Exploring how we can master ourselves by looking at how authors and experts say it is possible with your host Suswati Basu.

Intro music

Welcome to season 3 episode 101 of How To Be...with me Suswati as your timid presenter, guiding you through life's tricky topics and skills by reading through the best books out there.

The 16 Days of Activism against Gender-Based Violence is an annual international campaign that kicks off on 25 November, the International Day for the Elimination of Violence against Women, and runs until 10 December, Human Rights Day. For this event, I want to ask why for centuries women and non binary bodies have been treated like something to be ashamed of. Everyday shame affects our relationships with medical professionals. It is there when doctors ask us about our sex lives to determine the risk of sexually transmitted infections. It is there when they ask us about pregnancy, about how we manage the risks that are so often placed mainly at the feet of women, about cycles and ovulation and control.

And many anatomical terms have roots in shameful or judgemental views of the human body, especially when it comes to female anatomy. Shame is one factor that contributes to women, transgender men and nonbinary people with vulvas receiving worse or delayed care. A 2014 survey by British charity The Eve Appeal found that one-third of young women avoided going to the doctor for gynecological health issues, and 65 percent struggled to say the words vagina or vulva. As such, this episode will contain lots of sexual and anatomical words.

So why does this happen, and how do we change the conversation around this?

Our first book is from Rachel E. Gross, who is an award-winning science journalist based in Brooklyn, New York. A former Knight Science Journalism Fellow at MIT and digital science editor of the Smithsonian Magazine. She writes for BBC Future and is a columnist for their "Missed Genius series", the New York Times, and Scientific American. Her writing has appeared in The Atlantic, National Geographic, WIRED, New Scientist, Slate, Undark, and NPR, among others. Vagina Obscura: An Anatomical Voyage, tells the story of how early anatomists mapped our lady parts—and how a new generation is wresting them back. It was fantastic speaking with her, hence here is a snippet of our chat, but find the full interview on www.howtobe247.com or on the YouTube channel.

RACHEL E GROSS: I think that there's a very deep rooted notion of shame attached to the female body specifically. So in the book, I go back all the way to Hippocrates, the OG creation medical doctor. We still have the Hippocratic oath that doctors take today, and he actually named the genitals a word that means the shame parts, in this case, for both men and women. And over time, that shame became more attached to women and people with these body parts. Bulbas, clitorises, uteruses. So every time an anatomist would name the Clitoris or the vulva, they would insist on, again, naming it something like the part for which you should be ashamed. And even today in German, for instance, you have words like shamlip in, the labia, which means

shameless. So I can say that it's very deeply rooted. And you could definitely say it has to do with religious attitudes, though I would say it's kind of more broad than that. It's like cultural attitudes about women needing to be modest and covered up and sexually chaste, and about medicine and broader society not wanting to see them as sexual beings. So a lot of the skewed science that we're going to talk about that really minimizes the clitoris and female sexuality and the outer female genitalia, which are very involved in pleasure and sexuality, has to do with this shying away from women as being sexual beings. I think it's certainly a part of the puzzle. I think, unfortunately, there's this lethal intersection going on with a lot of what we think of as women's health care, but really is just the care for these body parts, the ovaries, uterus, vulva, clitoris, vagina. So, yes, on the one hand, often even doctors are squeamish and don't want to get into their patient's sex lives. You'll notice that a gynecologist rarely asks you about your clitoris or your orgasms, but also things considered, women's health issues are not seen as important. And it's kind of thought of as well, it's not cancer, it won't kill you. So not only is it kind of like there's an ick issue or a shame thing, but also it's not that important. It's just quality of life. It's not like you're going to die. So why should we put all these resources into investigating it? And a couple of concrete examples of that would be vaginal infections. We recently started looking at the vaginal microbiome, which is basically this protective ecosystem that helps defend us against invaders and infections and STIs, and is really important. And if we could find ways to strengthen it, we could prevent millions and millions of infections. But for a long time, medicine has seen these kinds of infections as not that important and kind of icky because it's like bugs in the vagina? Yeah. I mean, to me, it's very self explanatory. The clitoris is the homologous organ to the male penis. It just doesn't have a urethra running through it and doesn't make sperm. But it is the organ of female sexual pleasure and orgasm, and it's crucial to our overall well being. One thing that sexual health experts often say is that sexual health is health, because they're constantly having to push against this narrative that sexual medicine isn't real medicine. It's kind of soft or like fru fru. Actually, this has to do with all of our quality of life, and that's what makes life worth living. So it's really important to all of us who have a clitoris. It also can be the center of many conditions, including skin conditions, bulbar cancers, and other things that you don't want. So it's just important to be aware of this part of your body and checking it and hopefully have medicine checking it out from time to time, I guess. First of all, we actually don't know how the nerve endings in the Clitoris compare to that of the penis. We actually just found out about two months ago how many nerve endings the clitoris really has. Yes. so I think we'd been repeating these numbers again and again about something like 8000 nerve endings. And this surgeon who does gender affirmation surgeries and this vulva specialist that I've talked to, they actually looked up that claim and found it came from a single study on cow clitorises in the 1970s. So, yeah, as much as we like to hold on to that, actually, we're still learning the very, very basics. So they went and counted for the very first time and found the number was something like 10,280. So we are still learning. And I also find it helpful to, kind of think twice before making these broad comparisons between the clitoris and the penis. I think it's really important that they come from the same tissues and they develop from all the same structures in embryos. But it hasn't been helpful throughout history to make comparisons because they end up kind of lowering the status of one and elevating the other. That doesn't help any of us in our own personal experience. As for practices like female genital cutting, I can't speak on what we can do to end these practices worldwide. I don't think I would be qualified.

