Welcome to the Huberman Lab Podcast, where we discuss science and science-based tools for everyday life.
I'm Andrew Huberman, and I'm a professor of neurobiology and ophthalmology at Stanford School of Medicine.
Today, my guest is Dr. Reena Malik.
Dr. Reena Malik is a board-certified urologist and pelvic surgeon.
She is an expert in both male and female urological, pelvic floor, and sexual health.
In today's episode, Dr. Malik answers the most commonly asked questions about urinary pelvic and sexual health, for instance, how to avoid getting UTI's urinary tract infections.
We also discuss pelvic floor anatomy and function as it relates to overcoming an overly tight or an overly relaxed pelvic floor.
This is a key distinction that most people aren't aware of.
Many people hear about the need to so-called strengthen their pelvic floor, but in fact, many people need to do the exact opposite.
They need to learn to relax their pelvic floor in order to achieve proper urologic and sexual function.
So, today, you'll learn about that.
You will also learn about sexual health as it relates to erectile function, as it relates to things like vaginal lubrication, as it relates to orgasm.
We separate out very carefully the difference between psychological desire and arousal that occurs within the genitals themselves, and Dr. Malik highlights some important misconceptions about sexual dysfunction, for instance, that many people believe that hormones are responsible for sexual dysfunction, but in reality, hormone dysregulation is responsible for only a very small percentage of sexual dysfunction, and yet pelvic floor and blood flow related issues can account for a large number of cases of sexual dysfunction in both males and females.
So, I assure you that today's discussion is going to illuminate many new areas of information, many new tools and protocols that I'm guessing most people have not heard of.
We talk about the neural vascular that is blood flow related and muscular aspects of bladder function, prostate function, skeins, glands.
We talk about vaginal health as well as penile health.
We talk about these things as it relates to different stages across the lifespan.
It is a far-reaching and in-depth and practical conversation that I'm certain everyone will glean important takeaways from.
Now, before we go any further, I do want to highlight that the content of today's episode is sexual in nature.
We talk very directly about different types of sexual behavior, and we talk about it from the standpoint of the clinician and biologist, so it is a medical slash scientific discussion that said we can't be aware of where this podcast is being played and who is listening.
And I assert that there are certain themes within today's discussion that would not be suitable for young children.
How young?
Well, that is certainly not for us to discern.
We realize that different parents and different households should be the arbiters of what

sorts of information their children are exposed to or not.
So my suggestion would be that if you have any concern whatsoever that the content of today's episode would not be appropriate to be heard by some member of your family, that you please listen to the podcast first or at least check the time stamps where we've detailed what specific topics are covered and then to make your decision accordingly.
I should mention that not only is Dr. Malik still an active clinician.
She sees patients daily out of her clinic in Southern California, and we've provided a link to that clinic in the show note captions.
She's also authored dozens of high-quality peer-reviewed publications in the fields of urology, pelvic health, and sexual health, and we've also provided a link to that bibliography in the show note captions.
And she is also a spectacular public educator.
She provides zero-cost content about sexual health, pelvic floor health, and urology as it relates to both men and women on her YouTube channel.
And there, too, we've provided a link to Dr. Malik's YouTube channel in the show note captions to this episode.
Before we begin, I'd like to emphasize that this podcast is separate from my teaching and research roles at Stanford.
It is, however, part of my desire and effort to bring zero-cost to consumer information about science and science-related tools to the general public.
In keeping with that theme, I'd like to thank the sponsors of today's podcast.
Our first sponsor is Roka.
Roka makes eyeglasses and sunglasses that are the absolute highest quality.
I've spent a lifetime working on the biology of the visual system, and I can tell you that your visual system has to contend with an enormous number of challenges in order for you to be able to see clearly.
Roka understands this and has developed their eyeglasses and sunglasses so that you always see with perfect clarity.
In addition, they are extremely lightweight, and they won't slip off your face if you get sweaty.
Indeed, Roka eyeglasses and sunglasses were initially designed for performance in sports, but now they include aesthetics and styles that are really designed to be worn anytime.
I, for instance, wear readers at night, I'll sometimes wear sunglasses during the day when I drive, and of course, I do not wear sunglasses when I do my morning sunlight viewing, which I highly recommend everyone do their morning sunlight viewing.
If you'd like to try Roka eyeglasses or sunglasses, you can go to Roka, that's roka.com, and enter the code Huberman to save 20% off your first order.
Again, that's roka roka.com, enter the code Huberman at checkout.
Today's episode is also brought to us by Helix Sleep.
Helix Sleep makes mattresses and pillows that are customized to your unique sleep needs in order to allow you to get the best possible night's sleep.
Now sleep is the foundation of mental health, physical health, and performance.
When we are sleeping well and enough, mental health, physical health, and performance all

stand to be at their best.
One of the key things to getting a great night's sleep is to make sure that your mattress is tailored to your unique sleep needs.
Helix Sleep has a brief two minute quiz that if you go to their website, you take that quiz and answer questions such as do you tend to sleep on your back, your side of your stomach, do you tend to run hot or cold in the middle of the night, maybe you don't know the answers to those questions, and that's fine.
At the end of that two minute quiz, they will match you to a mattress that's ideal for your sleep needs.
I sleep on the Dusk DUSK mattress, and when I started sleeping on a Dusk mattress about two years ago, my sleep immediately improved.
So if you're interested in upgrading your mattress, go to helixsleep.com slash Huberman, take their two minute sleep quiz, and they'll match you to a customized mattress for you, and you'll get up to $350 off any mattress order and two free pillows.
Again, if you're interested, go to helixsleep.com slash Huberman for up to $350 off and two free pillows.
We are always striving to make the Huberman Lab podcast better, and to that end, we need your help.
Over the next month, we are going to be carrying out a survey.
The purpose of the survey is to improve the Huberman Lab podcast according to your feedback.
We put together a brief survey to understand what you love about the podcast, hopefully you love a few things at least, or maybe just one thing, as well as what you think could be improved, or perhaps the many things that you think could be improved about the Huberman Lab podcast.
Basically, what we are asking is to get your feedback so that we can improve any and all things about the Huberman Lab podcast.
The survey does not take long, and every single response will be reviewed.
As a thank you for completing the survey, we are offering two months free of the Huberman Lab premium channel.
If you're already a member of the Huberman Lab premium channel, do not worry.
You will get an additional two free months for carrying out this survey.
You can find the link to the survey in the show notes for this podcast episode and on our website, HubermanLab.com.
So if you would be so kind as to take a few minutes to fill out the survey and help us continue with bringing you the best possible content here at the Huberman Lab podcast.
And as always, thank you for your interest in science.
And now for my discussion with Dr. Reena Malik.
Dr. Reena Malik, welcome.
Thank you.
Thank you so much.
I'm delighted to have you here.
I'm a huge fan of your content.
I find that you are able to deliver critical information about sexual health, urology,

pelvic floor, libido, and so many other things that are of immense interest to people.
But that ordinarily people don't really know where to get the high quality information.
And coming to you for that information means they are going to get the highest quality information.
And I believe that because as everyone will soon hear, today we're going to have a very frank discussion, but one that's really grounded in science and medicine around sexual health and related topics.
These are topics that typically people learn about perhaps a little bit in school, maybe at home, from friends, usually overhearing things as opposed to direct exploratory conversation, online pornography.
And at least in my experience growing up, there was education around sexual health, reproductive health, et cetera, that was more oriented toward the fear of things like STIs, fear of unwanted pregnancy, all of which of course is extremely important for people to learn about, but far less about sort of the healthy versions of sexual health, right?
Yeah, absolutely.
So this is an especially important conversation.
It's also one that I think has a backdrop that we should just acknowledge right off the bat that because the information is gleaned from multiple sources and because there are, let's just say influences out there that relate to the morality of different practices, that there can be shame, there can be misunderstanding, there can be secrecy, and that further leads to misinformation.
So I'm confident that today you can clarify things for us and we're going to stay out of those trenches.
And the last thing I'd like to say is that because a number of terms will certainly come up that I think for some people, they're not used to hearing and general discourse, I'm just going to get them out of the way now, penis, vagina, anus, prostate, you know, what else is there?
We're going to talk about libido.
We're going to talk about intercourse, oral sex, anal sex.
We're going to talk about all of that.
So I just want to get that out there so that we can reduce the shock response.
I love it.
We got to talk about all of it.
Great.
So to start things off, in anticipation of this episode, I solicited for questions on social media and I got thousands of questions, but there was a lot of overlap in the questions.
So to start off, I'd like to talk about pelvic floor because both males and females have a pelvic floor.
And my understanding is that there's a muscular component.
There's a neuromuscular component.
There's a blood flow component.
What is a healthy pelvic floor?
What does a healthy pelvic floor do?

And then we can talk about some of the health issues that an unhealthy pelvic floor creates and some of the ways to ameliorate an unhealthy pelvic floor.
Absolutely.
Pelvic floor, very simply, is basically a bowl of muscles that's connected to bones that hold up all your organs.
So basically in your pelvis, there's all these muscles there.
And their function is essentially many.
It helps with urination, defecation, sexual function.
It helps with posture.
And so having a strong, healthy pelvic floor can mean that you're having normal urination.
You're having normal defecation.
You're having great sex, and that you are also not having ailments like back pain or issues related to those functions and those organs.
And so pelvic floor is so important in so many different aspects, and we deal with it a lot as urologists because it's so integral to these functions that we take care of.
And so when you have an unhealthy pelvic floor, it can vary from person to person.
And while you hear about it a lot in women, men also suffer from pelvic floor dysfunction or problems with the pelvic floor.
So basically pelvic floor dysfunction happens a lot when you're doing things like if you were to go to the gym and do repetitions of any sort of exercise and you didn't rest, then that muscle would become contracted and short.
Very similarly, if your pelvic floor is overstrained, it can become contracted and short and tight all the time.
And you may not know it.
It may just be a function of stress, anxiety, or overuse or posture problems, things of that nature that can affect your pelvic floor.
And so this can lead to issues.
Let's start with urination.
You can have symptoms of urgency, frequency, meaning you have to go a lot to the bathroom or you have to go and have a sudden desire that you can't delay, sometimes even have leakage.
In some cases, it can make it difficult to urinate because the pelvic floor is so tense.
Or perhaps to incompletely vacate the bladder.
Correct.
Like you go to urinate and then you go back to your desk or then five minutes later you have to urinate again.
Exactly.
Something of that sort.
Well, it can be either that you're not emptying completely or that the pelvic floor muscles are so tense that they're stimulating the bladder so it feels like there's more to go.
So it's not always that you're not evacuating.
It can present in a number of different ways.
And then with sexual function, if it's very tense, you can have pain.

So you can have pain with sex.
You can have pain with erections.
You can have pain with ejaculation.
Sometimes it can be a lot of different kind of pain syndromes and you're like, I have all these different things going on and it's really just pelvic floor dysfunction.
With GI function, you can definitely have constipation and then often you can also have back pain.
And so all of these things can happen when your pelvic floor is too tense.
Your pelvic floor can be too weak and that can be often because of, we see this in women a lot because of childbirth, delivering children with some people who have neurologic disorders.
They can have weak pelvic floors or connective tissue disorders like Ehlers-Danlos syndrome, for example.
These sorts of things can cause weakness to the pelvic floor, which can then cause very often what I see is like urinary incontinence or leakage, which can then create problems for people down the line.
Thank you for that.
First question, how does somebody know if their pelvic floor is too tight from a over contraction or chronic contraction of the muscles there versus too weak?
And one of the challenges in having this conversation is that if we were talking about contraction of the calf muscle or the bicep, I think everyone intuitively knows because they've seen the shortening of the muscles when the muscle is quote unquote flexed and the lengthening of the muscles when it is relaxed.
Is there a way to describe pelvic floor muscular shortening in a way that everyone can understand?
Would this be like, like I said, we're going to be direct today.
Would this like be like tensing up one's anus and the opposite of the movement that one would do before initiating a bowel movement and relaxation is sort of the pattern of pelvic floor muscular relaxation just prior to initiating a bowel movement?
So I will say most people can't recognize it because it's very difficult to notice.
It's sort of gradual and so it can over time become noticeable with these symptoms.
But otherwise it's very difficult because it's not a muscle that we were ever trained to recognize, right?
Like you hear about Kegel exercises, for example, and people talk about how to do them.
But that's all you ever hear about the pelvic floor.
And so you don't really know how to kind of do things in a way that protects your pelvic floor or kind of what, how to even tell when it's too tight or not relaxing.
And so that takes sort of a training.
And so usually when people come to first, you get an examination to see if your pelvic floor is tight.
So for women, it's a pelvic exam and for men, it's usually a rectal exam.
How does that exam go?
So it's essentially palpating the muscles and also looking at the function.
So we'll say...
So digital palpation, that's a medical technology for fingers are called digits.

So I'm old enough to recognize what a digital prostate exam is, right?
The physician inserts their fingers through into the anus and feels the prostate to see whether or not it's swollen or not.
And as I'm saying this, I'm realizing sometimes we think of medicine, quote unquote modern medicine is so evolved.
This has basically been the practice for what, 50 years, 60 years, maybe a hundred years.
In the same way that the old school practice for glaucoma excessive eye pressure was for the physician to just touch the eyeball.
So folks, for those of you that think that medicine has evolved a much, it clearly has in many ways, but in any event, so a prostate exam goes as I just described, what would a pelvic floor exam for a male and a pelvic floor exam for a female involve at a kind of granular level.
Yeah.
So for women, you can feel the pelvic floor muscles through the vagina.
So you can feel the iliocoxidius, the pubic oxidius, the levator, those are all names of different muscles in this bowl.
This is the physician who can feel them with their fingers.
Correct.
And you could too, you could put your finger in, but you don't have a reference of normal, right?
So you wouldn't know what a normal pelvic floor feels like versus a tight one versus a weak one.
And so you can assess the tenseness based on, you know, palpation.
You can also see if there's tenderness.
And so you can assess that based on just a general physical examination.
And then also you can observe.
So I can say, contract your, squeeze your pelvic floor up and in.
I can look and see, are they squeezing or are they pushing like, are they coordinated or not?
Right?
Because that's a function of normal use of the pelvic floor.
And sometimes you'll see that they're discoordinated.
You can also assess for sensation in the area and things like that that could be consequences of dysfunction.
Can there be dysfunction in laterality, like the pelvic floor is pulling up into the right or up into the left?
Absolutely.
So what typically when you see a pelvic floor therapist, now I'm not a pelvic floor therapist, but these are the people who do the work, right?
They work with you on a prolonged basis to help you normalize the function of your pelvic floor.
It's like going to the gym with a trainer, right?
They really work with you to get your pelvic floor functioning correctly.

And the first step to that, a lot of pelvic floor therapists will just align your bones and you're kind of the way you sit and walk to make sure that you're not straining those muscles by pulling in different directions.
And if a male goes to the physician to get a pelvic floor exam, there's obviously difficulty in putting fingers into the urethra, one would hope, too small an opening.
So how are they doing the pelvic floor exam?
Is it external to the body or is it through the anus?
So some of it's through the anus, you can feel the muscles through the anus and then you can feel the perineal area and feel the muscles there as well as sensation.
So perineal area, so from the outside of the body, the region between the scrotum and the anus.
Yes.
Okay.
So it sounds to me like if people want to get a high quality assessment of whether or not their pelvic floor is healthy or not, they need to see a pelvic floor specialist.
That it's not the sort of thing that they could into on their own necessarily.
It would be difficult.
I mean, so there are things you can buy online like probes that you can insert in the vagina that will teach you how to do Kegel exercises and give you some readings, but they're not really meant to diagnose.
They're usually something people use if they say have a weak pelvic floor and they want to try to do it at home on their own.
So there's nothing that's going to give you like a baseline reading.
Is this normal or abnormal?
Let's talk about Kegels.
First of all, who's Kegel?
So he is a gynecologist.
I don't remember all the specifics to be quite honest, but basically he came up with Kegels, which are a strengthening exercise for the pelvic floor.
And so what it is, what we describe it to for patients is we say you're going to, there's a few different ways to describe it.
You're going to use the muscles that you use when you urinate, but try to stop the flow.
But you don't want to do the one you're urinating because that can create dysfunction.
You want to learn what the muscles are.
And then you squeeze those muscles and relax, you know, in between sets, so to speak.
And so you'll do, the other way people describe it is pulling up and in in the, like the vagina or for men, sometimes you'll say it's like the feeling that you're trying to lift your penis off the floor without touching it.
Right?
So those are kind of using.
That's a good way to describe it.
Yeah.
So those are kind of the ways that you can describe those muscles.

