

Impact of Drinking Alcohol & Smoking Nicotine & Marijuana on Fertility | Dr. Andrew Huberman

I think a lot of people aren't aware of just how striking an effect these certain behaviors that you want to avoid can have in diminishing your fertility for both males and females So let's talk about those So the first one is smoking and when we talk about smoking here we're talking about smoking nicotine and we're talking about smoking cannabis And indeed there are strong data and I will put a reference to one of the better larger analysis of these data There's strong data showing that cannabis reduces fertility Now I can already hear the screams from the back although they're probably um fairly drawled out screams from the back of people saying they smoke cannabis and they had no trouble conceiving certainly there will be exceptions But whether or not you're male or female smoking cannabis is a bad idea If you want to conceive a healthy child can you still conceive a healthy child while smoking cannabis Probably certain people can Many people will greatly decrease the probability of a healthy fertilization and pregnancy by smoking cannabis There are excellent data to support that as well Nicotine both smoked or vaped is going to disrupt the process of fertilization and can disrupt pregnancy dramatically Ok So just avoid it altogether How does this happen Well it turns out that smoking increases what are called reactive oxygen species This greatly disrupts the quality of the egg at the level of the spindle and mitochondria and a number of other features And in the sperm turns out that smoking doesn't necessarily disrupt the sperm directly Although it can cause DNA fragmentation which can cause all sorts of abnormalities can prevent fertilization can lead to birth defects in the offspring But more importantly it increases what are called reactive oxygen species in the seminal fluid in the semen that contain the sperm This very under normal circumstances under healthy circumstances beautifully orchestrated chemistry of fluid that allows a sperm to thrive in their trajectory and attempt to fertilize the egg and lead to a healthy pregnancy So if you are a smoker and you want to conceive the best advice I can give you is to quit smoking And yes that includes cannabis as well Now I am not somebody who believes that cannabis across the board is not useful There are medical applications and other applications I talk about that in an episode all about cannabis for health and disease and notice health was in there too So you cannabis smokers don't come after me with uh I guess

whatever it is with um bongos and pipes or whatever it is that you want or with vapes the point is that while it can be beneficial for certain populations it's certainly bad for others And if you're trying to conceive it is bad for fertility and for a healthy pregnancy Ok Now that's smoking uh and vaping by the way Ok Vaping is included there Now the next category of don't relates to alcohol Now everyone has heard that drinking during pregnancy is a bad idea You may have heard and some people have talked about the fact that there are cultures in which they allow if you will or even condone Sadly one or two drinks while pregnant provided it's just champagne or something of that sort That is a terrible idea I did an episode all about alcohol both its potential health effects of which they turned out to be zero And yes that includes red wine It is far better to not drink at all And if you're going to drink the limit if you're a healthy adult who's not trying to conceive not pregnant and you don't have issues with alcoholism is probably two drinks per week total That's right Two drinks per week total And that's the level that you really should consider if you're a drinker if you're somebody who's trying to conceive However for a woman who becomes pregnant the total number of drinks that you should allow yourself per week while pregnant and breastfeeding is indeed zero there is absolutely no evidence that one can quote unquote get away with drinking during pregnancy And people say well I had a perfectly healthy child but of course you don't know what the health of that child would have been Had you not drank at all Now I'm not here with any generally strong stance against alcohol I myself am uh somebody who has a drink every once in a while Although I'm I don't consider myself somebody who has a strong proclivity for alcohol And of course I'm at this moment I'm not trying to conceive Children and I'm certainly not pregnant So that's safe for me Um But frankly I haven't had a drink in a very long time And so I don't miss it and that's me But I do realize that a lot of people enjoy alcohol And so it's that two drinks per week limit that really sets the upper limit and threshold beyond which you start running into issues with cellular mutation you start running into issues of oxidative stress greatly increase cancer risk in particular breast cancer risk all that's covered in the alcohol episode that we did You can find it Huberman lab dot com and time stamped If you want to navigate to specific topics and so forth find out all about the data supporting the statements that I'm making so on and so forth Now if you're somebody who's seeking to conceive or you fall into this category that some couples describe themselves as we're not trying but we're not not trying meaning they're not using birth control they're kind of letting chance run its

course Well then you should definitely be aware of the data showing that even just one bout one bout of so called binge drinking which is 5 to 6 drinks in a given night or half day in a 12 hour period One bout of 5 to 6 drinks If you're a woman or you're a man greatly increases both the likelihood of mutations in the embryo that would result from a fertilization And at the same time for reasons that should be obvious to you based on all the biology we've talked about a greatly reduced probability of fertilization Now that absolutely does not mean that you should use the ingestion of five or six drinks as a method of birth control That is not what I'm saying here What I'm saying is is that if you go out on a given night and you have five or six drinks and you happen to become pregnant the probability that that pregnancy will be disrupted in some way is greatly increased what the exact consequences are No one can tell you But also if you're somebody who is interested in conceiving a child well then you absolutely should abstain from ingesting drinks more than one or two during the time in which you're trying to conceive And ideally it would be zero and you certainly would want to avoid drinking multiple drinks per night And so this idea of going out and having you know three or four drinks or four or five drinks in a given night at a time in which you're also trying to conceive Children The biology tells us the epidemiology tells us that this is just a terrible idea It's going to reduce the likelihood of fertility and successful pregnancy And if there is a successful pregnancy the word success needs to be in quotes Right I mean I think every parent every species for that matter wants to increase the probability of having healthy offspring And so uh to my mind anyway and to the Obgyns and the urologists that are focused on fertility that I spoke to everyone will say try as hard as you can to avoid the so called big shrinking episodes And again these episodes are one night of consuming 5 to 6 drinks Now another important thing to remember in this context is that the negative effects of consuming five or six drinks in a given night extend over many weeks following the ingestion of that alcohol If you're a male what that means is that's going to impact the quality of your sperm and greatly decrease the likelihood of successful fertilization and or healthy pregnancy over the period of that entire spermatogenesis window which is as we talked about before 60 to 90 days right 60 to generate the sperm And then in some additional time for the sperm to be transported to the point where they could be ejaculated if you're a woman and you have five or six drinks on a given night well then you are going to disrupt the quality not of just the egg that eventually ovulates but indeed the entire pool of follicles that leaves the

ovarian vault and reserve and from which the one egg will be selected In other words you are reducing the quality of all of the eggs that you happen to deploy that month Now some of you who were really following the biology earlier might say well what if I have those five or six drinks during the time in which I'm menstruating just in which there's bleeding present And therefore I haven't yet ovulated Ah but if you remember the biology we talked about earlier specifically there is a subset of follicles and eggs that leave that ovarian reserve quite a bit before that one egg is selected for and ovulates And of course there are all the different hormonal cascades in the general milieu of the ovary which are important and are being regulated by different hormones And yes indeed the regulation of those hormones is strongly impacted by alcohol through a number of different pathways through the regulation of the neurotransmitter gaba up in the brain It's actually a lot of gabba and gabba receptors in the hypothalamus the very region from which gonadotropin releasing hormone Our old friend from a couple of hours ago in this discussion to disrupt GNRH secretion you can disrupt pituitary function with alcohol Again and again what we're seeing is that consuming more than one or two drinks per week of alcohol is really detrimental to the entire process of fertility and the entire process of healthy pregnancy And that's true from both the male side and the sperm and is true from the female side and the egg So my simple advice on this is if you are wishing to have a healthy fertilization and pregnancy the best thing to do would be avoid alcohol together And if you're going to drink to really limit that drinking to one or two drinks per week maximum