However, in my book, what I did find that was very surprising to me was that there was a long tradition of genital cutting in the West. So in the 19th century and early 20th century, a procedure spread, first in the UK and then in America called the clitoridectomy. And it was essentially an amputation of the top part of the clitoris, and then it was used to combat masturbation. So it was a time when there was this panic over masturbation. It was thought to be the most loathsome ulcer in society, and that it would cause madness and neurosis and hysteria. And so you might as well just remove this part and prevent the threat in the first place. So this is a tradition with long roots, and it does have to do with a fear of female sexuality when it's not directed towards procreation and heterosexual relations. There was also a fear of lesbianism at this time and just directing sexual energy towards anything besides making babies. So I think we have to recognize that this is deep in so many cultures and that if we don't dignify and truly care about people's sexual experience and their right to pleasure in their own bodies, which is really just a part of reproductive and sexual rights in general, part of the bodily autonomy movement, that nobody should do any procedure that removes a part of your body without your consent, and that includes infant and childhood procedures generally, there's no reason that you should have healthy tissue removed for purely cosmetic or cultural reasons. So I guess what we do need is a more consistent and broad application of this respect for basic bodily autonomy. Well, I mean, things are changing. I definitely tried to kind of push the story forward in my book and show some of the trailblazers today who are reimagining these organs, including the vagina. So I think you have these dissenting voices. They're often women scientists of color, LGBTQ researchers, and they're saying, hey, the vagina is not just a passive tube, actually, it's this incredibly powerful, muscular part of the body that's aligned with this ecosystem of important inhabitants, and we need to consider it as its own part of the body and not just a sheath for the penis. So there's progress being made in the long term. We do need actual investment and research dollars going into vulval and vaginal health, and at least here in the US, you see that very neglected historically. So it was only in 2014 that we got a branch of the NIH, the National Institutes of Health, dedicated to Vulvas and vaginas when people are not pregnant or trying to get pregnant. So it was the first kind of recognition that you have these body parts your whole life. Again, whether or not you get pregnant during your life, they're important to your overall health, and we need to take care of them.

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In "Vagina Obscura," the author explores the mysterious and often misunderstood realm of women's reproductive and sexual health. The book begins with the author's personal experience of grappling with a bacterial infection in her vulva, highlighting the frustration and shame many women feel when their bodies encounter medical issues that seem beyond understanding. She describes her journey to find a solution, including a treatment involving boric acid, which she humorously refers to as "vagina poison."

The book delves into the historical context of how the female body has been viewed in medicine, starting with Hippocrates' limited understanding of women's anatomy. It discusses the long-standing shame and silence surrounding female reproductive organs and the linguistic

challenges in finding appropriate terminology. The author also addresses the complexity of gender and the fact that not all individuals with female anatomy identify as women.