And so you can squeeze for five seconds and relax for five seconds and do them in repetitions.
And they're just like any sort of exercise you do, you don't want to start doing a hundred of them, right?
You want to do them.
I tell them people, I tell patients, do them lying down so that you're only focusing on those muscles.
You're not working on your posture.
You're not doing anything else.
And as you get better with them lying down, you then sit up and do them.
And then once you're good with them sitting up, you can do them standing and start with, you know, 10 to 15 at a time, like 10 to 15 repetitions.
So yeah.
Let's talk sets and wrap.
So yeah, 10 to 15 repetitions in the morning, 10 to 15 repetitions at night, maybe one more during the middle of the day, but don't overdo it because just like anything, especially when you're starting out, you can.
And if you're doing tons and tons of Kegels, then you will get a tight, short pelvic floor muscles and you will then develop pelvic floor dysfunction.
So it's really important to kind of understand those mechanics, which is why a lot of people think they know how to do Kegels, but they really don't.
And so I always encourage people, if you have the time and the resources to go to a pelvic floor physical therapist, so they can really work with you and make sure you're doing them correctly.
What are some of the benefits of Kegels for those that need them?
Yes.
So they are typically prescribed for urinary incontinence, specifically stress urinary incontinence.
So leakage that occurs when you have an increase in your intra-abdominal pressure like a valcelva or coughing, sneezing, lifting heavy things, jumping on a trampoline.
So for those purposes, we use Kegels to strengthen the pelvic floor and also in women pelvic organ prolapse.
So when you have weakness of the pelvic floor that leads to a bulge that you can visibly see or feel in the vagina.
For men, we often prescribe them for people who have had a prostatectomy, who then subsequently develop leakage after the prostatectomy that is against stress urinary incontinence.
Now a lot of people use Kegels recreationally because improving the pelvic floor musculature can lead to more intense pelvic floor contractions during orgasm, which can be more pleasurable.
And so some people do it for those purposes.
But again, I caution people not to overdo it because then you can lead to a more tense pelvic floor, which is not where we want to end up.
Yes.
I will underscore that cautionary note.
Years ago, I heard about Kegels.

I was like, okay, I'll try.
It sounds all good, right?
I only heard good things about Kegels.
And what it quickly resulted in was painful urination.
And I thought, this is weird.
Everyone's saying Kegels are so great.
And the best thing I could do for my pelvic floor, it seemed was to avoid Kegels.
And a little bit later, when we're talking about prostate, I'll explain at least what my experience was as it relates to the prostate.
I guess the take-home message that I'm gathering from what you're telling us is that strengthening the pelvic floor is great if you have a weak pelvic floor.
Strengthening your pelvic floor further, if you have a strong pelvic floor, can be detrimental.
It can be.
It can be.
It's if you over-train it, just like if you over-train anything else.
And so you just have to, if you really want to do Kegels, if you have any symptoms at all like you described, painful urination or the things I've described like pain with erections, pain with ejaculation, pain, difficulty emptying, any of those symptoms stop and go see a urologist so that they can kind of assess your pelvic floor.
What is the anti-Kegel?
In other words, if somebody decides that they have a tight pelvic floor, how can they learn to relax their pelvic floor?
So there's a lot of different sort of things that you can do.
So for women, you can do massage of the area.
You can use vaginal dilators to help relax the muscles.
You can take suppositories that have medications like Valium or Baclyphine, which are muscle relaxants and that can help as well.
Although they're not treatments, they're more of a bandaid, but they can help with the symptoms that you're having.
And then you can also, I think the best thing is to work with the physical therapist because they can teach you certain exercises that will help down train the pelvic floor.
For example, one of the ones I tell my patients is like happy baby pose.
It actually stretches and elongates the pelvic floor muscles.
So doing these exercises regularly will help you lengthen the pelvic floor muscles.
One thing that I've experienced extreme pain from and that stopping was one of the best things that ever happened for my pelvic floor was to not do any kind of crunching movement with my legs crossed.
I would go to these yoga classes at one point in my life and they'd have everybody do these crunches and I've always done some abdominal work here and there during the week if I'm being diligent, but they would have us cross our feet.
And that seemed to lead to some pelvic floor discomfort that was similar to what I had experienced when I did the Kegels.
So again, for me, ceasing the Kegels was one of the best decisions I ever made.

I only did them for a short while.
I was like, okay, this is clearly not for me.
And I guess that's another point that tell me if you agree or not that if you hear about something online or on this podcast or anywhere else and you tried and it seems to be sending things in the wrong direction, either you're doing it wrong or it might not be the right thing for you.
Exactly.
You know, I think all too often we hear this thing is great and people jump on that bandwagon and then they end up worsening their problems or developing problems where they didn't have them previously.
Is there anything about the anatomy of the neuromuscular connections or vasculature of the pelvic floor that would provide support for my experience there?
That doing crunches with legs crossed is essentially, is it possible that's creating asymmetries in the pelvic floor?
And now I'm sure I'm angering yoga teachers and crunchiness does everywhere.
But you know, hey, if it's a question of your pelvic floor or a few extra delineations in your abs, you know where my vote's going.
So there's a couple of things here that we should dive into.
One is that people don't often breathe correctly during exercise, right?
And so diaphragmatic breathing is really important, which is like a deep breath that expands the diaphragm, not kind of shallow breathing that's just in your mouth and throat.
And that is actually when you, you know, when you do any sort of exercise, your trainer will tell you, exhale on the effort, right?
And there's a reason for that because when you inhale, your pelvic floor relaxes.
When you exhale, your pelvic floor contracts.
And so it actually, that contraction stabilizes the pelvic floor.
So whatever intra-abdominal pressure you're causing to increase from the exercise, whether it's a squat or as crunch or whatever, you're increasing your abdominal pressure, your pelvic floor is then contracting to help stabilize that.
And so part of the reason people tend to hold their breath during crunches, right?
They don't do the appropriate breathing.
And so that can be part of it.
The other thing that can happen with certain things is that there are, you know, nerves and arteries, particularly the pedendal nerve and the pedendal artery that run through the pelvic floor.
So when you get pelvic floor dysfunction, you can cause decreased blood flow to the, to the pelvic floor muscles, which can affect sexual function and you can get nerve inflammation as well that can also cause pain.
And so this is kind of how it all comes together.
I'm so glad that you mentioned blood flow.
I think our entire discussion today should be framed up at least in the back of our minds and the minds of our listeners and viewers as involving at least three things.
You know, anytime we're talking about erectile function or dysfunction or pelvic floor function

or dysfunction or vaginal lubrication or lack thereof, we need to think about the hormonal influences, the blood flow related influences and the neural influences, including the neural influences that come from the brain.
The signals of arousal, for instance, or lack of arousal and so on.
So we won't be overly systematic in our parsing of all this.
But I think what you just mentioned raises a really important point that sometimes in an effort to do something that's good for the muscles, like strengthen the muscles, one will cut off blood flow.
In fact, one of the more common questions I got and I consulted with a couple of exercise physiologists about this and they confirmed that a lot of people who squat and deadlift heavy in the gym or even who just tense their pelvic floor when they're doing things like dumbbell curls or other exercises and especially people who seem to do a lot of abdominal work reported to me in the questions that they experienced things like erectile dysfunction, that they experienced things like pain during vaginal intercourse, that essentially they had created some sort of what sounds to me like a hyper contraction of the muscles in that area that were impeding all the things that they wanted as either side effects or direct effects of exercise because many people are exercising for aesthetic reasons and health reasons.
But nowadays, it seems especially on the male side, but we will also talk about the role of testosterone on the female side, a lot of males lift weights in order to increase their testosterone and for reasons that are obvious also want to have healthy sexual function.
And here they are doing this thing that's very good for increasing testosterone if they're doing it correctly.
And testosterone is involved in libido in the male sexual response and the female sexual response, of course, but they are impeding their erections.
So you can start to see how there are probably a lot of confused and maybe even distraught people out there.
They're trying to do all the right things and they're setting up roadblocks and even sending themselves backward in some cases.
So the question is, how does one know whether or not something like let's say low lubrication or pain during vaginal intercourse or loss of erectile strength or some sort of erectile dysfunction, whatever it may be, because it can take on different forms as we'll talk about.
How does one know if it's blood flow related, hormone related or neural related?
And if it's neural related, how does one know if it's an issue of lack of appropriate signals from the brain over suppression or lack of arousal from the brain or whether or not it's some peripheral neural thing of innervation of the penis or vagina?
So I think there's a lot that we can go into here, but essentially first you want to find out very specifically what is going on.
Are you getting aroused?
Are you having erections?
Are you masturbating?
There's all these questions that will help us go down the route.

Sorry to interrupt.
Let's say aroused, for sake of this discussion, I just want to make sure that we distinguish between psychological arousal, the desire to, I guess here we also have to be precise, arousal to engage in intercourse and arousal to desire, essentially.
I think people will learn to recognize.
Or are we talking about arousal as the response of the genitals?
Correct.
So desire and arousal, this is a very important concept, doesn't always go in one direction.
Sometimes you can feel arousal, meaning you have the telltale signs of arousal, your nipples get erect, you have more lubrication if you're a female.
You're both male and female nipples get erect during arousal.
I believe so.
I think so, yeah.
I believe so.
You know, you maybe get the sex flush, right?
You get some redness or warm feeling.
That's your body's response, right, to arousal and sometimes that can be an erection and sometimes that's not.
Not having an erection does not mean you're not aroused.
It may mean other things, but certainly that's part of it.
And then desire, do you want to have sex?
Do you have, like when you think about your partner or whoever you want to engage with, is there a desire to actually do that, right?
Or is it just more of obligation or other things?
And it doesn't matter if the desire comes after arousal.
For some women in particular, we see that they may not have the desire right away, but they want to be intimate or close with their partner.
And so they'll start just being close with them and then arousal will come and then, oh yeah, you know, I like this.
So then the desire comes after and that's normal.
That's totally fine.
So you want to kind of parse that out.
And then for men, you can ask, are you getting erections at night?
Because that will tell us the function of your organ at night versus during the day where you have also psychogenic components, right?
You can really get in your head about erections.
When you have a problem in the bedroom with performance, it becomes a vicious cycle, right?
So you have a problem the next time you're really stressed.
You're not present.
You're not mindful in the moment with sex and you're thinking about, oh my God, am I going to perform okay?
Am I going to perform okay?
And then it doesn't perform again and you're just, it's getting worse and worse and the

anxiety is through the roof and that's actually causing your sexual dysfunction.
So I think it's important first to identify those issues.
And then also for blood flow, a lot of times we can assess based on, well, what other comorbidities do you have?
Do you have other issues ongoing that may be affecting your blood flow?
Most common, high blood pressure, diabetes, heart disease, and if you smoke, all of those things will affect blood flow to the genitals.
And so that will point-
Negatively.
Negatively.
Negatively.
That will point us to a more vascular issue.
Hormonal issues are very important for desire and, you know, as far as sexual function in terms of erections, there's only 3% of erectile dysfunction that's related to hormones.
So it's actually more-
But that's pure erectile function.
Correct.
As opposed to desire.
Correct.
Psychological arousal.
Desire is predominantly modulated by the hormone testosterone for both men and women.
In fact, a lot of people don't know this, but women have more testosterone in their bodies than they actually have estrogen.
So testosterone is very important for both men and women for a variety of reasons.
And so, you know, using that discussion with the patient will help you kind of identify where you're headed in terms of what you need to focus on for treatment.
There are, you know, certain things you can use to assess blood flow.
You can do Doppler ultrasounds of the penis as well as the clitoris to see if there is good blood flow.
You can assess the peak systolic velocity, which will tell you if there's a problem with arterial inflow versus the end diastolic velocity, which will tell you if there's a problem with venous outflow.
And so that can assess those things.
There are some tests you can do for nerve function, although they're very uncommonly done because mostly we can kind of get that through a clinical report.
And unfortunately, if you're having nerve problems, sometimes it depends on what's causing them, but sometimes they can be very difficult to reverse.
And that's kind of a problem.
We know that as people age, their sensation becomes less.
So just through aging, the receptors become less sensitive, and so you will generally have less responsiveness to the same sensations you did when you were younger.
And so that kind of overlays all of this.
So it's complex, but really a lot of it comes from the discussion you have with your patient

or you kind of really doing a deep dive in what's going on, like really thinking about each of those aspects and also what's going on in your relationship and what's going on in your life, stress, anxiety, like how are those playing a role?
As many of you know, I've been taking AG1 daily since 2012, so I'm delighted that they're sponsoring the podcast.
AG1 is a vitamin mineral probiotic drink that's designed to meet all of your foundational nutrition needs.
Of course, I try to get enough servings of vitamins and minerals through whole food sources that include vegetables and fruits every day, but oftentimes I simply can't get enough servings.
But with AG1, I'm sure to get enough vitamins and minerals and the probiotics that I need, and it also contains adaptogens to help buffer stress.
Simply put, I always feel better when I take AG1.
I have more focus and energy, and I sleep better, and it also happens to taste great.
For all these reasons, whenever I'm asked if you could take just one supplement, what would it be?
I answer AG1.
If you'd like to try AG1, go to drinkag1.com slash Huberman to claim a special offer.
They'll give you five free travel packs plus a year supply of vitamin D3K2.
Again, that's drinkag1.com slash Huberman.
Gosh, lots there to unpack, and I'm glad you mentioned the relationship itself because there are all sorts of things that can impact the arousal response.
Novelty.
Not everyone's in a committed relationship.
Whether or not people are engaging in a lot of masturbation to the point of ejaculation or climax or not, pornography, et cetera, we will get into that.
It's a vast space to explore.
Before we go any further, I want to make sure, however, that we cue people to where and how they could find a really good, let's say, pelvic floor therapist and where they could find a really great urologist to do the sorts of exams and perhaps the sorts of treatments that we've talked about because, at least as far as I understand, much of what people want to learn on this podcast is how things work and what happens when things break down, but also how to resolve those issues.
Let's say somebody wants to check out their pelvic floor, figure out what's going on there.
Maybe they're having issues, maybe they're not.
If they are male or female, where do they go?
Is there a place online that has a great list of some of the best ones in one's area?
Can it be done over telemedicine?
How does one go about that?
In terms of your pelvic floor, it's good to get assessed by a physician who specializes in pelvic floor.
That could be a urologist, that could be a gynecologist, or even a physical medicine rehabilitation doctor that specializes in pelvic floor health.

Typically you'll see in urology, you'll look for people who are board certified in female pelvic medicine and reconstructive surgery.
If you're a woman, if you're a man, maybe sexual medicine, someone who specializes in sexual medicine would be a good place to look.
For gynecologists, again, you want to look at someone who has interest in this area, who does manage pelvic floor.
And then in terms of pelvic floor physical medicine rehabilitation, at least when I was in training, there was about 20 PM and R doctors around the country who really focused on this.
So it's not a lot of people.
If you can go to a pelvic floor physical therapist and you have one near you, that's great as well.
You do want to make sure that one, they do are certified in pelvic floor physical therapy and that they have taken care of your gender.
So if you have male anatomy, then you want to go to someone who's actually seen men because a lot of the pelvic floor physical therapists tend to treat a lot of women.
And so that's kind of what I tell my patients generally speaking.
There's no, at least to my knowledge, no great resource and maybe we'll look that up and see if we can find one.
That's very helpful.
Thank you.
And because again, going back to what I said at the beginning of our conversation, I think there's a lot of shame or at least a lack of clarity as to how one gets help for issues that relate to the genitals.
Because if you have a headache or you're having an eye issue, I mean, you sort of know where to go.
Yeah.
Hopefully your headache doesn't warrant going to a neurologist, but it might.
You know, high stuff tends to be ophthalmologist optometrists, right?
So I don't think we hear often enough about where to access the best quality care for these things.
So thank you for that.
In thinking about sexual dysfunction, I'd like to have that conversation more or less in parallel, if we can, around male sexual dysfunction and female sexual dysfunction.
And I want to make sure that before we do that, that I'm creating the correct parallel construction, as they say, erectile dysfunction in males is clearly a form of sexual dysfunction.
What is the parallel to erectile dysfunction in females?
Is it lack of vaginal lubrication and lack of relaxation of the vagina to have non-painful intercourse?
I mean, is it even possible to have a parallel conversation about these two things?
So it's different.
In some circumstances, there are homologs, right?
So the penis is the homologue of the clitoris.
Right.

