# Transcript of “The Clitoris and Its Friends with Rachel Gross”

Tammy Kremer:

Welcome to Coming Together for Sexual Health. I'm Tammy Kremer and I'm thrilled to talk with you about the world we are creating by coming together for sexual health. And yes, the pun is intended. My background and thinking holistically about health as a facilitator and a doula helps me talk with our guests about celebrating pleasure, combating stigma, and making sexual healthcare both more accessible and more inclusive of the communities we serve.

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Welcome back to Coming Together for Sexual Health, Rachel Gross. I'm really excited to have this next episode with you. We're going to be speaking today about the clitoris. Rachel is the author of Vagina Obscura: An Anatomical Journey, which if you didn't hear it, listen to the prior episode we did together. We talked all about the book. And Rachel is a science reporter. She writes a lot for the New York Times and the Atlantic, in addition to being the author of this book. Please go out and read it. Welcome back, Rachel.

Rachel Gross:

Thank you so much, Tammy. Clitorally, one of my favorite topics, the clitoris in all her glory, so couldn't be happier to chat with you.

Tammy Kremer:

I'm so excited to talk about the clitoris today. I realized when we were planning for this show that I don't know that we've talked about the clitoris at all yet on Coming Together For Sexual Health, which is just kind of mind-boggling.

Rachel Gross:

Yeah, that's shocking.

Tammy Kremer:

It is.

Rachel Gross:

You probably talked around it, you probably circumambulated. It's kind of like the center of sexual health to me.

Tammy Kremer:

I mean, maybe. I guess it was the foreplay to this conversation, that circling around, because we've talked about pleasure.

Rachel Gross:

Now it's time for some direct stimulation.

Tammy Kremer:

That's great. Yeah, and I think it's something that in the world of public health that I'm in, we talk a lot about wanting to be very sex positive. We talk about wanting to support people in their pleasure and remember to include that in our thinking about sexual health and sexual healthcare. But I recognized through our preparation for this that there's not a lot of times that we really get into those details, at least in the work that I have done, so excited to jump in.

Rachel Gross:

Same, I mean, that kind of makes sense to me though, because it's kind of like you are assuming that sexual activity is happening and hopefully people are having a good time and hopefully that involves their clitorises. But you're looking at the sequela and the things that can go wrong and the larger public health effects. So maybe you're not specifically discussing the root of everything that's happening, I guess.

Tammy Kremer:

Yeah. And I think that people's queasiness around speaking about sexual pleasure and the clitoris and vaginas extends into this work too. And of course, if patients come in and their clients come in and they're not feeling like that's an easy conversation for them to have, it can be challenging for a provider to even bring that up. And sometimes it's appropriate, sometimes it's not called for, but I think it can be challenging to figure out when we can really address, are you experiencing pleasure? Are you having orgasms?

Rachel Gross:

Yeah, absolutely. And part of it is the expectations we've set up. What do you expect when you go into your regular gynecology appointment? You expect to get a pap smear and maybe get your IUD checked on or ask about fertility stuff and see if you have any STDs. I just think then both sides, there is a total chasm of where is it appropriate in medicine to talk about pleasure, orgasm and sexual function. And that's a lack that I think is just being addressed now.

Tammy Kremer:

Well, let's get into building that bridge over the chasm. Can you share with us what are the basics of the clitoris? Where does it come from? What does it look like? What does it do?

Rachel Gross:

Yes, absolutely. Okay. So let's just start with the clitoris is and what it is not. When I came into this book project and speaking to many of the researchers and patients I've talked to, everyone kind of has this understanding that the clitoris is this part that you can see and touch. Sometimes it's called pea sized, which I really hate, but it's this mound or button between your legs that is between the labia or the lips of the vulva, which is the outer part of the genitals. And as I got further in my research, I realized that actually that part that you could see in touch is only the tiniest bit of the tip of this iceberg. It's literally 10% of the clitoral tissue. It's like the head of the penis. So just imagine there's more than two thirds of the penis that is not the head.

