Effects of Smoking in Infertility and Impotence.

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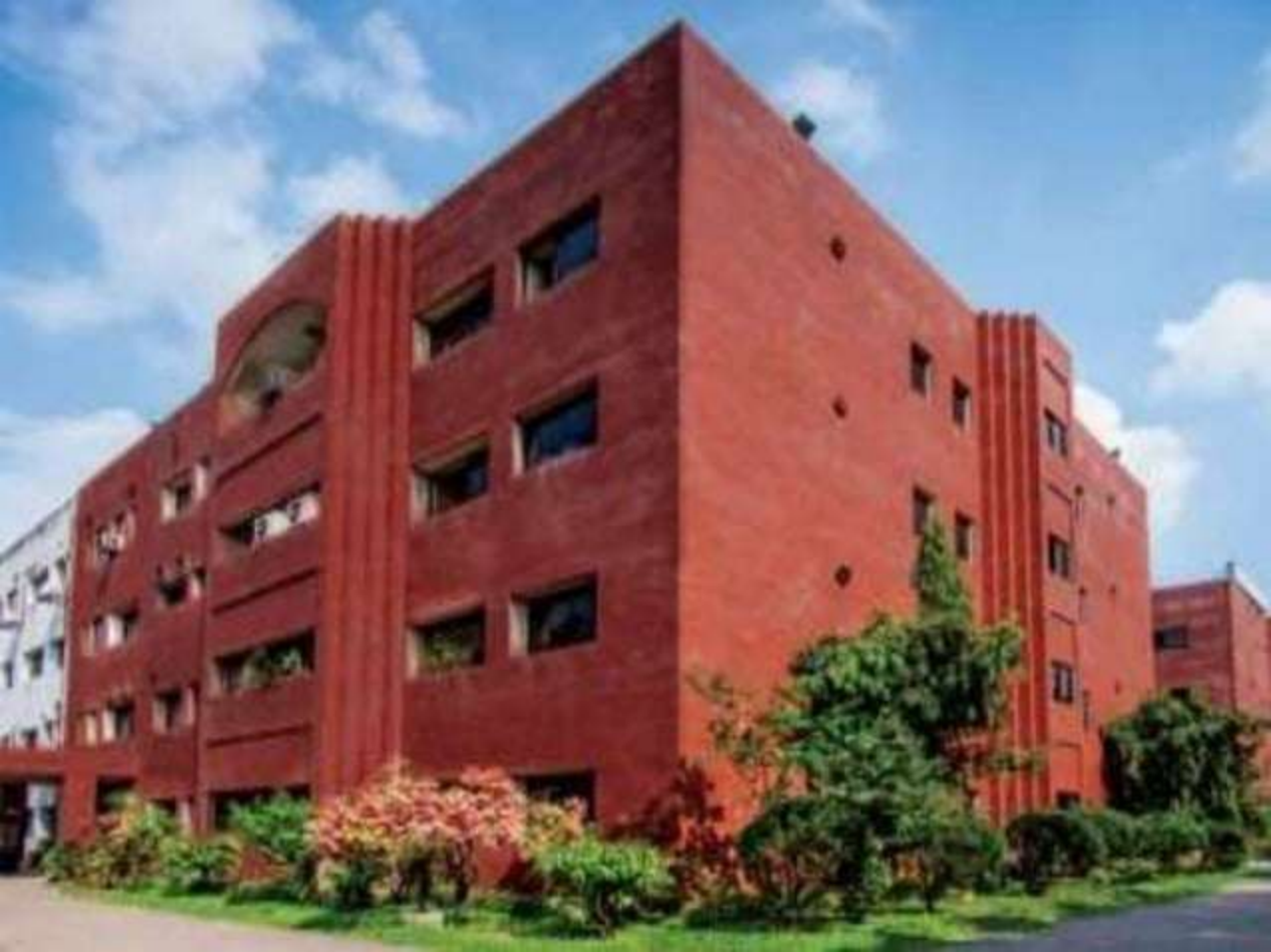


Smoking is a practice in which a substance is burned and the resulting smoke breathed in to be tasted and absorbed into the bloodstream. A variety of plant materials are smoked, most commonly associated with tobacco as smoked in a cigarette, cigar, or pipe. Tobacco contains nicotine, an alkaloid that is addictive and can have both stimulating and tranquilizing psychoactive effects.

Infertility is "a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse" (WHO).

Erectile dysfunction (**ED**) is the inability to get or keep an erection firm enough to have sexual intercourse. It's also sometimes referred to as **impotence**.

- **An erection** starts from brain; something you saw, feel, smell, heard or thought makes your nerves send chemical messages to the blood vessels in phallus.
- The arteries relax and open to let more blood to flow in; at the same time the veins close up. Thus pressure traps in within the corpus cavernosa; the penis expands and holds the erection.
- When the inflow of blood stopped and veins open, penis reaches detumescence.