Throughout the book, the author emphasizes the need for more research and understanding of women's bodies, including the vagina, cervix, ovaries, and related systems. She highlights how science and medicine have historically focused on male bodies, leaving a significant knowledge gap regarding female anatomy. Hence the work aims to empower readers to embrace and understand their bodies better, challenging the stigma and silence that have surrounded women's health for centuries.

In the early 20th century, Marie Bonaparte, a French princess, sought a solution to her inability to experience orgasm during vaginal intercourse, which was considered a societal expectation for women. Her pursuit of pleasure led her to Dr. Josef von Halban's experimental clitoral surgery, where her clitoris was repositioned to enhance her sexual satisfaction.

Marie's journey began with her frigidity diagnosis, a condition she struggled with throughout her marriage to Prince George of Greece and Denmark. Despite having two children, Marie felt unfulfilled and embarked on passionate affairs with prominent men in search of sexual satisfaction. Her longing for a "vaginal orgasm" pushed her to seek a radical solution.

She turned to psychoanalysis and, eventually, to Sigmund Freud himself for help. Freud believed that Marie's issues stemmed from unresolved psychological conflicts related to her feminine identity. He analyzed her extensively, becoming a mentor and a father figure in her life.

However, Freud's insights couldn't alleviate Marie's physical issues. She decided to undergo clitoral surgery by Dr. Halban. The procedure involved moving her clitoris lower to improve its stimulation during intercourse. Despite the pain and risks, Marie believed this surgery was her path to sexual fulfillment.

Marie's story reflects the complex attitudes towards female sexuality in the early 20th century, as society expected women to find pleasure in vaginal intercourse. The medical community's evolving understanding of the clitoris and its role in female pleasure also played a significant role in shaping perceptions of female sexuality during that time.

Marie was ahead of her time in exploring female sexuality, but she faced many challenges and criticisms, especially from Freud, who believed that women needed to transition their pleasure from the clitoris to the vagina. However, modern understanding of female anatomy tells us that the clitoris is a complex and extensive organ, and there's no need to pit it against the vagina.

Marie's story serves as a reminder of the historical misconceptions and struggles surrounding female sexuality and the importance of accurate knowledge about the female body. In the end, she may not have found the answers she sought, but her quest contributed to a greater understanding of women's sexual experiences.

Dr. Helen O’Connell's groundbreaking work on the female clitoris is also explored, along with its profound implications. O'Connell, an Australian urologist, challenged historical misconceptions and misrepresentations of the clitoris as a small, insignificant organ. Through meticulous dissections and research, she unveiled the true complexity and significance of the clitoris, demonstrating that it extends deep within the female body, consisting of a network of erectile tissues and nerves. Her work debunked Freud's false dichotomy between the clitoris and the vagina, highlighting that both are interconnected and equally vital for sexual pleasure.

The book also delves into the impact of female genital cutting (FGC) and how it has affected women like Aminata. Aminata's journey to reclaim her identity and sexual autonomy through clitoral reconstruction surgery is described. Dr. Ghada Hatem, a dedicated healthcare provider, plays a crucial role in supporting women who have undergone FGC by offering clitoral reconstruction and comprehensive care.

The story underscores the importance of Dr. O'Connell's research in providing a scientific basis for understanding and addressing women's sexual health. It sheds light on the resilience and strength of women who seek to reclaim their bodies and identities in the face of cultural practices like FGC.

In the 1980s, Dr. Pierre Foldès, a humanitarian doctor in Burkina Faso, encountered women who had undergone female genital cutting (FGC) while primarily treating rectovaginal fistulas. He realized that these women faced not only physical issues but also the pain and loss of sexual pleasure due to the removal of their clitorises. With little knowledge about the clitoris at the time, he conducted extensive research and developed a surgical technique to reconstruct the clitoris and restore sexual sensation.

Today, many surgeons have learned this technique from Foldès, and he has performed surgery on thousands of women. However, he acknowledges that surgery alone cannot address all aspects of female sexuality. It's essential to consider how individuals feel in their bodies, their self-image, and their communication with sexual partners. Many women require holistic care, including therapy and support from sexologists.

The notion of "normal" female sexuality has been a long-debated question. Early sexologists like Dr. Robert Latou Dickinson challenged Freud's theories and emphasized the importance of the clitoris in female pleasure. They dispelled myths about vaginal and clitoral orgasms, highlighting that the clitoris played a central role.

