

Erin Welsh

Hi, I'm Erin Welsh and this is This Podcast Will Kill You. Welcome everyone to the latest installment in this season's book club miniseries where we get to read fascinating popular science books and then chat with the authors of these amazing books. I have had so much fun so far talking about topics such as the origins of SARS-CoV-2, why we should appreciate sweat more, and most recently the disturbing persistence of race science in biological and medical research today. And we have got so many more exciting books on our schedule over these next few months to keep you informed and entertained. We'd also love to hear from you about how you're liking these book club episodes, what lingering questions you have that we didn't cover, and if there are any books that you'd like to add to the list. Just send us a message through our contact us form on our website thispodcastwillkillyou.com or through our email thispodcastwillkillyou@gmail.com.

All right, podcast business over. Now let's get to what we're going to be talking about today. And that is menstruation. Despite the fact that about half of the people on this planet have menstruated or will menstruate at some point in their lives and that as UNICEF tells me 1.8 billion people across the world menstruate each month, there remains an aura of mystery surrounding this completely natural biological function. Conversations about periods, about flow, duration, cramping, color or consistency of discharge, they take place in hushed tones, tampons or pads or panty liners are passed surreptitiously like sleight of hand style, TV commercials advertising menstrual products somehow manage to not mention periods or menstruation at all and instead show people pouring a mysterious blue liquid, distinctly not menstrual blood, onto various pads or in a beaker where it's absorbed by a tampon.

The list of euphemisms for periods is seemingly never ending and I bet you can think of at least three or four right off the top of your head. That time of the month, Aunt Flo, on the rag. These were just the first three that popped into my head. And if someone does dare to speak openly about menstruation, they are often told that they are gross, that periods are disgusting and don't make for polite conversation. This widespread shame regarding periods so often leads to silence, a silence which serves only those who actively want to exert control over menstruators, who want to take away their bodily autonomy. And in a recently proposed bill in Florida, this silence would be legally enforced with children and their teachers forbidden from talking about menstruation in school until 6th grade, at which point many of these children would have already started having periods.

In 'Period: The Real Story of Menstruation' published just last week, author Dr. Kate Clancy explores the complex origins of these attitudes to menstruation and considers their role in the perpetuation of period myths, menstruation taboos, and widespread myths and disinformation that reveals that what little science does know about periods is often less than correct. Dr. Clancy, who is a Professor of Anthropology at the University of Illinois at Urbana Champaign and has worked extensively on the issue of pervasive sexual harassment in higher education, presents a compassionate, clear, and thoughtful examination of menstruation that is at once informative and inspiring. Informative for the thorough debunking of longstanding period myths and clear explanation of biological processes, and inspiring for demonstrating that knowledge is power, that knowing the sources of and reasons for shame and disinformation is a crucial part of imagining a better period future.

Dr. Clancy joins me on this bonus episode to discuss a bit about these period futures, the inspiration behind her book 'Period', some of the ways that different cultures vary in their perceptions of periods, why the concept of a quote unquote "normal period" is both untrue and can be harmful, what the SARS-CoV-2 vaccine revealed about scientific attitudes towards periods, some of the different hypotheses for why humans menstruate, and so, so much more. 'Period' is sure to become an instant favorite among listeners. And as a long time admirer of Dr. Clancy who has kicked myself for never taking one of her classes while I was at the University of Illinois, I am so excited for today's episode if you can't already tell. So on that note, let's get right to the interview after this short break.

TPWKY

(transition theme)

Erin Welsh

Thank you so very much for being here. I was incredibly thrilled when I learned that you were writing a book about periods and that excitement was totally justified because 'Period: The Real Story of Menstruation' is absolutely fantastic. What made you decide to write a book about periods and why focus on the aspects you did?

Kate Clancy

Well first, thank you so much. I'm so glad you liked it. That makes me really happy. I will say it's been such an interesting process going from the book idea to book proposal to multiple drafts and now this finished product. And you know what I want most of all is just for people to read it. I hope it gets into some hands and that people will read it. So that's wonderful to hear. Part of the reason that I wanted to write a book about periods was that I really noticed a lot of menstrual stigma in my field and when I would discuss menstruation or periods, there would be these interesting body language changes in the way I spoke to people, they would start to wrinkle their nose, that was the big one, they would start to lean back.

There was a lot of just sort of changes that made me realize that even in a scientific context we are often not ready to discuss it. And it's interesting to me because my field talks endlessly about menstrual cycles and we have no problem talking about ovaries and eggs and estrogen and progesterone but you start to talk about menses and it suddenly becomes well let's see if we can sort of scientifically talk our way around this being unnecessary or of no real consequence to the science of menstrual cycles. So really I just leaned into that.