So the clitoris is essentially the same sort of spongy erectile tissue that you see in the penis.
It gets erect with arousal and it actually extends very deep into the pelvis.
So it's not just a small little organ.
It's actually quite long.
So you can, in men, you can have erectile dysfunction because you can see it, but in women, you may have difficulty with orgasm.
And it's not exactly a parallel, but difficulty orgasming in women is multifactorial and we can get into that.
But I think they're different and I think also sexual dysfunction presents differently in both genders.
So when you talk about men, they're very, the one visual they see of arousal is erections.
And so it becomes very ingrained in your psyche that if I don't have an erection, I'm not aroused, right?
But there's a lot of reasons that you might not have an erection that we've sort of touched on, vascular problems, hormonal problems, neurologic problems, psychogenic issues and other medications you're taking.
So there are issues that can affect erectile function.
And so that can be part of it where you might feel like you have low desire because your arousal is not there and that becomes a little bit confusing.
For women, what they can assess is their level of lubrication, if sex hurts and if they get an orgasm.
And so those are kind of the ways you can look at it.
Thank you for fleshing all of that out.
You know, years ago I worked on sexual differentiation and in particular the role of hormones in sexual differentiation.
And indeed, as you described, we learned because we were taught and I think people still generally agree that if one looks at the embryological origins of the penis and the clitoris, they are essentially analogous structures.
And that a lot of male genital development involves literally the regression, the disappearance of the female sexual genitalia and associated organs, malaria and ducks and things like that.
And what would become the ovaries, become the testes, et cetera, et cetera.
Those are anatomical parallels.
But what you just described for us very beautifully is the sort of functional parallels as it relates to sexual function and dysfunction.
So I'm hoping with that framing that we can knock down a few of these pins in a little less time because there's a lot to tackle here.
First off, I'd like to address the hormonal issues.
You mentioned that only 3% of erectile dysfunction and by extension, can we say also female issues with sexual arousal are hormonal in origin, is that right?
So with desire, yes, they are hormonal in general and arousal in terms of lubrication, if you're using that as a barometer, yes, you can see less vaginal lubrication due

to hormones.
And I guess I would say 3% to 6% more, up to 6% we see of erectile dysfunction is hormonal.
It's a small percentage of the entirety of erectile dysfunction.
So I think in looking on the landscape of social media podcast and just in the common mindset, we've all come to believe that testosterone is pro-Libido, it's pro-desire in men and women.
I think now people are starting to appreciate that it's pro-desire in women as well, certainly in men.
And that dopamine is also associated with desire and the general public tends to have this view of estrogen as being sort of anti-Libido or anti-male, which is frankly false.
In fact, and I've covered this on the podcast with Dr. Kyle Gillette and with Dr. Peter Atia and another fellow YouTuber, Derek from More Plates, More Dates has talked a lot about the fact that if people, if men, excuse me, take drugs like an astrozole to suppress their estrogen, thinking that, oh, it's all about having high testosterone, low estrogen, oftentimes they crush their libido, just abolish it, which has led to a slowly growing, but I think a positive shift in how people are thinking about estrogen, estrogen is great for brain function, estrogen is great for libido in men and women.
And that is a revision of, I think, how most people think of the male sexual response.
It's more in keeping with how people think about the female sexual response, oh, estrogen and the female sexual response, that makes sense.
But what we're trying to do here is clarify some of the misconceptions.
Now the reason I mentioned dopamine is that, my understanding is that dopamine is involved in the, excuse me, the desire response.
We will distinguish desire, the psychological arousal from genital arousal, physical arousal, and that prolactin is associated with the refractory period during which erection can't occur and other perhaps orgasm can't occur in females, et cetera.
But my understanding is that's also not that simple.
And we need to take a step back perhaps and just talk about the physiological underpinnings of the desire and an arousal response.
So I'll tell you what I was taught and then you can tell me where it's wrong, I hope.
I was taught that the erection response and the vaginal lubrication response is generated by the parasympathetic nervous system, the relaxed, the rest and digest aspect of the nervous system, hence why some people can get psychogenic sexual issues of lack of erection or lack of vaginal lubrication.
That there are individuals out there for whom a lot of alertness, maybe even, and this is a controversial thing, but for some people, even some sense of aggression or edginess or excitement, adrenaline, in other words, can stimulate erection or vaginal lubrication.
So it gets tricky.
It's not like the textbooks, it's not like they taught us in high school as far as I know.
I was taught that the arousal response in males and females is initiated by a parasympathetic sort of relaxed tone and that as sexual desire and arousal and sex or masturbation progresses, that it shifts more towards the sympathetic nervous system, which has nothing to do with emotional sympathy and has everything to do with arousal.
The catecholamines, dopamine, norepinephrine and epinephrine, also called adrenaline and

noradrenaline are released and that the climax response, which may or may not include ejaculation, we have to separate that out, is one that is really of the stress system of the body and then in the post-coital or post-ejaculatory or post-climax phase, then there's a shift back to the parasympathetic nervous system.
That's where the pillow talk and the exchange of odors and tastes and other molecules is known to enhance pair bonding through things like oxytocin, vasopressin and so on.
And what I just described is exceedingly oversimplified, I realize.
But is that more or less how the physiology works?
Yeah.
So the way we're taught in medical school is point and shoot.
So point is the parasympathetic nervous system.
All the male audience will like that one.
And then you go on to the sympathetic nervous system, but it makes sense and the reason that I think you're hearing about this aggression or these things that are leading to arousal is because there needs to be a stimulus, a visual stimulus, a tactile stimulus, some sort of stimulus that you're getting that is then causing the release of nitric oxide from the parasympathetic nervous system.
And that could be for some people aggression or some form of that.
Could you tell people about nitric oxide?
Because we'll get into this when we talk about drugs that increase blood flow, C. allus by agra and also non-prescription drugs, things like L. citrulline, arginine, and watermelon for that matter.
So I read on the internet.
So nitric oxide is essentially the ignition for what we say for erections, the ignition for erections.
The reason I talk about erections more often is when you look at the data, in fact, there was a paper on this where they looked at the number of articles that came up when you put in the word penis and the number of articles that came up when you put in the word clitoris.
And it was 50,000 about penis and 2,000 about the clitoris.
Okay, we have to, this was actually a major section of the comments when I asked for questions on Instagram and comments on comments and yeah, how come, why not, et cetera.
Is that because the urology and sexual health field was dominated by men, that's going to be the presumption, or is it because it's easier to study somehow or, I mean, what's going on here?
Yeah, I think there's been a lot of, I mean, you can go back to like Freud where he thought that the female sexual response was less valuable and so there are some, some reasons.
Less valuable.
I guess, I don't know if that's the right term, but he,
Oh no, no, I'm not challenging your term, I just meant, you know, it was sort of dismissed.
But it was more about the male sexual response than the female sexual response.
And so in general, yes, there is, you know, there were more men in medicine.
There was more, and it is easier to study, right?
You can't say the clitoris quite as easy as you can study the male penis response because

you can see it visually.
You can inject it and see an erection response, right?
We do this for people who have erectile dysfunction, they'll take medications that increase blood flow like try mix and you'll inject it into the penis and you'll see an erection.
So you can actually try mix, try mix.
The entire male audience just went, wait, what are you injecting into the penis?
So there are, there are three basically brand names of intracavirinosal injections that we use for erectile dysfunction.
I hear injection in penis and I think I'd say, I like to think that it reflects a natural male response.
I sort of, I, I take in a back, I don't know, maybe there's a pelvic floor contractions in there someplace.
So it is, it is scary to hear about.
It's a very small needle.
It is very well tolerated.
I've done it to patients in the office and they look at me and say, you're done.
Like they don't even, you know, it's, it's not as painful as it seems.
And when you are not having erections and you've tried multiple things, people get to the point where they're willing to try that.
You know, and, and so it is very effective.
It is the most effective non-surgical treatment we have for erectile dysfunction and it's usually either one medication, two medications or three.
So you can have, you know, a prostadilapapavirin and the third one.
So we can look at, someone will put it in the comments, surely they will.
What is it designed to do?
Is it, is it a vasodilator of sorts?
So they, they, they work in different mechanisms, but similar to the medications that we have, PDE five inhibitors, PDE five inhibitors work in the erection cascade.
Basically what happens, let's actually, let's take it back to the nitric oxide thing and we'll get there.
So nitric oxide essentially is released by the endothelium in response to a visual tactile stimulant, stimulating Q, right?
And so your body releases nitric oxide, which then sets off the cascade for the erection.
And so that releases CGMP, which is, which is causes the erection and it's degraded by a phosphodiesterase.
And so medications that inhibit phosphodiesterase like Viagra and CLS tend to prevent the breakdown
of that CGMP.
So you have longer lasting erections.
And so similarly these medications work sort of similar to that.
Some of them we don't know exactly how they work, but they work by increase, increasing CGMP or CMP that are involved in those cascades.
And what about L-citrulline?

I hear about L-citrulline use.
It's an over the counter supplement and it's in the arginine pathway.
And my understanding is that it works similarly to things like CLS Viagra, but is perhaps not as potent.
I also just cautionary note out there, L-citrulline can give people vicious cold sores and cankers sores.
Vicious.
And you hear about this on the internet.
It's been verified by grotesque images that you do not want to Google for and not everyone tolerates it well.
So these actually work by increasing nitric oxide.
So they're not in this, they're not later down the pathway.
They're actually increasing the availability of nitric oxide.
So L-Arginine is the more direct pathway, but it's very low bioavailability.
L-citrulline converts to L-Arginine, but it lasts much longer in the bloodstream, which is why people tend to use L-citrulline.
Now, in sexual medicine, these supplements, while there has been some studies on them and they are effective, there's no regulation on the supplement industry.
So we can recommend them, but we just can't say that for sure that the supplement is exactly what's said on the bottle.
We see lots of studies where they'll say, I read one about melatonin and there's a variation of melatonin from like what's on the bottle to 400% times more.
And so that's kind of the struggle that we as medical doctors have.
And I know we get a lot of slack for it that we don't talk about supplements, but it's really the challenge there is like finding the quality supplement.
A great site is, which I have no relationship to, except that I mention them all the time, is examine.com, which has references to human studies and where there's a lot of efficacy shown and we'll get into some side effect issues.
It does, can't address quality by brand issues, but thanks for mentioning that.
What percentage of males who take Cialis, aka to Dallafil, or Viagra for erectile dysfunction get relief from that?
Because you mentioned only 3% of erectile issues in males are hormonal in origin, but what percentage are likely to be blood flow related in origin?
So a large percentage are blood flow related, that doesn't mean that the medication will be effective for everyone.
If you look at the large percentage are vascular in nature, right?
That's the number one cause as men age.
So we know that about 52% of men over the age of 40 will have erectile dysfunction and that continues to increase as you age.
So 50% of 50 year olds, 60% of 60 year olds, and so on and so forth.
So it's very, very common and the success rate in the studies is about 60 to 70%.
So when you give someone a medication, they will have sustained erections that are sufficient for penetrative intercourse, which is the way we kind of discuss erectile dysfunction

in studies and with patients is about 60 to 70%.
So not everyone will have success, but not all of that is because the medication doesn't work.
Sometimes people are not taking them correctly, sometimes people need to try different doses, and then there's still this issue of your brain is still active.
And so if you're having anxiety, you're having other issues or stress in your life that can have an effect on your ability to create an erection.
So there's lots of factors that go into it.
But generally speaking, they are effective and they do work quite well and they're tolerated pretty well.
And 60 to 70% is not a small number.
That's a significant number.
That's the majority, but by a significant margin.
Is there a basis for the use of Cialis, Tidalafil, Viagra, L-citrulline in females?
So yeah, there's not a lot of data on this, but certainly if you have surmised that there is a blood flow issue and they're having difficulties with orgasm, it's certainly something you can try off-label.
And certainly people do try these medications off-label to see if they improve sexual function for women, but there's not a whole bunch of robust randomized controlled trial studies on women with these medications.
A little bit later, we will talk about prostate health specifically, but I'm just going to make a note here that nowadays there's increasing use of low dosage, Cialis slash Tidalafil.
So rather than what I found online was that the erectile dysfunction treatment dosage of Cialis Tidalafil is somewhere in the 15 to 20 milligram range.
What we're talking about here is daily use of 2.5 to 5 milligrams of Cialis Tidalafil for prostate health.
And I learned in researching for this episode that Tidalafil, Cialis was actually developed as a drug for the treatment of prostate health to essentially increase blood flow, the prostate to increase prostate health, not for the treatment of erectile dysfunction.
So I found that to be somewhat interesting and a lot of people are now starting to use that.
I also learned that if you dive into the guts of the internet, one can find that now there's a growing use of combined low dosage, Cialis and apomorphine, which is a pro dopaminergic agent.
It's a dopamine a little bit later.
But is there any basis for low dosage, say 2.5 to 5 milligram daily use of Cialis Tidalafil in females?
Yeah.
So, well, let's talk about it for males and females.
I think low dose daily Cialis is excellent for erectile function in men.
Is that true?
Sorry to interrupt, but is that true even for men that are not experiencing erectile dysfunction?
It's not indicated for that purpose.

There's a thought that it's increasing blood flow to the area.
So people, I've personally used it for men who have pelvic pain to help with increasing blood flow.
You can also use it potentially as a preventative.
So some people have kind of thought, okay, it's increasing blood flow.
It's preventing fibrosis of that erectile tissue that can happen with age or other vascular problems.
So it may be beneficial for that as well, although again, that's off label and not something that we generally promote.
But as far as for women, again, it can help with blood flow.
So if you're having issues, so if you have a female who's having sexual dysfunction and she's got signs of vascular problems, like she's got diabetes, high blood pressure, she smokes, and yes, it's certainly reasonable to try and see how they do.
We usually want to give at least a four week trial to see if there's any benefit with those medications.
Great.
Thank you for that.
Why is it that I get so many questions about erectile dysfunction from males who are in their 20s and 30s?
Because everything you said up until now was mainly focused on men 40 years and older.
Is it from lack of physical activity over use of nicotine, by the way, vaping as far as we know, vaping and smoking bad for erectile function, and perhaps sexual health in males and females generally because nicotine is a vasoconstrictor, nicotine does have certain benefits and I covered this in an episode on nicotine, neurocognitive benefits and the elderly in particular, but it is a vasoconstrictor, so it runs against all of the sexual arousal stuff that we're talking about.
But okay, let's assume that a male in their 20s or 30s is sleeping enough, you know, six to eight hours a night, is exercising, isn't doing anything to punish their pelvic floor in the gym, you know, they're not doing legs cross kegels while doing crunches or something while inhaling on the crunch.
That was a quiz, by the way, folks, for earlier topics covered.
Let's assume they're, you know, eating pretty well, the majority of their foods are coming from non-processed or minimally processed foods, they're doing a little meditation each day, they're engaging in hopefully healthy relationships, they're not masturbating like crazy to porn and, you know, let's assume that they are, you know, not on an SSRI.
Why are all these 20 and 30 year olds on the internet asking mainly you, they mainly run to you, but also to my direct messages about their erectile issues.
So I will say I have seen a lot of young men in my clinic and I will say that they very often have pelvic floor dysfunction.
So even though they're doing all the right things, they do have, I mean, we're in a stressful society so you can try all the things to be, to decrease your stress, but a lot of us are sitting long periods of time, especially during COVID.
I mean, people sat for months, right, years, like just sitting at their home computer.

And so, you know, exercising one hour is not going to offset the day full of sitting.
And so all of those things can affect pelvic floor function.
So my theory is that that's probably the more common cause.
So walk more.
Yeah.
I've actually heard back.
Use a standing desk.
Yeah.
Yep.
Yeah.
Walk more standing desk.
Okay.
So, and then my guess is that there's some psychogenic feedback loop, which is just nerd speak for things aren't working as well as they would like them.
They're stressing about it and the stress is making things worse.
Absolutely.
And, you know, you mentioned that people are not masturbating or using porn, but a lot of people learn about sex through porn, whether it's good or bad.
We can't, you know, it's not a great thing, but like that's accessible now.
When we were growing up, you had to find a VCR, you had to find a quiet room that no one was going to walk in.
I'm old enough to remember when the kid down the street, I won't mention them by last name, but yeah, the kid down the street, you know, had porno magazines or magazines.
And then there was actually a library of these goodness.
I shouldn't say where they were in the town that grew up in where kids would stash them in specific locations, in parking lots.
And then, you know, boys would bike or skateboard over or walk over and then they would like take turns, look, take turns, excuse me, looking at them.
But that, that actually is to raise a perhaps a more important point, which is that looking at pornography is different than masturbating to pornography, which is also different than masturbating to pornography to the point of ejaculation, right?
Because I also get a lot of questions from people about their porn addiction issues.
And there's a growing theory out there that overuse, that meaning not just looking at, but masturbating to pornography to the point of ejaculation is creating a deficit of seeking out and cultivating healthy, real world sexual interactions.
Yeah.
So I want to, I want to start this before I get into that is to say that if you're masturbating to porn and you have normal, healthy relationships and you're going to work and you have a great, you know, a partner and everything's great in your life, it's okay.
Like shame is a real problem.
And maybe they're watching pornography together.
Yeah.
So I think, you know, I think it's important though that at least in the literature they

describe, if they don't describe porn addiction, they call it problematic pornography use.
And it's only described in about 4% of people in these studies.
So it's, it's a small subset of people.
I think it's becoming more common because pornography is so accessible and it activates a dopamine pathway is just like any other sort of addiction, right?
You watch pornography, you get a dopamine response, your brain then says, Oh, I want this.
I want that again.
And you keep seeking more novel, more aggressive, different types of pornography to get that same response, but it doesn't happen to everybody.
But also I would say, sorry, Jintra, but that the dopamine response as a hardwired biological mechanism for adaptive behaviors, including, and let's just define healthy sexual behavior because I feel like there's such a range on that, depending on one's background, religious beliefs, et cetera.
Anytime we talk about sex on this podcast, I like to say that involves at least four things, obviously consensual, age appropriate, context appropriate, species appropriate.
Yes, absolutely.
Absolutely.
I'm really glad you brought that up.
So I've heard you say that before, but it's very important.
And so I think, you know, there is a spectrum, a large spectrum of people who watch pornography, ejected pornography and have a normal life.
And so that's fine.
I think that, you know, if we shame those people, we're creating problems, right?
We say like, oh, you do that, that's horrible.
And then they're in their head, right?
And then they're causing problems in their life because of shame.
And so there's, I think there's a little bit of cultural shame that comes of this discussion.
And so, you know, it's a problem in the long term if we say that, oh, this is going to create problems because not everyone has.
There's so many people who watch pornography and have no problems, who, you know, have normal, healthy relationships, great sex with their partner.
And it's fine.
Or they watch porn.
Or they're between relationships.
Yeah.
And they're relying on masturbation specifically.
Right.
Are there any data that distinguish between just pure imagination fantasy versus visual fantasy as it relates to developing or inhibiting sexual health?
And here we're talking about the desire aspect.
Let's assume physical arousal is, you know, handled, no pun intended.
So I think that, um, the, the, the thing about young people, I wanted to get back to