So yeah, if you do a cross-section, you'll see that there are these columns of erectile tissue. So this really spongy vascular tissue that can swell with blood. And it's actually very richly supplied by arteries and blood vessels. And there are these two teardrop shaped bulbs that hug the vagina and the urethra. And then there's these two arms of the clitoris that are like 3.5 inches long on average. And both of them are made of erectile tissue. So it really is similar to the interior of the penis. And I only say that because people are familiar with it, but it's its own magnificently shaped and sized structure.

Tammy Kremer:

The wings, where do those sit?

Rachel Gross:

They go against the pubic bones. It is a structure that's in several different planes. It's always easier to show imagery with this. And I do have a video on Scientific American that has a 3D glowing clitoris above my head if you have show notes or anything. So yeah, I realized this challenge when I was writing a textbook about anatomy to describe 3D structures can be challenging and is another reason why textbooks can be really lacking in their descriptions and imagery of the clitoris. And really a lot of medical textbooks still point to the head or the glans clitoris, again, 10% of the iceberg, and say, "That's it. That's the whole organ." But yeah, it's a pretty extensive kind of underground structure, both nerves and erectile tissue. And it interacts with every part of the pelvis. It's really squeezing the vagina, it's interacting with the urethra and in extension, the bladder, and it's kind of puffing up underneath the vulva. So the clitoris is the center of everything, as I think of it.

Tammy Kremer:

And can you talk about how the sensation from the clitoris relates to sensation from other parts of the vulva?

Rachel Gross:

So I think of everything as working as a system. And if you look at the history of anatomy, there's this tendency of largely male anatomists to kind of point at these individual parts of the system and say, "Ah, this is the function of this part of the vulva." And they kind of fragment the system. And I think as a result, make us think of our genitals as these individual parts and not this smoothly working universe. So I guess going along with the fact that the clitoris is larger and more extensive than we appreciated before, it is also touching all these different parts. So again, the vagina, which is the muscular tube, sits parallel to the urethra, and then both of them kind of open into the vulva, which is the outer part.

So the clitoris is touching all of these things and it's very dynamic. So if it is swelling and erect, then it's causing the labia to puff out, or again, it's squeezing on the vaginal canal. So basically you can feel sensations anywhere and everywhere. Anatomy is beautifully different. I like to borrow Darwin's phrase of endless form is most beautiful when describing people's bodies, but usually those sensations, often they go back to the clitoris because that's the primary erectile tissue in the area. So it's the primary organ of pleasure and orgasm.

Tammy Kremer:

So when there is stimulation in the vagina, can you talk about how much of that pleasure might be coming from the clitoris versus other things? I know this is an area that's often misunderstood.

Rachel Gross:

Yeah. And honestly, kind of still under debate in some ways, which is mind-blowing. So Alfred Kinsey, one of the OG American sexologists, did a lot of experiments on this. So through having researchers touch women's genitals, their clitorises and vaginas with a Q-tip.

Tammy Kremer:

Very sexy tool.

Rachel Gross:

Yeah, hot. I mean, everybody lubricates when they think about a Q-tip.

Tammy Kremer:

Yeah, absolutely.

Rachel Gross:

Right. They found that the vagina was like an insensitive orifice, and the clitoris was full of nerve endings, incredibly sensitive. So with that conclusion, you would assume that it's a clitoris kind of being stimulated through the walls of the vagina or through the vulva. But there are many different understandings of this. So the G-spot is still hotly debated and researched. And one of the conclusions that I wrote about in the book was that basically the G-spot is where the arms and the bulbs and the body of the clitoris come together. So it's kind of like, I don't know, the hinge where everything connects. And so you would expect it maybe to have some very intense sensations, because it's all these different erectile tissues. And there are also some important glands down there, which we don't know enough about. So potentially the G-spot is the back of the clitoris that is felt on the back wall of the vagina. I think everybody's bodily sensations are valid and they can be distributed very differently. But that's, I think, a really good explanation for the G-spot phenomenon.

Tammy Kremer:

And how about when someone with a vagina ejaculates? What do we know and not know about what that ejaculate contains?

