Emily Kumler: I'm Emily Kumler and this is Empowered Health. 25 million Americans suffer from some form of incontinence[1] and 75 percent to 80 percent of those people are women. So this week we're going to talk about incontinence, peeing your pants. Why that happens to women and how there are things you can do about it. So just to give you some idea, a quarter of women who are over the age of 18 experience some leakage[2]. So this is not something that just is like a normal aging process and it's not something that only happens to women after they've had a baby. Certainly, menopause is a time where women often experience this [3], but what we learned was that it's about 6.5 years from the first presentation of a symptom to an actual diagnosis[4] that tells me that a lot of people are suffering from this and don't go and talk to their doctor about it.

Dr. Carolyn Swe...: So my name is Carolyn Swenson[5]. I'm a urogynecologist and urogynecology is also known as female pelvic medicine and reconstructive surgery. It is a surgical subspecialty of obstetrics and gynecology and we primarily manage pelvic floor disorders[6]. And there are a number of things that fall into the category of pelvic floor disorders, but some of the most common things we manage are urinary incontinence[7] or pelvic organ prolapse[8] and bowel incontinence[9].

Emily Kumler: Great. Well we want to talk about all of those, but I think one of the things that I'm just, I feel like just out the gate is a little bit confusing is that we tend to think of the elderly as suffering from incontinence as sort of like just a byproduct of age, right? But then we also understand that there is this sort of postpartum incontinence[10] that is perhaps different. Maybe it's not. But the, I guess the segmentation of those two things creates an assumption--which I'm assuming is wrong--that the postpartum stuff just sort of heals. Right? And then you might become incontinent again. So can you sort of break those apart for us? Like maybe just start with postpartum because I feel like having had two kids myself, like the bladder is just pushed on a lot right, when you're pregnant. And then there's this idea of like the baby going through the vaginal canal and like, but women who have C-sections also suffer from incontinence[11]. So I know you've covered this extensively, so I'd love to sort of hear you just break it down in a lay person's medical terms if you can do that.

Dr. Carolyn Swe...: I will try my best. I think taking a step back, I think one of the reasons that we typically think of pelvic floor disorders including incontinence and prolapse as disorders of the elderly is because age is one of the biggest risk factors for

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2 https://phoenixpt.com/statistics/

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https://www.menopause.org/for-women/sexual-health-menopause-online/causes-of-sexual-problems/urinary-incontinence

4 https://www.health.com/condition/incontinence/12-myths-and-facts-about-incontinence

5 https://www.uofmhealth.org/profile/4001/carolyn-weaver-swenson-md

6 https://www.nichd.nih.gov/health/topics/pelvicfloor/conditioninfo

7 https://www.mayoclinic.org/diseases-conditions/urinary-incontinence/symptoms-causes/syc-20352808

8 https://www.womenshealth.gov/a-z-topics/pelvic-organ-prolapse

9 https://www.mayoclinic.org/diseases-conditions/fecal-incontinence/symptoms-causes/syc-20351397

10 https://urogyn.coloradowomenshealth.com/patients/library/incontinence-after-childbirth

11

https://www.nih.gov/news-events/news-releases/pelvic-floor-disorders-linked-mode-delivery-among-first-time-mothers

these things. But the other big risk factor is childbirth as you mentioned. So we know that vaginal, especially vaginal is kind of the inciting event for a lot of these pelvic floor disorders. Interestingly, sometimes, urinary incontinence certainly can happen during pregnancy or right after, but there is something about the aging effect, and we haven't quite figured it out yet, whether it's the kind of atrophying or thinning of the muscles in the pelvic floor or changes in the nerves that go to the pelvic floor or just kind of what we think of as a repetitive loading, which is you know, with time, you know, gravity kind of takes effect and changes the pelvic floor and all of those things can increase your risk for something like urinary incontinence as you age. But as you mentioned, urinary incontinence especially can absolutely be a problem and an issue in pregnancy. And the reason for that is because of the excess intra-abdominal pressure that goes along with carrying a baby. So typically what we see as early on in pregnancy, you know, the urinary incontinence is relatively uncommon, unless that was a problem before getting pregnant. And as the pregnancy progresses and your uterus gets bigger and you are carrying more wheat, it puts more pressure on your pelvic floor and just by weight of having that excess pressure that can increase your risk of what we call stress incontinence[12]. And that's the type of leakage that occurs with activity, laughing, coughing, sneezing. So this type of leakage can occur in up to 30% of pregnant women[13] (Editor's Note: From cited study - "The mean prevalence of SUI during pregnancy was 41 % (18.6–60 %) and increased with gestational age.") and some of these women after they deliver that leakage will go away. But we know in some of the research that we've done, that leakage actually can persist in as high as 20 to 25% of postpartum women[14]. So we also know that if you have leakage during pregnancy, that is a risk factor for having continued leakage later on throughout your life. There are some changes during pregnancy that affect your pelvic floor that might be outside of just having a vaginal delivery. So if women have a c-section, as you mentioned, that's not entirely protective of pelvic floor disorders, especially urinary incontinence. So one of the things, because you just mentioned sneezing that was so upset and preparing for this interview was that there's a stat that says like 79% of women who in one particular study, they were, I think in their fifties and sixties, reported that sneezing and laughing were like most common triggers[15]. Yes. And I feel like that's heartbreaking because you sort of think like you really can't prevent that, right? I mean you can't stop yourself or protect yourself. Like I was thinking like, okay, I just did a workout where I had to do like burpees or jump rope that you have a little leakage, but laughing and sneezing like that, just that feels just totally unfair, right.

Dr. Carolyn Swe...: Right. I mean you can't control sneezing and nobody wants to say you can't laugh, right? I mean that's a healthy part of living and that's a really good thing that we want to encourage as this exercise.

Emily Kumler: But so what is the connection between the sort of the, I guess the diaphragm, right? Where like the, when you're sneezing or you're laughing, you're sort of like shaking that upper part of your body. Why is that a trigger?