that, then I'll answer your question.
But the thing about young people who are watching pornography, that's what they think sex is supposed to be like.
They don't get an education about what sex is, right?
No one has a conversation with their kids like, Hey guys, this is what happens when you have sex.
This is how long it should take.
This is what foreplay is.
And this is like not normal.
This is a production.
This is a produced product that's meant to arouse you, right?
And to give you ideally an ejaculation or an orgasm, right?
So, um, no one has that discussion.
So we've then go to relationships and like, why did my partner not react like that woman did on the porno, right?
Or why did I not react like that woman did on the porno?
Why didn't he react when, you know, like they wouldn't porn because again, I think females are watching porn as well.
Exactly.
Yeah.
You raise a really critical point, which is that the shame can extend both ways.
And so I think to that end, that's a problem and because it's so accessible, I think we need to have conversations.
I think it needs to be open.
We have to talk about sex and that's kind of why I do what I do.
We have to have these conversations so people know what normal is.
Thank you for that.
I do think that people need to know what normal is and what the range on normal is, keeping the constraints that we talked about place earlier, because I do think those are universal healthy constraints, right?
Yeah.
Consensual age appropriate, context appropriate, species appropriate.
Absolutely.
I'd like to take a quick break and acknowledge our sponsor, Inside Tracker.
Inside Tracker is a personalized nutrition platform that analyzes data from your blood and DNA to help you better understand your body and help you meet your health goals.
I'm a big believer in getting regular blood work done for the simple reason that many of the factors that impact your immediate and long-term health can only be analyzed from a quality blood test.
However, with a lot of blood tests out there, you get information back about blood lipids, about hormones and so on, but you don't know what to do with that information.
With Inside Tracker, they have a personalized platform that makes it very easy to understand your data, that is, to understand what those lipids, what those hormone levels, etc. mean,

and behavioral supplement, nutrition, and other protocols to adjust those numbers to bring them into the ranges that are ideal for your immediate and long-term health.
Inside Tracker's ultimate plan now includes measures of both ApoB and of insulin, which are key indicators of cardiovascular health and energy regulation.
If you'd like to try Inside Tracker, you can visit insidetracker.com slash Huberman to get 20% off any of Inside Tracker's plans.
Again, that's insidetracker.com slash Huberman to get 20% off.
I asked whether or not the pure imagination-based arousal versus visual arousal.
And for some people, the sounds of people having sex is extremely arousing.
If you've ever lived in a major city like New York, which I spent summers in New York, you hear more often than you do in areas where people are living further apart.
You hear people having sex.
Yeah.
It's part of the auditory landscape.
Yep.
You're very close together.
But yeah, so there's not exactly, at least to my knowledge, I don't know the data that looks at fantasy versus visual versus auditory, but I will say that you can get habituated to certain things.
And there is that data that maybe you can get habituated to watching a certain type of thing to get aroused.
And then normal things do not get you aroused, right?
Like you may watch pornography and then you may have difficulty getting aroused or turned on when you see your partner.
You may get used to masturbating a certain way, right?
So if you use certain vibratory stimulation or certain pressure sensation every single time you masturbate, you can get habituated to that.
And you may not be able to replicate that during penetrative intercourse.
And so I think that's really important.
And I think the take home is to try and vary what you're doing.
Masturbation is a fine, healthy way of self-exploration, again, with the caveat that as long as you're not masturbating to excess and avoiding your obligations or your family or your partners or your friends, right?
Like you are just masturbating for the benefits of maybe sleep improvement, mood boosting, reduction in anxiety, those things are great.
And so I think with that being said, you just want to be thoughtful about varying it up.
One of the issues with masturbation that I've talked about when I was a guest on other podcasts, mainly in the context of male masturbation and perhaps with pornography, perhaps not, is that it's pretty clear based on the data surrounding addiction that anytime there are big increases in dopamine without a lot of effort required to generate that dopamine, like turning on pornography on the internet versus asking someone out on a date, going out on a date.
Again, we're talking about going through the conversations and the mating ritual that is

the human mating ritual that of course in the context of healthy interactions involves getting mutual consent and these kinds of things, right?
You could imagine how without placing any moral judgment on it, without shaming anybody, you could imagine that if somebody exclusively masturbated and didn't develop the skills of courtship and building healthy sexual relationships that pornography and or masturbation could start to create quote unquote problems, right?
Whereby somebody only felt comfortable in those domains.
And I think that's what I'm hearing more and more about when it seems to be young men reach out.
Absolutely.
And I think you're, you know, it's definitely the ease of access, right?
But I think that's pervasive in the young society now, like you don't have to actually go and find a mate.
You can just go on an app and look for somebody, right?
Like there's, there's many.
Well, that's a form of finding a mate.
I mean, I was weaned in the era when, you know, no smartphones or anything.
No, my point is, I think that we've become very connected to technology in our world, which also means that we're having less conversations.
The younger generation is having less conversations and more online conversations.
And I think that's a skill that needs to be developed as well.
And I think part of that is, is contributing to all this as well.
Well, one thing that I can attest to is that, you know, I grew up in a community of mostly male friends.
I have free male friends always have where a lot of what we learned about sex came from older, in my case, guys.
My sister probably learned a lot about sex from her female friends.
And there was always that one guy who would just say stuff that years later, I realized was incredibly misleading, right, maybe even just detrimental.
And I just want to remind people that when you are on Reddit or anywhere on the internet and there's people saying things with certainty, they might be that guy.
Yeah, absolutely.
And if you look at the if I look at the long arc of those people, that guy's life, it didn't speak to tremendous success in the domain for which they were asserting such confidence.
Let me put it that way.
Okay.
I'd like to slightly pivot to a different aspect of this conversation because it's just really critical, which is the female sexual response.
You know, this is something that does not get enough discussion.
Absolutely.
And there's a lot of stereotypes, right?
The stereotype that we hear about is, oh, you know, they need more foreplay, which can be true.

Some cases is not true.
The stereotype is that women are more intimacy and relationship based in their sexual response.
That can be true.
I have female friends and have known women who also are just really interested in having sex for sex's sake at times or maybe all the time.
I think I like to think that we are past the stage of human development where the stereotypes around this are fixed, right?
And we hear more about this and we see more about this now.
But what is the real deal around the female arousal response?
And then we will talk about female orgasm response.
And there I'm just going to earmark now that anytime we say something like arousal or orgasm, there are multiple forms of that, right?
And we will talk about the multiple forms of female orgasm.
Yeah.
So if you talk about the response cycle, you can go back to the research of Masters and Johnson.
And so what they did, this was way back when, and they actually watched sex workers have sex and this was, I guess, okay, back then.
Female sex workers.
Yeah.
So they watched and they took note of the kind of the steps of the female arousal or sexual response.
And so the first phase is excitement, right?
And during that phase, your heart rate goes up, you're breathing a little heavier, there's the sex flush, you can see redness in areas like, you know, in the vulva, in the breast, I mean, in the nipples.
And then you go to sort of, and that can last a variety of different times.
You'll also start seeing some lubrication vaginally, right?
And then the plateau response is when, you know, that is kind of at its peak and it kind of stays steady.
And then you reach orgasm.
And so orgasm essentially is a response of the body where you will have, again, increased sympathetic response and you will have pelvic floor muscle contractions, which are rhythmic about 0.8 seconds or so.
You're having a rhythmic pelvic floor contraction along with the sensation of orgasm.
And then you'll have your recovery period, which you talked about briefly earlier, which can have, you know, sort of a refractory time period at which point you can no longer, you know, orgasm again, if you'd like to, or for men to obtain another erection again for a short period of time.
And that can be kind of an absolute refractory period.
So it's definitely not happening.
And then a relative refractory period where you'd need something more novel and exciting to then again, resume that cycle again.

The Coolidge effect.
Yeah.
I've talked about the Coolidge effect before on this podcast.
I'll just cue people to a timestamp link in the show note caption so we don't go down the path.
But one thing that's really important to understand is that the Coolidge effect is present in both males and females, meaning if a male ejaculates and is of the feeling that they can't have another erection for some period of time, the presentation of a novel, I guess we should say partner because we could be talking about homosexual relationship here, not just heterosexual, but a novel sexual partner, female or male, depending on their proclivities, can override the refractory period.
And they can have another erection and ejaculation.
Similarly, a female will have a post-orgasmic refractory period if they're given an adequate stimulus, right?
Something arousing enough.
They can experience arousal and orgasm again.
And we know based on really good pharmacology that this is a dopamine-driven thing.
And prolactin is essentially establishing the refractory period and the dopamine is essentially overriding the refractory period.
Fascinating neurochemistry there.
And it speaks to the incredible extent to which the brain is controlling the genitals.
Yeah.
I mean, we always say in sexual medicine that the brain is the most powerful organ for sex.
Not your genitals, but the brain because it is so powerful.
And I'm not sure if we're going to touch on this later, but I'll bring it up now.
There are some centrally acting medications now available for their FDA approved for pre-menopausal
women with low libido.
Oh, but maybe just throw those out because the one that I'm aware of is in that's often used in let's say niche cultures is melanocyte-simulating hormone in men, which gives people a tan, makes
them erect.
The melanocyte-simulating hormone at MSH comes from the medial pituitary, if I'm not mistaken.
One of those weird regions, no, everyone talks about anterior and posterior.
But and people are now injecting this as a peptide.
It can cause pre-epism.
I have not had that experience.
I've never tried this MSH, but I've been told that people are getting cavalier with it.
They can have issues.
Pre-epism being enduring and perhaps even final erection.
Is that true?
So a priapism, a pre-epism.
Sorry.

I mean, it's actually from Priapis, the Greek god who is often photographed with a really big erection.
Oh, wow.
We didn't hear enough about that Greek god in school.
Is it Roman?
Roman or Greek?
But anyway, so it's an erection that lasts longer than four hours, and it is actually a surgical or it's not a surgical, but it's actually an emergency.
If you have an erection that lasts longer than four hours in the absence of sexual arousal, then it is important to get to an emergency room because at that point, you can start developing decreased blood flow and ultimately changes to the actual tissues, scarring, fibrosis.
So it's really important to actually go to the emergency room.
Don't wait because you're embarrassed.
Really get there and get treated.
However, if I'm not mistaken, earlier you mentioned that it is exceedingly rare that people who take C. allus slash to Dallafil or Viagra for erections are getting true priapism.
Correct.
It's mostly from those injectables we talked about earlier, those intracavirinosal injections.
People can get priapism from those a little bit more commonly.
And so that's something we always counsel on and also certain medications like Trasadone or if you have sickle, selenemia, those are the most common reasons that we see people coming in with priapism.
Trasadone, really?
Okay.
I'm going to refrain from my desire to figure out that one so I don't take us down a rabbit hole here.
Sorry.
I want to get back to the MSH.
It's actually an FDA-approved medication called brimelanatide is the brand name.
Vylici is the generic name, Vylici is the brand name, which is FDA-approved for women with low hypoactive sexual desire disorder, premenopausal women, premenopausal because that's what they studied.
But it is basically the same peptide, right?
So it is a melanocortin receptor agonist and it works on the brain pathways to increase desire.
It's taken as an injectable, again, just like you said about an hour, 45 minutes before when you want to want, you take it 45 minutes before and it works quite effectively in increasing desire.
How long does it last?
About 24 hours.
Some people maybe up to 48.
I mean, I know men using melanocyte-stimulating hormone peptides.

I also really want to caution people about obtaining gray market peptides.
Sorry for this insertion here, but there are a lot of peptides available without a prescription on the internet.
They are almost all contaminated with something called LPS, lipopolysaccharide, which is not something you want to be injecting a lot over time.
That's actually how we induce an immune response in animals in the laboratory and it is amazing to me how many websites are selling this stuff and it arrives to you easily.
You just buy it on the internet.
It says not for human or animal use and people are injecting it and the LPS issue is something I think is potentially going to shut down that whole market at some point, but if you are interested in using a peptide, you should be obtaining it by a prescription from a quality physician.
Exactly.
And because we have brimelanotide, we can prescribe that for men as well.
So sometimes we'll do it off-label for men who are having delayed ejaculation because it will help them achieve orgasm a little bit better.
And so this is available for premenopausal women.
The other medication that's available for low libido is called phlebancerin, also known as ADDI is the brand name, and that also works on serotonergic.
It's got kind of a mixed response serotonin and dopaminergic areas of the brain and essentially works as a daily medication taken before bedtime, 100 milligrams a day that actually helps with decreasing hypoactive sexual desire disorder works in about 45 to 60% of patients and you need to take it for some time.
Now, both of these are brand name medications, so they are a little bit costly and sometimes insurance doesn't cover them, but they are available.
And I think very few people know about them.
And I think they're really great and useful tools in the toolbox.
And these are for desire.
They're for, yes, they're FDA approved for what we call hypoactive sexual desire disorder, which is essentially low libido that causes distress and bother.
I don't want to take us off course about vaginal lubrication, arousal and few more orgasm, but as long as we're talking about arousal and reduced arousal that requires treatment, I have to ask this now.
Anytime we talk about arousal and libido, there's no BMI, which by the way, the body mass index is probably not the best tool either, but there's no chart.
It's not like a thermometer that says you're 98.6 plus or minus two degrees.
You're good.
If it's too high, much higher than that, you have a fever.
If much lower than that, you're hypothermic.
So my understanding, I don't want to say naive understanding, but my understanding is that one determines whether or not their libido is normal, high or low, largely based on some intuitive understanding of what their partner or partner's desire, whether or not they can meet those desires.

And if they sort of accrue enough of a sample size, they date enough people where they have sexual interactions, they figure out over time whether or not they have a low, medium or high sex drive, and people tend to compare to how they felt in earlier years or at different times of the year or under different psychological conditions and stress conditions, that kind of thing.
But we really don't have a benchmark for this, right?
I mean, we can't say that, for instance, that if people are not desiring sex or thinking about sex with blank frequency, that they have low libido, right?
It's sort of what is working or not working for you in the context of your life, right?
Is that reasonable way to think about it?
There's no right or wrong.
Basically what you're saying, there's no right or wrong amount of libido.
There's many people who identify asexual and they are happy with that.
There are people who like to have sex once a month and they're happy with that.
It really is a matter of distress.
Are you bothered by it?
So when we look at studies for female sexual dysfunction, you can, using like validated questionnaires like the FSFI, you can actually see that about 40% of people qualify for having sexual dysfunction, but really bother is only seen at about 12%.
And you can be bothered because you're bothered.
You can be bothered because your partner is bothered.
But it's really up to you, right?
Like if you feel like there's something that you want to improve on, then that's when you go see your doctor, but there's no right or wrong answer, right?
This is very subjective.
And a lot of times we'll see couples who have mismatched libidos.
Now, does that mean one person's right and one person is wrong?
No, it's just a matter of like, well, how do you, if you want to come to a point where you agree, how do we get there?
You know, and what is, what is your end goal?
Yeah, I later, we'll talk a little bit more about chemistry, which I find infinitely fascinating because in my life experience, I've just been struck by the fact that occasionally you have a physical interaction with someone or sometimes it's not even physical interaction.
And they are just so unbelievably arousing to you or somewhere in between.
Or sometimes it, it just sort of ain't there or it's just not there that much or nobody likes to talk about this or it's there until you sleep together.
And then it's not there.
And this is all not just put on males.
This is put on females.
I, I hope she doesn't kill me for saying this.
I know somebody who is a family member who once said, sometimes you have to realize you never want to sleep with somebody again, by sleeping with them.

