

## Benefits & Issues with Birth Control | Dr. Sara Gottfried & Dr. Andrew Huberman

What are your thoughts on sort of pure estrogen Birth control is what I learned when I was in college is that birth control is basically tonic estrogen So constantly taking estrogen estrogen women are taking estrogen so that they don't get the estrogen priming of progesterone you're not getting any ovulation And I've known women that have been taking oral con or that took oral contraception as like estrogen pills basically for 5 10 15 years Are there long term consequences of this as it relates to pregnancy PC os menopause What if so what are some of those consequences Um What are your concerns What do you like about oral contraceptives What do you dislike about them I like how balanced you ask that question So women who take oral contraceptives as long as you're describing like 10 years or longer we call those Olympic oral contraceptive users in terms of benefit I think that especially when they first came out and even now it gives women reproductive choice and that's essential As you may know our reproductive choice has been declining recently So I'm a big fan in that regard and we've got a lot of data to show both the risks and also the benefits of it So I'll speak first into the benefits because uh I'm gonna get on a soapbox a little bit about the risks So we know that it reduces the risk of ovarian cancer So there's something about this idea of incessant ovulation that is not good for the female body So if you look at for instance women who are nuns who uh don't take oral contraceptives and they have a period every single month of their reproductive lives they have a greater risk of ovarian cancer So if you look then at women who have uh several babies and they've got a period of time when they're pregnant that they're not ovulating and then they breastfeed for some period of time they have a lower risk of ovarian cancer So oral contra contraceptives help with reducing ovulation and reducing risk We know that if you take the oral contraceptive for about five years it reduces your risk of ovarian cancer by 50% And that's significant because we're so poor at diagnosing ovarian cancer early There's really no method that's really effective We use C A 125 and ultrasound screening especially in women who are at greater genetic risk But even that often we diagnose it you know in a later stage maybe just because that statement is going to highlight for a number of people Um The question of what are some of the symp earliest symptoms that people can recognize without a blood test So is o

ovarian cancer is it gonna be pain So the problem is the symptoms are so vague and they're so non-specific One of the most common symptoms is bloating And we've already talked about constipation We've talked about how women have this longer track G I track And so bloating is a really common experience for most women you can have bulk symptoms you know feeling like your your lower belly is kind of pressed out So the way that we inform women in terms of watching for this is to get regular gyne classic exams Um for women who are at high risk or they have for instance an ultrasound for some reason and it shows a mass that we're concerned about There's a way to triage that in terms of what kind of evaluation that they need And that's a situation where you might get a blood test called the C A 129 C A 125 The um yeah the problem is the symptoms are so vague It could be it depends on how big the tumor is how much bulk you have what it's pressing on So if it if um taking estrogen and thereby reducing the frequency of ovulation lowers the risk of ovarian cancer Should women that are even women who are not sexually active So they're not they're not actively trying to get pregnant or avoid getting pregnant But if they're not sexually active then the probability of conceiving unless they go through some iu I or some other route is is very low as far as I know Um So I was taught in high school anyway Um would they be wise to suppress ovulation for periodically using hormone based contraception just so that they can offset the risk of ovarian cancer That's a very rational question And I would say that's what mainstream medicine has had at its back to recommend oral contraceptives not just for women who are seeking contraception but for acne for painful periods for really kind of the drop of a hat they're prescribing oral contraceptives That's what I was taught to do But there's so many consequences And I think the issue here is more about consent because in OBGYN and I started out as a board certified OBGYN and I now mostly see men but I was taught as an obgyn to convince women to go on the oral contraceptive And I think a lot of that is pharmaceutical influence So maybe we could talk about the risks and why the answer is no to your question Um As we do that could I just ask is the um the so called ring the new it used to be called the NVA Ring Maybe that's a brand name But when I was in college there was all this discussion about the ring All right by both men and women for reasons that don't belong on the podcast Um Use your imagination folks So um is the the ring obviously it's not oral it's not oral hormone contraception but it's hormone based right The ring is releasing estrogen locally as opposed to taking it orally But would you would you slot

it under what you're about to tell us in terms of the concerns So we have less data about the ring So the oral contraceptive is two hormones It's ethanol estradiol and it's a progestin So it's not the normal uh progesterone that your body makes that your ovaries make and your adrenals make It is a synthetic form of progesterone and it is the same progestin similar same class that was shown to be dangerous and provocative in the women's health initiative So I'm not a fan of progestins I do not recommend them for any woman unless the consequence of not taking them is surgery or some other Um you know unless it gives them some freedom in some way So I don't like progestins The uh NuvaRing is estrogen plus progestin but it's released transdermally through the vagina So given the the way that um it's delivered to the vagina the doses are lower than what's taken orally But in terms of some of the risks that I'm about to talk about we don't know about much of the data We think that it's similar there's probably a spectrum of risk and the NuvaRing is a little more towards the middle than you know what I'm talking about with oral contraceptives Are you ready for that Yeah I'm ready for the risks Ok So like with almost any pharmaceutical the oral contraceptive depletes certain micronutrients So magnesium there's certain vitamin B6 that are depleted Uh it also affects the microbiome that data is not as strong but there seems to be some effect and there's also an increased risk of inflammatory bowel disease and autoimmune condition it increases inflammatory tone So the studies that I've seen increase one of the markers of inflammatory tone high sensitivity CRP by about 2 to 3 X It seems to make the hypothalamic pituitary adrenal axis more rigid so that you can't kind of roll with the punches and wax and wane in terms of cortisol production the way that you can off the birth control pill it can affect thyroid function I'm thinking of the slide that I have that has like 10 problems associated with the oral contraceptive But that's what I can remember right now That's very helpful And it makes me wonder whether or not if on the one hand oral contraceptives are protective in women It's ovarian cancer but then they have these other issues Yeah there's one other I want to mention anytime you take oral estrogen it raises sex hormone binding globulin and you've talked to other podcast guests about this Kyle I think sex hormone binding globulin I think of it as a sponge that soaks up free estrogen and free testosterone So when you go on the birth control pill you raise your sex hormone binding globulin it soaks up especially free testosterone And for some women it's not a big deal They don't notice much of a difference But then there's a phenotype maybe related to CAG repeats on the androgen receptor who are exquisitely sensitive to that

decline in free testosterone So this then opens the portal of talking a little bit about testosterone in women So we've mentioned already that it's the most abundant biologically the most abundant hormone in the female system Even though men make almost 10 times as much or even more than 10 times It is so important for women It is essential to so many things not just sex drive and muscle mass and seeing a response to resistance training but also confidence and agency And so those women who are so sensitive to their testosterone level they've got this high sex hormone binding globulin their testosterone declines What they describe is vaginal dryness maybe a decline in sex drive But there's also this bigger issue related to confidence in agency Even risk taking from studies that we've done with MB A students that I think is a serious problem Maybe the most important out of all of these things is that it can shrink the clitoris by up to 20% 20% And that includes a regression of the of the nerves that innervate the the clitoris Is that I mean that's a very good question as a neuroscientist Yeah I would think uh I used to teach uh the neural side of reproductive health We need to do a series on sexual health Maybe you would co-host that with me because I I we could certainly use your expertise I think Um yeah that's a dramatic that's a dramatic number Yeah But then let's go back to the sacred marketing If I've got a woman that I think should not be on the birth control pill maybe she's taking it for acne or she's taking it because her periods were a little painful What I'm gonna do is say let's leverage these other ways of making your period less painful Let's take the message of your painful periods and figure out OK it's your inflammatory tone and we give you some visual oil and Sp MS maybe a little aspirin when you've got your period Like let's find some other ways to deal with it than to take the oral contraceptive which you have not received informed consent about because it can trig your clip by up to 20% Now that usually convinces most people to converse the elevation in sex hormone binding globulin does not seem to go away when you come off the birth control pill To me that is the biggest problem with prescribing oral contraceptives