase in blood flow into the genitals and there is the same need for the expansion of the arteries in women as well. There's also some evidence that women who have other risk factors associated with heart disease tend to report more sexual dysfunction as well. There is preliminary evidence there but there's no empirical study at this point that can pinpoint this association.

Judy.: Why hasn't there been a study done?

Ira.: Good question.

Alessandra.: There's always a first place to begin and there's also not a lot of laboratories that are set up the way that Dr. Bernstein and myself have access to technology that can do this work and there might be a handful of other laboratories in the United States that can do that. Lack of resources lack of funding lack of need for this process to start.

Judy.: Has it not been seen as a priority maybe?

Ira.: I would argue that if you look at the recent history the identification of the association of male sexual dysfunction with cardiac disease isn't that old. That has been around that long so the entire area is a relatively recent evolution in our understanding about vascular biology. I think for social reasons Males were examined first in terms of this relationship and we're probably not the only people thinking about this I'm sure there are others around the world who are interested in this issue. Ali and I have developed a cooperation using our relative expertise where I think we can examine this pretty effectively so we decided it was a good idea to move forward with it.

Judy.: Does that mean that there would be the same connection between sex and heart disease for women?

Alessandra.: We hope that's what we're going to find because that would make a difference in terms of our ability to prevent heart disease and screen women while we know physiologically is that during sexual arousal there is an increase in blood flow in and as you can see in the image there is a greater blood flow into the vagina and the clitoris and labia and we have devices able to assess this pretty accurately. We really want to see if endothelial health in healthy women could be paired up with any impairment and blood flow in those areas because again it could potentially if the same results were feasible for women we could predict heart disease three years prior to the first infraction so that would be a potentially lifesaving experience for women.

Ira.: I would add this is potentially more valuable for women than it is men as a historically in the recent past screening for cardiovascular disease in women has been more problematic. Women are more likely to suffer severe effects from their first heart attack. Are more likely to be fatal. We don't have as good screening for women for cardiovascular disease and this is one mechanism by which we can approach that question.

Judy.: What are some of the things that women are going to be helping you with in this study?

Alessandra.: If they purchase a paid in the study first of all we're looking for women who are 30 to 40 years old who are healthy and not on birth control. When they come into the laboratories we will be able to assess their physiological responses and see if the blood impairments and the blood from the genitals is associated too many missed factors with endothelial Health. They will actually be bounced between my laboratory and Dr. Bernstein's laboratory and we will assess at the same time physiological changes and the vagina and physiological changes in other arteries in the body.

Judy.: You're looking at people in their thirties and forties what about people who are older than that what are some of the concerns there?

Alessandra.: The reason why we're focusing on thirties and forties is because we really want to see this as a screening tool. We want to see if we can predict this because making a prediction three years in advance before any heart attacks would potentially save people's lives. Older people might already have other signs in place that may be assessed.

Ira.: I'd add we thought that trying to begin at the earliest possible age we thought there might be a difference would be the place to start. Again this is a pilot study readers asking this question for the first time so we had the target a population to look at it and we decided to try that the youngest age group reasonable to detect this.

Judy.: Are there any mechanisms in place now for men because more of the studies have been done on men as are experiencing erectile dysfunction is it a trigger for the doctors to say maybe you should get screened for heart disease?

Alessandra.: It depends from the knowledge of the Dr. But that is considered one of the goal standards and neurologists across the nation are becoming more and more aware of this. Again in some areas South America and Europe it is their gold standard practice. In the us that depends on who you go to but it's an important topic to bring up because sexuality is not just an aspect of people's lives associated with their well-being but also with their medical health in the same is true for women. For women it's harder because for men usually they have the urologist to go to. Women don't usually talk about those issues that are going to call a just and they don't talk about it that their primary care Physician and they often don't talk to a psychologist about it so it's a more difficult topic for them.

Judy.: Are some of the changes for women considered a function of their age? They will say you're getting into your forties now or close to 50 and you should experience and changes.