Rachel Gross:

Oh yeah, that's how we first came to the question of the G-spot. So there is this sexologist, Beverly Whipple, who was a nurse practitioner and she was working with women who had urinary incontinence. And she noticed that some of them actually produced fluid only when they were orgasming. And this led her to ask what is creating the fluid? And it wasn't pee, it wasn't urinary, so where was it coming from? And our best understanding is that it is a combination of fluids from those different glands and maybe natural lubrication as well. But yeah, I don't know. It is kind of mind-blowing that I don't have a better answer for you. We're still working on female ejaculate. And again, I think the fact that some people have this experience and some don't speak to the beautiful spectrum of anatomical variation.

Tammy Kremer:

Can you describe how orgasm happens?

Rachel Gross:

Orgasm basically is when usually the clitoris is stimulated to the point that there are these contractions, and the contractions can actually be in the anus and cervix area as well. But the sexologists of Kinsey's era kind of measured it as a certain amount of contractions per minute, that kind of plateau and even out and then subside, which is a very clinical way of looking at orgasm. It's also described often as kind of this point of no return where simulation gets to the point that there's a huge release, which I kind of like better. And there's so many emotional components that could go into it as well.

Tammy Kremer:

I feel like that illustrates this idea of it all works together as one system in terms of what actually happens with all these parts. And I thought it'd be interesting to talk a little bit about, in your book you talk about the genital tubercle. I'm not sure if I'm pronouncing that correctly. I also read Come As You Are by Emily Nagoski, and she has a phrase of all the same parts organized in different ways that she says that over and over in her book. But yeah, I thought it'd be great to talk about that a bit.

Rachel Gross:

Yeah, I love that too. Sometimes I say burrito and taco because it's the same ingredients just organized slightly differently in a different configuration. And I love both those foods. So the genital tubercle is a structure on a growing embryo. So at around four to six weeks, embryos look exactly the same in the uterus. You just see some wriggling, larva looking creatures. But they all have the same kind of mound of what will be erectile tissue. And at this point it's kind of bi-potential and undifferentiated and it could specialize into a clitoris or a penis, which I think is really cool. And it stays that way for quite a long time. And it's a really complex mix of hormones and genes and other factors that we don't actually know that push the body one direction or another.

Another cool fact is that at that point you actually give two sets of tiny ducts. They're called Wolfian and Malarian ducts. One is considered female, one's considered male. Essentially one will end up growing and the Malarian one turns into the fallopian tubes and the upper part of the vagina and uterus and the one that's not chosen will kind of wither away, but you'll still have a tiny remnant of it in your body no matter what sex you are determined at birth, which is crazy. So the genital tubercle is kind of this moment of pure potential when your body could go any direction. And by about four months, the labia and the clitoris will be pretty clearly defined and that's why a doctor can do a sex test at that point.

Tammy Kremer:

So fascinating to think about how our society got where we are in terms of people's expectations of you're this way or you're that way, and that it again would be so, I guess, meaningful to go back to that moment in embryology of what it looks like to really develop our body parts to begin with.

Rachel Gross:

Yeah. And it also speaks to what you were saying that these structures, even after they've differentiated, share so much in common, including the functions, and that's why the clitoris can be so well understood, if you understand how a penis works. So we're really more the same than different, and yeah, it is fairly arbitrary and limited that we have been placed in two boxes, which the kids today well know. They're already well on their way to understanding fluidity.

Tammy Kremer:

Yeah, I was just thinking I'm queer and I have had experiences with people with all different kinds of bodies, and that has taught me so much about really understanding the ways that bodies are arranged and just the amount of difference that exists within groupings versus across them is sometimes there's that reference of there's more variation within groups and across groups sometimes in these areas.

Rachel Gross:

Yeah, I agree with you. I'm always blown away by how different people's bodies are. But then again, I think the best sex advice is like, but if you listen to that person's body, it's usually pretty clear and you can learn from past experiences because there are also a lot of parallels. It's just not as mysterious as it's made out to be.

Tammy Kremer:

Yeah, for sure. I think really understanding the clitoris is like the penis is such a pivotal central thing to me in this of understanding also how people have sex and what kinds of issues might come up or might be important to people across gender and sexuality spectrums.