And here we're not talking about traumatic experience, right?
So, you know, again, the discussion about libido, as you so aptly pointed out, engaging what is healthy levels of libido has a lot to do with what one self desires, as well as the hopes and expectations of the people that we are sexually involved with.
So we'll get back to that a little bit later in the context of chemistry, because I find it so fascinating and it's something that isn't talked about enough, but thank you for that.
Um, let's get back to female sexual arousal response and orgasm.
So physiologically what happens to the body is it prepares for penetration.
Now that could be a penis, that could be a sex toy, that could be a digit finger to be more specific.
So it, what it does is the cervix moves up and out of the way.
The, the inner one third, two thirds of the vagina lengthens and elongates to allow for penetration.
And it can actually double, nearly double in size of the, of the baseline vaginal length.
And so it is preparing for that.
So if you, and so that's part of it in some people who have, um, painful intercourse, it's because they haven't had adequate time for arousal.
And so they're the penis penetrating before they've had those adaptations to occur and also the labia open up to allow for that penetration.
So these things actually happen physiologically to allow for preparation.
So while some people may be aroused and get to that point quicker, some people do need a longer period of time of what, as you described before play, and not everyone is the same, but I think it's important to have that discussion with your partner.
And you know, lubrication is one of the ways that people assess arousal, but that's not the be all end all.
Some people just make a lot of lubrication and some people don't.
And certainly that changes with age and hormones.
So if, um, certainly we know that after menopause with a drop in estrogen and testosterone, you will see a decrease in lubrication.
And sometimes if people are on medications that can alter their hormonal access, they may also see changes in lubrication after during breastfeeding.
You can see changes in lubrication.
And again, this is not a, they're not aroused necessarily.
This is like a physiologic problem that they're having.
Can we distinguish between arousal based lubrication, let's say sexual arousal based lubrication.
And again, folks, forgive me for being so hyper specific in language, but there are other forms of arousal besides sexual arousal that, um, we know from, it's not a pleasant topic from, um, reports, uh, following sexual assault that,

you know, oftentimes the victim is demonized for having been, um, lubricated.
And they will say, well, then people will presume that somehow they wanted that interaction and that's not true in those cases.
It's clear that those, that the lubrication occurred independent of libido type arousal.
Exactly.
Okay.
So let's set that aside.
Again, unpleasant topic, but one that's important to, to, um, to, to flag are their forms of non-libido type arousal lubrication that allow for non-painful or even pleasurable penetration that are important to distinguish from the arousal based lubrication.
In other words, I have to imagine, um, that women will have sex and it can be pleasurable or at least not painful.
And that might relate in some way to baseline levels of lubrication.
And here we've been talking about lubrication, um, mainly in the context of arousal, you know, postmenopausal reductions in lubrication, but are there also postmenopausal reductions in baseline lubrication or some people's vagina is just more lubricated at, um, I'm going to say at rest.
It's like the scientist in me, um, when, um, there are sleep, for instance, I mean, men are having erections in their sleep or women getting vaginal lubrications in their sleep periodically.
My guess is yes.
Well, they're definitely getting clitoral engorgement, right?
They're getting clitoral engorgement.
There's been some studies on that, that they are also getting nocturnal two-mesance, right?
Just like men do.
As far as lubrication, you know, the data, at least from what I understand is like there is a protective mechanism whereby women, when, when there's any sense that there may be penetration, that their body will immediately start creating lubrication.
And that is protective to avoid, you know, trauma and injury.
Uh, there's also baseline vaginal discharge.
That's completely normal.
Women will make physiologic discharge.
In fact, in our examinations, when we examine, we'll say normal physiologic discharge because we see it, there's always discharge and it is, um, it can be up to like five milliliters.
And so it's not a small amount.
It can happen.
It can be quite a lot.
And then menstrual cycle dependent in terms of the viscosity and the, yes, it

changes over the cycle and it can be different in color and different in thickness and that's completely normal.
And I think that's a real problem in the feminine hygiene industry.
Um, you don't need to smell a certain way or, or, uh, reduce that discharge.
This is like completely normal, healthy.
And you talked about chemistry and I know there's like, not a ton of data on this, but there's like pheromones, right?
There's sense that are coming from you, which are actually attractive to a partner potentially and, and in whatever physiologic, you know, I don't know, there's not a ton of data on this, but like there is that part of it.
So, um, you know, there's a lot of marketing towards women that you're dirty.
You should be smelling like peaches or whatever.
And there's a lot of marketing.
I, maybe this is generational thing.
But I learned early on, I think my behavioral neuroscience courses that vaginal lubrications were, um, uh, part of the arousal response for both, um, these were always framed in the context of heterosexual relationships, but both partners, let's just say both partners, um, because this could be a homosexual, female relationship too, right?
We want to make the conversation as broad as possible.
Um, and that the, uh, odor, let's just be frank here, um, the odor and the taste, um, played a role in both arousal, but also the pair bonding response that would establish future arousal.
And anyone that's ever been in a, um, in a relationship that, uh, let's say you had healthy sexual relations, uh, I like to think his experience of remembering somebody's smell or thinking about somebody's smell and that itself can be very arousing partners, even I'm smelling different articles of each other's clothing and that being arousing.
So, I mean, this is the stuff of, of real physiology.
We're not, we're not making this stuff up.
But there is, there is a lot of marketing towards women that they should use douching or other things to clean themselves.
And it is, it's damaging, right?
It's actually one, it can affect the vaginal microbiome.
So their pH is changing and that can affect, you know, their risk for UTIs or bacterial vaginosis.
And, um, and, and so they're, they're buying these, spending their money on these things because they're being told that they're not clean.
And they come to the doctor saying, Oh, I'm, you know, I think I have a STD, but it's like normal physiologic discharge.
Um, and so I think it's important to say that this is normal and, and it's normal to have an odor that is distinct to you.

And that there's, you know, of course, if you have like a fishy odor, that may be a sign of like a very strong new novel odor that wasn't there before, that may be a sign of a sexually transmitted infection.
But if it's your general odor that you've always had, that's normal.
What about other infections like yeast infections or bacterial infections?
Are the, um, I got a number of questions about mycoplasma, um, infections, which, you know, we don't hear that often about, but, um, yeah.
So you, you can see if your discharge has changed and become more like cottage cheese-like or there's, um, you know, other symptoms like itching, um, or discomfort, then, you know, those are signs to go get evaluated.
A mycoplasma is another infection that we see in the vagina, but we also actually sometimes see in the urine.
And while it's not something we routinely test for, when we have people who have symptoms of urinary tract infection and they're not improving, sometimes we will check for mycoplasma that could be causing symptoms in the urethra itself.
Um, we've had a couple of episodes about the gut microbiome.
My colleague, Justin Sonnenberg at Stanford, his laboratory is directly above for my as expert in the gut microbiome.
Done a couple of episodes about this and, um, he reminded me and I like to remind people that, um, every mucosal lining of your body has a robust microbiome.
So that means intranasal, intravaginal, intreurethral in, um, males and females.
Um, there's an anal microbiome.
There's a microbiome on your skin, on your eyes.
Um, and you mentioned douching and other, uh, in other ways of, I'm going to say, quote unquote, cleaning it because that language falls in line with the idea that it's a good thing.
You're telling me it's, it's, it's a bad thing in many cases, um, because wiping out the microbiome.
What are some of the things that, uh, females can do in order to, uh, promote the health of their vaginal microbiome.
So it's, it's really, um, our bodies are amazing.
The vagina is a self-cleaning oven.
You don't have to do anything.
You just watch the vagina is a self-cleaning.
I'm not going to, I'm not going to repeat that too often in too many different contexts, but I'm going to remember it forever.
You will.
You will.
And so all you need to do is wash the hair bearing areas because those are the ones that create sweat and, and, and should be cleaned.
But other than that, let soapy water run down.
You don't need to do anything.

Your body will take care of it itself.
When I was five years old, I pulled my parents in the bathroom and I said,
they still talk about this.
I said, I want to know everything about sex.
I want to know everything.
And they were like, Oh my God, what are we dealing with?
And I'll never forget my dad just looked at me.
He's Argentine.
And he said, just remember kids are the one thing in life.
You can't give back.
That's all he said.
That was it.
That's it.
That was it.
Oh gosh.
Well, I would tell you my discussions with my sons are my son, my older son has
been much more graphic than that.
I tell him.
Amazing.
Yeah.
Amazing.
Well, I went out into the world and anyway, um, you figured it out.
Let's spend a few minutes or more talking about female orgasm.
One of the more cryptic topics on the internet, not because it isn't discussed,
but because I think that the nuance of it isn't discussed often enough or in
full depth.
So let's take the time we need, um, to parse this.
I think that the simplest way to parse it is going to be from the anatomical standpoint,
clitoral orgasm versus so-called G spot or penetration based orgasm.
But of course, penetration based orgasm is also a bit of a misnomer because, um,
there can be, uh, clitoral stimulation by pelvic pressure or by digit.
We're talking about fingers as digits because we're both, um, in the medical
slash science profession, but we're talking about fingers here or something else,
right, vibrator, toy, whatever.
I'm toe for, it depends on how flexible you are.
I don't know.
But the point being, um, that I think the simplest way to go about this is going
to be to talk about the distinction between clitoral orgasm and G spot orgasm.
However, those are achieved.
Um, and to also talk about this idea of graded versus absolute.
Okay.
So, um, this has actual parallels to neuroscience, where we talk about
communication between neurons being graded, meaning it's kind of, you know,

one level than a higher level than a lower level or all or none.
Right.
Um, how shall I say this?
Um, it is clear in my life experience and observation that there are multiple kinds of female orgasm, those that are graded and in some cases cumulative, they sort of build towards a larger and larger orgasm.
And then there are what some people have described as cliff type orgasms, where there's a refractory period.
I think that's a fair way to frame this.
And clearly there are different responses to the orgasm response.
Some people get sleepy.
Some people get energized.
Some people, it heightens their desire for more.
Some people, they need a period of time in which, um, they become hyper sensitive to touch.
Um, so, uh, lots of different things going on there, um, psychologically, physiologically.
Um, yeah, tell us all of it.
So in terms of orgasm, right?
I think it's important to distinguish that there is orgasm and then there's different areas that you stimulate to achieve orgasm.
So some people will stimulate the clitoris is probably the most reliable form of stimulation that will achieve orgasm.
And when you look at the data and again, you know, female sexual dysfunction data is not super robust, but what we find is that about 85% of women require clitoral stimulation or to climax.
So very few actually climax through just vaginal penetration alone.
And so this is, you know, a real problem we're seeing on the media that, you know, you, you have sex and you penetrate immediately women are having orgasms.
That's not the reality for a lot of women.
And in terms of stimulation, so like we've talked about throughout this podcast, the clitoris is the homolog of the penis or the penis is the homolog of the clitoris.
However, you want to say it good on you for getting it both directions.
I probably would have screwed that one up.
So, um, so clitoral stimulation is just like female stimulation for women.
That is very reliable.
And there's a huge orgasm gap for men.
It's pretty consistent that when they have a first time sexual encounter, 95% of men are having an orgasm.
When you look at first time sexual encounters for women with in heterosexual relationships, it's about 45 to 50% are having an orgasm.
And when you look at homosexual relationships of women, it's again, 90%.
So there's clearly some lacking in 90% of, um, female homosexual interactions that are first time interactions, 90% are having orgasm.

Correct.
Presumably because they understand the anatomy of other by way of understanding the anatomy of self.
So there's a huge physiology and psychology of that too, that too.
But, you know, there's a huge gap there.
And so I think to, to bring it home as a clitoral stimulation is the most reliable way.
And as you mentioned, when you're stimulating vaginally, you're often, the clitoris is like a wishbone and it goes around the vagina.
And so you're often stimulating those, the crura is what we call the legs, I guess, for lack of a better term of the clitoris.
And so you're stimulating that.
You're also stimulating the clitoral shaft, which goes deep into the pelvis.
The G spot is, um, is an area as a neurogenous zone where it's kind of in the anterior wall of the vagina, about two to three centimeters in.
That's the location of these periurethral glands called the skeins glands.
And they are analogous or homologous to the male prostate.
So just like some men have prostate play and enjoy pleasure from prostate stimulation, some women enjoy G spot stimulation.
Now that's not universal, right?
Not all men enjoy prostate play and not all women are going to be aroused by G spot stimulation.
And so I think there's a huge, uh, huge variety of ways you can stimulate, what stimulate anyone, it can be man or woman.
Some people will have orgasms through just nipple stimulation alone.
Some will just hear something or see something and be able to achieve an orgasm.
And it's, it's so varied from person to person.
And I think that the big take home from this for people listening is like, you have to talk to your partner.
And this is the hardest thing we never learned how to talk about sex.
Like, what do you like?
What do you not like?
And, and don't take it personally, right?
Like, I think a lot of times people feel like you have to orgasm to have pleasure, which may not be the case for everybody.
Um, and if it is, you know, how do you prioritize that for your relationship?
So I don't know if I got off track there, but that's kind of, um, I think the, the take homes for this and also the vaginal penetration, it's actually usually from cervical stimulation, not necessarily vaginal, because the large density of innervation of the vagina is in the first outer third of the vagina.
There, the deeper two thirds of the vagina has, has much less innervation.
And yet there is such a thing as cervical orgasm.

So, and the cervix being further up the vaginal canal, um, is cervical orgasm, specifically the, what, the stimulation in act, uh, the foci of an orgasm that starts in the back of the vagina.
Is that?
Yeah.
So it's from stimulation of the cervix through whatever means, right?
And that can be pleasurable and lead to orgasm.
And again, orgasm, you know, is, is defined differently, right?
But the one thing we know is that there are pelvic floor contractions, which are measurable.
So you can kind of tell that your partner is having an orgasm if you have a female partner, because you can actually feel those contractions, right?
Whether it's on your digit or your organ or a sex toy.
Okay.
Super nerdy question here.
Um, years ago when I worked on hormone based sexual differentiation, which by the way, we've done a episode of the podcast on previously, um, uh, you know, I learned that the levator any muscle, um, is the muscle that controls erection in males and presumably a clitoral, two-mescence and an, an engorgement in females.
Is there an equivalent muscle responsible for the orgasm response or is the contraction of the pelvic floor, um, part of a more general theme of, of muscular contraction and a bunch of different, um, nerve routes contracting.
The reason I asked this is that eventually in this conversation, we're going to migrate up toward the brain, but because this is a science and health podcast, when we talk about orgasm, of course, many people recognize that as their experience of it and their recognition of it and other people, um, and descriptions, et cetera.
But, um, are we talking about a response that originates at a foci, um, kind of like in a, in the brain, we were talking about a seizure, but you know, starting at a focus of foci and then spreading out, um, or are we talking about a bunch of different nerve routes and brain centers firing in synchrony?
And that's why some people experience it as, you know, behind their forehead and in their genitals or as a whole body response.
And here we're not talking about the flood of, of neurochemicals into the body.
I'm talking about during those moments of orgasm.
Um, what is happening?
I mean, it does have certain parallels to seizure, right?
It does.
So let me go back to your first part of the question, which was, um, about orgasm and, uh, sorry, erection and tumescence being related to levator a nice.
So actually what happens during, um, the reason you get an erection and presumably clitoral stimulation the same way is blood flows into the erectile

tissue and the tunica, which is the outer layers of the, of the, of the erectile tissue, which are two basically cylindrical shaped structures in the penis and in the clitoris, they will fill with blood.
And then that tunica will compress veins on the outside to prevent blood flow from leaving.
So it's not a muscular event.
It's an actual blood flow event.
Then how come when we wanted to study erection behavior in rodents, we would, um, give them injections of testosterone, females or males and observe changes in sexual behavior, accordingly, erection and clitoral tumescence.
Um, although that's hard, harder to measure in rodents, there's a way of indirectly measuring that.
And then we would measure the, the size and weight of the levator.
Annie muscles as a readout of how androgenized that whole system was.
You know, in other words, what is the role of the levitory Annie in the sexual response to the levator, Annie, or what I say, well, you would know.
I, I, so those muscles are part of the pelvic floor, right?
And so those contract when you, when you climax, right?
So whether it's orgasm for male or female, they're contracting and they're exercising, right?
They're, so that's how they would increase their, their strength or their density, um, if you're measuring that through the actual climax of what you can't see in rodents, right?
So like you're kind of using it as a surrogate in that way.
Um, so that's what happened.
Those muscles contract as a response and climax is a brain initiated event.
Orgasm is a brain initiated event.
So that's why to answer your second part, you obviously feel focal response, but you also can feel a variety of responses because it's all coming from the brain.
It's not a kind of the way you described it as like a ripple effect.
Um, it's more of like a, it's the way your body responds to that particular stimuli and it's actually like the ultimate form of mindfulness.
You can't think of anything else when you're orgasming, right?
So it's like, you have this moment of clarity and, and every, and, and everything you were very present in that moment.
And so people will feel different stimulations depending on, you know, how they're, how they kind of, how their sensor, you know, their nerves are, their sensations are and things like that.
Um, this is perhaps a good time to, um, mention dopamine.
We've talked about it a few times, um, earlier when talking about the arousal arc that starts with parasympathetic sort of calm and then, um, move typically starts as calm and then moves to, um, the orgasm response.
Uh, we know that the orgasm response is associated with release of dopamine.