Over time, researchers, including Dr. Helen O'Connell, investigated the anatomy of the clitoris and its connections to female pleasure. They found no distinct "G-spot" but instead emphasized that female pleasure is complex, involving various anatomical structures and individual preferences.

Beverly Whipple, who popularized the concept of the G-spot, regrets how it was simplified by the media, emphasizing that female pleasure is diverse and not limited to a single spot. She

now promotes the idea that pleasure can be derived from numerous body parts and types of touches.

Dr. Patty Brennan, a biologist, stumbled upon a fascinating discovery about bird genitalia while studying the great tinamou in Costa Rica. She observed a male tinamou with a peculiar appendage during mating, which turned out to be a penis—a rarity in the avian world. This unexpected finding prompted her to explore the mysteries of bird genitalia further.

Historically, both in human society and scientific research, vaginas have been overlooked or underestimated. Freud's perspective reinforced the notion that the vagina was a passive organ, meant solely to accommodate the penis. Second-wave feminists challenged this view by emphasizing the importance of the clitoris, inadvertently relegating the vagina to a secondary role.

In the field of animal research, male genitalia received more attention than female reproductive structures. Entomologists often dismissed female reproductive tracts, washing them away during specimen preparation. However, recent research, led by scientists like Brennan, has revealed that vaginas play active roles in reproduction. Vaginas can influence mate selection, sperm storage, and even the outcome of forced matings.

Brennan's work with waterfowl, especially ducks, demonstrated the complexity and diversity of vaginal structures across species. In some cases, vaginas evolved to make mating more challenging for males, leading to coevolution between male and female genitalia. This newfound understanding highlights the vagina as a remarkable and adaptive organ.

However, the neglect of female reproductive anatomy can be traced back to historical biases, including Charles Darwin's views. Darwin, while fascinated by various traits related to sexual selection, avoided discussing genitalia, especially female genitalia, in his writings. His beliefs about male superiority and female passivity influenced the scientific community's perspective on female anatomy.

Darwin's reluctance to address female genitalia extended to his views on human differences, where he perpetuated the notion of female inferiority. This perspective played a role in limiting women's access to higher education and careers.

In the past century, biologists struggled to understand the incredible diversity of genitalia across species, often resorting to the idea of "lock and key," where genitalia were thought to be species-specific to prevent mating mistakes. But this explanation had its limitations, and William Eberhard, an entomologist, suspected there was more to genital diversity. He realized that sexual selection extended beyond mate selection to include interactions during copulation. Males actively worked to stimulate females during sex, suggesting that genitalia had courtship functions too.

Eberhard coined the term "cryptic female choice" to describe the various strategies females employed to control reproduction even after copulation. These strategies included discarding sperm, preventing complete intromission, and choosing among sperm that reached the egg. This revelation opened the door to studies on female genital evolution.

Despite this, female genitals remained less studied and understood than male genitals due to biased research. This bias led to a lack of knowledge about what happened inside vaginas.

Dr. Brennan aimed to shift the focus towards female genitals. She collaborated with Dr. Dara Orbach to study sea mammals' vaginal diversity and discovered that vaginal shape influenced sperm placement.

Moreover, Holly Dunsworth challenged the prevailing belief that female genital evolution was solely in response to male traits. She suggested that the human vagina's size and shape primarily evolved for childbirth, with penises adapting to fit inside.

Joan Roughgarden proposed that genitalia's complexity goes beyond reproduction, serving various purposes such as communication, dominance, and alliance building. She highlighted the diversity of genital features in animals, challenging conventional notions of sexual selection. Roughgarden also emphasized the importance of considering same-sex behaviors in animals, arguing that restrictive theories limit our understanding.

Hence, genitalia research should encompass both male and female aspects. However, due to limited knowledge about female genitals, there is a need for more research to understand the full spectrum of genital diversity. Brennan believes that we must prioritize studying female genitals for a while to catch up with the understanding of male genitals and appreciate the complexity and diversity of genitalia.

In 2014, Dr. Ahinoam Lev-Sagie faced a common yet devastating issue in her gynecology clinic – bacterial vaginosis (BV). BV affects almost 1 in 3 women and can lead to discomfort, discharge, and a "fishy" odor. Lev-Sagie had no effective treatments to offer besides antibiotics, which often provided temporary relief. Inspired by the success of fecal transplants for gut issues, she began considering a similar approach for vaginal health.