Erin Welsh

It's so interesting. And in your book you discuss how attitudes about menstruation in the US tend to be negative, right? Following along, you point out three axes, concealment, activity, and communication. What do each of these mean and what are some of the ultimate consequences of these negative attitudes?

Kate Clancy

Sure. So concealment is around menstrual concealment. So we are taught very early on that for people to know we are menstruating or see that we are menstruating is shameful. And yet at the same time there have been researchers who've looked at what are we actually taught about menstruation particularly in the US, these are US focused studies. Even though most of us are taught like what is a menstrual cycle, what is the uterus for, like sort of the the health class version, menstrual management, so how to actually do that concealing, is something we're not really taught. We're taught that tampons exist, that pads exist. Now we have cups and underwear and other options.

But I don't know, I mean maybe you have a different experience but my experience of health class was definitely not that my male health teacher who was also the basketball coach was going to be explaining tampon insertion to any of us. And yet research has shown that that is what people most desperately want to learn when it comes to actually learning about periods. So on the one hand, there's all this enforced concealment and there's this shame when we fail to conceal. On the other hand, because of the stigma nobody talks to us about how to do that concealing. So just imagine how many issues are wrapped up in that, right.

Then in terms of activity, there are sort of these long standing assumptions that during menses you're more tired or um, that you might want to withdraw from society or do less physical activity. Certainly when I was younger it was one of the ways you could get out of PE or physical education class was to tell your instructor you have your period. On the one hand you could see it as a nice thing because it's a way of honoring, hey, maybe my body is doing something a little different today, maybe it would be nice to rest. On the other hand though, it also is a way of withdrawing from society. And so sort of this issue of activity I think is a big one because of the ways that since you're never telling anybody why you're doing it, because we're not supposed to be talking about when we have our periods, it's just sort of this secret thing that we just sort of exempt ourselves from the world a little bit more around this time.

And then again, communication kind of ties these all together because issues of communication mean that even though we somehow get this vibe that we're supposed to be concealing, we're supposed to be removing ourselves, people aren't supposed to know that we have our period, the how and the practicalities of it completely escape us, which means many of us go through all sorts of rounds of not concealing menses and having very embarrassing stories. I bled through my clothes multiple times in middle school and high school. And I actually really enjoyed the solidarity of being supported by other menstruating people in those moments, of people swapping shirts with me so I could wrap things around my waist, finding tampons or pads when I ran out. I actually think that we can notice the broader structural problems here while also appreciate that menstruating people have found some very clever ways to subvert or undercut these structural problems and still support each other.

Erin Welsh

Absolutely. I have so many memories of middle school, just the horror of a tampon flying out of my backpack and like oh no, someone's gonna see. And in retrospect it's like okay, that's okay. But you don't learn that growing up.

Kate Clancy

We watched a pancake movie. I don't know if you watched a movie but when I was in 5th grade, so again I'm old, I'm in my 40s, but the movie we watched in 5th grade as part of our sex ed was these girls were having a sleepover and they were in a tent out in the backyard. And in the middle of the night one of them gets up and goes inside and comes back and is kind of secretive about it. And then in the morning you find out one of them got her period. And then it's this whole educational thing where the mom is then teaching these three girls all about periods.

And it's actually one of the only ones I've ever seen that even talks about like the quantity of menstrual blood or anything. So the really funny scene for me that I will just remember for the rest of my life even though it's 30 plus years ago is the moment she's holding up some pancake batter and she says a girl will menstruate about half a cup over the course of her period. And then she pours out the batter into the shape of a uterus. and then starts explaining the functions of the uterus and menstruation on this pancake.

Erin Welsh

Wow.

Kate Clancy

So that's one of my very strong memories from childhood is just the uterus pancake and the menstrual blood batter.

Erin Welsh

That is amazing. I'll have to find that on YouTube and check that out. These negative attitudes or menstrual taboos, they're not universal across cultures although it's a common misconception that they are. Why do you think this misconception is so common and what do you think are the origins of this Western idea of menstruation as being unclean or shameful or something to hide?

Kate Clancy

I mean the main misconception is that who drives the majority of science in the world right now in terms of what gets the most attention and what dominates, right? So Western science and Western medicine models and Western language are what dominate in science, even if that's not obviously the only way to think about Westernness or Western science of any kind, right, it doesn't have to all be English language but in fact the majority of it is. So I think a lot of that universality misconception comes from the fact that Westerners, particularly white Westerners, tend to center themselves and everything and just assume that we are the norm.

To me that's the biggest piece of it and that's very tied to settler colonialism. You know the whole practice of settler colonialism is going in where people already live, pretending now that this stuff belongs to you, and then extracting resources, committing genocide, taking over. And often there's some cultural appropriation but there's also a ton of cultural erasure. And a lot of colonialism is about dominance. And so it's not surprising then that we just come to assume that a lot of the cultural practices that occur in a lot of our societal contexts are universal. I think the other thing is that as our ideas of menstrual stigma and menstrual taboo have changed over time, I think there have been a lot of folks who have at first pushed for a more scientific understanding of periods and then have expressly tried to neutralize a lot of the language and even sometimes create a positive spin in thinking about menstruation.