Uh, and then prolactin, which sets up the relative or absolute refractory period.
The, uh, the interesting thing, and I got some questions about this is that, um, there's literature, as I understand, about the elevation in dopamine caused by say antidepressants like wellbutrin, brupyrin, which increases dopamine and norepinephrine, um, people who recreationally use drugs like cocaine or other stimulants, um, people who take, um, Adderall, Vivants or other drugs that increase, um, levels of dopamine because, uh, I did a whole episode about those drugs and they are different forms of amphetamine.
Unless we're talking about Ritalin, which is a little bit different.
Um, and I got a lot of questions about people who experience feeling a lot of, um, desire sort of arousal, but not being able to achieve the, um, physical arousal erection or vaginal lubrication.
So it's almost as if they're sitting further along that arousal arc.
Hence the importance, I think, of, um, people learning to have, um, calm, um, states of mind when going into sexual interactions.
Now I realized that in saying that it might be confusing because a lot of people think, well, that's anything but calm, right?
Sexual arousal is anything but calm, but maintaining enough calm that they can, um, ride that arc, um, for whatever duration is appropriate for that interaction in them, right?
Cause again, and we should probably get back to this, you know, um, you know, some people will have sex for long periods of time, some for shorter periods of time and here people don't really know what other people are doing, except by way of pornography and self-report and discussion.
So, um, is it the case that drugs that increase dopamine can inhibit the sexual response?
Do they tend to promote the sexual response?
Because I also mentioned earlier, there's this, um, growing trend of people taking by way of prescription, of course, from a physician, um, combined apomorphine, which is a dopaminergic drug, um, with to dalafil, which is a, um, PDE five inhibitor, so it's going to increase blood flow.
And I'm hearing about men and women, but mainly men doing this.
So ramping up their dopamine, uh, ramping up their blood flow to their genitals in order to have presumably more arousal and sex.
Does that make sense?
Um, um, as a, as a mechanism.
Yes.
So in terms of apomorphine, um, the, that has been studied and it's mostly been approved outside of the United States.
So we don't use it very often here in the United States because it hasn't been FDA approved.
Um, but you know, it's a very complex response.
So like I mentioned that, um, phlebancerin, which is essentially acting medication,

it actually has not only, um, inhibitory and not only stimulatory, but also inhibitory effects on dopamine.
So the way it sort of works to enhance interest or libido is sort of complex and kind of confusing the, when it was actually approved, it was, it was being studied for an antidepressant.
And what they found was that women were actually having, you know, better, um, interest in sex or more interest in sex.
And so that's kind of how it was discovered.
Similarly, Viagra was actually studied for high blood pressure.
And when they went to, um, it was horrible blood pressure medication, but then the people, the men who took it actually didn't return the samples for the study.
So they realized like, well, what's going on here?
And it was because they were having better erections.
Is it true that, um, at some urology meeting that the first, um, description of Viagra as a treatment for, um, erectile dysfunction involved the speaker actually coming out from behind the podium and revealing his erection.
Is that a true story?
Yes.
I don't think it was Viagra.
I think it was an intracavirinosal injection though.
I think he came out, um, it is a true story.
There's actually a published article.
I'll send it to you so you can share it if you'd like.
I'm not sure I want to see it, but I'll read the article.
There's a published article about people who were attending at the meeting.
And yes, he came out and at the time, like it was mostly men in urology, but there were like spouses, I guess, in the audience, which is not typical now, but, um, so there were women in the audience and he came out with a full on erection to show that it, you know, it worked.
Well, I suppose at the urology meeting, um, or OBGYN meeting where a woman comes out and reveals her, um, enhanced vaginal lubrication, then we will have, um, we will have a gender and sex balance at the meetings on urology.
Um, it'll be interesting to attend one of those someday.
Um, differences in arousal as a function of stage of the menstrual cycle.
Really interested in this.
I did a long episode on fertility and we're going to have a few other IVF experts, um, fertility experts on the podcast.
Um, but clearly, um, there are differences in hormones across the menstrual cycle.
We know that for sure.
Yeah.
Um, clearly there can be psychological variation according to those hormones were probably other things across the menstrual cycle.
And it's always an imperfect experiment because, you know, we aren't laboratory

rats and people are having different interactions across the menstrual cycle.
Is there any known, um, correlation between, uh, desire and stage of the menstrual cycle?
There are some obvious, um, assumptions that one might make, you know, prior to ovulation, et cetera, around the time of ovulation.
Um, but what about the other direction too?
Um, is there a category of women that are very interested in sex at certain stages of their menstrual cycle and then not at all interested in sex at other stages of the menstrual cycle?
You know, all that I, the data that I've heard, and maybe a gynecologist could speak more on this cause they studied those variations a little better.
But there is data to suggest that libido does increase prior to ovulation and during ovulation.
I think it's like a couple of days prior because that's the optimal time for fertility.
So yes, there is data to suggest that in terms of like completely, uh, lack of interest.
I don't believe there's data, but I'm not, I'm not sure.
Is there evidence that females who perhaps have not experienced so-called G spot orgasm or cervical orgasm can learn to do that?
And I always find it interesting that whenever there's a discussion about different forms of female orgasm, um, people are careful to point out that many women don't have penetration based orgasm.
And then they separate out clitoral stimulation as more, a more common route to orgasm, but of course there can be clitoral stimulation with penetration.
Absolutely.
Right.
And depending on the physical arrangement, um, there can be clitoral stimulation purely by way of penetration through pelvic contact, um, you know, fingers, et cetera.
So yeah.
So how do we, how should we think about this?
How should we talk about it?
So there was an interesting study that I just read recently where they gave women words for these things, right?
So, um, they, there's like the rocking stimulation.
So that can also stimulate.
So meaning that the you're penetrating, but there's like a rocking motion that can also penetrate the clitoris.
There's, um, stimulation of just the outer part of the vagina, which again, as I mentioned, the G spot is there.
It's more highly innovated.
So that can be more stimulating.
There's also ways to align yourself so that when you're penetrating, you're putting pressure on the clitoris.
And then there's, you know, stimulation with like actual stimulation of the

clitoris, like intentional stimulation, either by yourself or by the partner.
And so there are multiple different ways to do that, right?
Um, and so there, I think that it's important to really, um, kind of, it's okay to explore and not always be a home run.
And I think that's like when you get into a relationship where you're maybe second, third, fourth time, having intercourse with someone that you can try and explore these different things, or if the partner themselves knows what they'd like to actually tell the other partner, right?
There's a huge part of communication that I think is, plays a huge role in this because we know ourselves better than anyone else.
So you can tell your partner what you like.
And I think that that we have never been taught how to do that.
Yeah, um, such important conversations for so many reasons.
And as you point out, um, definitely not something they teach people in school, except, you know, they might say something about, you know, communication is important and that almost always circles back to the, the key four things we talked about earlier, which is, is, you know, consent and age appropriate context appropriate, these kinds of things.
And, um, and, uh, obviously substances like alcohol and other drugs can strongly confound those issues.
And so that's, we'll just leave that as a, as a kind of an obvious one.
Um, as long as we're talking about communication around sexual interactions, um, perhaps it would be useful to people to cultivate a language or a nomenclature there too, to facilitate that.
Um, some of the language that, uh, I've heard that is, um, quite useful as things like, um, you know, people have different arousal templates, right?
Some people, certain ideas are stimulating to them and other ideas are aversive to them.
And then there's this category in between where sometimes people sort of either don't know, cause they haven't tried it or haven't thought about it.
Or they're sort of curious, but kind of unsure where it might work in the right context, but maybe not all the time.
Yeah.
Um, so is there any kind of structure that's been put out there as a way to improve communication around sexual interactions?
Yeah.
I mean, there's no like script, but I think in general, you want to have the conversation outside of the bedroom.
So not like right before sex or right after sex, because that leads to like a, you know, a sense of insecurity for the other person, right?
Did I do something wrong?
Did something go wrong here?
So you want to kind of move those to a neutral location.

So like kitchen table in the car, whatever, somewhere where, you know,
sex is not going to happen, um, at least for that particular moment.
And, um, we have folks listening, um, some challenging conversations on this
podcast, challenging, uh, previously challenging because they, you know,
you're trying to get things clear and, uh, as clear as possible.
Um, this one's challenging because there's so many caveats to everything, right?
We don't, of course we'll have sex in cars, right?
Yeah.
Um, or they did when I was growing up.
Um, and sometimes they still do.
Um, okay.
Please continue.
Yes.
So that's one.
And then two, like when you're discussing it, I mean, this is kind of goes for any
difficult conversation is like you make I statements, right?
You say, I like it when this, I don't like it with this.
It's not something you did, right?
It's not, you didn't do this.
You didn't do that.
It makes kind of an animosity sort of situation.
And then, you know, I think also part of it is like being open about those things.
And it may, it's not going to happen in one conversation.
I think that's the hard part.
Like you think you're going to have a conversation.
It's going to go great and things are going to be better.
It's going to be like multiple conversations.
And some of them are not going to go well, right?
So like, um, that's another place where you can actually get the help of a sex
therapist.
And there is a website for that.
It's a s e c t a sec dot org where you can look for a sex therapist near you.
And you can even do those things virtually.
Um, and so that can be really helpful when you're having difficulty having a conversation.
Yeah, I think, um, again, such important conversations.
And then when people, um, differ in terms of their level of experience,
it gets, um, potentially problematic, but also it can be potentially, um, educational.
Um, and then of course there are the twists and turns that occur with when one is asking
about somebody else's arousal template.
Oftentimes you'll learn things about people's sexual past.
And that can be either neutral, stimulating or aversive, right?
That can open up all sorts of other issues related to the psychological
interplay.

So there's no way we can parse all of those.
Now, I just think it's worth highlighting, um, that it's understandable why those conversations are challenging.
Um, and it also is understanding why pornography isn't going to involve those conversations.
Right.
Only conversations there between your brain, your hands and your eyes and your ears.
Um, uh, not going to highlight any particular order there.
Um, I want to switch gears slightly, um, and talk about UTIs.
I got a lot of questions about urinary tract infections.
Let's make it related to both females and males, because yes, males get urinary tract infections, get them more females asked about urinary tract infections.
How common are they?
Should they always be treated with antibiotics?
Is cranberry really a good treatment?
If so, why are there other things that are better?
Is it related to the acidity or alkalinity?
Um, how does one prevent getting UTIs?
Can you get them from swimming?
Should you urinate after sex?
Tell us about UTIs and how not to get them and how to get rid of them.
Happy to.
So UTIs are very common in women, um, probably up to 50% of women get at least one UTI in their lifetime and up to a third of them get recurrent UTIs.
And what that means is they have two or more in six months or three or more in a year.
Now this is common.
And so we'll see a lot of it.
And it's not as, um, until you're having recurrent UTI.
So you just have one a year or you have one every few years.
It's not a huge issue in men.
However, UTIs are much less common and that's because the urethra is longer.
So there's less, um, entry from the outside world into the bladder, which causes infections.
And so, um, the, when men get a UTI, it's concerning.
Like why is a man getting a UTI?
You know, there's multiple reasons that it could happen, but it should be investigated like so that you can make sure there's no anatomic abnormality or functional abnormality with a bladder that's causing the UTIs.
In terms of prevention, uh, there are kind of major things that are highlighted in the guidelines that we all, we all talk about.
So one is hydration.
So making sure you're drinking about two to three liters of fluid, ideally water a day, um, cause dilution is the solution to the pollution, right?
So drinking more fluids is going to get that bacteria and you're going to

pee it out.
It's going to help keep not let it sit around in the bladder very often.
Another thing in women who have altered states of estrogen, whether it's post-menopausal, surgical, um, menopause, or maybe have, uh, reduced estrogen for postpartum or other reasons.
Oh, what about during the second half of the menstrual cycle?
When it's not necessarily for those specific people, but for those specific times, but because it's pretty short lived, um, I guess you could use it, but, um, is, is vaginal estrogen.
So vaginal estrogen, meaning estrogen that's applied in the vagina either through a cream, a suppository or a ring is, is highly effective in reducing the occurrence of recurrent UTIs.
And this is because when you have low estrogen, the pH in the vagina goes up and the pH in the vagina goes up because there's less conversion of glycogen to lactobacilli.
And then those lactobacilli are preventative for UTIs.
So essentially you want to reduce the pH back to its normal acidic pH and vaginal estrogen is very effective at doing that.
In fact, in our clinics, we'll actually check a vaginal pH, you know, to see if there is an indication that their pH is too high, that maybe they do need vaginal estrogen, particularly around like perimenopause.
Cause it's hard to tell just by looking if they are really, um, heading into a lower estrogen state sometimes.
And so that's very, very effective and very, very safe.
So when you look at estrogen, you know, they're the women's health initiative way back when sort of made a big stink about how estrogen is related to cancer.
However, um, vaginal estrogen has never ever been a reported breast cancer, uterine cancer, or any other blood clot, any other adverse event associated with vaginal estrogen, you can get some breast tenderness, some discharge, those things can occur.
Um, but the absorbed amount vaginally is so little that your estrogen level barely goes up.
It doesn't even reach pre-menopausal level.
So it just goes up very slightly in the bloodstream, not enough to create any sort of abnormality.
So vaginal estrogen is extremely safe and it's pretty affordable.
You could actually use coupons if your insurance doesn't cover it through, you know, um, good Rx or Mark Cuban's pharmacy and get it very, very affordably and it's very effective.
It does take about three months to work.
So, you know, you have to be consistent and you apply it about twice a week at night, sometimes three times a week.

Um, and it's, it's very effective.
The ring you put in once and it lasts for three months, but so generally speaking, that's the most effective option for low estrogen states.
Other kind of simple things are trying to make sure you're completely emptying your bladder.
So over a lifetime, people can develop some mild pelvic floor dysfunction, right?
Not enough to create pain or discomfort, but maybe they're not emptying completely, right?
Because maybe they used to hold their urine for long periods of time when they were a kid, or maybe they're always hovering over the toilet because they don't want to sit on it at work.
And over time, that can create a little bit of mild dysfunction, which can make it more difficult to completely empty the bladder.
And when you're in a sitting in the bladder for long periods of time, it's basically food for bacteria to grow.
And so bacteria grows and then you get recurrent UTI.
So making sure you've completely empty by sitting, relaxing on the toilet, sometimes leaning forward, and then maybe going a second time.
So standing up, sitting back down, going again, and even for men, sometimes trying to sit and see if you completely empty, because sometimes standing, you're not able to empty completely.
Whoa, a lot of men are going to, because there are these, you know, it was fun to research for this episode because there are entire discussions on Reddit about what percentage of males sit while urinating.
I mean, my understanding based on having visited many male bathrooms in my lifetime and just being in the world that I assumed that men stood up in order to urinate, but there are a decent percentage of men that sit down to urinate.
There are.
And in fact, it's variable like country.
Probably the reason it's become more interesting lately is like country.
So a certain country was recently surveyed.
I think it was Germany, but essentially this recent, like picked up by the media that Germans sit more often to pee.
And so, you know, then people like, Oh, is this better for me to sit to pee or stand to pee?
And there's this whole big discussion on the media.
But the reason being is when you're sitting, your pelvic floor is most relaxed.
And so if you're having any issues, emptying your bladder, you're going to pee better.
Also, if you have an enlarged prostate, which I'm sure we're going to talk about prostate enlargement, that can sometimes allow you to develop a little bit more intra-abdominal pressure because you're sitting and you can lean forward to overcome sort of a blockage.

And so there are some, some indications we're sitting is better, but if you're peeing fine and you're standing, that's fine too.
I don't think you have to.
I think it's just something that, you know, in other countries, they do more.
And here we don't.
And I don't think it's right or wrong.
It just depends on your individual circumstance.
Can spermicides or condoms or both increase the frequency of UTIs for females?
So spermicides, absolutely.
So spermicides, if your condom has spermicide on it or you're using spermicides, that is a known risk factor for UTIs.
Other things I want to touch on, you did ask about cranberry.
So cranberry is actually in the American Urological Association guidelines for prevention of recurrent UTIs in women.
Now, how does cranberry work?
Right?
Like, do I just drink juice?
It's actually a specific active ingredient in the cranberry, which is called proanthocyanidins or PACs.
And in, or they've actually looked at the amount of PACs you need and what formulation.
So you need 36 milligrams of PACs in a soluble form.
So a lot of the supplements on the market will say that they're 36 milligrams of PACs, but they're like the whole berry.
So they're using the, the skin of the berry and the stem of the berry.
And that's not going to help you.
So you need to make sure that the supplement you're using is a soluble form of the cranberry.
And it's actually very, very effective at reducing the risk of UTIs.
So do you mean capsules, like a gel cap?
Yeah, it's a capsule that you take once a day.
And there is some, although not as much data that if you're having them around sex, which some women do always have post-coital UTIs, that you can take two on the day of sex and two on the day after.
And that may be helpful, but there's not a lot of data there.
But certainly an option that you can try.
That's pretty low risk.
Um, so that's kind of the, the guidelines.
Now there's a ton of other things that you can do to help prevent that are kind of available and have some data behind them.
So D-manos is one of them where you take, um, you know, about two grams a day of D-manos and you drink it and that actually helps, uh, reduce UTI risk.
It's been studying a small randomized controlled trial to be effective.

