

Cell Phones & EMFs Reduce Sperm Health & Testosterone | Dr. Andrew Huberman

Now a topic that is sure to be a bit controversial but it really shouldn't be because the data at least to me are very clear is this issue of phone use and sperm quality Now this can open up a whole array of issues related to things like emfs and you've got people out there that have you know ideas about five G and all of this stuff that is not what this discussion is about The discussion I'm about to have with you relates to the fact that the electromagnetic fields and the heat related effects of smartphones can indeed have a detrimental effect on sperm quality And yes indeed on testosterone levels as well I'm gonna refer you to a paper Uh We will link it in the show note captions The title of this paper is Effects of mobile phone usage on sperm quality No time dependent relationship on usage A systematic review and updated meta analysis This is a paper that came out in 2021 and talks about the fact that phones emit a radio frequency electromagnetic waves which are called called RF radio frequency emws electromagnetic waves at a low level between 82 2200 megahertz that can be absorbed by the human body We know this Ok This is not controversial and have potential adverse effects on brain heart endocrine system and reproductive function that has been established Keep in mind there is basically no controversy that radio frequency waves and emfs can have a negative impact on biological tissues The question is how intense are those radio frequency waves and emfs and how detrimental are those on those biological tissues Ok It's a matter of degrees but there is very little controversy as to whether or not they have an effect on biological tissues And I'm aware of absolutely zero data showing that they can have a positive effect on biological tissues Since what we're mainly talking about now are smartphones We want to separate out the heat effects of smartphones from the EMFS related to the fact that they are Wi Fi smartphones or they're using cellar towers and Wi Fi one or the other a combination Ok So there are a number of different things in the phone that could be detrimental We need to separate those out Why Well because you might have heard that carrying your phone in your pocket can reduce your testosterone levels and sperm count and guess what That is true The data contained within this meta analysis and other meta analysis clearly point out that it can reduce sperm count and maybe testosterone levels significantly But certainly sperm count and motility significantly It reduces sperm quality

So should you avoid putting your phone in your pocket You certainly your front pocket I would suggest yes Right If you are somebody who is seeking to conceive right I'm not somebody who is gonna stop using my smartphone I don't expect anyone's gonna stop using their smartphone The question is should you carry in your front pocket If you're a male I think to be on the safe side the answer is probably avoid doing that too much of the time Ideally don't do it at all Then people will say well what if I turn off the Wi Fi or I turn off the cellular access Then is it still a problem Well it's a problem due to the heat related effects And then people say well I don't actually feel the heat of the phone It doesn't get that warm but the temperature effects of the phone it turns out are enough even under conditions in which people don't report it to be uncomfortably warm that it can change the temperature milieu of the testicle in ways that can diminish sperm quality How much and how that relates to fertility and healthy pregnancy not clear But since we're talking about things to avoid if your goal is to have a healthy fertilization in pregnancy well then by all means just don't carry it in your front pocket Then people say well what about back pocket or what about backpack look it's very clear that avoiding being too close to the phone is probably better for your sperm quality than putting the phone very close to your testicles or anywhere else on your body But it's also the reality that most people are going to carry a phone nowadays All right It's just the reality I think all I think the current estimates as discussed in this paper that 90% of the human population has a smartphone 90% which is incredible the adult population of course uh although a lot of kids have them as well So this paper goes on to detail a number of different studies and outcomes from studies but basically what they find And here I'm paraphrasing is that uh the data indicate that sperm quality declines when people start using a mobile phone So from the point they start using a mobile phone regardless of the usage time This is important It used to be thought that it was four hours a day or more of holding your phone or having that phone close to your body was going to diminish sperm quality It turns out that it's not related to usage time That's even the title of the paper It's just the fact that people are using mobile phones is reducing sperm count and quality That's the reality is it entirely responsible for all the reductions in sperm quality and maybe even the reductions in testosterone levels that we're observing from decade to decade going forward I doubt that's the case Is it likely to be one of the major players I've got my bet on the fact that it is based on the data that I've observed And so if any of you would like to peruse the data in this meta

analysis they're quite good This study looked at 18 studies that include 4200 and 80 samples they were able to separate out the radio frequency versus the heat effects and they were able to eliminate this time of usage Um variable that previously we thought if you were exposed to a lot of um cell phone contact that it was far worse than if you were exposed to a little bit Turns out if you're exposed to any at all you're going to diminish sperm quality What does that mean Does that mean that no matter what you do if you own a smartphone that you're going to diminish sperm quality I think the short answer is yes but that you can mitigate it What might you do Well keeping your phone away from your groin or as far from your groin as possible if you're a male who's wishing to conceive and maybe even a male who's wishing to maximize his testosterone levels because it does appear that radio frequency waves and the heat from the phone So both of those factors independently and together of course can disrupt the lighting cells of the testes and the production of testosterone and intra testicular testosterone is important for sperm production The exact biological variables leading to all these changes isn't exactly clear But if you're like me you say ok probably not a problem for most males to carry their phone but probably best to not carry it in the front pocket Maybe even avoid carrying the back pocket as well Again in the future we will have an episode all about Bluetooth We'll talk about um uh various aspects of emfs It's a super interesting uh data set and it's a data set which there's a ton of controversy Um It's uh really interesting however and there are more and more quality data coming out all the time And I think going forward we are going to see that indeed there are some negative effects of smartphones related to both their radio frequency um transmission and the fact that they generate heat and in general heat is not good for biological tissues