And as we've moved in that direction, it becomes very comforting to Westerners again, especially white Westerners, to conceive of menstrual stigma as something in the past or even to use really problematic language like this must be a primitive way of thinking because we are modernizing it. And then that continues to reinforce this idea, well since this is in the past I bet this is what happens to those other cultures that are less modern than ours. So I think there's a couple of different things going on where again, it's all about colonialism and it's all about these ways in which we are just trying to believe that wherever we're at is the best place to be and the most sort of evolved or modern take on things.

Erin Welsh

So speaking of misconceptions, let's turn towards this idea of quote unquote "normal periods". Why do we have this idea and why is it still often taught, maybe two separate questions, that a normal period comes every 28 days and you bleed for 4-5 of them and anything outside of that is too heavy or too light or too long or too short? Why is it so important to discuss variability in periods or normal patterns rather than a normal period?

Kate Clancy

Right. So this concept of normality is actually one with a eugenic origin. And when we say, it used to be that the term normal meant normal in terms of functional. So a normal kidney is a kidney that is functioning as it should be, a normal liver is one that is functioning in the way that it was intended, right. So again, it just sort of meant functionality. It began to be co-opted and thought of differently in particular among people who liked to start to imagine some people are better than other people or some processes are better than other processes. And so again, these concepts of normality came directly from people who believed in eugenics, promoted eugenics, wanted to believe that some people fell within a normal range or were statistically average and that to be statistically average is the desired trait.

And I think it's kind of a weird concept, right? Because in some ways we have these concepts of ideals and we also have these concepts of average. But what happens really often is that they get really conflated and we start to see the average as ideal. How does that happen? Because when we create this idea of average, we only include some people in the calculation. So if you're trying to figure out the ideal body type and you only include thin, white, able-bodied, cisgender women between the ages of 18-20, you're going to get an average of that group that then if you try to say that that's the average for everybody is really not gonna seem right at all. So that's how those things start to get conflated. So with the menstrual cycle, it's the same sort of an issue where the way that we've calculated or assessed normal and average has been from a very limited understanding of menstrual cycles.

This idea that the best menstrual cycle to have is one that is 28 days long and always ovulates, that's really not the right notion, menstrual cycles should vary. They should be really variable and long and largely ovulatory when you're a teenager. Even in your 20s, they should still actually be, the hormones should probably be on the lower side and you're still gonna have some anovulations. 30s are when the body really kind of hits its stride. And the mid 20s to mid 30s, maybe even into late 30s is when you're seeing something closest to what we often say is sort of the normal cycle. Even then up to a third of the time you're not ovulating, so it doesn't look anything like the norm. And then things start to shift, late 30s into 40s as we head into menopause, we start to have a completely different range that you can see among completely healthy people.

So again, I use age as one example but there are so many other ways we can also sort of parse these different patterns and start to learn that this textbook that we keep being shown doesn't actually represent a whole lot of people. And in fact when we look at menstrual cycles in our lab, it's really hard to ever find anybody who looks like that even among people in our rural Polish population who've had 12 children, who clearly have no problem getting pregnant, super fertile, but their menstrual cycles don't look like that.

Erin Welsh

So when scientists and researchers began to take a closer look at periods during the time when eugenics began to rise in popularity as well, it also resulted in many researchers proposing different hypotheses for the reasons humans menstruate. And those hypotheses have changed and there have been new ones and other ones have gone out of style. Can you take us on a brief tour through some of these ideas about the evolution of menstruation? And do you think it's likely that there's a one size fits all hypothesis that will eventually come to light or do you think it's just going to be difficult because there are so many different drivers for the evolution and persistence of menstruation in humans?

Kate Clancy

I kind of want to answer the second question first, which is that there is never going to be, I don't think, one perfect explanation for why menstruation evolved. And the reason for that is that there isn't really a good one for any trait that's evolved. And that there's a fundamental problem when we create incentive structures in science that require that we have the Clancy hypothesis or the whoever. The reason that we have these ideas of the quote "prime mover" hypothesis so much in evolutionary biology is that people want to stake their professional claims on being the one who figured out the answer. But the reality is that most of these traits are operating under a number of different competing forces.

So I'm gonna give the punchline of what I think is going on, which is that I think there are really three main hypotheses, all of which have some truth to them in terms of why humans in particular menstruate as copiously as they do. We have BI Strassmann's hypothesis on energy economy that came through in the 1990s. I think what was really important about it is that in addition to the fact that she did some work to discount a hypothesis I'll talk about in a minute, she also used it as an opportunity to say there is a lot of energy expenditure that goes into creating, so proliferating the lining of the uterus, and then differentiating it. And that's like hundreds of calories. And so rather than maintaining that indefinitely for some possible implantation, really we should get rid of it when we don't need it and start over.

So the energy explanation, I mean energetics rides through so much of evolution that I think it would be silly to say that that has absolutely no bearing. The next one is terminal differentiation, which is the one, this is Colin Finn, this is the one people like the best. But I think again is one of really three great hypotheses that are all valuable. And his point is really just like a physiological inevitability one, which is that if you're going to grow this endometrium, you're going to differentiate it into this particular set of cells, this particular structure that's great for implantation, it probably has an expiration date, right. Most cells that once they differentiate, that's where that term terminal differentiation comes from, once cells sort of get to a certain point, they can't really back up and do something else.

So once they've hit that point and you've kind of passed some receptive window by which it's maybe not gonna be as effective for implantation to work, it makes sense for these cells to die so that you can kind of start over again. So that's where the terminal differentiation idea comes from. Once it differentiates, if it's not used we kind of have to just start over. The third one which is a newer idea that I think is incredibly valuable is from Brosens and others looking at what's called preconditioning, which is basically this idea that menstruation is practice. So when you grow and differentiate that endometrium, what you see is that the more and more you do it, the better those structures get and potentially the more receptive the endometrium is for implantation, it means that the implantation process might go better.

And we have some really interesting lines of evidence to support this in particular around preeclampsia. So preeclampsia is a condition of pregnancy that is a hypertensive, so it's a blood pressure disorder, and it's incredibly dangerous. It has killed many people, many pregnant people. And as your heart, as your blood pressure starts to go up, really the only fix is to give birth. So it can lead to premature birth and even then that may not be enough if you don't catch it early enough. And we now do have some drugs that will help people survive preeclampsia. But I mean if you're a Downton Abbey fan, you know that one of the beloved sisters dies of eclampsia which is the downstream version of preeclampsia.

So we know now that part of what causes preeclampsia is likely sort of not good enough invasion of the trophoblast, so basically the maternal fetal contact isn't quite as good. And increasingly we also know that one of the means by which preeclampsia is more common is in younger people, so people who have had fewer menstrual cycles, people for whom it's their first birth, they haven't had a lot of implantations. There's other mechanisms too but that's one of the really big ones is it's more common in sort of first timers and people who just tend to be on the younger side.

There's also some evidence that people who are longtime contraceptive users who also have fewer periods that way are also at slightly higher risk. So all of that said indicates that when you remove menstruation as practice, you increase the risk for some of these pregnancy conditions. So to me that's a really compelling reason for preconditioning being a great explanation for why we menstruate, is that we need it in order to build up the actual cellular architecture to make it an effective place for implantation to happen. There are so many people now who are starting to sort of move in that direction and try to understand the function of menstruation now that we understand that it actually has a purpose.

I think to me the problem with the terminal differentiation hypothesis is where it's led a lot of people to go is to say menstruation is non adaptive and useless because it's just this thing that comes out of the body because of these other functions, because of cycling itself being adaptive, but periods itself aren't. But menstrual blood and menstrual tissue are crucial to the component to endometrial cycling and are necessary for the healing processes to be occurring simultaneously with the removal of menstrual tissue. So to say that that stuff's not important is kind of weird. Of course it's important, it's part of the whole process, right. You can't just decide one part of the process isn't important because you think it's gross. So that's sort of like the big picture of where we are today.

But I think that what's interesting to think about, I'll give a briefer version of how we got there, in terms of how we got there and I think the reason that the terminal differentiation one became so compelling, and again the title of it was literally a non adaptive consequence of uterine evolution or something, and people really leaned into that non adaptive consequence, is that some of the early ideas about menstruation being adaptive were pretty crummy. We have the menotoxin which really just came straight out of a lot of Christian beliefs that menstruation is dirty and so you have to get the dirty stuff out of you because women are dirty. That's where a lot of that came from. Those beliefs persist today but they aren't studied all that much anymore thankfully. But the menotoxin throughout the entire 20th century was considered a significant means of understanding menstruation.

And my favorite counter to that was Margie Profet's hypothesis of sperm borne pathogens. So she says yeah sure, menstruation is dirty, the reason it's dirty actually is that dudes are dirty and they send their dirty sperm in here and then we gotta clean it all up because we don't want to get those pathogens, we don't wanna get sexually transmitted diseases. So menstruation in her hypothesis is to remove the pathogens that sperm are sending up, not that menses itself is dirty. And so part of the reason that I think the terminal differentiation idea in particular was seen as so refreshing is it was trying to get out of that adaptation evolution conversation at all and say look, it's not any of that stuff, it's just this basic biological phenomenon. So I think it made an important contribution in that way but it also did what happens all the time to things that we gender feminine or that are more common in female bodies, which is that we call a lot of those functions useless.