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[12] https://www.urologyhealth.org/urologic-conditions/stress-urinary-incontinence-(sui)
[13] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3671107/
[14] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2662093/
[15] https://www.healthyagingpoll.org/report/urinary-incontinence-inevitable-part-aging

Dr. Carolyn Swe...: It is all simple biomechanics. So it all has to do with increasing your intra-abdominal pressure. So when you cough or sneeze or jump up and down and do burpees or jump on a trampoline, every time you do one of those things or your feet hit the ground in an aerobic exercise, your intraabdominal pressure suddenly increases. And if your pelvic floor muscles are not either strong enough or prepared for that increase in intra-abdominal pressure, you can leak urine. So the one thing I do want to mention, I know I've, and I'm wondering if that statistic was from our National Poll on Healthy Aging Study[16].

Emily Kumler: It was.

Dr. Carolyn Swe...: Okay. I was going to say that sounds about like what we found.

Emily Kumler: That's not a coincidence. It is what you found.

Dr. Carolyn Swe...: There are some relatively simple things that can actually decrease the prevalence of that type of leakage, especially with coughing and sneezing. There is a really, it's a very simple technique that you can learn called the Knack[17], which is actually developed by one of our nurse practitioners here. Basically all it is is when you feel that sneeze coming on or if you feel like you're about to cough, you squeeze your pelvic floor muscles, you do a really strong kegel[18]. So it's strategic use of your pelvic floor muscles. Now normally we reflexively do that. So when you are running and when you're jumping on a trampoline and when you, when you cough your pelvic floor reflexively contracts, you don't even have to think about that. But in women who have problems with leakage of urine, they can get some extra protection if they consciously can track their pelvic floor muscles.

Emily Kumler: But that makes me think it's like a neurological thing.

Dr. Carolyn Swe...: Well it can be. So it can be certainly in some cases, either that reflex is not fast enough or those muscles either with age or because of a related birth injury or not strong enough without that conscious additional increased contraction. So there could in some cases be a neurologic component. It could also just be related to weaker pelvic floor muscles as we age, which all of our skeletal muscles get weaker and thinner with age [19]and your pelvic floor muscles are no exception to that.

Emily Kumler: And so there, is there a connection between the drop in estrogen in menopause and the, I mean, obviously the thinning of the vaginal wall probably, right? Or like the tissues?

Dr. Carolyn Swe...: Yes, yes.

Emily Kumler: And that contributes in some way?

Dr. Carolyn Swe...: It can. The estrogen, the bladder and urethra are also very sensitive estrogen and lack of estrogen. So what we can see in some women who have rather severe incontinence is that if we look in their bladder and in their urethra with a little camera, we can see that, especially in the urethra, the normal really healthy blood vessels that line the urethra it's called the mucosal lining is very

[16] https://www.healthyagingpoll.org/
[17] https://www.ncbi.nlm.nih.gov/pubmed/9670874
[18] https://www.mayoclinic.org/healthy-lifestyle/womens-health/in-depth/kegel-exercises/art-20045283
[19] https://www.webmd.com/healthy-aging/guide/sarcopenia-with-aging

thin and atrophied, which means it hasn't seen estrogen in awhile.[20] And that seal that you typically get and rely on to help with continence is absent. And so basically you have a urethra that is relying almost completely on the muscles and connective tissue on the outside and has lost any additional help from the inside in terms of that healthy blood supply and those healthy blood vessels that help create a seal. So in that way, lack of estrogen can contribute to the risk of incontinence.

Emily Kumler: So does hormone replacement therapy have any benefit?

Dr. Carolyn Swe...: Unfortunately, we don't have a lot of good data to show that giving patients a vaginal estrogen and certainly not oral estrogen really makes a significant impact in reducing incontinence. While we see these changes in postmenopausal women that we think probably contribute, we don't have really substantial data to say that giving those patients estrogen replacement will treat their urinary incontinence.

Emily Kumler: I think maybe we should just back up for a second and talk a little bit about what the pelvic floor is because I think there's even a lot of confusion.

Dr. Carolyn Swe...: Sure. I'm glad you brought that up because I think there is confusion about that too, and I do want to say that men have a pelvic floor too[21], but what we're talking about today is women's pelvic floor, but it's the same kind of for everybody. The pelvic floor is comprised of a group of skeletal muscles and connected tissue that aid in holding in and supporting the pelvic organs and also aid in holding, allowing women to hold in urine and stool. So in a normally functioning pelvic floor, you would not leak urine, you would not have any prolapse, which is the pelvic organs descending down into and sometimes out of the vaginal opening and you'd be able to hold in stool and difficulty with any one of those things is something that someone like me, a urogynecologist can help manage.

Emily Kumler: Okay. And so when people talk about doing a kegel.

Dr. Carolyn Swe...: Yes.

Emily Kumler: Can you just sort of explain what that is? Because I also think there's the muscles that we're talking about go from sort of like the vaginal opening, right? Like all the way up, right?

Dr. Carolyn Swe...: Yes. So there are three main muscles that make up our pelvic floor muscles. They're sometimes referred to as the levator Ani[22], and that's all Latin word. That means elevate the anus. And so these muscles actually run from behind the vagina and some of them connect around and behind the anus and they run along the sidewalls of the vagina and the pelvis and attached to the pubic bone and then to the inside of the upper pelvic wall. So when you're doing a kegel, that can mean different things to different people. But in general what that should mean is that you're contracting those muscles around the vagina like you have to. I always tell patients kind of squeeze like you really have, you're really trying to hold in urine. Or sometimes if you squeeze like you're trying to hold in

[20] https://www.mayoclinic.org/diseases-conditions/vaginal-atrophy/symptoms-causes/syc-20352288
[21] https://www.continence.org.au/pages/pelvic-floor-men.html
[22] https://www.kenhub.com/en/library/anatomy/levator-ani

gas, those are the muscles, those are your pelvic floor muscles. And that's what a kegel is. It's squeezing those muscles.

Emily Kumler: And so like sometimes I feel like this is like an, I don't know if this is like a MythBuster kind of thing, but like sometimes you have to pee and then you hold it for a really long time, which I think happens to Jill and I all day because you can't go right and then it goes away.

Dr. Carolyn Swe...: Uh-huh.

Emily Kumler: What is that?