Rachel Gross:

Yeah, and I struggled with this in the book because I never want to simplify and reinforce that binary of the way to understand the clitoris is to understand the penis and to compare it. And a lot of the researchers of the clitoris are kind of resistant to this idea of like, okay, we don't want to talk about the size compared to the penis or the number of nerve endings. However, it's just a function of the penis being more well-studied and more well-known, which hopefully will continue to change over time. But it is useful, the idea of, again, erectile tissue, erection, orgasm, it's all similar. And also if you're going to ignore the clitoris when you are having a sexual partner and you're hoping that they're going to feel pleasure orgasm, that's a wild idea. And may God be with you.

Tammy Kremer:

Seriously. Oh my goodness.

Rachel Gross:

Would you just not touch someone's penis?

Tammy Kremer:

One of the things getting into the direction of the clinical aspects and public health conversation here, in our pre-conversation you were talking about how physicians who work on gender affirmation surgeries are some of the folks that understand this anatomy best. Can you talk a little bit more about that?

Rachel Gross:

Yeah, so I just mentioned the number of nerve endings in the clitoris, and there are a lot of memes going around. One of my favorites is it's like the clitoris is 8,000 nerve endings, but still isn't as sensitive as a white man on the internet. Anyways. While the spirit is true, the number is not. So even though it's debatable how much you want to compare the two, the fact remains that nobody had actually counted the nerve endings for a mind-blowing number of decades until I think 2022, which is when a gender affirmation surgeon named Dr. Blair Peters and a vulva specialist named Dr. Maria Uloko decided, "Oh, we actually have clitoral tissue from people undergoing gender affirmation surgeries. We have the ability to count under a microscope. Why don't we just do this?"

And they came out with the number, it was 10,280 nerve endings, which is significantly more than the memes suggested. And take it with a grain of salt because that clitoris did have testosterone treatments. We can't be sure of the applicability to all clitorises. But what was realized then was that we were working with an old number that came from I think one study in the 1970s on cows, and that was just copy pasted for decades as close enough. Humans, cows, whatever. First of all, cows have clitorises inside their vaginas, which is a wild innovation. It would make penetrative sex much more pleasurable.

So we definitely should not be relying on their clitorises as an analog. Anyways, so the reason this could be done was because of gender affirmation surgeries and innovations in that field. And I did speak to a lot of gender affirmation surgeons, but one I profile in the book specifically, she actually commonly says that the penis is just an overly large clitoris actually, and that it's all the same parts, and that's what allows her to do her job and craft clitorises out of penises most typically is what her job is. So she understands very intimately how the erectile tissues relate to each other, and that allows her to kind of have fluidity between the two types of bodies.

And so that was mind-blowing to me. The other thing that I realized was that gender affirmation doctors and trans health doctors really understand hormones at a much broader level because they work with all types of hormones, they've seen the effects of hormones on many different types of bodies, and they think of them outside of just menopause or fertility. They're thinking of the whole person and their goals. So they don't have this narrow focus as you are a set of diseased organs, and maybe I focus on one of those organs, which a lot of western doctors do. They're kind of asking, "What do you want out of your body? What kind of body experience do you want? And how can I help you reach those goals?" And that's another reason I have compared them to menopause doctors and written about that parallel, because ideally that's what someone focused on menopause is asking you is like, "You're approaching this life transition. What would you like out of your body? How would you like to feel? How can we get you closer to that and how can hormones be part of it perhaps?"

Tammy Kremer:

Yeah, I think menopause is one of those areas too that I'm just so excited to see more research happening on. I'm grateful that I will be coming of age into menopause at a time where more research will have been done because it's so understudied and it's amazing to, again, these areas that are so obfuscated in our society.

Rachel Gross:

Relevant to your field, I really wasn't seeing conversations happening when I started this book about sexual function, orgasm and arousal after menopause and after cancer treatment. And now I am, and I think that's really cool. I remember reading about and talking to women who had had reproductive cancer treatment, and their doctors said nothing about the fact that they would enter menopause abruptly and that they would have a total hormonal dip and that it would change their genitals, and that there was things that could be done about that. And so they were given absolutely no warning about how their sexual function would change. And that's crazy admission and just one example of the kind of consequences of not talking about sexual health.