And, um, and so those are kind of the bigger ones.
There's other things that people use like probiotics, but there's a lot of heterogeneity, as you know, in probiotics and what to take.
And are they really effective vaginally, uh, in the flora there?
So those are kind of the big things.
And there is a, actually a lot of microbiome study and UTIs going on actually at UCLA, um, where they're looking at the microbiome of people who are more at risk for UTIs or even overactive bladder or other conditions like that.
And they're trying to figure out like, is there something here that we can target or that we can figure out is, is causing problems because sometimes we just can't figure out why it's happening.
Um, in terms of wiping from front to back and swimming and peeing after sex, uh, there's no good data on any of those things, um, wiping from front to back.
I think it does create a little bit of like shame.
Like it's not a big deal if you've wiped back to front, as long as you're not like, you know, as long as you've like cleaned yourself, so to speak.
So I think, um, it's less of an issue.
But what we're talking about is you're referring to any contamination from, you know, um, any bacteria around the years, right?
And a lot of women who have recurrent UTIs like tend to come and feel very dirty, like there's something wrong with them.
They're like, Oh, I wash all the time.
I'm really clean.
I'm really this.
And you know, it's not something they're doing.
It's probably a microbiome effect or a hormonal effect or, you know, there's something going on that we need to investigate further.
It could also be an anatomical or functional problem where you're not emptying the bladder correctly.
So there's lots of different factors.
It could mean it's like very infrequent.
I would say like, I've never seen a patient who's dirty.
And that's the reason they're getting UTIs.
Um,
perhaps even the opposite is true.
They're cleaning too much based on what you told us earlier.
Yeah.
And they're eliminating the gut micro, excuse me, just rolls off the tongue.
Again, no pun intended.
Um, perhaps it's there, they are abolishing the local microbiome on the skin.
Too much cleaning eliminates the microbiome on the skin.
Not that we don't want to wash, but, um, when
Sonnenberg was a guest on this podcast, he said, actually kids can develop

a very healthy microbiome and general microbiome oftentimes by sorry,
parents not washing their hands before eating.
If they've been playing with soil outside or dirt,
a little bit of that is actually healthy.
Pets actually offer microbiome support.
This is so weird.
I know it sounds dirty, but we have to imagine how we evolved as a species was
not with antibacterial soaps and, um, alcohol swabs everywhere.
And, um, obviously we don't want infections, but overcleaning
can disrupt the microbiome, which presumably can lead to UTI.
So perhaps someone who's cleaning excessively is more at risk than
somebody who's cleaning a little less.
Absolutely.
And actually the cleaning can irritate the dermis, right?
So you can actually get contact dermatitis type symptoms from overcleaning.
And so that's one of the, you know, things for like, I, I definitely have a UTI.
I definitely have one.
Well, no, you don't, but there's a host of other things that it could be.
One of them could be that.
Another very common one that we already touched on is pelvic floor dysfunction.
So very often pelvic floor dysfunction, just like you had pain with urination.
Women can also develop pain with urination that doesn't go away.
And it can start where they had a UTI that triggered the pelvic floor.
And then the pelvic floor just didn't relax.
But the pain just triggered the pelvic floor to tense up.
It didn't relax because again, we're not taught how to relax our pelvic floor.
And, um, and then they've developed pelvic floor dysfunction.
Like, why is UTI not going away?
Or why does it keep coming back?
And so that's another common thing that we see, um, in people who have quote
unquote, recurrent UTIs, but don't really have them.
To be clear, I experienced the pain in urination as a consequence of trying
those damn Kegels that everyone was talking about.
Stopping that, um, was informative in two directions.
One, it relieved the pain very quickly.
So that was good.
The other was, um, I realized that it is possible to have a pelvic floor that's
neither, um, hyper contracted nor over relaxed.
And in some cases just not doing anything for it is the, is the best circumstance.
Right.
So, um, and the only reason I mentioned that is because, um, obviously this
discussion is not about my pelvic floor.
This discussion is about the fact that some people perhaps need to clean less.

Some people may be more, but probably not based on what you said.
Some people might need to strengthen their pelvic floor.
Some people might need to, um, relax their pelvic floor.
And some people's pelvic floor is probably a okay, you know, I think any discussion about, um, anything medical or, you know, especially hormone stuff, this happens a lot in the discussions around, um, that I get into, it seems with, with males, they're like every male now seems to wonder if their testosterone is too low, except the ones that are blasting testosterone because they know it's excessively high.
Um, and as you pointed out earlier, at least in terms of sexual function, that's unlikely to be the case.
Maybe less desire, but, um, but in terms of, uh, genital based arousal function, probably, yeah.
And I mean, you've talked about testosterone a lot on the podcast.
So I'm sure your audience knows very well, the multitude of benefits for testosterone.
So I think there is value in assessing hormones, panels and assessing your level of free testosterone, testosterone and, you know, assessing, if you're having symptoms that are not always sexual, right?
It can be depression.
It can be weight gain that you're not gaining muscle mass.
Um, you can have cognitive changes.
So those things can still be a sign of low testosterone and very valuable and important to assess.
That reminds me of another thing.
And then we'll get back to, uh, UTIs and I want to talk about kidney stones, but, um, I've heard of women using a small amount of testosterone cream directly on the clitoris as a way to amplify the, maybe it's the, uh, desire and arousal effect, or perhaps just one or the other.
So I've, uh, the way that we discuss testosterone use and there are like consensus statements and there's actually an abundance of data on testosterone use, particularly in post-menopausal women for low libido or low sexual desire, and it's all been very positive.
And since there's been increased, uh, sexual desire based on validated questionnaires, increased number of sexually satisfying events with testosterone use.
Now the range of testosterone in women is about a 10th of the, the amount of testosterone a man needs, right?
So testosterone cream is systemically absorbed wherever you apply it.
And so the way we generally recommend women to try this, if they are having low libido and we've ruled out other issues that may be psychological by, you know, relationship, other issues that can affect libido medications, there's a lot of things, obviously that go into that.

But if we said, and we've checked their testosterone, it appears to be low
for physiologic levels for women, which again is one 10th of the male level,
then we can actually prescribe off-label testosterone.
And the guidelines or the consensus statements are not like true guidelines,
but they recommend using transdermal testosterone.
So getting, you know, androgel tubes from the pharmacy and putting a 10th of
one tube on the back of the calf or the upper outer buttock, a hairless
area, um, for absorption that can improve desire overall.
And then the other place we use testosterone is in women who have, uh,
what we call vestibulodinia.
So the vestibule is the area outside the vagina, which is very
hormonally active.
There's lots of androgen receptors there.
And it can actually, when you have hormonal issues, meaning lower testosterone
and estrogen in that area, it can cause pain.
And so actually applying a combined or compounded estrogen, testosterone
cream to that area over time can reduce that pain and discomfort.
So as you know, testosterone receptors or androgen receptors all over the body,
very much in the genitals, very much in the brain.
And they're very useful to a very useful place to treat women for those issues.
Thank you.
Kidney stones.
I hope to never have one, but people get them.
Um, how do you avoid getting them?
And how do you get rid of them?
So kidney stones, um, very often are, they, um, they can be for a
variety of different metabolic disorders, right?
So it can be one dehydration is a very common cause of it.
So, uh, dehydration combined with maybe a slight metabolic abnormality where
you're creating more calcium or oxalate in your urine can result in, um, in kidney stones.
And so how can you prevent them?
I mean, I, you know, each person is individual.
If you get a kidney stone, typically we do what's called a 24 hour urine analysis
plus some blood work to assess what is the metabolic abnormality.
So we can target that either with diet or with medication.
And so the kind of general recommendations for people who have kidney stones,
one is increase your fluid intake to two to three liters.
Again, the same number I told you before, you want to decrease your oxalate intake.
Now, if you Google oxalate, you're going to find a million things that you eat
that have oxalate in them, but the big ones are spinach and rhubarb.
We're seeing a lot of nuts too.
That are, you know, people eating a lot more nuts to get more protein.
So, you know, cutting back, it's impossible to get rid of all of that in your diet.

But if you're having like a spinach salad every day, well, switch it to a different green, right?
Don't eat spinach every day.
Also, you want to increase your citrate intake.
That's an inhibitor of kidney stone formation.
So increasing fruits and things like that to increase citrate vegetables as well.
Actually, one easily accessible thing is crystal light.
It has a high citrate composition.
So you can drink crystal light with that two to three liters and that can be helpful.
You want to decrease your protein intake.
So high levels of purines or purogenic meats like red meats and things can also put you at higher risk.
So these are kind of the general sort of preventative measures we talk about for kidney stones.
If you have a kidney stone, so a lot of times people can have kidney stones and their kidneys, they're not creating any problems.
They're tiny.
We can observe them over time.
If they start coming, if they start getting very large or they are starting to move into the ureters or the tubes that drain the kidney, oftentimes they're they're accompanied with pain, quite a bit of pain.
And it can be very uncomfortable.
In those cases, we can, if they're not having any infection symptoms, I mean, there's no signs of a urinary tract infection.
There's no fevers, no chills.
We can treat it conservatively with pain medication.
And also there are medications like flow max, which we use for a large prostate as well that actually relaxes the ureteral smooth muscle to allow the stone to pass a little bit better.
If you're having an infection, you got to get treated right away.
It can you can get very sick very quickly.
In fact, I've seen young, healthy patients like they're healthier than me.
Walk in the ER with a kidney stone.
And within 24 hours, they're in the ICU because they're really sick because of a kidney stone.
So fever, urinating, tea colored urine, meaning blood in the urine.
All of those are important warning signs that you ideally don't get to.
Yeah, blood in the urine.
I mean, it doesn't always mean infection.
It could just be irritation from the stone, but certainly fevers, chills, or you have a sign of an infection and the stone looks like it's blocking.
So if you get imaging and you see what's called hydronephrosis or pressure behind the kidney and you're, you know, you have these signs of infection,

we don't want to wait because you can get sick pretty quickly.
And then, you know, once to treat the kidney stones, there's three major options.
One is shockwaves.
Another is ureteroscopy, where we go in with a camera and we have a small laser.
We break it up into small pieces and take it out.
Where is the camera inserted through the urethra?
Correct.
You're asleep under anesthesia, so you don't have to.
You saw that.
Yeah, I saw.
You saw the wints.
And then percutaneous nephrolosotomy, which is done if you have a large kidney stone
or a very hard kidney stone that's up in the kidney, you can go in through the back
with a small, like a small incision and with a specialized camera
that goes in and uses ultrasonic lithotripsy to break up that stone
and kind of suck it out that way.
These are extremely helpful bits of information or not even bits.
These are this is an enormous amount of useful information.
I'd like to pivot again for sake of breadth.
We can't go into extreme depth on everything, but
appreciate your willingness to follow this carousel with me.
Oral contraception.
Previously on this podcast, I hosted a female physician
guest who offered both sides of female oral contraception,
discussed some of the benefits, discussed some of the risks.
I made the decision to post clips about both on the internet and wow, wow, wow.
Was I surprised but also, frankly, a bit shocked?
And then finally, intrigued by how polarized the discussion is
around female oral contraception and female contraception in general.
So nuva ring, nor plant, the pill, broad category of things there,
but for sake of discussion, the pill, et cetera.
I mean, it seemed that approximately 50% of responses, which seemed to come
mainly from women, were of the this stuff is terrible.
It ruined my life.
It ruins lives.
It destroys you.
It has immense risk.
And then the other half seemed to say, no, there's reduced risk
of certain forms of cervical cancer.
This has allowed me the sexual choices and lifestyle that I prefer
without risk of pregnancy.
I mean, it was astonishing.
To the point where I thought, wow, if only I could post both clips simultaneously.

So obviously, I don't know what the answer is, but I do know that this is
among the more polarizing topics available for discussion.
So what is the story, meaning what are the data about oral contraception?
Why so much controversy and what's the real deal here?
Yes, so it is a very polarizing topic and there is abundance data, abundant data.
In fact, we even did a study and again, this is not like high quality evidence,
but we looked at Reddit threads and we looked at sexual dysfunction,
specifically low libido, orgasmic difficulties, and we read hundreds of
threads and we did like a qualitative analysis in females to see what are
people talking about and problems with oral contraceptives and antidepressants
leading to low libido and being very, as you described, very like this is
ruined my life was very common.
And so the theory is that, you know, taking oral contraceptives increases
the amount of sex hormone binding glomulin, which binds testosterone and estrogen.
And that actually makes testosterone less available, which is as we've talked
about a very important hormone for desire.
And so in some subset of people, they're seeing very significant consequences
of taking oral contraceptives.
Now, I think that there is, you know, we don't know which women are going
to have this problem and we don't know how it's probably a very small subset
of people, but we do know that this does happen and that when you measure
SHBG levels, they're up and that even after they stopped the oral contraceptives,
you'll see elevated SHBG levels from baseline.
For how long?
You know, for like at least four months afterwards, you'll still see
elevated SHBG levels.
So we don't know.
But not infinite.
I mean, we don't know.
Yeah.
The endocrine system is weird because it, we assume everything is a short term
effect, but there's some plasticity in the system, especially because it's
a neuroendocrine system.
So yeah, okay.
So I think, yeah, there's some neuroplasticity there that occurs as well.
And so we do see this and I think that the other side of it is, yeah,
absolutely oral contraceptives are amazing right there.
They're helpful for sexual freedom, for, for preventing pregnancy, for, you know,
for a lot of things and particularly other conditions too, like PCOS and,
and other problems, oral contraceptives are amazing.
And they've changed, you know, gynecology and management of these women for,
you know, in a very positive way.
And so I think, you know, yes, I do think that there is oral contraceptive

related sexual dysfunction.
Usually low dose estrogen, sort of contraceptives are the culprit.
But, you know, I think that it's, it's again, the data, female sexual dysfunction literature is just not as robust as male sexual dysfunction literature.
I saw a lot of comments about how oral contraception had led to depressive like symptoms or just kind of a hedonia and apathy, not just low lowered libido.
I can imagine how that would be the case through the elevated sex hormone binding globulin, which is, you know, preventing testosterone estrogen from being free, literally, and exerting their effects on not just the body, but the brain.
But is there any evidence that oral contraception can disrupt no transmitters?
I'm not aware of any.
I don't think so. Not to my knowledge.
Okay. Well, it sounds to me like oral contraception for women, because that's where we normally hear about it.
It sounds like there's a varied response and it's highly individual.
I certainly had partners that love the pill or at least didn't seem to mind it.
I've had some that hated it and like, it's like, no way tried that, never will.
Or, you know, just went with other forms of contraception or for whatever reason, we're not using contraception.
So it seems to me that there's a lot of variation out there.
How does one explore that without risk of permanent damage?
It sounds like truly permanent damage is unlikely.
You know, what are the other options?
You know, is the ring copper IUD?
So any sort of long acting hormonal contraceptive, we've seen, that's what we counsel patients on is if they're having issues with oral contraceptives, even if they come in with pelvic pain and they're on oral contraceptives, I'll tell them, you know what, just stop because maybe the energy, the effect of on the energy and receptors or estrogen receptors is affecting, you know, the lubrication or other things.
We're not sure, but, you know, why don't you stop it and go get a long acting contraceptive method?
Like an IUD.
Like an IUD.
And our IUD is our IUD safe.
And here we should probably say, okay, copper IUD is one form.
You want to mention a few of the other forms?
So I don't prescribe IUDs, but generally speaking, they're very safe.
Of course, there's risk with any sort of, you know, it's a procedure.
You're inserting an IUD.
So there's obviously some small risks associated with it, but it is safe and effective form of contraception.

If people are wondering why the copper IUD is an effective form of a contraception,
copper is like the third rail for sperm, as I understand it.
So much so that I was able to find some evidence for this in the medical textbooks
that in the old days, as they say, prostitutes who wanted to avoid pregnancy
would put copper pennies in their vagina.
Really?
Now, I don't recommend that to anyone.
Don't.
And please.
And I don't think it's a foolproof form of contraception, but there is evidence
that that did happen.
So, which is amazing.
That means that people somehow figured out the copper-sperm relationship,
which isn't a good one for the sperm, and deduced from that a behavior.
Yeah, that's.
I mean, that's cringing.
I am not suggesting people do that.
I think it's just an interesting medical factoid.
I can tell you want to move on from this topic.
So we will.
Before discussing prostate and anal sex, not stated next to one another for any
particular reason, I want to talk about SSRIs.
A lot of people over the last 20, 30 years have been prescribed selective serotonin reuptake
inhibitors and other antidepressants that have disrupted their sexual function
or their sexual desire, it seems in particular.
Do you see a lot of this in your clinic?
Do you hear about it?
What can people do about it?
You know, oftentimes these sexual arousal or dysfunction issues associated with SSRIs
and other medications make those medications prohibitive for people.
So, you know, serotonin is kind of the anti-to-orgasm.
And so, in fact, we will use SSRIs off-label for people who are having premature ejaculation.
So it delays ejaculation.
And then there's also other sexual dysfunctions we see with it.
And it does happen.
Absolutely.
It's dose-dependent.
So in some cases, when someone comes in with SSRI-related dysfunction, if they're doing well,
you can either try to reduce the dose or switch them to another antidepressant,
for example, Wellbutrin, that does not have such severe effects on sexual function.
And so you can also use like Cialis and Viagra, like you've, well, we've talked about
for erectile dysfunction as an addition, if we can't change their medication management.
Because, you know, and this gets a little bit complicated because we know erectile dysfunction

and depression are very interrelated.
Now, what's causing what and what, you know, where do we, like, maybe somebody went to see their doctor for depression was also having issues with erections.
And now what do you, if you fix the erections, do you help with the depression?
Like what, you know what I mean?
So I think.
Nails everywhere are shouting, yes.
So I think, you know, I think that there's a lot of discussion has to be had there.
It's a lot easier to talk to your primary care doctor about depression than it is about your erections.
And so I think it's important to like really dig into that a little bit.
But yes, there, it is definitely a known thing.
We use it to our advantage when needed.
And, and it can be helpful to, to switch medications or reduce the dose.
And you mentioned earlier that trisodone can cause sustained erection.
And is trisodone in the category of, of touching the serotonin transmission system?
You know, I don't remember the mechanism, but interestingly, trisodone is also used for off label, like as a third or fourth line for premature ejaculation as well.
So, so I don't remember the mechanism offhand.
Let's talk about prostate and prostate health.
Earlier I queued up that there's a growing trend toward, I would say more progressive male physicians or physicians who treat males, excuse me.
Thanks for that.
Yeah.
Prescribing low dose 2.5 to 5 milligram C. Alice, which is to Dallafill, which may assist with erections, but the rationale for this low dose, daily low dose is not centered around erections per se.
It's really about prostate health, improving blood flow to the prostate, reducing prostitis, maybe even reducing the probability of prostate cancer.
What other sorts of things are you encouraging men to think about when thinking about their prostate?
Yeah.
So before I forget, I want to mention that low dose to Dallafill is actually a treatment for erectile dysfunction.
In fact, it works quite well, particularly in men who are having a lot of psychogenic issues.
One, because you don't have to remember to take a pill before sex.
It's always on board.
And you're taking five milligrams every day and it has a 36 hour half life.
So over, you're kind of increasing those so it can actually work quite well and is a great option for erectile dysfunction.
So I do want to make that caveat.
In terms of prostate health, it has been shown to be effective for BPH or enlarged prostate.
And this is a very common condition.