Dr. Carolyn Swe...: So that is a great technique that we teach patients how to suppress urinary urgency. So what you're doing in that situation, you have an urge to go because your bladder muscle is contracting, your bladder has gotten there's a certain amount of urine in your bladder[23]. Your bladder wall has stretched. Those stretch receptors send a signal to your brain that says, "oh my bladder is getting full, I need to go." And then reflexively your bladder muscle starts contracting because it's preparing to empty the bladder. So you get that urgency because your bladder muscle is contracting. If you squeeze your muscles really hard, if you do a really strong kegel, it actually suppresses that reflex and will will stop your bladder from contracting. So, that is a technique that women who have urgency predominant symptoms, so, overactive bladder, kind of that gotta go gotta go symptom. We teach them to do that because it can help manage some of those urgency symptoms. Now I will say you shouldn't do that for really prolonged periods of time. Ideally you want to empty your bladder every three to four hours during the day and try not to go longer than that cause your bladder can get overly full. But it sounds like you and Jill have kind of instinctively learned how to do that. Good for you.

Emily Kumler: Well you're always sort of like, well where did it go? Right? I mean like my, you hear that with kids all the time, like, ah, mom, we have to pull over, I have to go. And then you're like, you get to the rest stop. And they don't have to go anymore. Right?

Dr. Carolyn Swe...: Yeah. So the urine is still there. The bladder has just relaxed a little bit so you don't have that urge.

Emily Kumler: And then I think the other big sort of confusion point or MythBuster thing we can handle is, you know, this idea that like when you go pee, you should stop for a couple of seconds and then go again as a way of using those muscles. I feel like I've heard both things. One, I feel like we, somebody at some doctor that we talked to at some point said, do not do that. Like, that's not good. You don't want to do that. Same with like holding your pee. Like I feel like some people are like, don't do that. It'll stretch out your bladder. It'll make it harder in the long run. Like when you're old, you'll be mad that you did that. And I could kind of see both sides of it. Right. Like losing it a little bit so that you have that tension under pressure or whatever, seems like kind of like a workout for that muscle. Yeah. But I also could see like when you're peeing, if you hold your pee and then let it go, like does that have any benefit or not? Or maybe that's superfluous.

Dr. Carolyn Swe...: Yeah, I don't think we have any evidence that it's harmful. We certainly don't have any longitudinal evidence of, you know, people who, who do that in their

[23] https://www.continence.org.au/pages/bladder-training.html

lifetimes and what the outcomes are. I think it probably is not super helpful either. I mean, I think it's probably one of these things that doesn't really matter. I think a better way to strengthen the pelvic floor muscles if that's what you're wanting to do is kind of use those muscles is to just, you know, what I tell patients is when you're brushing your teeth, so you brush your teeth twice a day while you're brushing your teeth, just do a set of kegels. You know, while you're doing that and that way you'll do that twice a day. Just like you brush your teeth twice, twice a day. And just like you go to the gym to work out your other muscles, you can work out your pelvic floor muscles doing that as well. I think kind of squeezing them one time while you're avoiding or you know, once a time while you're avoiding, I don't know that that's really going to do anything,

Emily Kumler: Yeah.

Dr. Carolyn Swe...: But for women who do that, I don't think it's harmful. I just don't think it's probably really that helpful.

Emily Kumler: And so then for women who have real incontinence where they're feeling like they can't hold it, do things like kegels, like doing that regularly that will make a significant difference? Or do they really need an intervention in a surgical way or others?

Dr. Carolyn Swe...: It depends. So, part of it depends on what type of incontinence they have. In general, we think about two main types of incontinence. One is called stress incontinence, which I mentioned before. So that's the type of leakage with laughing, coughing, sneezing and aerobic activity. The other type of leakage is called urgency incontinence. And that's the type where you feel the urge to go and you can't make it to the bathroom. And the reason we distinguish between the two is because the causes of the two are different. Therefore the treatments in general are different. One of the treatments that is similar between the two is sometimes kegels. But actually what I prefer is to send women to pelvic floor physical therapy[24]. So we do have some good data showing that if women have incontinence and they go see a pelvic floor physical therapist, they actually have more benefit compared to just doing kegels on their own. So pelvic floor physical therapy is a sub specialty physical therapy. So these are specially trained physical therapists that have gone through extra training to focus on the pelvic floor. They are very good at what they do and they have all kinds of biofeedback and different methods to patients to know how to use their pelvic floor muscles efficiently and to strengthen their pelvic floor.

Emily Kumler: Wow.

Dr. Carolyn Swe...: So that can actually be really beneficial. And I have a significant portion of patients who do pelvic floor physical therapy and then that's the only treatment that they need. If your symptoms aren't where you want them to be after pelvic floor physical therapy, we have other treatments again, depending on what type of leakage is most bothersome for you.

Emily Kumler: That's really interesting because I also, I feel like I have anecdotally a friend who had a baby in France and a midwife like came to her house every day for like the first ten years of the baby's life or something really magical. And one

[24] https://www.brighamandwomens.org/patients-and-families/rehabilitation-services/services-overview

of the things that the midwife did with her was to teach her pelvic floor exercises.

Dr. Carolyn Swe...: Interesting.

Emily Kumler: And she was sort of like, it was just sort of like a normal part of my healing process.The first time I ever heard about Kegel exercises, I was probably in the context of like some sex talk. Right. And so it's so interesting to think that this is an area of physical therapy that is really beneficial to people, but you probably would, you might feel sort of embarrassed having to go right and that this is really just part of taking care of your body and we don't think about it like that. Right?

Dr. Carolyn Swe...: Absolutely. And I think you're not the first person to tell me a story like that about someone who delivered in France. And I think in France, my understanding is maybe the midwife coming to the house counts as this, but I was under the impression that pretty much anybody who has a vaginal delivery gets sent to pelvic floor physical therapy[25], there is mixed evidence on whether that should be done. And I don't know that that would be feasible in the United States. But certainly if you have symptoms postpartum that is a great place to start. But I will say the pelvic floor physical therapist patients can be hesitant because they do internal work and you it can be a little uncomfortable to think about doing that. But the public for physical therapists I know are absolutely phenomenal. And they make patients extremely comfortable. And my patients love their pelvic floor physical therapist and have nothing but good things to say about them. I can't speak for all physical therapists obviously. But I think in general they're really good at what they do and are really passionate about their work.

Emily Kumler: And that's the kind of thing that you would get a referral from a your gynecologist or correct.

Dr. Carolyn Swe...: Yes. Right, exactly. Yup.