Introduction

- Most people understand that smoking increases the risk for cardio-vascular, and lung disease. Many do not realize that smoking can also lead to problems with fertility and impotency in both male and female. Erectile dysfunction and pregnancy complication rates are also increased with smoking.

Introduction (contd..)

- Women who smoke – or are exposed to other people's smoke – have an increased risk of infertility and are more likely to take longer to get pregnant.
- In fact, passive smoking (inhaling someone else's smoke) is only slightly less harmful to fertility than active smoking

Introduction (contd..)

- Pregnant women who smoke can find it more difficult to quit if they have a partner who smokes.
- Research shows it is much easier for people to stop smoking if they do it with their partner. Deciding to quit together is a great way to increase fertility and chances of having a healthy baby

Introduction (contd..)

- Chemicals (such as nicotine, cyanide, and carbon monoxide) in cigarette smoke speed up the loss rate of eggs.

- Unfortunately, once eggs die off, they cannot regenerate. This means that menopause occurs 1 to 4 years earlier in women who smoke (compared with non-smokers).

Introduction (contd..)

- Male smokers can suffer decreased sperm quality with lower counts (numbers of sperm) and motility (sperm's ability to move) and increased numbers of abnormally shaped sperm. Smoking might also decrease the sperm's ability to fertilize eggs.

Introduction (contd..)

- Women who smoke do not conceive as efficiently as nonsmokers. Infertility rates in both male and female smokers are about twice the rate of infertility found in nonsmokers. The risk for fertility problems increases with the number of cigarettes smoked daily.

Introduction (contd..)

- Even fertility treatments such as IVF may not be able to fully overcome smoking's effects on fertility. Female smokers need more ovary-stimulating medications during IVF and still have fewer eggs at retrieval time and have 30% lower pregnancy rates compared with IVF patients who do not smoke.

Introduction (contd..)

- Because smoking damages the genetic material in eggs and sperm, miscarriage and offspring birth-defect rates are higher among patients who smoke. Smokeless tobacco also leads to increased miscarriage rates. Women who smoke are more likely to conceive a chromosomally unhealthy pregnancy (such as a pregnancy affected by Down syndrome) than nonsmoking mothers. Ectopic pregnancies and preterm labor also occur more often among female smokers.

Introduction (contd..)

- Men whose mothers smoked half a pack of cigarettes (or more) a day had lower sperm counts. Smoking during pregnancy also can lead to growth restriction of the baby before birth. Children born with lower-than expected birth weights are at higher risk for medical problems later in life (such as diabetes, obesity, and cardiovascular disease). Children whose parents smoke are at increased risk for sudden infant death syndrome (SIDS) and for developing asthma.

Introduction (contd..)