In fact, if you look at autopsy studies, 80% of men at 80 have an enlarged prostate.
Like it's very, very common.
Now, does everyone get symptoms?
And what's the long-term concerns of it?
And, you know, what can you do about it?
So typically as the prostate enlarges, it's right around the urethra.
It's a walnut shaped gland sits underneath the bladder around the urethra,
and it can narrow the urethra or the P tube.
And so over time, you can imagine, like if you're, I always give this example,
if you're sucking from a straw, right?
You're drinking from a straw.
If you have a wide diameter straw, it's really easy to drink.
If your straw gets really narrow, like say you take a coffee straw and you drink out of that,
it's very difficult to drink.
Very similarly, it can become very difficult to urinate if you have an enlarged prostate.
Now, what causes an enlarged prostate?
There's a whole host of factors.
A lot of them are genetics.
So if your father or grandfather had a large prostate,
you're probably more likely to have an enlarged prostate.
Do we know exactly how to prevent that?
Not exactly, but we know how to mediate the symptoms a little bit.
So the other symptoms you'll see before you have difficulty urinating
is sometimes you'll see overactivity.
So you'll see your bladders responding to having to push hard against that narrow urethra
to push urine out.
So it's having more urgency, like the sudden desire to go to the bathroom that you can't delay.
You're maybe going more frequently and very often you're going more often at night.
And so those are kind of the first signs people will see.
And then over time, it may become more and more difficult to empty the bladder.
You might see some hesitancy, like you're waiting for your stream to start
or it stops and starts.
And so those, you know, or you're just like, I can't empty.
Like it's not just drips or a very weak stream.
And so those are kind of the things that can happen over a lifetime.
Now, what are some things that you can do to help?
You know, Cialis helps relax those, the fiber, the smooth muscle of the prostate,
so that it allows urine to pass more easily.
There's also other medications that you can treat very often.
Flowmax or other alpha blockers are helpful in that area.
In terms of like things that you can do in general for bladder health, prostate health,
there are certain things that are irritants to that area.
And so what I tell people, not everyone's affected the same way.

So I don't want people to be like, oh, I got to stop all these delicious things I eat and drink.
But certainly it can be useful to just pay attention.
So like if you say you drink coffee every day and you find yourself right in the bathroom a lot,
if you limit your caffeine intake, you might see that you're not going to the bathroom quite as often because caffeine is a bladder irritant.
So that can be coffee, tea, chocolate, you know, things of that nature that have caffeine in them.
Energy drinks, sometimes people forget they have caffeine in them.
And so limiting that may improve your symptoms.
Alcohol also is a bladder irritant.
And these have actually been studied in animal models.
And you'll see that the bladder contracts more often when they're given these sorts of substances.
And it's dose dependent.
And some people can actually habituate or get used to a certain dose of caffeine.
So if you're drinking coffee every day, you may have less symptoms than someone who drinks it every once in a while.
Other things can be sometimes carbonated beverages, spicy foods or acidic foods,
those sorts of things can also irritate the bladder lining.
So sometimes limiting those things may be helpful in those situations.
Thank you so much.
That's very informative.
Years ago, there was a discussion about bicycle seats causing damage to the prostate,
maybe even sexual dysfunction.
Is that still a thing?
I thought they put grooves into the seats.
But I've also, in reading on the internet, I didn't do a deep dive on Reddit,
but it seems that women are reporting some bladder incontinence from excessive bicycle seat use,
maybe even an exercise bike doesn't have to be a road bike.
Yeah, so this is a great point.
So cycling, if you think about it, you're sitting on your perineum,
which is that space for men between the scrotum and the anus,
for women between the vagina and the anus.
And right there runs your prudendal artery and your prudendal nerve,
which are again responsible for blood flow and nerve function to the area.
So the most common things we see in people who are really high volume cyclers,
now the studies have looked at maybe they did a 350 kilometer race,
or they're biking three times a week for 60 minutes, but there's no consistency.
But they're seeing pretty high rates of genital numbness, so up to 50%.
And also in men erectile dysfunction.
In women, you'll also see numbness, but because sensation is a big part of arousal,
you'll also see decreased lubrication, maybe decreased arousal as well in women.
And so how can you prevent that?
The reason is because when you're sitting, particularly if you're leaning forward,
like competitive bikers do, or aero riding,

you're putting pressure on the beak of the bicycle seat.
And that's where most of the weight is not distributed evenly.
So the goal is to take a bike seat that allows you to sit comfortably on your ischial tuberosities.
And posture is a huge part of your pelvic floor.
I know we didn't talk about that earlier, but sitting with good posture
and not kind of slouching or leaning forward can actually really do wonders for your pelvic floor.
So focusing on posture is helpful, but also when biking posture is helpful.
So they've actually looked at this data and they found that people who aero ride, meaning lean forward,
are people who use narrow bike seats are more likely to have issues.
And so you want to get kind of a nose-less seat and a wider seat.
The cutouts, actually when they've looked at kind of mechanics of the cutouts,
they'll see higher pressure around the opening.
So it's actually not good to have a bike with a cutout, a bike seat with a cutout,
because they've seen, at least with some of the cutouts,
that the pressure actually becomes higher on the area that's right around it.
Very important point. I don't cycle. I don't like the exercise bike.
I'll sometimes ride the assault bike for, which has the big seat, maybe for a few minutes.
But I just want to add one thing, because I think that I don't want to
make people not cycle. I think it's really valuable. Cycling is a great aerobic exercise,
has lots of benefit for cardiovascular health. But there was actually another study that looked
at people who were parts of sports clubs. So they were like swimmers, runners, and cyclists.
And they looked at rates of dysfunction and they found that actually the rate of erectile dysfunction
was not different between runners, swimmers, and cyclers. So maybe, you know, because those
other studies were just looking at cyclers, that maybe it's just the general rate of erectile
dysfunction in that population at that point in time. So the numbness is definitely an issue.
The erectile dysfunction, maybe, maybe not. So I just have a couple of more questions for you.
And by the way, you've been incredibly generous with your time and information here.
Oh, thank you. Thank you. So I really appreciate it, as I'm sure our listeners do as well.
Anal sex. You recently did a post describing the multiple reasons why
women do or do not have anal sex. Yes. Very interesting post, very interesting study
that you covered and you explained it very clearly. I'm guessing there are relatively few,
but perhaps some other studies as well about this. Let's talk about anal sex and maybe if you could
offer some of the key bullet points that you've learned from the literature and from your clinical
practice. How frequent is it with protection, without protection? How safe is it? What are the
different reasons people do it? That might seem like a kind of a silly question, but it turns
out when it comes to this topic, they're interesting data. Educate us. So anal sex,
let's talk about it. Well, when you talk about anal sex, the reason people become more and more
common. Let's say it's more and more heterosexual couples are doing it. We know that male
homosexual
couples are having anal sex. And I think the one thing is that it's safe in terms of pregnancy,
right? You're not going to get pregnant from anal sex, which is one of the reasons people
do engage in anal sex. Do you think that's the reason people are doing it more frequently?

No, I think that's one of the reasons that people, one of the reasons, but in general, the issue with anal sex is that people forget to use protection, like a condom, for example, because sexually transmitted infections are actually more likely with anal sex than they are with vaginal penetrative intercourse, because the anal tissue is very thin and friable. So when you penetrate the anus, particularly if you have any trauma, you can have, you know, you can have blood loss and that blood loss can then easily more easily transmit sexually to the infection. So it's really important to use a condom and use adequate lubrication. The anus does not make any of its endogenous lubrication. You have to use lubricant. The other interesting thing about anal sex is that the anus pH is different from the vaginal pH. So you want to use specific lubricants that are iso osmolar to anal pH. So you can actually look up anal lubricants. And we could talk about lubricants, but generally there's water-based, silicone-based, oil-based lubricants. Water-based are the most easily accessible. Silicone-based are a little more slippery and last a little longer. And oil-based also last longer, but are not good for use with condoms. So definitely using lubricants and always kind of making sure to be in the context, of course, of being consensual, but also like never force, always take your time. And those things are really important to avoid trauma because trauma can happen. And usually it's not severe trauma, right? It's not going to create long-lasting problems, but it is, you know, inconvenient, uncomfortable. And probably we're not seeing as much of it because they're not coming to the emergency room if they're having issues unless it's really serious. So I think it's really important, one, to prevent from sexually transmitted infections. Two, to be thoughtful and cautious. And sometimes it requires some preparation. If you're going to penetrate an anus, it's going to, you know, you're not going to start with a large girth item. You're going to start with something smaller and kind of work your way up. And then I think ultimately why people have anal sex. So as I mentioned earlier, the prostate is, you know, highly innervated and can be a source of pleasure. So some people enjoy that, particularly men may enjoy anal penetration. Women as well may enjoy anal penetration because of the innervation around there, the pelvic floor. And, you know, so that's certainly reasonable to do so, as far as why people engage in anal sex. So sometimes it's because, as I mentioned, they're trying to avoid vaginal penetration, either to avoid pregnancy or maybe menstruation or other reasons. Sometimes it's because people want to do something special with their partner, like they feel like this is my special thing with this partner that I do with them. And so it may be something kind of like a gift or something like that. Sometimes it's almost like they feel like they have to. And this particular study that I looked at, there's actually not a lot of studies on why people engage in anal sex. And this particular study that I had talked about on my channel or on my Instagram was talking about why they specifically recruited drug users. And so a lot of people had used drugs prior to using, to engaging in anal sex. And I think that that's not ideal. You always want to be kind of in the right state of mind for consent and safety purposes. And so those were kind of the common reasons. What about infection not related to sexually transmitted infection? My presumption is there is a higher risk with anal sex than there is with other vaginal intercourse, oral sex, etc. What is their evidence for that? Not necessarily. It's more about sexually transmitted infections more than anything else. It's rare. You can sometimes, I mean, the rare things that people have kind of commented on like anal incontinence temporarily or things

like that, very rare. Mostly it's just sexually transmitted infections because you can have more, it's more easy to create bleeding through anal sex if you're not careful.
And are people doing enemas before anal sex to prevent bacterial infection? Or is that just like it's a kind of? Some people are. Some people are not. I think it's, you know, people are making sure they're evacuated fully. There's some, you know, media articles about like what you should eat before to kind of keep your gut, you know, healthy and avoid kind of loose stools and things like that. But generally speaking, you know, there's, there's lots of things you can look up to make it safe and healthy. Again, I'm sure some people are listening to this and they're maybe they've turned it off already. But and I think we can expect a varied response to this discussion, but it's happening out there. Apparently with an increasing frequency.
Yes. And I don't know if that's because of the increasing availability of pornography, where it's visualized more or if they don't really know why, but we do know that there's more going on in heterosexual couples than prior. As a final category of question, I was really interested in some of the posts you've done about herbs and supplements in the context of sexual desire and sexual function. On this podcast, I always say, always, always, we emphasize behavioral tools first, do's and don'ts, because those are the foundation of mental health, physical health and performance, you know, in all contexts. There is, of course, a role for prescription drugs sometimes. Oftentimes people can't do the things and avoid that certain things they want to because of depressive states, anxious states, etc. And prescription drugs can serve a role, but I do believe the goal is always behaviors first. Then, of course, things like adequate sleep, nutrition, healthy social interaction, all of that stuff, exercise. But we do often talk about supplements because they represent, I think, an important category of, you know, over-the-counter compounds that can play a role. And I've talked before about Tonga Ali, this Indonesian herb. I think it can be Malaysian as well, but this Indonesian herb is typically the one that I am aware works best for mild libido enhancement. Sometimes, especially in the case of people taking SSRIs, it can enhance libido to override some of the challenges with SSRI-induced reduction in libido. And generally, even if people aren't on their SSRIs, I hear from people who take Tonga Ali and get libido increases. Also, things like maca root, which we don't really know how these things work exactly. Probably some freeing up of testosterone with Tonga Ali, maybe some cortisol suppression as well, maybe some estrogen receptor modulation with maca root, maybe some dopaminergic tone changes. Shilijji, this Ayurvedic herb, which there is at least one study that I think has done well that shows increases in FSH, follicle stimulating hormone, with Shilijji use. What are your thoughts on things like Tonga Ali, maca root, Shilijji? How do you talk to your patients about this stuff?
Yeah, so I think that I see at least my patient population is still in the behavioral management place. The biggest cause of sexual dysfunction, whether it's low testosterone, erectile dysfunction, sexual dysfunction is often comorbidities. So managing high blood pressure, managing diabetes with diet, which you talk about a lot, but the best study diet is the Mediterranean diet, at least in the sexual dysfunction literature. Exercise, like doing both cardiovascular, aerobic exercise, but also doing resistance training, particularly like large muscle groups. And then really working on reducing blood pressure and preventing diabetes. And those things I think are really key. And I know you talk about them along this podcast, but I will tell you that when people are getting ready for, for example,

we do a surgery for erectile dysfunction called penile prosthesis. So this is like end of the line, nothing's working. They can't get an erection at all. And it can be a, and they may have diabetes as a cause of it. And when we say, you know, you have to get your hemoglobin A1C below a certain level to do surgery. I cannot tell you how quickly these men change their behaviors for sake of erection, for sake of erections. So I think that really, if I can say one thing before you do supplements, I don't have a problem with, I think that it's reasonable to try them. I would try one at a time to see what's working. And so you're not taking a bunch of things and not knowing what exactly is working and realizing that they're not going to work immediately. If you take something that works immediately, it's probably got a PDE five inhibitor mixed in there. And so it's going to kind of build over time and you're going to see changes over time. But I would say that the number one thing that I recommend for people is improving their diet, exercising, getting good sleep, as you know, it boosts testosterone. And even, you know, you mention this all the time, but getting early morning light, but it's beneficial for testosterone as well because you're really helping release testosterone with a circadian biology. So I think that those things, I can't stress enough, like how valuable they are. And if you're smoking, quit smoking. It will kill your erections. And vaping. And then lastly, if you are developing true organic impotence, meaning that there's a biologic problem that's causing your sexual dysfunction, then it's really important to get your cardiovascular health assessed because about 15% of men who develop erectile dysfunction seven years later will have a cardiovascular event. It is the canary in the coal mine, meaning that, you know, it's the sign that you may be developing cardiovascular problems or like endothelial dysfunction that's first presenting in the penis or in their sexual organs. And, you know, this probably is the same for women. We just don't have the data yet. I know a good number of women that take Tonga Ali. In part, I think on the recommendation, although I want to be clear, I never recommended it. It was an offer of something that people could try if they're doing everything else correctly and could assess with consulting your physician, of course. And they too, some of them have reported improvements in libido and desire as well. So, yeah. And the Shilaji is less known about the distinguishing quality versus low quality sources of Shilaji is harder. Dosing is harder. It comes as this tar typically. Maybe more science on Shilaji will come out in the next few years. We could get behind it a bit more. Right now, I'm sort of on the, yeah, maybe if you are in an adventure, you might try it, but I'm not, it's not one that I normally throw to the top of the list. I think that like Alcitrelin is pretty good. Ashwagandha for stress reduction, which also has implications for sexual function. Tonga Ali has reasonable data. I think there, you know, there is reasonable data on these things. I think the website you talk about all the time, examine.com is a great place to look at that. And, you know, as I said, I think it's reasonable. They're smaller studies. They're not, you know, there is bias in many studies, but there, you know, there is effort done in this area. And there's never going to be a really high quality science. No one's going to really fund that, I think. So I think our expectations need to be a little tempered when it comes to that stuff. Well, Rina, Dr. Malik, I want to thank you ever so much for this discussion today. You provide us so much useful information and really have transcended the divide between, you know, the mysterious thing that everyone wants to know about sex and sexual health, genitals and genital health, prostate, urethra, UTIs, all these topics that many people are just afraid to raise and to

confront directly. And you've taught us so much about how to promote the health of this incredibly important system. Absolutely. I mean, one thing we know for sure, either in vivo or in a dish, we're all here because of sperm and an egg. And of course, there are other reasons why people engage in sexual activity that have nothing to do with reproduction. But surely it is core to our biology and our psychology and well-being. So thank you so much. And also thank you for the work you do day in and day out, weekend and week out in your clinic. We will provide links to your clinic. People are interested in working with you directly, as well as online. That's how I initially found you. And when I did, I was just absolutely delighted. I thought, finally, there's somebody who's providing the kind of information that everybody wants in a thoughtful, logical, clear and respectful way. So on behalf of all the listeners and viewers and on behalf of myself, I just want to say thank you. Thank you. Thank you for what you do. And please keep going and please come back. Thank you so much. And honestly, the work you do is phenomenal. It's an honor to
be here. Thank you so much. Thank you for joining me for today's discussion with Dr. Reena Malik all about urology, pelvic floor, and sexual health. If you're learning from and or enjoying this podcast, please subscribe to our YouTube channel. That's a terrific zero cost way to support us. In addition, please subscribe to the podcast on Spotify and Apple. And on both Spotify and Apple, you can leave us up to a five star review. If you have questions for me or comments about the podcast or guests that you'd like me to consider hosting on the Huberman Lab podcast, please put those in the comments section on YouTube. I do read all the comments.
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