And now I think, I don't know, those taboos have been breached, and fortunately we're having those conversations and I think most importantly, seeing the connections between them, how there are many hormonal transitions in life and across different bodies, and we can learn from that in order to take care of everyone's sexual health and function.

Tammy Kremer:

Yes. And that's, I think, a great transition to talking about some of the potential problems that can come up in a clinical setting and some of the things that we'd like to be thinking about or learning about in terms of care around pleasure and the clitoris.

Rachel Gross:

Yeah, so as I think I mentioned earlier, one thing that people say across the board is that nobody asks about their clitoris in their typical gynecology appointment. And sometimes that's okay if you're there for a different reason or you're just getting a checkup. But it then begs the question, where in medicine are we talking about clitorises or making sure that they're healthy and getting the attention they need and that people can ask questions about sexuality and function and changes in orgasm. So I admit this is a tricky problem because gynecology has a really dark history, and I totally understand practitioners want to be super aware and sensitive to that. But I wonder if there's a way to at least open the conversation up about asking people if there are other sexual concerns or problems that they want to talk about or questions just about sexual anatomy that doesn't put the onus on the patient, but opens the conversation to say, "This is okay to talk about, and I do have knowledge if you want to use me as a resource."

Obviously this requires a provider to have that knowledge, which is another story. My other thought is I work with a group called TightLift, and it's a pelvic pain vulvo-vaginal pain advocacy group that's changing medical education to better incorporate an understanding of these conditions. And a lot of the people in the group have Vulvodynia and similar forms of pelvic pain, and they often say, A, they've never had a full pelvic exam that has addressed this. So again, the doctors are just going up the canal for the pap smear situation and not noticing this immense sensitivity that might be happening in the vulva or the entrance to the vagina that is really clinically important and important to someone's quality of life. And it's really, really easy to learn how to do a vulva exam. It doesn't involve a Q-tip unfortunately, but it takes literally five minutes, and I've seen many doctors perform one.

So there's that. And then there's also the really deep-rooted tendency in gynecology to assume that sexual problems are psychological in nature, and there's a lot of different ways that this happens, some more subtle than others, but I talked to quite a lot of endometriosis patients, for instance, who have first been sent to therapists or given antidepressants or gotten these antiquated, brilliant suggestions. One woman in the book who's a bioengineer who was dealing with endo in the nineties was literally told by a doctor that she was rejecting her feminine role, and that's why her body was in pain and having-

Tammy Kremer:

Wow.

Rachel Gross:

Yeah, nineties are not that long ago. But I think it's a real difficulty for patients to push back on those kind of interpretations and ask for actual medical and biological interpretations to their pain. And once you've been dismissed, once you kind of close up and you start to gain a distrust, obviously, in the medical system. So a lot of factors at play.

Tammy Kremer:

Yeah. That work around vaginal pain or pelvic pain, however we describe it or think about it in Vulvodynia is so important. And something that like many of these other issues or conditions, something that I know through my personal life, impacts many of the people who I love and care about at different stages of life. And the degree to which we don't really cover that and just assume, well, just go home and do sex better, do sex differently.

Rachel Gross:

Drink a glass of wine and use this dilator.

Tammy Kremer:

Take a bath.

Rachel Gross:

Yeah, I mean, I am laughing out of exasperation, as many of the people in this group do. But that does remind me of one other suggestion, which is also a lot of those patients have really had their lives changed by pelvic floor therapists and physical therapists that work with pelvic pain. And so they say often it took them a really long time to be referred to one or to have their doctor connect them, but once they did, it was incredibly affirming. Then those practitioners really understood what was going on more holistically. We're talking about how these parts all interact as part of a system. Sometimes the pelvic floor and the tightness of that muscle affect things as far away as back pain and your shoulders and radiate out to other parts of your body. So I think if I were a doctor, I would definitely want to be friends with some pelvic floor therapists and refer to them a lot.