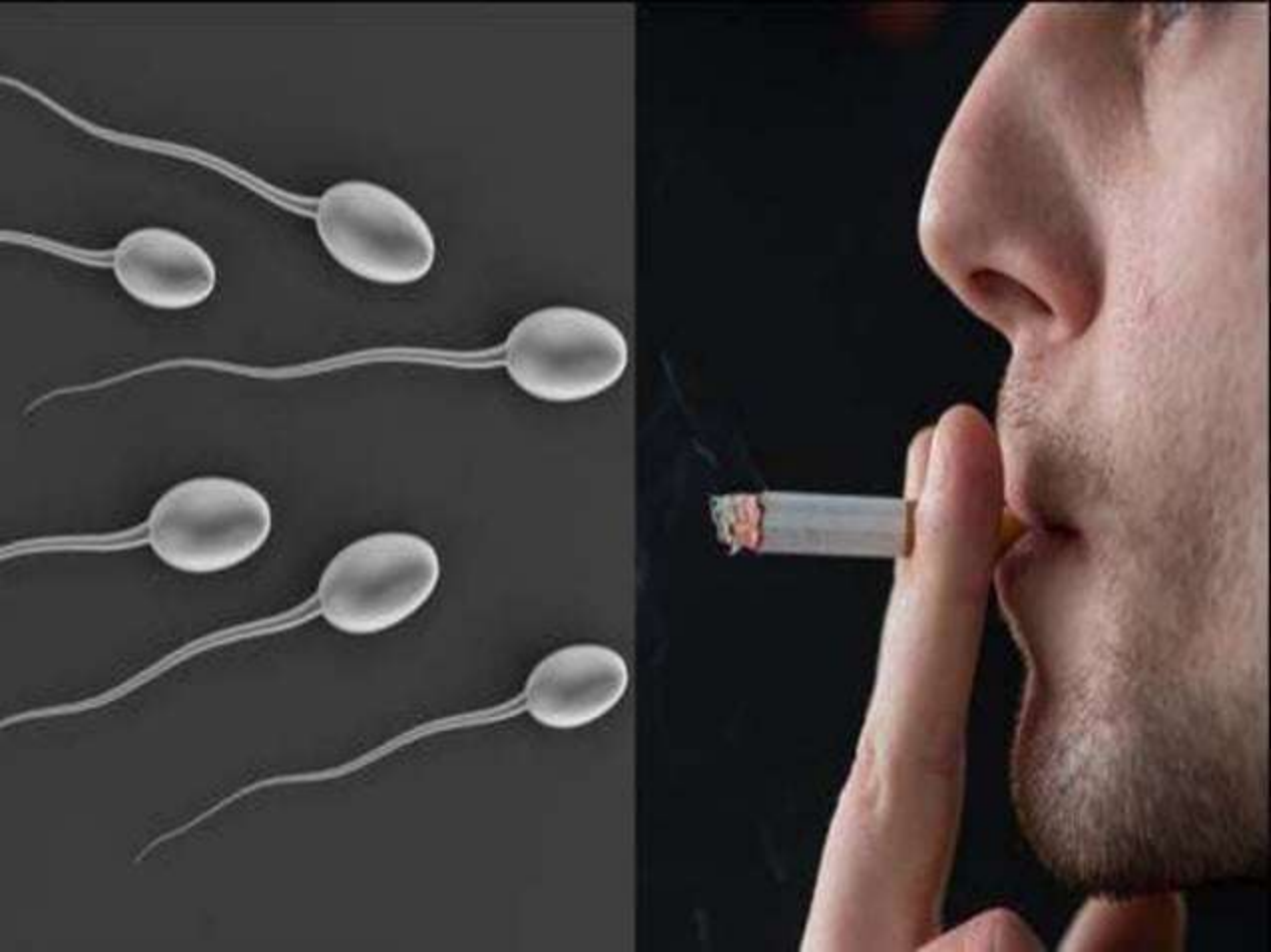
- Women exposed to secondhand smoke can suffer all the above health risks.
- Quitting smoking can improve fertility though the decrease of the egg supply cannot be reversed. The rate of pregnancy complications due to smoking decreases the longer a person has not smoked.
- Quitting smoking can be very, very difficult but studies show that the chance for success is much higher if you work with your health-care provider and/or a support group.

Introduction (contd..)

- Sometimes, temporary use of a nicotine replacement (such as nicotine gum or patch) and/or prescription medication called bupropion can improve quitting smoking rates, and you can use these while trying to conceive, if needed. Though it generally isn't advised to use these during pregnancy, you and your health-care provider might consider their use during pregnancy after weighing the risks and benefits.

Introduction (contd..)

- Smoking and consumption of tobacco have in general been a growing concern for women all over the world. It is a major health problem affecting developing countries especially amongst the youth and teenagers. The smoking rate in females has increased from 2.9% to 4.6% from 2009 to 2018 and is growing at a faster rate than males.



Smoking and Reproductive Health

- Smokers are more likely to have fertility problems than nonsmokers. If smoke for many years, or smoke many cigarettes per day, risk for fertility problems is increased.
- 10 cigarettes per day for 20 years is same effects 20 cigarettes per day for 10 years.
- Problems may occur due to smoking
  - Ovulation problems
  - Damage to your reproductive organs
  - Damage to your eggs or premature menopause.

- Secondhand smoke can affect your fertility
- Smoking increases the chance of miscarriage
- Smoking causes fertility problems for men and women
- Stop smoking to increase your chances of getting pregnant.
- Smoking also causes impotency for male due to decrease blood supply to sex organ.
- Smoking causes foetal anomalies.

Smoking increases the chance of miscarriage

- The pain of miscarriage can be devastating. Due to the toxins from cigarettes, smokers are more likely to suffer from miscarriage than nonsmokers. In addition, smoking increases several health risks during pregnancy, such as preterm labor and ectopic pregnancy.
- Despite these warnings, millions of women of childbearing age still continue to smoke. By doing so, they risk their own health and the health of their babies.

Smoking causes fertility problems for men

- Men that smoke cigarettes are at an increased risk for the following male fertility problems:
- Lower sperm count and sperm motility problems (motility is the ability of sperm to swim towards and penetrate the egg)
- Hormonal issues
- Erectile dysfunction - trouble getting or maintaining an erection
- If you are trying to get pregnant without success and your partner smokes, encourage him to quit. The sooner he quits, the sooner you may be able to conceive


Smoking may reduce
the blood flow
and causes impotence

Stop smoking to increase your chances of getting pregnant.

- Fertility often improves for women after they stop smoking. Studies show that female smokers can increase their chances of conceiving by quitting at least two months before trying to get pregnant. Quit smoking and you may just find it easier to get pregnant.

The facts about smoking and having a baby

- Smoking affects each stage of the reproductive process, including egg and sperm maturation, hormone production, embryo transport, and the environment in the uterus. It can also damage the DNA in both eggs and sperm.
- