



R. Stan Williams, MD

Harry Prystowsky Professor of
Reproductive Medicine
Chairman, Department of
Obstetrics and Gynecology
University of Florida



May 21, 2014

Alcohol, Smoking, and Drugs: Effects on Fertility

Q: Is there any effect on ectopic pregnancy?

A: Ectopic is primarily dependent on the tubal function itself. Now I am sure there are correlations, so women who have tubal disease, i.e., pelvic inflammatory disease or another infection, they are more likely to have developed an infection if they have used those substances and so there is that correlation. I don't think the compounds themselves would cause any problem in tubal transport.

Q: Any effect on kids with cleft palates?

A: I didn't run across any information about cleft palates. I am not an expert in this, but cleft palate is a multifactorial condition, so there is a part of it that is genetic and a part that is not genetic—health and environmental factors play to that also.

Q: What are the effects of stopping Adderall for 6-12 months, same as smoking?

A: I haven't ever seen evidence about that, but my guess is that it would be the same; 6-12 months after you remove the offending toxin, there should be an improvement. I haven't seen that specifically.

Q: Any relation between substance use and endometriosis?

A: I haven't seen that either, but there is a lot of evidence that dioxin in the atmosphere definitely can cause endometriosis. There is actually an entire monkey colony that was accidentally exposed to real high levels of dioxin and every one of the female monkeys has developed endometriosis. So, there are a lot of estrogen-like substances in the environment and the link is that they can contribute to endometriosis. With these drugs themselves, I haven't seen any evidence of that.

Q: What are the general statistics on infertility?

A: Again, 10-12% of couples will experience problems. That statistic has held steady for 30 to 40 years since the U. S. government has been looking at National Survey statistics.

Q: What advice would you give someone in treatment or recovery about infertility?

A: I think, based on concept, if it is the female, there is going to be a much stronger correlation with damage to her eggs, so I would want to wait the 6-12 months after removal of that toxin. With a male, he is regenerating spermatozoa continuously, so even after a month or two, I would assume it is fairly safe to use the sperm. It takes 3 months to make a new sperm from start to finish, so certainly after 3 months, all the exposed sperm are gone. Actually, I had a couple last week, where both of them were recovering from addiction. One was out for 5 or 6 years and the other was out 6-8 years, but their infertility had nothing to do with their prior addiction.

Q: Does having sex daily decrease your chance of fertility?

A: There is a fine line between. The male is making sperm every day, but he does have to store up a certain amount of sperm to impregnate his wife. For men with normal to high sperm counts, having intercourse every day is probably not going to be bad. If you have a patient with borderline or low sperm count and he is having really frequent ejaculations, then he is not going to be able to store up enough to be useful. We advise our couples that they should be having intercourse about every other day.

Q: What about the effects of invitro vs conjugal relations for infertility?

A: We look at mostly invitro studies here and that is actually the gold standard. That really removes a lot of those other variables out of the equation, so when you see an effect in a couple going through invitro, that's a pretty powerful statement. Most of the studies I showed are invitro studies.

Q: Effects of multiple drug abuse on fertility?

A: I would assume the impact was additive. I think that is one of the problems with teasing this data out. There are a lot of people who both use alcohol and smoke. So how would you get a pure alcohol population, a pure smoker population, and a population who uses both and then study? I assume the impact is additive.

Q: Is there any way to reverse the damage done to a woman's eggs or ovaries?

A: So, you take an ovary and you expose the ovary and its entire cohort of eggs to a toxin. The eggs do have a pathway of maturity, so they are at different stages of maturity. The more mature the egg is on its pathway the more susceptible to damage it is going to be, and the ones who are in the resting stage are less susceptible. So it is a continuum of susceptibility. Now for sperm, there is a brand new batch of sperm every three months. You can expose today's batch of sperm to a pretty horrible toxin, and if it doesn't turn off spermatogenesis, 3 months later he is making sperm that have never been exposed to that toxin.

Q: What about after coming clean and being in recovery?

A: The best evidence we have is stopping smoking and you see the reversal of that in 6 to 12 months. I am assuming that is the reversal time of any kind of toxic exposure.

Q: What about the fertility of a women that are in their 40s?

A: When women enter into their 40s, their fertility is dramatically lower, simply because of their age. If I have a 41 year old woman who walks into the office, I am already thinking, "Oh, it is going to be difficult to help her get pregnant." This is as opposed to a 31 year old. If you layer on top of that the 41 year old has been smoking continuously for the past 20 years, she has damaged her eggs on top of her age decline and so, it is a double-whammy.

Q: Can you talk about how today most people are delaying childbirth?

A: Over the last 10-15 years there has been an increasing number of women who are delaying childbirth because of professional careers, to their 30s or even their mid to late 30s. The ability to freeze and store eggs really has only been solved since 5 years ago. Now there are IBF programs in New York City where a lot of these professional women live, and half of their IBF program is made up of women coming in to freeze eggs because they are still not ready to have children. They still want to advance another 5 years in their career before they consider having children. So, egg freezing has become big business because of that delay in childbearing.