Erin Welsh

Right. So in terms of the evolutionary significance of menstruation, where do you think then something like period suppressors come in? So for instance if you take continuous birth control packs without doing that skipped week or if you have a hormonal IUD where you just stop menstruating, where do you think that conversation should go?

Kate Clancy

So two things. One is I think a lot of people have really good reasons to want a need to suppress their menses. No matter how positive one might feel by the end of my book about periods, that doesn't mean that you then like have to menstruate. You know what I mean? This is not a call to say now that we understand periods better, everybody go out there and bleed, right? There are lots of reasons that it causes gender dysphoria, that it causes pain, that it messes with our schedules. And can we look at these broader structures and say why is the world set up so that it's so hard for us to bleed? Of course.

I'm menstruating right now, I'm on day two so I am very heavily menstruating as we speak. And I am kind of at that stage where I'm having to swap out pads, I'm wearing period underwear and I have to swap out pads pretty regularly. And so it's one of those things where I'm having to look at my schedule, look at my back to back meetings, and figure out how can I run in between multiple meetings to make sure I'm swapping out so I'm not bleeding onto my pants which I have done at work multiple times in my life because my meetings have gone too long and I haven't gotten a chance to swap things out. So in anticipation of that and not wanting that to happen, I've been running around quite a bit to swap out pads between meetings. So I share all of that, and I try whenever I am demonstrating to be public about when I am, but I share all of that to say still it's a giant pain in the butt, right.

And again, if that's the only reason you don't want to do it, that's a good enough reason to not want to do it. To the point of like is suppressing periods bad for you? I think it's an open question. I think this preeclampsia and this question of pregnancy practice, it does open up a question of if you are someone who wants to reproduce in the future, should we be doing a better job studying menstruation, processes of menstruation, and frequency of menstruation to see whether some of these hypotheses that we have that are indirectly supported by the evidence can actually be shown to be a real causal thing, right? And so I'm unwilling to tell any one person you need to get bleeding if you want babies, right. Because these are inferences that we can make from the literature that I think are strong.

But the thing is that the research hasn't been done to establish this causality. The one last point I'll make about this is one of the really frustrating things around hormonal contraceptives and IUDs is that far more people have unpleasant experiences with it than often admit it and even IUDs have a fairly high discontinuation rate, possibly as high as 50% depending on the study. And discontinuation of an IUD is challenging because the coercive pressure of medical doctors to keep you on IUDs is so strong that it can be very hard to find someone who will remove your IUD for you. And so you can be having months of distress, lost libido, just continuous spotting, not feel like you, have whatever the experience is that makes you say I want to get this IUD taken out, and you can't find someone who's gonna do it for you. It is a real problem that we make it so hard and that we prioritize efficacy over lived experience every single time when it comes to these contraceptives.

So I'm excited about the fact that there are people now starting to think about this and say maybe we should care about lived experience and side effects as well and start to think about and develop new technologies that allows people to have their contraceptive needs met, their suppressive needs met, but without having to endure so many other side effects. And again, half the people who take them don't have any of these problems, right. So to be clear, there's plenty of people, I know plenty of them, who are like you will take away my IUD from my cold dead hands, I never want this thing removed, or I'll keep it in as long as I possibly can and then I'll swap it out for a new one. Which is fantastic, I'm so glad for them. But I also know a lot of people who have been miserable and we just need to make sure that we're tending to all of the different people who have different experiences.

Erin Welsh

Yes, completely agree. Okay, we are going to take a quick break right here but stay tuned. We've gotten more menstrual talk for when we get back, including what the deal is with the COVID vaccine and periods.

TPWKY

(transition theme)

Erin Welsh

Welcome back everyone. So we've talked already about how there isn't really such a thing as a quote unquote "normal period" across the board, but people who menstruate often do notice when their period is outside of the norm for them. And one recent instance of this on a wide scale was breakthrough bleeding after getting the SARS-CoV-2 vaccine. Can you talk about your incredibly fascinating research into this pattern, how you got interested, what you found, and what sorts of reactions you got from the press and public?

Kate Clancy

Sure. This has been a real team effort, this project. The first person to notice that this was something we should be paying attention to was Katie Lee who is an assistant professor at Tulane and a former member of my lab, got her PhD here at Illinois. And Katie being affiliated at the time with a medical school was one of the earliest people to get the vaccine. So she was in a group chat with other people as they were all going over what side effects did you have? What did I have? And a few of them were like weird, period's different, wonder what that's about. And it was sort of from there that we began to have this conversation.