The idea was to transplant an entire vaginal microbiome from a healthy woman into those with persistent BV. Lev-Sagie initiated a trial, and the results were promising. Participants received vaginal microbiome transplants, and their symptoms improved significantly. This groundbreaking approach offers hope for those suffering from recurrent BV, a condition that can negatively impact self-esteem, relationships, and overall health.

However, the road to vaginal transplants faced challenges, including the historical mistreatment of women's health issues in medicine. It wasn't until recently that researchers started exploring the vaginal microbiome's complexity and potential treatments.

In the 1920s, Lysol marketed itself as a feminine cleanser, even promoting it as a contraceptive. Today, nearly 1 in 5 American women still douche, unaware that it can strip the vagina of its natural protection. In South Africa, "blessers" prefer "tight and dry" vaginas, leading girls to use harmful substances. Researchers like Jacques Ravel seek solutions, working on lab-grown healthy vaginal environments. Recognizing that there's no one-size-fits-all definition of a healthy vagina is essential, especially considering racial and social factors that affect vaginal health. The diet theory suggests our unique vaginal microbiome could be linked to our ancestors' dietary habits.

In 1944, Miriam Menkin, a dedicated technician, embarked on a groundbreaking journey at Dr. John Rock's fertility clinic in Boston. Armed with precision and dedication, she pursued her scientific passion – the study of human eggs. Her mission was to fertilize human eggs outside the womb, offering hope to women with blocked Fallopian tubes.

Miriam's meticulous work involved retrieving ovaries, extracting eggs, and introducing fresh sperm into a watch-glass to create embryos. It was a tedious and delicate process that she executed tirelessly.

After six years of failed attempts, a momentous day arrived. Fatigued, she accidentally let a sperm and egg interact for a longer time than her usual protocol. That small change led to a historic breakthrough – the world's first human embryo fertilized outside the womb. Excitement and disbelief filled the lab. In the mid-20th century, her groundbreaking work in fertilization laid the foundation for in vitro fertilization (IVF), a technology that has revolutionized human reproduction.

Miriam's journey began with a fascination for the intricate dance of sperm and egg. Contrary to initial perceptions of sperm as all-powerful, she discovered their mechanical weakness, unable to break even a single chemical bond. The zona pellucida, a jelly-like membrane encasing the egg, proved essential. It captured sperm with sticky sugar chains, preventing stragglers from entering.

Upon sperm-egg contact, the egg swiftly blocked other sperm receptors, released calcium granules to harden the zona, and initiated cell division. Within days, the embryo hatched and implanted in the uterus. Miriam's curiosity led her to work alongside renowned reproductive expert Dr. Rock, contributing significantly to the understanding of fertilization.

Her life was marked by personal challenges, including a difficult marriage and raising a disabled child. Despite these hurdles, she remained committed to her passion for reproductive science. Her determination eventually brought her back to Rock, and she continued to contribute to research on fertility, though she never returned to IVF. Menkin's legacy lives on in the millions of babies born through IVF and the broader landscape of reproductive technologies.

Jon Tilly, a reproductive scientist, embarked on a journey to understand the aging process of ovaries. These vital organs play a central role in a woman's reproductive health, but they age long before other tissues in the body. Tilly's research aimed to slow down ovarian aging, which could benefit women undergoing cancer treatments and alleviate menopause-related issues. Surprisingly, his experiments revealed that eggs didn't disappear as expected; instead, they seemed to regenerate. Tilly hypothesized that stem cells might be involved in this process, challenging established beliefs in the field. His groundbreaking findings led to significant controversy and reshaped our understanding of ovarian biology.

Dr. Dori Woods initially hesitated but ultimately took a job with Dr. Tilly to work on granulosa cells, aiming to build an "artificial ovary" with clinical impact, catering to cancer survivors and genetic conditions. They found a way to isolate stem cells from ovaries and envisioned extending ovarian function. This research held the potential to delay menopause and improve women's health. Before the 17th century, ovaries were referred to as "female testicles," and Dr. Regnier de Graaf played a crucial role in understanding their functions. Ovarian removal surgeries by Dr. Robert Battey in the 19th century led to early menopause and gained popularity. Dr. Eugen Steinach explored glandular hormones and their impact on sex traits, aging, and vitality, leading to controversial procedures like the "Steinach operation" and X-ray treatments for women, claiming to rejuvenate individuals, sparking public fascination and skepticism.