Emily Kumler: Don't look in the yellow pages for...

Dr. Carolyn Swe...: No.

Emily Kumler: Yes, exactly. That's like my PSA for the day. God knows who you would find.

Dr. Carolyn Swe...: Exactly.

Emily Kumler: So then will you talk to us a little bit about like sort of what happens if you do the surgery, if you, if it's that if you've tried the physical therapy or it's been diagnosed as something that's more acute and requires surgery, what does the surgery actually do?

Dr. Carolyn Swe...: Sure. So I will talk about, this is going to be on stress incontinence and then we can talk about the treatment options for urgency incontinence after. So if you do, if you have leakage of urine with laughing, coughing, sneezing, exercise, and you've done physical therapy and you're not where you need to be, there is

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25 https://www.theguardian.com/commentisfree/2016/nov/02/french-mothers-bladder-incontinence-nadia-sawalha

one other option you can try before surgery. Um, and it's, it's called a pessary[26]. It's a silicone ring that goes in the vagina. So this is a, this is a nonsurgical option. And so it basically provides some support to the urethra, the tube you pee out of, so that when you have these increases in intrabdominal pressure, your urethra is supported and it prevents it from, from leaking. So a pessary is another option. You may have heard or seen, this product in the store is called Impressa[27], Impressa vaginal inserts. They look kind of like a funny shape tampon.

Emily Kumler: Okay.

Dr. Carolyn Swe...: But it's the same idea as a pessary. They're relatively new, but you can get them over the counter and it's a vaginal insert that supports the urethra and is for women with stress incontinence.

Emily Kumler: And so how does that work? You put it in for a certain number of hours a day or is it just go in and stays in?

Dr. Carolyn Swe...: Yeah. So with the pessary it's silicone so you can actually leave depending on why you're using it. So sometimes these are used for prolapse as well and there are women who can leave it in for three months at a time. But in general for using it for incontinence, you can just put it in when you're about to go to the gym, if that's only when you have leakage or you can leave it on all the time. And in that case, I tell patients to take it out once a week, leave it out overnight. All you do is wash it with soap and water. There's no special creams or soaps that you have to use for the pessary and then you just put it back in in the morning. So it's pretty low maintenance, but it is something that you have to kind of deal with and manage.

Emily Kumler: And it doesn't stress out any other area.

Dr. Carolyn Swe...: Correct. If it's, if it's a good fit, it should be kind of like a tampon where you put it in, you feel it when it's going in and then you should kind of forget about it.

Emily Kumler: Okay.

Dr. Carolyn Swe...: It should not be painful or anything like that. So that's another good nonsurgical option. But if we failed all of those things and we're interested in surgery now...

Emily Kumler: So is that an accurate progression? Like that's what you would do with a patient. You'd try the physical therapy and then you'd try one of these devices like the pessary or the other you mentioned and then move forward with the surgery?

Dr. Carolyn Swe...: So in general, surgery is an option — is a first line option for some women. So there are some women who in certain situations they don't want to do PT and can't imagine having to deal with something like a pessary and they're good surgical candidate and there that's a good first line treatment for some women. I would say for the most, I tried to encourage conservative management first.

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26 https://www.mayoclinic.org/diseases-conditions/urinary-incontinence/multimedia/pessary-use/img-20006056

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And if that doesn't work then we talk about surgery because surgery is not without risks. So I always want to make sure that my patients have tried the conservative management first. If that doesn't work then we'll go to surgery. But for stress incontinence, we have excellent surgical procedure to treat that type of leakage. And that is called a mid-urethral sling[28]. And this is a tiny ribbon of polypropylene mesh that's about the width of your pinky that sits right under the middle part of the urethra. And just like the pessary provides extra support to the urethra. This just so in a permanent way. So it's a surgery that takes less than an hour to do. It involves a small incision in the vagina and two tiny incisions above the pubic bone or in the groin, depending on how the procedure is done. It's an outpatient procedure. And these procedures have an 85 to 90 percent [29]objective cure rate[30] that is sustained over the long term. So we have data following these patients out 17 years that shows about an 80 to 85 percent cure rate still at that time.

Emily Kumler: And so can you just explain to us like what is it doing? How does it work?

Dr. Carolyn Swe...: The way the sling is placed in the vagina— the one that I do is called a tension-free vaginal tape[31]. And I like that name because it kind of describes what we do. So it's placed in a tension-free way. So it's not that this mesh is really-

Emily Kumler: Pulling on different things.

Dr. Carolyn Swe...: Yeah. Really pulling up on anything. It's just the mesh scars in place and that scar tissue and just the, sling being there provides enough support to the urethra that the urethra does not move around with any increase in intra-abdominal pressure. And that mobility of the urethra is often what is associated with weekends, with activity, And those different laughing, coughing, sneezing, situations.

Emily Kumler: So it keeps it in mobile. So like if you look at a person who doesn't have incontinence, is their urethra more fixed I guess? Interesting...

Dr. Carolyn Swe...: Yes. That's exactly right. So we usually, sometimes we see, especially after vaginal deliveries, a little more mobility in the whole anterior vaginal wall. So that front vaginal wall where the bladder and urethra sit behind everything kind of comes down a little bit. And that is what we see, it just goes hand in hand with stress incontinence as well.

Emily Kumler: And that makes sense because it's like as the baby is coming out, it's like messing everything in its way up, kind of.

Dr. Carolyn Swe...: It can. Okay, so urgency incontinence again is the type of leakage where you have the urge to go and can't make it to the bathroom. So there are several different options for management One of the first options is behavioral management. So fluid management, sometimes women are drinking too much fluid. And so the more you drink, the more you have to pee. And I always tell my patients that you should look at your, the color of your urine to monitor your hydration level and not worry about drinking a prespecified amount of fluid every day. If your urine looks like water, you're drinking much and you

[28] https://www.health.harvard.edu/newsletter_article/midurethral-sling-surgery-for-stress-incontinence
[29] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4444769/
[30] https://www.ncbi.nlm.nih.gov/pubmed/11711344
[31] https://www.urology.co.nz/info/tvt-sling

need to back off because your body's just trying to get rid of all this excess fluid. Your urine should be yellow. So that's one kind of easy thing. Another common contributing factor to urgency incontinence is the consumption of bladder irritants.

