LINDSEY WHISSEL FENTON: Welcome to *12 Degrees.* I'm Lindsey Whissel Fenton, and I'm here with a question. What if I told you that what's good in bed might also be good for your head? In this episode, we're turning up the heat on intellectual wellness with some surprising research from Penn State. One study suggests that sexual satisfaction in later life is linked to better memory and possibly a sharper mind as we age. I'm talking with Dr. Marty Sliwinski, director of the Center for Healthy Aging at Penn State, to break down the science behind the sheets. Marty, thanks for being here.

MARTY SLIWINSKI: It's a pleasure.

LINDSEY WHISSEL FENTON: Can you start by just giving a broad brushstroke background of what your research focus is on?

MARTY SLIWINSKI: Yeah. So broadly, I look at intellectual or cognitive health and how that changes and improves or faces some challenges across the adult lifespan. And I look at all kinds of factors-- lifestyle factors, environmental factors, biological factors.

LINDSEY WHISSEL FENTON: All right. Lifestyle factors, biological factors bring me to the study that I found from 2023 that you coauthored that found that low sexual satisfaction in middle age may serve as an early warning sign for future cognitive decline. So, we'll just cut to the chase right there and talk about what the big takeaway from this particular research study was. Are we talking about better sex, better memory?

MARTY SLIWINSKI: Not exactly. So, what we didn't look at where the specifics of the individual sex life, just a general sexual satisfaction. And we looked at three different domains of functioning that ended up being interconnected in an interesting way-- cardiovascular function, cognitive function, and sexual satisfaction and function. And what was unique about this study-- instead of just measuring people once and looking at people maybe who have better cardiovascular health-- of course, maybe their cognition is going to be better than others. But we tracked how these three variables were changing together across time. And what we saw is that from year to year, if there was a decrease in one of those variables, that was pretty much accompanied by decreases in the other two. Or in contrast, if things got a little bit better in one variable, all three got a little bit better. So that gave us some insight and maybe suggests a clue that all of these domains of functioning-- sexual, cardiovascular, and cognitive-- bear some interconnectivity at a biological level.

LINDSEY WHISSEL FENTON: Interesting. And you said the word "satisfaction." What I heard was satisfaction, not frequency, which we hear a lot of people concerned about, if their frequency is high enough. Why does how we feel about our sex lives matter more for our brains than how often we're doing it?

MARTY SLIWINSKI: Yeah. This is analogous to the same kind of question we have when we measure stress. And when we measure stress, it's not so much the frequency with which stress occurs that is related to a person's health. It's how it affects us and basically how we appraise our stress. Similarly, for sexual satisfaction, our brains are filters. And if we're happy with how things are going, that probably means things are going OK regardless of the frequency. And there are a lot of things that can affect frequency as well.

LINDSEY WHISSEL FENTON: And this research kind of blows up the idea that brain health is just puzzles and leafy greens or just only puzzles and leafy greens. So, what does this tell us about the emotional and relational side of intellectual wellness?

MARTY SLIWINSKI: That's a great question. So, we've also done research examining how-- and not just us, but it's very well established that social connectivity, social interactions-- vitally important for maintaining brain health for a number of reasons. So, people who are socially isolated and lonely show more likely to have cognitive problems or cognitive decrements. So, it isn't just the physical aspect. It is, as you say, the connecting with others.

LINDSEY WHISSEL FENTON: And building off that a little further, a lot of people must accept that memory decline is just part of getting older. How much of it is actually influenced by these social connections-- the quality of our daily lives and relationships?

MARTY SLIWINSKI: I'd say most of it. One of the first studies I did, and this was now about 30 years ago, where it was a longitudinal study where we measured people over the course of time. And everyone entered the study, and no one had a diagnosis of dementia. But some individuals developed a diagnosis over the course of time. When we went back and looked at age differences in memory at their baseline performance when no one was diagnosed with dementia, basically, we could explain all of those age effects on who ended up developing dementia. And what we know now is that the effects of Alzheimer's disease and other dementias manifest years, if not longer, than when symptoms get sufficient to warrant a clinical diagnosis. So, a lot of what we say is aging is really disease.

LINDSEY WHISSEL FENTON: Wow, I want to just repeat that because that just blew my mind. A lot of what we say is aging, it's really disease.

MARTY SLIWINSKI: Yeah. There are things that happen to us over the course of time, such as loss of muscle mass, for example. But that has as much to do with how we change our living instead of just being alive longer. So, as we get older, we may not be as active. We may not exercise as much. So, what this means is as we get older, we need to be more intentional about maintaining our good health, both physical and social health.

LINDSEY WHISSEL FENTON: The study about the link between sexual satisfaction and cognitive health focused on men in their 50s and 60s.

MARTY SLIWINSKI: Yeah, about 55 to late 60s, yeah.

LINDSEY WHISSEL FENTON: OK. So, for folks in their 30s, 40s, what should we be thinking about now to stay sharp later?

MARTY SLIWINSKI: All of the things that people who are older think about. So, think about it as-- when you save for retirement, you need to start early, and you accrue the benefits of compound interest. The same for healthy lifestyles. It's never too late to start, but the sooner you start focusing on these factors, the better it helps. For example, staying physically fit, socially engaged, managing your stress levels, staying cognitively stimulated. All of those can help accumulate cognitive reserve, which can pay dividends later in life. If you do develop a disease like Alzheimer's disease, there are people who never demonstrate symptoms of Alzheimer's disease. But after they pass away, and we do autopsies on the brain, their brains look like they had Alzheimer's disease, but they never showed the symptoms. And we

think that's because, in some individuals, they are able to establish a high degree of cognitive reserve that can help mitigate against the effects of the disease.