Sex glands once symbolized hope for restoring youth and vitality. Scientists like Edward Doisy and Edgar Allen isolated estrogen in the 1920s, naming it for its rat-induced estrus effect. It was marketed to alleviate menopause symptoms, pathologizing the condition.

Dr. Linda Griffith, a bioengineer, faced a challenging battle with triple-negative breast cancer in 2010. The support from her husband and colleagues helped her navigate through the grueling treatment. Unlike her experience with endometriosis, breast cancer received immediate and compassionate attention. Griffith sought to bring the same approach to endometriosis. During her cancer treatment, she directed her lab to study endometriosis patients, seeking to understand the disease's complexity. Her work identified networks of inflammatory markers in patients, taking a step toward classifying endometriosis subtypes.

In 2007, she was asked to speak about her work at a Women in Science and Engineering luncheon, which annoyed her initially. During the event, she realized the lack of treatment progress for endometriosis, a chronic disease affecting her niece, inspiring her to open the Center for Gynepathology Research at MIT. Her lab uses uterine organoids to study endometriosis and advocates for a shift from viewing it as a "women's issue" to a broader health concern. The disease's complexity and impact beyond the uterus warrant a multidisciplinary approach.

Dr. Marci Bowers, a pioneering gender affirmation surgeon, has transformed the field of gender confirmation surgery. In a 2007 conference, she highlighted the vast improvement in surgical techniques since the 1960s and '70s when basic hole creation was the goal. Bowers' approach

prioritizes aesthetics, functionality, and female sensitivity, earning her the nickname "the Georgia O'Keeffe of genitalia." Her expertise and artistry have led to a five-year waiting list for her surgeries. Bowers, who is transgender herself, aims to provide patients with a better experience than what she received in 1997, pushing the boundaries of surgical possibilities in the process.

The book also delves into the journey of Roxanne Euber, one of Bowers' patients, who sought gender affirmation surgery to align her body with her true identity. Bowers' surgical techniques involve repurposing existing genital tissues to create neovaginas that are not only aesthetically pleasing but fully functional, allowing patients to experience pleasure, arousal, and even orgasm. Gross highlights the diversity among gender affirmation surgeons, each with their unique approach and expertise, shaping what is considered "normal" and setting standards for the field.

In the 1950s, Christine Jorgensen underwent gender-affirming hormone therapy and surgeries in Denmark and later in the United States to become a woman. Her transformation became widely publicized, leading to her receiving letters from others seeking similar treatment. Dr. Harry Benjamin, a pioneer in transgender medicine, reached out to help and worked to advance transgender healthcare in the U.S. Christine's journey marked a turning point in transgender history, though access to such procedures was still limited. Johns Hopkins Gender Identity Clinic became the first U.S. institution to offer gender affirmation surgeries in 1966. Dr. Stanley Biber in Trinidad, Colorado, emerged as a key surgeon in the field, attracting patients from around the world. Gender affirmation surgeries began to spread to other doctors and cities, providing more options for transgender individuals, though affordability remained an issue.

Our final book is from Jennifer Gunter, who is a Canadian-American obstetrician-gynecologist and author who specializes in women's health and pain conditions of the vulva, vagina and cervix. The Vagina Bible is a comprehensive guide to everything to do with women's health. Here she is

JEN GUNTER: So since the beginning of medicine, I mean, at the beginning of the time of Hippocrates. And it's really interesting, most historians don't actually believe he was even a real person. The cadavers were all male because it was inappropriate to look at even a naked dead woman and never mind examining a live one, right. And so all of medicine was basically a midwife, a woman explaining to people. And they wrote it down in a textbook. They're like a bad game of telephone, right? And then the dude would be like, yeah, I don't think so. I think this is what it is, really? So it's like mansplaining from the beginning. So you have that kind of history. But even when I was in medical school, I pulled back, like, I kept a lot of my textbooks. And so I looked at my anatomy book, which was published 88 or something. yeah, I think it was published maybe in like 86, 87, something like that. So there were three pages with illustrations of the penis, beautiful color plates. And the clitoris was this tiny little inset up in one corner. It was pews, and it was labeled the miniature penis. So this is the gold standard, actually, I would like to point out, and this is something that a lot of women find really empowering, is the clitoris is the only organ in either men or women that is designed solely for sexual pleasure. It has no other function. So I like to think of the clitoris as a butterfly. Yes, exactly. and so the head of the

butterfly is like the part that you see, and that's called the glands and the body of the butterfly is like the body of the clitoris. And the top part of the wings kind of folds down underneath the labia and wraps around the urethra. And that's the clitoral bulbs. And then the lower part of the wings wraps a little bit further back. And that's the career and that's all the clitoris.