Dr. Carolyn Swe...: So those are foods or drinks that irritate the lining of the bladder and cause that bladder muscle to contract or spasm. Those include caffeine, artificial sweeteners, nicotine and alcohol. Those are the main ones. There are lots of different other potential bladder irritants that I try not to give patients a whole list of because that can eliminate like the majority of their diet, but some spicy foods. Citrus foods can be potential bladder irritants. Oh that's so interesting. Yeah, so that's an easy thing. I always have patients kind of track what they drink and if they notice that their bladder symptoms are worse after drinking three diet Cokes, then maybe you want to cut back to one or drink water instead. So that's another easy kind of behavioral management strategy we can take. Then there's pelvic floor physical therapy, like we mentioned. Sometimes a pessary can be helpful in urgency incontinence, but that's the only if there is a significant bladder prolapse associated with the urgency symptoms.

Dr. Carolyn Swe...: Otherwise the pessary is not overly helpful with that type of leakage. And then we have medications, so there are six antimuscarinic medications on the market. These medications that reduce bladder contractions or bladder spasms. The main side effects of these medications unfortunately are dry mouth and constipation, which if you think about it are the two worst side effects you could give anybody with a urinary incontinence because then they drink more fluid and if you're constipated your bladder won't work well. So if your bowels aren't working, your bladder is not working well. So we don't want constipation. That's a really important thing to manage as well. There is a newer medication called Mirabegron[32], which works on a different receptor, does not have the dry mouth and constipation side effects. So, I prefer that one over the older medications, but it's the United States, so insurance companies don't want to pay for those new medications yet.

Dr. Carolyn Swe...: So that's the biggest barrier right now we have with that one after medications, there is something that is like acupuncture for your bladder and this is called percutaneous tibial nerve stimulation[33] or PTNS and this is a procedure — this is a type of what's called sacral neuromodulation[34]. So the bladder, the nerves that go to your bladder start in your sacral nerve roots. And so with this procedure, we put an acupuncture needle in the nerve that runs behind the middle of your ankle bone. Okay. It's called your posterior tibial nerve[35]. So we put an acupuncture needle in that nerve. That nerve feeds back into those sacral nerve roots and then we apply a mild electrical stimulus. It's not painful, you just feel a tingling in your foot for 30 minutes at a time. And so patients have to come into the clinic. We put the needle, apply that electrical stimulus for 30 minutes once a week for 12 weeks. That's the whole course. And we have good data to show that PTNS is at least as effective, if not more effective than the medication. Yeah, so the only downside is that you have to come into clinic once a week. It's kind of time-consuming. After PTNS, we have Botox. So we

[32] https://www.mayoclinic.org/drugs-supplements/mirabegron-oral-route/side-effects/drg-20075675?p=1
[33] https://simonfoundation.org/ptns/
[34] https://www.bladderandbowel.org/surgical-treatment/sacral-nerve-stimulation/
[35] https://www.ncbi.nlm.nih.gov/books/NBK546623/

can inject Botox into the bladder muscle[36]. This is done through a tiny camera that we put into the bladder and it's the same Botox that you would use for crow's feet or facial stuff that is actually very effective as well. And in carefully selected patients, just like the Botox injected into your face, it wears off after several months. So usually about six to nine months after we do the treatment. Then we have something called InterStim[37], which is essentially a permanent version of the sacral neuromodulation that I just described, that PTNS. So this is actually a surgery where permanent electrode is inserted into the sacral nerve root and you get a battery pack that's positioned kind of in your upper buttock and there's an external kind of controller where you can modify the settings and it acts like an essentially a pacemaker for your bladder to help reduce the bladder spasms and that urgency that's reserved for really severe cases of urgency incontinence. Yeah, but that's the range of treatment options.

Emily Kumler: Next we're going to talk to somebody from NIH who's a researcher, who's going to explain to us why this is a topic that deserves further investigation and also what we as patients need to know. And what we can do to advocate for ourselves.

Dr. Mazloomdoos...: I'm Donna Mazloomdoost[38]. I am currently a medical officer at the National Institutes of Health, specifically the National Institute for Child and Human Development[39]. And I also am the program director for the Pelvic Floor Disorders Network[40] and also practice clinically in the field of urogynecology.

Emily Kumler: We are so excited to have you on. A great place for us to start would be just to sort of talk a little bit, since this episode is really going to focus on incontinence, that there are two different kinds of incontinence, which we sort of have a general overview of. But one of the things that I was interested in was that your research has found that this sort of two different kinds often go together. So like we should kind of have a third category perhaps for that mix of the two. So will you just talk a little bit about what those are ? And why they sometimes go together or commonly go together?

Dr. Mazloomdoos...: Absolutely. So there's actually several different forms of incontinence, but the two most common that we see are what are called stress urinary incontinence and urgency urinary incontinence. And when women have both, we call that mixed urinary incontinence.

Emily Kumler: I think you found out it was a third of people that were in your study had both, is that correct?

Dr. Mazloomdoos...: Yeah, anywhere up to about like 50% of women with incontinence could have both[41]. But the prevalence numbers are quite probably varied and maybe not as well documented just because it's so hard to get women to talk about this. Of course, always sort of caution against being very strict on what these numbers

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36 https://www.mayoclinichealthsystem.org/hometown-health/speaking-of-health/how-do-bladder-botox-injections-work

37 https://urogyn.coloradowomenshealth.com/services/interstim-therapy

38 https://www.nichd.nih.gov/about/org/der/branches/ghdb/mazloomdoost

39 https://www.nichd.nih.gov/

40 https://www.nichd.nih.gov/research/supported/pelvicfloor

41 https://jamanetwork.com/journals/jama/article-abstract/2749872

mean. And I think that the reality is is it's probably a lot more common than anything we've reported in our literature because it's just not comfortable to talk about.

Emily Kumler: I feel like that's something that we hear all the time on this podcast because we're really looking at women's health and so much of women's health is either understudied or under-understood, I would say.

Dr. Mazloomdoos...: And a big problem, I think when it comes to this specifically is that these are very common conditions as women age or after they have babies. Not all are related to having been pregnant, but a big common problem is that women are oftentimes told this is just what happens, of course this is normal and so it's sort of dismissed as this is just what you're supposed to live with.