Tammy Kremer:

I also love thinking about it in the context of physical therapy in the sense that yes, this is a body part. Like other body parts and muscles, it can become tight and there are relationships between these different soft tissues that we have in our bodies.

Rachel Gross:

Exactly. Yeah. And that is how I'm starting to think of it. The pelvic floor was almost its own chapter in this book, and maybe that's book number two, but the idea that it's a hammock for all your organs, it's like the bowl in which the pelvis and its viscera sit, and this idea that, like you said, it can just become tight like any other muscle, and you might not even realize it. If you think about it and try to relax your pelvic floor, you might realize that you are holding onto it tightly right now, and maybe you do when you're anxious and maybe it affects how often you urinate. And I'm just like, we just don't think of this. I remember being really blown away by learning that in France, literally when you're pregnant, you're assigned a pelvic floor therapist for after birth. It's dynamic. There's stuff you can do. You're not like fated to have pelvic floor problems. So yeah, I want to find one now.

Tammy Kremer:

I feel like there could be good tips for all of us. So if you kind of imagine being in a provider role and merging that with your understanding of vaginas and clitorises, but particularly the clitoris, what would be your quick pitch on clit care?

Rachel Gross:

I love that idea. As a person with a clit, we can do more, I think, to look at ourselves like the feminists of the 1980s in the women's health movement, and we can do an examination like you're told to for breast health and think about your clitoris even when it's not involved in sex or causing you direct issues. I'm thinking of grand rounds. So when all the providers meet in the morning and sometimes learn something new before shifts, if you could just have a really interdisciplinary and fun session on clitoris health and how the clitoris is both clinically important and connected to all these other body parts, I feel like that could be really transformational. And again, really fun.

Tammy Kremer:

You just gave me this image of getting one of those life-sized clitoral models into everyone's little mailboxes.

Rachel Gross:

Oh my God. Exactly. I mean, it's not that crazy. I used to 3D print clitoris models at MIT, and my friend Sophia Wallace is a clitoris artist here who makes clitoral sculptures around town.

Tammy Kremer:

Oh, I love that.

Rachel Gross:

Yeah, and we've done events where we do sexual anatomy Jeopardy, where you learn like mind-blowing facts about the clitoris and other body parts, and the intent is not just to get fun facts, but to rethink your own body. So maybe that's what I would do. I would bring my sex jeopardy into various hospitals.

Tammy Kremer:

That would be a great grand rounds.

Rachel Gross:

I would love that. I think I've probably done that once or twice.

Tammy Kremer:

I was also blown away in holding the clitoris model that it's basically the size of your palm.

Rachel Gross:

Yeah, it's very substantial. And I do think that can kind of change the way you think about your own body too, because it's really just minimized in so many different ways, including through medical education, and you're taught to think of it as something small and diminutive, even if that's unconscious. So to realize that it's pretty extensive, I don't know. And that you can feel it too when you think about it.

Tammy Kremer:

Yeah. Well, to close us out, I like to ask every guest the same question, which is, what's one thing you hope we can create by coming together for sexual health?

Rachel Gross:

I mean, the fact that we are talking right now and that conversations about the clitoris and menopause and sexual function through many types of hormonal transitions are happening, to me, gives me hope. Something that really struck me in writing this book was how siloed different fields of medicine are. And sexual health actually is a field that is incredibly interdisciplinary that does consider a person as a whole being and connects to so many different fields. So it's an incredible opportunity to think about hormones and organs and urology and all of these different things that are happening at the same time in the same body.

Tammy Kremer:

So fascinating to look at it from all those perspectives. Thank you again, Rachel, for coming on the show. For those of you're listening, please check out Vagina Obscura. It's a great read. I'm just grateful for your work and I look forward to reading what you write in the future.

Rachel Gross:

Likewise. I'm so glad this podcast exists, and I'm really excited thinking about all the doctors and providers listening and thinking about how they might incorporate some of this into their work. So thank you for having me.

Tammy Kremer:

My pleasure.

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