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The term "vagina" often oversimplifies the complexity of female genitalia. Firstly, having a vagina doesn't define one's gender, as many transgender individuals do not identify with their assigned sex at birth. Secondly, "vagina" technically refers to the inner part, while the external area is the vulva. The vagina is a muscular tube connecting the vulva to the cervix, lined with mucosa cells containing sugar to support beneficial bacteria, maintaining a healthy pH. Vaginal discharge is normal and consists of lactobacilli, mucosa cells, and fluid. The vulva includes the mons, labia (majora and minora), and the clitoris, all of which can become engorged during arousal. The clitoris, exclusively for sexual pleasure, has a complex structure beyond its visible part, including crura and bulbs.

The market for vulvar and vaginal care products is growing, but medically, there's often no need for extensive cleaning. The vulva typically cleans itself; excessive cleaning can be harmful. For vulvar skin, a pH-balanced cleanser around 5.5 can be used if desired. Avoid high pH soaps and fragranced products. Pubic hair serves as protection, but if removing it, do so gently to prevent skin tearing. Avoid douching, as it disrupts the vaginal ecosystem and increases STI risk. Diet doesn't directly affect vaginal health, but a balanced, fiber-rich diet benefits the body as a whole. Products like coconut oil and petroleum jelly can help with dryness.

Understanding how your vagina works can enhance sexual pleasure. Sexual arousal increases blood flow to the vulva and vagina, making them more sensitive. Orgasms involve rhythmic contractions of pelvic floor muscles, primarily triggered by clitoral stimulation. Despite myths about vaginal orgasms and the G-spot, high-quality studies haven't proven their existence; clitoral stimulation is key. A penis isn't the sole path to orgasm; many women need additional clitoral stimulation for satisfaction. Some vaginas can ejaculate due to Skene's glands or bladder involvement. It's normal if yours doesn't, and using lubricants is also perfectly fine. Enjoying sex matters more than how you reach pleasure.

Menstruation is the shedding of the uterine lining when pregnancy hasn't occurred in your last cycle. It's a coordinated process involving the brain, ovaries, and hormones. The cycle begins with brain signals, leading to egg development in the ovaries, estrogen production, and thickening of the uterine lining. Ovulation is triggered when estrogen peaks, sending eggs to the uterus via fallopian tubes. Progesterone then stabilizes the uterine lining, but for a limited time. When progesterone levels drop, menstruation begins. Periods usually start around age 12-13, lasting 3-7 days, with varying blood amounts. Menstrual product choice depends on comfort and flow, with tampons and pads being common options. While tampons are generally safe, changing them regularly and using the right size is advised. Experimenting with different menstrual products is recommended for personal preference.

Throughout significant life events like pregnancy, childbirth, and menopause, a woman's body undergoes transformations that also impact the vagina and vulva. During pregnancy, changes begin as early as four weeks after conception, with increased blood flow to the vagina and hormonal shifts. Yeast infections and group B streptococci can occur during pregnancy, requiring testing and treatment. Childbirth can lead to temporary vaginal tearing in up to 79% of women, but the body's natural ability to heal varies. Perineal massages may reduce tearing, but outdated practices like shaving or cleaning the vulva before delivery have no effect. Menopause involves hormonal shifts, potentially causing symptoms like vaginal dryness, irritation, and hot flashes, treatable with estrogen-based therapies.

Most sexually active women will contract an STI at some point in their lives, a common occurrence with treatable options. Untreated STIs can lead to infertility, cancer, and heightened HIV risk, making regular screenings, particularly for young people, crucial. Local health departments often offer affordable and anonymous testing. Human papillomavirus (HPV) is the most prevalent STI globally, with over 80% of women encountering it. While most HPV types show no symptoms, some can cause genital warts and cervical cancer, underscoring the importance of regular testing and HPV vaccines, most effective before initial virus contact, recommended for girls aged nine to twelve. Condoms are essential for STI prevention, although correct usage is crucial, as 29% may fail in real-world conditions.