Emily Kumler: Which is also so depressing. And I again like sort of another theme on the podcast, right? Which is sort of this idea that you are dismissed for something that is treatable. So talking a little bit about what the treatments are. And I really enjoyed hearing about how you sort of had found a positive role for social media[42] and some of this and really encourage practitioners to share the information that they have on the internet. Because I do think as much as we bash the internet and social media for good reason, I think the access to information is, if it's good information, allows people to privately view stuff, right? In a way that can be very helpful and empowering. Can you talk a little bit about the advocacy component because I think there is so much mixed information out there and so if you were going to send people to some good sources online where they could, you know, sort of further look this research up, we'll obviously link out to all of the studies that we mentioned in our show notes, but I always think it's really helpful for somebody who's an expert like you to refer people to places online.

Dr. Mazloomdoos...: That's actually really excellent because I think you can get a lot of misinformation out there. So this is where we get worried about anything on the internet. But both NIH and NICHD have published some things. So if you just Google, "urinary incontinence and national institutes of health", usually that'll pull up the websites where you can get a little bit more information. There's some information that women can get to through our pelvic floor disorders network website. There's voices for PFD and this is in American Urogynecologic Society sponsored website that is really for patient advocacy. It has lot of great information for the patients, but there's also chat rooms where they can gauge other women's experiences. American College of Obstetrics and Gynecology also has some information on their website, which is also excellent. And then there's the International Urogynecologic Association that also has patient handouts and information. So all three of those websites are very good and very accurate and they can also help women be linked to providers in the area.

Emily Kumler: And just to pause you there for one second, because I know you've done a lot of research into this idea that like PCPs don't always know a Urogynecologist to refer out to,[43] which is a big problem, right? Because you don't have somebody to refer somebody to. And then, so I would just assume, and correct me if I'm wrong, but the same is true for pelvic floor physical therapists. Absolutely. So what do you recommend to people who might be listening who are, like I mentioned to my doctor that every time I sneeze I have some urine come out

[42] https://www.ncbi.nlm.nih.gov/pubmed/27319368
[43] https://www.ncbi.nlm.nih.gov/pubmed/28547268

and they just basically told me, well, you know, such is life and move on. I know you just gave those great resources, but is there another way to sort of empower women to talk to their doctors or to seek out somebody? I mean I feel like there is like this idea that there is some internal work that can sometimes be done. And so you really want to make sure that you find somebody who's well qualified and certainly safe and all and knows what they're doing. So I would love to hear how you sort of could vet somebody if you don't have a referral from your doctor.

Dr. Mazloomdoos...: So you're sort of hitting a passion of mine obviously. So my background is I practiced as a general OBGYN for many years before I actually went back and did the further fellowship, the three-year extra training, which people thought I was crazy to do. But the reality was is this was sort of an emerging field as I was coming up into training. So we didn't have a lot of exposure to it. And then in my own practice I saw that it was such a huge problem by my own admission, I wasn't very familiar with a lot of the treatments and it took me a little while to find people to refer women to. And so then I just thought, you know, there's an easy way to solve this, just do it myself. And so we're still working on this. And I think even in, I get a lot of feedback from women in their frustration, why didn't we talk about this at the postpartum visit?

Dr. Mazloomdoos...: And I have to defend the providers a little bit because one, we don't educate all providers all that well, but also you have to cover such a variety of topics in those visits that I think this takes a back seat to some more pressing issues. And it's just in the time that we're allowed in this current healthcare state, it's just not a great system to promote this. What I'm hoping is that women out there, will do a little bit more advocacy to help us out as well. So sometimes it's a matter of just getting the information out to their mom groups cause a lot of, especially new moms are part of these groups and they can talk about, Hey this is a problem that I'm having or that I've heard about and there's treatment out there. And even as far as talking to the legislature about the calling your representatives and saying, I think this is not getting enough attention because sometimes that's a great way to get more money and more advocacy.

Dr. Mazloomdoos...: But also most insurances don't necessarily require you to have seen a specialist. So women can seek out pelvic floor physical therapists on their own. And in fact I sometimes get referrals from P pelvic floor physical therapist from a patient who sought them out. So, if they don't have a provider that's as familiar with it, you can actually search through the American Physical Therapy Association[44]. It's apt.org and you can look up women's health. I think the subject that you would search under and they can find a physical therapist in their area that specializes in this.

Emily Kumler: and has done the extra training, I mean I feel like that's, it seems like such a sensitive kind of physical therapy that you want to really make sure you're going to the right person. I joked in another interview like, please don't look in the yellow pages, physical, internal, physical therapists like God knows what you'd find, right? Like...

Dr. Mazloomdoos...: Yes. No, and that's, and again, I'm always delighted when women have sort of taken that avenue themselves and oftentimes they will find a therapist and they will go and ask their primary care doctor or their gynecologist to get them a referral, which is an absolutely perfectly acceptable approach. I think women

[44] https://aptaapps.apta.org//APTAPTDirectory/FindAPTDirectory.aspx

shouldn't be nervous or afraid to suggest these sort of things because providers don't always know all the options out there when it's not related to their own specialty.

Emily Kumler: One of the other things that occurs to me is that when you're in that postpartum period, your whole body feels so out of whack, right? That you really don't know what's normal and what's not and probably some of these things may resolve themselves on their own. At what point do you recommend women sort of checking in with their bodies and saying like, you know what, this is still happening to me or this is still an issue and I should go get help because I agree with you. I think especially with all the maternal mortality sort of stuff, everybody's worried about, understandably, I think those postpartum visits are not probably addressing incontinence as a top priority, but at what point do you sort of suggest women do a little bit of a, I don't know, just sort of a check in with themselves about like, okay, at this point this would have gone away or it's something that I need to sort of look into a little more.

Dr. Mazloomdoos...: I would say that it's really very variable. A lot of these symptoms are incredibly common within those first six weeks and just as the part of the healing process, it doesn't mean anybody has to tolerate it. At any point physical therapy is reasonable. If a woman could find the time to do it and is physically healed up enough to do it. I usually say it's a good idea to probably start asking for some help. If it's going beyond that six weeks, it doesn't mean that it's still permanent even within that first year, especially when women are breastfeeding because of all the hormone changes, a lot of these symptoms can take a little while to resolve. But I would say anytime after the six weeks is a legitimate time to just ask for help. Personally, I don't typically... I'm not very aggressive in terms of treatment until they're really past that postpartum phase. But I think that from a physical therapy standpoint, it's absolutely reasonable at any point postpartum to get that help.