And I'm not an IUD user so for me I didn't have breakthrough bleeding but I noticed my first period after my first shot, I had one of the heaviest periods I've had in my life. The only heavier period I can think of is after my embryo, I had two failed embryo transfers before I had my second child. Those were incredibly heavy periods but they were because they were stimulated with hormones and stuff. But like that level of heaviness. So I just asked Twitter, again one of the reasons that I love and hope I will never miss Twitter, hopefully it will stay around in some form, is that you can learn from and listen to so many people by using that space.

And it went viral. By the end of the day Katie and I were already talking about and mocking up a first survey because we thought we have to look at this, there are people who are in distress, there are people who are equating it with infertility issues. And we immediately were like we know the biology of it enough to be very confident that that's not what's going on. But we also knew that just saying that wasn't gonna be satisfactory. So we thought we really need to do some kind of project that gathers this information and allows us to critically assess what's going on while also creating opportunities for listening and validation. As anthropologists, that's how we create our science. We also build in reflexive practices so that we are discussing our projects and thinking about and adding to things based on what our participants say.

So we got an IRB exemption and in our little IRB exemption form it was like how many people do you think will participate? And we said maybe 500. And we thought that was a stretch. Like that would be so cool if our survey got 500 people. I think we had 500 in the first hour it was open. By the time we closed we had... Once we did all the data cleaning, I think I wanna say 120,000 individuals. We had 165,000 separate responses but then removing some of the dual ones and stuff, I think it went down to about 120,000. And then our first paper we focused just on the first couple of months of data collection, so that was 39,000 participants. Just numbers that I don't normally work with. We had to try to beg for emergency funding from the university, which they were kind enough to give us in order to get some RAs to help us with all of the data cleaning.

And so this little fun project that Katie and I were like maybe we'll get an honors thesis out of it and we'll just have our own curiosity satisfied, turned into this ginormous international phenomenon. The other thing I want to point out is that in part because of the attention our research was getting, the NIH came up with supplementary funding in order to fund people looking at this phenomenon. And so then five more projects in addition to ours. Ours was never funded by NIH, we've tried four times now, but the NIH funded five other projects so that we knew we were not alone in doing this which was really another form of validation in many ways. It was great to have multiple people looking at this with different data sets and different methodologies.

And now the papers have all started coming out and we're all having all the same findings which again, given that the initial criticism of our work was that we were doing it in this way that centered participants and yes, it was snowball sampling, yes, it was self selective, it's not a random sample, we aren't comparing to people who aren't vaccinated. We didn't do the kinds of things that people like to hold up as methodological gold standards. But when you're trying to do things as it's happening and you feel you have ethical obligations to not create a condition that might encourage people or incentivize them to not get vaccinated, you're gonna do it the way we did it.

And again our findings ended up being the same as the folks who did prospective work which is that heavier and longer periods did happen in a subset of participants who got any of the mRNA vaccines in particular. I can't remember the name of the commission but a European commission has just released a requirement that in Europe at least the two mRNA vaccines must now disclose that a potential side effect is heavy menstrual bleeding. Again it's still really validating to see that because we were able to get that narrative out there, we were able to push back on the 'there's no real biological mechanism to explain it' which was what a lot of MDs were being quoted as saying. And we were able to push back on the idea that it was connected to fertility.

So this is an immune process, it's a downstream immune effect. Part of immune function is hemostatic, is related to changes in bleeding and clotting. So what's an organ that does a lot of bleeding and clotting? The uterus. So in some portion of people, a giant immune response is probably going to invoke a downstream effect on an organ that bleeds and clots. And in fact the participants that had it happen more, so of the heavy bleeders, they tended to be a little bit older and tended to be more likely to have already had children, so again they had more of that endometrial architecture. So were kind of more primed for something bloody happening to them. So again, our hypotheses were in a lot of ways supported by who it seemed to happen to more. And so it's less about fertility and more about you're just gonna have that architecture being like capitalized on a little bit more if you've got all this bloody clotty stuff happening prior to it.

Erin Welsh

Yeah. And breakthrough bleeding is something that a lot of people experience at various points but it can be worrying or disconcerting at the very least. And I feel like when you hear about a vaccine causing breakthrough bleeding, how do you reassure people that although the vaccine may have contributed to that or been a cause of that, how do you still talk about vaccines being safe? And I feel like part of it has to do with just talking about periods and period variability and so on. But yeah, I was wondering if you could talk a little bit more about that potential issue.

Kate Clancy

There's a couple of issues. One is that vaccine and drug treatment trials typically only ask one question about your period which is when was your last one? And they ask that question because they wanna know that you're not pregnant. And in fact, a lot of vaccine trials and drug treatment trials will say you cannot have conceptive sex during your participation. And if you are, you must be on a hormonal contraceptive. For a good reason, right, they don't want a potential fetus exposed during this testing period because that's not the purpose. The purpose is probably in this case testing an adult and looking at the effects on an adult. But what this does then is that if they're potential masking effects with a contraceptive and if they are then asking no other questions, then they never are gathering any of these data about well what does happen to your period after these drugs or vaccines or whatever?