Alessandra.: It's an interesting topic because I think it's a common belief but it's not really substantiated by evidence behind it. Women's sexuality can be very lively and healthy and functional way later in life after menopause as well but we have this idea that sexuality is something for the youngest and women who get older normally experience dysfunction and that's not really the case. There are changes and things always change but in terms of developing dysfunction and developing serious problems there might be other biological psychological relationship factors underneath. Here we are mostly targeting biological factors but in my research clinic we address both with treatment and with research also the relational and the psychological ones.

Judy.: How closely tied are the relational and psychological aspects of what's happening with both men and women?

Alessandra.: Sexuality is such a complicated construct that you cannot tear apart to one component without looking at the others. We're doing in the study because we're really looking at only the biological component of sexual concerns. One of the things we do is screened carefully for any other psychological relational factors but you can pull apart the whole picture. And sexuality comes as a complex factor in itself so that's why my laboratory really looks at all components of the same time.

Judy.: Is that what you find two as far as some of the work you doing?

Ira.: Yes our connection Ali and I really relates to her interest then in sexual function in my interest in cardiovascular disease. My work in pregnancy relates to a disorder called preeclampsia where we examine women who develop a specific disorder in pregnancy associated with high blood pressure and try to understand how women are predisposed to developing that. Examine them prior to pregnancy then tracked them longitudinally to pregnancy. Just in the last year the American heart association has recognized that hypertension pregnancies specifically preeclampsia is now a recognized risk factor for the development of cardiovascular disease later in life for women. So the American heart association is just beginning to identify earlier missed factors and pregnancy related risk factors specifically among them. My lab specifically examines those risk factors so this was a very nice combination of work that we were able to put together to try to combine my work with the broad cardiovascular phenotypes which is the ways in which we can examine risk with Ali particular interest in sexual dysfunction.

Judy.: Talk a little bit about how important it would be if you could say that somebody is predisposed to this condition?

Ira.: The identification of risk is obviously critical to establishing interventions that are successful. In the broad scheme of them to the idea that first women do not have good risk factors for identification. As having identified risk factors if we're capable of doing that then you need to establish effective intervention so it's not as clear that the interventions that are used in men are as effective in women but understanding who is at risk will allow us to establish an examine the interventions that may be appropriate. First you have to figure out who's a risk than you have to figure out what's going to work for them to prevent the actual occurrence of disease. All of those are part of a longitudinal strategy to be successful and try to reduce the risk for cardiovascular disease in women.

Judy.: Ali what's the most important thing you want our viewers to know today and take away from this conversation?

Ali.: There are two things I want them to know if they do have a sexual concern they can talk to their gynecologist or

call us were here in Vermont and happy to consult with people any time because we want to improve their situation. Also if there is people out there interested age 30 to 40 women who are healthy not on birth control to give us a call and really need to find women to help us out for the study is really important to make a contribution. Not just women in Vermont but nationally.

Judy.: It's really groundbreaking stuff.

Ali.: Our phone number is on display now it's 41908 to zero we have people ready to answer the phone rang time of the day.

Judy.: How both for you Ira?

Ira.: The way that our studies working out the subjects are going to come into Ali's lab then get referred to our lab for follow-up studies so in the same way that Ali just outlined to entered the study were very excited about having people participate. I think we have an opportunity to do some unique work here in Vermont and to identify some new and I think interesting relationships between female functioning with regard to sex and cardiovascular disease.

Judy.: And perhaps down the road save some lives.

Ira.: That's certainly the goal.

Judy.: I want to thank you both for joining me today. One quick question how long is the study?

Ali.: It takes about 2 hours in my lab and about 2 hours in Ira's lab.

Ira.: We will be going for six months to a year depending on how long it takes us to recruit the appropriate number of subjects.

Judy.: All right thank you so much for joining me in having this important conversation. That's our program for today I'm Judy Simpson we will see you again next time on across the fence.

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