Emily Kumler: And then what about women who haven't had babies who are experiencing incontinence? Like even in their forties.

Dr. Mazloomdoos...: Yeah. And that absolutely happens. I think those are the women that really feel lost because they don't have anybody else to talk to. And so it's unfortunate that they sort of get very embarrassed, "why is this happening to me, there's clearly something wrong". But again, a gynecologist is a great person to start with. A primary care provider is a great person to start with and then hopefully directing them to these websites where they can get a little bit more information. I hear this kind of over and over again in terms of usually related to women who have had children, but I hear the my trampoline days are just over now, you know, jumping on the trampoline and leaking and I feel like we need to do a better job of letting women know that's not the case. You know, they should still be able to jump on a trampoline if they want to. Not that I find that at all enticing for me. I think it's really important that at whatever point women start to adjust their lifestyles to sort of incorporate the symptoms into their lives is when they really should hopefully be looking for some sort of help. And that's a big part of what we try to do.

Emily Kumler: I feel like having covered pregnancy from a lot of different angles... as a journalist, it's sort of interesting and a lot of people talk about how pregnancy is often your first sort of big health inflection point, right? Like if you have some sort of underlying condition, it will probably express itself during pregnancy. But I think, what's interesting is that more and more women are not

having kids and that time period is also, I mean like if we say if you're looking at your thirties and your forties those are also really wonderful times to look at, huh, this is something that's starting to come up and I could do something about it now. Whereas in 20 years it's going to be harder.

Dr. Mazloomdoos...: I'm always very happy when I see somebody that's coming in in their twenties and they're thinking this isn't normal. Why is this happening to me? Because I bet a lot of the women that we see in their forties or 50s they've probably had symptoms for decades and just kept dealing with it. And the younger we are, the better we can compensate. So maybe they were having symptoms of going to the bathroom frequently, but we have stronger pelvic floor muscles when we're younger and therefore we can compensate as we get older. It gets harder and harder to hold that in. They're probably experiencing, really the embarrassing part, which is the leakage and that's what finally brings them in. But these are not... while pregnancy and delivery absolutely impact this, these are big risk factors. This happens to plenty of women unfortunately who've never been pregnant before. And it can happen as a result of either getting older or certain medical conditions that chronically puts strain on that area. Extreme weight gain or not even extreme, but any kind of weight gain could really probably impact these conditions. So, it's just being a woman really puts you at risk for having any kind of incontinence.

Emily Kumler: And I think that's so important to highlight. I mean I feel like we just need to spend a minute on it because it's, I think, when you have a baby too, you also become like kind of hyper-aware of your body. And the changes during pregnancy and then certainly the changes postpartum and trying to get back to your old body and like all of that is obviously a big, big deal. But I also think this idea that women who don't have children don't feel like... they're probably not as hyper-focused on their body because they haven't gone through that kind of extreme transformation and their doctors are probably not talking to them about it. Right? So like where you have a baby, you get very used to people like looking at your vagina. When you don't... Right? Like I mean, I just remember my modesty like went out the window after giving birth and it was like, wait, I used to like really care if people looked and now I like, I'm just so used to it that it doesn't mean anything anymore.

Emily Kumler: So I think the idea that women who are experiencing any of these symptoms at any point in life, there is something you can do about it that's a real remedy, right? This isn't some sort of terrible thing that you're going to have some invasive procedure. There's a lot of places to start working on this and a lot of people who can help you with it and it's not a defect that's abnormal in some way that you need to feel embarrassed about it, having not had a baby. I mean, I think your research also definitely indicates that vaginal delivery is more commonly linked to these kinds of incontinence than like having a C-section, right?

Dr. Mazloomdoos...: It is. Now C-sections are not known to be active is the important thing.

Emily Kumler: So explain that a little bit.

Dr. Mazloomdoos...: So we don't have guidelines that show us for sure that if we did a C-section on somebody or if we just across the board started doing Cesarean and deliveries on everybody, we probably wouldn't be completely eliminating these conditions. So in terms of recommendations for delivery, I think most people are still under the impression that whatever sort of your body is going to do is

what it probably should do. I'm not sure that we have great interventions now that can prevent these conditions and the underlying thing is it's nearly impossible to do a randomized controlled trial basically randomizing women to a certain form of delivery, so probably the underlying factors that allow some women to have vaginal delivery and others require a C-section are probably some of the factors linked with these conditions.

Dr. Mazloomdoos...: In other words, if somebody is predisposed to having incontinence, if we do a Cesarean delivery on them, we may not necessarily prevent them from getting the incontinence afterwards and then looking at women who of course have never even been pregnant before who have these conditions I think is really important to understand. We right now don't have all of the information yet in order to be able to give a good recommendation in terms of, especially when we consider the risks and the morbidity that are associated with Cesarean deliveries[45]. I think we have to be very cautious in saying, yes, all women should proceed with that to try to prevent these conditions. We just don't have that information to support it.

Emily Kumler: Like you would never ever want to have a C-section in order to prevent incontinence. Right? That would not be a risk benefit win.

Dr. Mazloomdoos...: Right. That is currently not what our data supports looking at exactly when you consider the risks of even the surgery to treat, for example, stress incontinence compared to the risks of a Cesarean delivery. Most people would agree, I mean there was no comparative trial that, but most people would agree that the risks associated with a C-section are far greater than that. So when we look at this, we just don't have enough data to really start encouraging women to change their mode of delivery because of this.

Emily Kumler: And also it sounds like if your indicates that people who have gained a lot of weight, even without childbirth experience incontinence, that suggests, which obviously we're not saying anything conclusive here, but that would suggest that the pressure of carrying the baby regardless of the delivery method, maybe the impetus for causing some of this, right?

Dr. Mazloomdoos...: Yeah, that's absolutely one thought to it. But it is very suggestive that certainly vaginal deliveries and operative vaginal deliveries, for example, the use of forceps or vacuums could be more correlated with these conditions. So we don't want to dismiss that. But again, it's the more important part of, we haven't been able to show that a C-section will prevent this from happening.