So the fact that it's not even in the trial design is a problem because it means we just don't know what's going on. And I think that there are sort of three things to think about when we're thinking about a new medical treatment of any kind. There is efficacy, there's safety, and then there's also just side effects or what I've been calling lived experience, right. It is worth noting that chemotherapy can be very effective for treating many cancers and seriously affect quality of life. And if it has a really high chance of being effective, you will still go through it. Most people are still gonna say you know what, this is gonna be miserable, but it's better than being dead. I am going to make this choice, right. So I think there's this medical paternalism that often seems to say well we should probably not fully inform the ladies of how this might affect them because then they might not do it. And that is not what our data supports.

So our data support that our participants felt incredibly betrayed by not knowing ahead of time what to expect. They were not betrayed by having side effects like breakthrough bleeding or heavy bleeding, they were betrayed by never being told and never being studied. They also shared with us many stories of having this heavy or breakthrough bleeding and going to their doctors or other medical providers and then being mistreated in those sessions where they were told it's in your head, you're stressed out, it's not real, there's no biological mechanism or whatever the story was. And it was really distressing.

Something that we have in preparation right now that is really relevant to this is that one of my grad students, Urooba Fatima, who's just a brilliant qualitative researcher, has been looking at doing a sentiment analysis of people's descriptions of their vaccine experiences or their post vaccine menstrual experiences. And she was noticing that a huge proportion of the participants had what looked like negative and then positive affect appearing and always in that order in their description. And so she didn't dive in to figure out well why is this happening with most people? It's not all negative or all positive, and it's never positive then negative, it's negative then positive.

The negative affect terms were all describing the negative symptoms that they were experiencing with their periods. I'm fatigued, I'm tired, I don't feel good, various types of negative framed experiences of their heavy period. And then the positive words were all but I am so grateful to have this vaccine, I am so happy to be vaccinated, I am so glad that I got the vaccine, I feel so lucky, like all of these incredibly positive words. The negative experiences of the vaccine were not driving them to have negative sentiment toward the vaccine. What we saw instead were the people who had negative experiences with medicine had negative sentiment about the vaccine. So this idea that we shouldn't bother looking at this or we should only wait until post emergency authorization to bother to look at these adverse effects I think is really deeply problematic and again points to this bigger question of why are we so paternalistic towards patients, particularly patients with uterus?

Erin Welsh

Yeah. And hopefully it's something, I mean I always want to have hope, hopefully it's something that will change in the future. And in your book you have a chapter on the future of periods which I love. What positive changes do you wish to see in your period future and how do we get there?

Kate Clancy

That chapter went through so many different variants and really where I settled in terms of what I would like to see for period futures is more of a recognition of our bodies more generally. There's this concept of the bodymind, I cite a really lovely book by Doctor Sami Schalk called 'Bodyminds Reimagined'. And the concept of the bodymind is one that you see present in science fiction and fantasy quite a bit. And in general it's just like a feminist and black feminist concept that says why do we keep believing in this Cartesian dualism thing that says we have a brain, we have a body, and we can ignore the needs of the body in the pursuit of a life of the mind? People that don't have bodies that have a lot of needs, that might not be a challenging dualism to live in. People that have bodies that are tended to by other people also might not have too much of a problem living with this dualistic life.

So in particular, white men who maybe have lived their whole lives being served by other people, experiencing medicine that allows them to be able bodied for longer, perhaps do not ever have to menstruate, lactate, or gestate, or recover from any of those processes or be at more risk of conditions that come from any of those processes are gonna have a much easier time living a life of the mind. Like if someone is making me lunch every day and typing up all of my notes every day and I never have to care for children or gestate or anything, it's gonna be pretty easy. So I think the intervention is really we have to do a better job acknowledging that there are bodies and working to create communities that love and support lots of different bodies. And in many ways I'm borrowing from disability justice here as well.

And I'm saying this in a way that acknowledges this is not me coming up with this idea, this is me noticing the work largely of black feminists and other women of color working in many activist spaces who have been making these points for decades. And so I'm just sort of trying to bring that to an audience that might not be as familiar with that work. But to say that that's I think who we should be paying attention to and what we should be doing is again that we should be creating communities of care, acknowledging that we have needs that we have... We do these now, oh everyone gets a five minute bio break between Zoom meetings. You can't heat up your lunch, eat your lunch, hydrate, use the bathroom, swap out a tampon, and also perhaps pump breast milk in a five minute bio break. And so there's starting to be some acknowledgement that we have bodies that need to be tended but we're not going nearly far enough.