LINDSEY WHISSEL FENTON: And let's be real, sexual health can be awkward to talk about, especially as we age. Any tips for making these conversations feel less weird, more wellness-focused? Should we come at our partner with, hey, if you care about my brain health-- [LAUGHS] This is important.

MARTY SLIWINSKI: Wow. That is a great question, Lindsey. And I don't have any advice for couples, but I think we can do, as researchers, a better job of representing this very important aspect of human health functioning and well-being and not have these be one-off rare studies but be a little bit more mainstreamed.

LINDSEY WHISSEL FENTON: Should or do physicians, especially with older adults, regularly ask about sexual health and, well, I guess, sexual satisfaction?

MARTY SLIWINSKI: No. And this is not a critique of physicians because, as you know, our healthcare system is so overburdened. They are less focused, and understandably, on flourishing and more on, is this person sick, and is something bad going to happen right now? And by the time people get into their 70s, prevention doesn't even really enter the conversation often.

LINDSEY WHISSEL FENTON: In this study or in any other work, is it the social connection, or is it the biological function? I know you said there's a few things because I'm wondering, does satisfactory solo sex help your brain in the same way that that connection with another human would?

MARTY SLIWINSKI: So, some of that might get outside of my pay grade--

LINDSEY WHISSEL FENTON: Sure.

MARTY SLIWINSKI: --because in terms of understanding the physiology of sexual health. But what I will say is that maintaining close connections to others is a biological imperative. Much like hunger or much like when we feel pain, if our body's being damaged, we feel lonely because that's our body's way of telling us we need to connect and be around people. And there's an evolutionary explanation for this. If you were in the olden days, if you were off by yourself out in the wilderness, you were at real physical risk. So, there isn't really the strong distinction between the biological and the emotional part because these are so intertwined.

LINDSEY WHISSEL FENTON: For sure. So that study was from 2023, I believe. What are you working on right now?

MARTY SLIWINSKI: Well, one of the things we're really interested in is how to track in a very precise, sensitive way how cognitive function is changing in individuals, not just over the course of years but from day to day or week to week. And this is important because it can help us examine the effects of environmental exposures, such as extreme heat, variations in air quality, variations in health behaviors like sleep and physical activity, as well as day-to-day variations in social engagement. We've been able to show that on days where you have really positive social connections, your cognitive function is better on that day, and that boost lasts for two or three days. So, we're really trying to dig into the fine-grained day-to-day timescales to find ways that we can help people stay cognitively fit and improve their daily functioning.

LINDSEY WHISSEL FENTON: OK. And so, what I'm hearing is going back to this idea of what we can do to take care of our brains as we get older-- do the puzzles, eat the leafy greens-- but we need to be just as focused on talk to humans, spend time-- well, I shouldn't say that. Not everyone can talk-- is connect with humans and spend time with others around you.

MARTY SLIWINSKI: Be with others in ways that are meaningful and valuable for you. And I did hear you catch yourself about in terms of the talking and the speaking. And auditory communication, though, is a fundamental way in which we connect with each other. And one of the public service announcements I always like to leave everyone with is one of the most-- actually, it is the biggest risk factor for dementia is hearing loss. But the good news is that it's untreated hearing loss. So, the one bit of advice I would give everyone is if you find yourself not so enthusiastic about socializing because you have difficulty following the conversations, get your hearing checked and get one of these new hearing aids, which are very difficult to see. They're so modern. That can be good for your social life as well as your brain health.

LINDSEY WHISSEL FENTON: That's a great practical takeaway. And just to loop back to that very first question I asked you, so it's not as simple as better sex, better brain health, but it's more about what I'm hearing. It's kind of correlation.

MARTY SLIWINSKI: It's what the greater satisfaction with your sexual health signifies. And that signifies you are connected, and it also indicates that you're healthy enough to engage in sexual activity. So, I think if that part of your life is starting to lag behind, you can accept that, but also, you want to be sure that it's not because of some problem that could be addressed.

LINDSEY WHISSEL FENTON: Looking at it holistically, as we always talk about on 12 Degrees, the full spectrum of wellness, all of these different degrees feed all the other degrees.

MARTY SLIWINSKI: Yep.

LINDSEY WHISSEL FENTON: All right. Well, this has been great. Thank you so much, Marty.

MARTY SLIWINSKI: Well, thank you, Lindsey.

LINDSEY WHISSEL FENTON: That was Dr. Marty Sliwinski, the director of the Center for Healthy Aging at Penn State. His work looks at how daily experiences influence brain health. I'm Lindsey Whissel Fenton. *12 Degrees* is produced by WPSU in collaboration with the Penn State Ross and Carol Nese College of Nursing. This podcast is intended for informational purposes only and is not intended to be a substitute for medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified healthcare provider with any questions you may have regarding a medical or mental health condition. Please consult your physician or other qualified healthcare provider immediately if you are experiencing any suicidal thoughts. If you're in crisis, help is available for free 24/7 in the US by calling or texting the Suicide and Crisis Lifeline at 988. More information is available at 988lifeline.org.

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