Emily Kumler: We are going to go back to Dr. Swenson, who we talked to at the beginning of the episode to hear a little bit about what we need to do to improve this condition, both as individuals. If you're experiencing this or somebody who is and also sort of as a society or a community and the medical sense as well as the larger sense.

Emily Kumler: I'm curious in terms of your interest in this and what has surprised you in the course of both treating women and doing all the research that you've done. Is there anything that's come along where you've sort of thought, "huh, like that's not what I thought or that's wildly misunderstood?"

Dr. Carolyn Swe...: Well, I think one of the things that surprised me when we did that national poll on healthy aging, which was a survey, in conjunction with AARP of US women

[45] https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(18)31930-5.pdf

50 to 80 years old. First of all, almost half of women reported urinary continence in the past year[46], which was a little bit higher than I expected.

Emily Kumler: And that was 50 plus, right?

Dr. Carolyn Swe...: 50 to 80. Yep. But only a little over a third had actually spoken to a doctor about it. And the common themes that came up in terms of why women weren't talking to doctors were that one in five women didn't view urinary incontinence as a medical problem.[47] That definitely surprised me. Yeah. But in the same vein, I hear from patients all the time who come in, especially our older patients. Oh, you know, I thought urinary incontinence was just a normal part of aging. And I thought I would just have to deal with this and this isn't really a problem. It's just something I have to learn how to manage. So that was interesting and a little distressing. And then actually about 25% of women said they didn't bring it up because either their doctor didn't ask about it or they were uncomfortable bringing it up themselves.[48] So that speaks to what you were talking about earlier in terms of how there is a little bit of a hesitancy or discomfort on the patient's side of kind of bringing these issues to light even with their primary care doctors or OBGYN. Hopefully we can continue to change that narrative over time.

Emily Kumler: Yeah. And so in terms of looking towards the future, are there things that you see in terms of either awareness I guess or innovation and technology that you sort of feel like are going to change the game on this or, I mean I in some ways it feels like if the pelvic floor is such an important part of our bodies, it's almost like they're just, the awareness needs to be increased so much more about taking care of it.

Dr. Carolyn Swe...: Absolutely. I mean let's start with biology 101. For our young people who are in school and learning about their anatomy. I mean, I think education as a whole is key to a lot of this. I will say I have found it really interesting that my younger patients, they tend to have less of a problem bringing up this issue. They, you know, they will come and say, I am leaking here. I can't work out because I'm leaking urine. This is not right. Like what can we do to fix it? And that gives me hope that at least our younger generations are feeling more empowered to come to doctors with this as an issue and wanting to fix it.

Emily Kumler: Well is it that or is it that or they realize this isn't normal. Like this is supposed to happen to somebody who's much older than me.

Dr. Carolyn Swe...: It's probably a combination. But I think recently there has been a little more dialogue in the media and like the podcast that you're doing, I mean this is really critical to informing and educating women about what is normal and what is not and that there are good treatment options out there. Because I think if, if women think, Oh there's nothing that can be done, I'm just going to have to wear pads for the rest of my life and they're not going to go to a doctor cause they... that'd be a waste of time. But we have really good treatments now that can help women with that.

Emily Kumler: When for me, I feel like this is really a quality of life thing too. I mean it's obviously a medical issue, but it's like if you're truly nervous about being out

[46] https://www.healthyagingpoll.org/report/urinary-incontinence-inevitable-part-aging
[47] https://www.healthyagingpoll.org/report/urinary-incontinence-inevitable-part-aging
[48] https://www.healthyagingpoll.org/report/urinary-incontinence-inevitable-part-aging

and laughing with friends like that is really, I mean talk about changing your quality of life or making you feel isolated or alone or all of these other things that are certainly dangerous.

Dr. Carolyn Swe...: It is a quality of life. But I would argue that if you can't work out, if you can't exercise because you're leaking urine, that's a health issue, right? Cause that's directly affecting your health. If you can't be healthy because you're saturating your gym clothes every time you try and do any cardio activity. I mean that's...

Emily Kumler: Well and I think your study also found that women were were cutting back on fluids. Right? Because they didn't want to have pee come out and that obviously is detrimental.

Dr. Carolyn Swe...: Yeah, that can be, it was certainly with some medical conditions. We don't want want that to happen. And answering your question that you had a few minutes ago about the future, I think one of the things that we have here at the University of Michigan that has been kind of replicated at other centers, and I've been hearing more and more that there's interest in establishing in other places is a specialty postpartum clinic. So we have a clinic called the Michigan health and healing after delivery clinic where we see women who are postpartum who have any kind of pelvic floor issue. So in that clinic we see women who have urinary incontinence or symptoms of prolapse or persistent pain or who have had a complex obstetrical tear that need follow up. And we're able to evaluate and address these symptoms early on with the hopes that we can either just treat them or prevent them from progressing and having them be a lifelong problem.

Dr. Carolyn Swe...: I think that clinic model is something that should be all across the nation. And all postpartum women should have access to a trained specialist who can manage their pelvic floor issues related to childbirth and they're not just dismissed as, "Oh well that happens after delivery. Hopefully it will get better." Our congressional body ACOG, American Congress of obstetricians and gynecologists, last year actually put out a new committee opinion on what they're calling the fourth trimester, which is that postpartum period. And really encouraging obstetricians kind of setting a new standard that we need to be following up with patients earlier to kind of address, especially with high risk patients or somebody with a complex delivery because otherwise we have no contact with them for six weeks after delivery. Which is a long time.

Dr. Carolyn Swe...: I mean, so that's one of the things I think as OBGYNs and as a society, we need to change. And again, I think the younger generations are, kind of driving that a little bit and it's probably a combination of increased awareness and then also they're not going to put up with it. They're the generation that, "wait a minute, this is not right. I'm going to the top of the chain. I'm not going to just wait it out. I'm going to go to the boss's boss's boss and figure out what I can do to change that." That's a good thing about the millennial generation and hopefully the other generations to come.

Emily Kumler: I'm Emily Kumler and that was Empowered Health. Thanks for joining us. Don't forget to check out our website at empoweredhealthshow.com for all the show notes, links to everything that was mentioned in the episode as well as a chance to sign up for our newsletter and get some extra fun tidbits. See you next week.