And so to me it's more just like starting to imagine what are the kinds of futures, not just for people who have periods, but people who have lots of different types of bodies, all of whom deserve to be tended, so that all of us can be present. One of the places I find this most distressing is the complete removal of hybrid options and masking across most university settings and, and most other public settings now, even among scientists who should know the science and know that we are still living in an airborne pandemic are still walking around unmasked all the time. And what that tells people who are immune compromised or disabled or would prefer to avoid long COVID is that their lives just really aren't worth protecting. We're not gonna do this minimal thing and put this scrap of fabric over our face to just make you not just feel more comfortable but be more safe and be made to feel welcome.

So what are the ways that we can think about that when it comes to all the different ways we can protect each other? We can be masking, we can be filtering, we can create more time and space for people to get places, we can create hybrid options. There are some people that I know who menstruate so heavily that they spend a decent portion of their period just sitting on the toilet because they're like what's the point of swapping out tampons? I could just sit here and let it come out. Hybrid option would be kind of nice for those folks, right? Like we don't need to enforce these ableist returns to work when instead we could try to imagine a different future instead of a return to a really problematic past.

Erin Welsh

What was the process of writing this book like? Were you surprised by anything that you learned while researching it or by any of the reactions that you got when you said that I'm writing a book about periods?

Kate Clancy

A lot of directions that could go in answering this. There was a lot of confusion I think in my decision to write a book about periods and also to write a book, period. Sorry, no pun intended. Because as a scientist, it's not something we do as often because it doesn't quote unquote "count". My writing a book does not support my promotion in any way, if anything it detracts because all of the years I spent writing, revising, I went through two rounds of peer review for this book as well, one of which took over six months because it was during the pandemic and the second one took almost as long too, actually. And so it took a really long time, it took literal years of my life. So people were mostly book perplexed, like why would you do that? And I think once I sort of talked through well here's why I care and here's the sort of the big idea of the book, then I think people were supportive.

I think the main thing I was surprised by is that I could do it honestly. Because it's six chapters, it was six really long papers. And so thinking through argumentation and stuff when you're trying to write six long papers all by yourself is a lot. But in terms of topically, the kinds of things that surprised me, I would say a lot of the menstrual preconditioning was really exciting and interesting to think through. I mean I think probably the most surprising piece or the most rewarding thing to do in this book was how I think in many ways it got to remain a feminist book and a book that came from a place of what's called feminist objectivity. So trying to expose and think about histories, biases, assumptions implicit in the literature.

And when you strip those things away and you move away the menotoxins and the terminal differentiation and the eugenic concepts of normal and when you pull all of that away and you look at what menstruation is, it is just one of the coolest things that the body does. Like it creates an opportunity for your body to practice a thing that it has to get good at later. It is simultaneously remodeling and sloughing off at the same time, like it is doing all of these repair processes that would if anybody gave a crap and actually paid attention to in the tissue engineering space, we would have already solved so many tissue regeneration questions in that discipline. But ew, menstruation, so people haven't paid attention to it. I mean I have a collaboration where that is something we've been doing for almost 10 years. But that's because the collaborator is my husband, nobody else is gonna listen to me about this stuff. And so I think for me that's the thing is that like it is an incredibly cool process, it is an incredibly cool function of the body.

And if there hadn't been so much bias baked into our understanding of it for multiple centuries, this would be a thing taught alongside dinosaur bones. This would be a thing taught alongside the planets. Like it would be one of those basic functions that everyone would be like hey, have you guys learned about this? Because this is this cool thing, like all of us were in a womb at some point, right. We should be really fundamentally curious about what happens in there. And how is it that there's not an entire high school class just devoted to it. So I think that's for me the sort of surprising amazing thing is that of course I already love this stuff because this is what I do. But I think it became even more obvious with feminist objectivity that it's even cooler than I thought it was. And I think that's my biggest hope for this book is that other people will arrive at that same conclusion.

TPWKY

(transition theme)

Erin Welsh

Dr. Clancy, thank you again so, so much for joining me. That was absolutely fantastic. And if you listeners also enjoyed this conversation and would like to learn more, check out our website thispodcastwillkillyou.com where I'll post a link to where you can find 'Period: The Real Story of Menstruation' as well as a link to Dr. Clancy's excellent podcast, fittingly called Period Podcast. And don't forget you can check out our website for all sorts of other cool things including but not limited to transcripts, quarantini and placeborita recipes, show notes and references for all of our episodes, links to merch, our bookshop.org affiliate account, our Goodreads list, a firsthand account form, and music by Bloodmobile.

Speaking of which, thank you to Bloodmobile for providing the music for this episode and all of our episodes. Thank you to Lianna Squillace for our amazing audio mixing. And thanks to you, listeners, for listening. I hope that you liked this bonus episode and are now so excited to be part of the TPWKY Book Club. A special thank you as always to our fantastic, generous patrons. We appreciate your support so very, very much. Until next time, keep washing those hands.