A yeast infection is a common issue for individuals with vaginas. Yeast, a type of single-cell organism, is normally present in small amounts but can overgrow, causing symptoms like redness, itching, and pain. The exact causes of overgrowth are unclear but could involve a weak vaginal microbiome, immune system problems, or low iron levels. Around 70% of women experience a yeast infection at least once in their lives, with 5-8% facing recurring infections. Candida albicans is the most common culprit, but non-candida species are emerging. Accurate diagnosis by a doctor is vital, as over half of self-diagnosed cases are incorrect. Effective antifungal drugs known as azoles treat yeast infections, as there's no conclusive evidence supporting home remedies.

Bacterial vaginosis (BV) is another common issue, resulting from an imbalance in vaginal bacteria. BV can cause discomfort and odor, but its precise causes remain uncertain. Proper diagnosis and treatment are essential, as BV can increase the risk of STIs and pelvic inflammatory disease. Existing drugs target the "bad" bacteria but don't boost beneficial lactobacilli. Probiotics containing lactobacilli show potential but lack comprehensive studies. Condom use may protect against BV, as they prevent the introduction of foreign substances and bacteria into the vagina during sex. However, condoms with spermicides can disrupt vaginal ecosystems.

Taking care of your vagina and vulva involves essential steps, such as regular STI testing for sexually active individuals and annual cervical cancer screenings. Consulting a doctor for symptoms like itching, burning, or pain is crucial, even if you believe you know the diagnosis, as self-diagnosis is often incorrect. Describing symptoms accurately, including location, timing, and

sensation, helps doctors make informed decisions. While online research is valid, it's essential to discern reliable sources from sexist or misleading information. The United States National Library of Medicine offers trustworthy resources, and their tutorial helps assess internet health information credibility. Be cautious of products labeled "pure," "natural," or "detoxifying," focusing on minimal use for vaginal and vulvar hygiene.

So to sum up:

Gross says in Vagina Obscura that our bodies can blind us. But they can also free us to see differently. They can help us bear witness to how a multitude of people, bodies, and perspectives have fallen through the cracks. Only by seeing connections instead of siloes, and sameness instead of difference, can we move the science of the female body forward and point the way to a truer, fuller understanding of all bodies.

Gunter says in the Vagina Bible that your vulva and vagina are resilient and require minimal maintenance despite patriarchal myths and wellness companies' misleading claims. Natural changes during life stages like pregnancy, menopause, or dealing with STIs are typically normal. Consulting a doctor is vital for any discomfort or concerning symptoms. Most importantly, nurturing your vagina's health involves gaining a deep understanding of it, enabling you to provide appropriate care when needed.

What do you think? How do we remove the stigma around women, trans and non binary bodies? Let us know. Please join in on the conversation by following @howtobe247 on Instagram, Twitter, and Facebook, and subscribe to the podcast, which can be found via www.howtobe247.com. We have Spotify polls, so feel free to send your responses there too! You can even check out all our exclusive unseen bonus material from every single interview, all for a price of a coffee on both Spotify and Patreon under the name Behind the Scenes: Exclusives From the How To Be Books Podcast. All the latest ones are on Spotify while more than 30 exclusives are on Patreon. We've also launched a shop on Patreon where you can buy one off exclusives. Sign up to be part of the movement.

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Remember to check out the website! It was #ReadPalestine week so we reviewed Mosab Abu Toha's beautiful poetry collection Things You May Find Hidden in My Ear. On the other end of the spectrum, we reviewed the new controversial royal family book Endgame by journalist Omid Scobie - check out our verdict. It was also wonderful to see the legendary British Turkish writer Elif Shafak talk about her new work. We also finally have our Barcelona literary tour up, follow in the steps of Spanish and Catalan writers.

Before we go, please check out Zencastr. We do all our interviews with it and it's for free! If you have thought about podcasting before and realized that you need a lot of different tools and services, those days are over. With Zencastr's all-in-one podcasting platform, you can create your podcast all in one place and distribute to Spotify, Apple, and other major destinations.

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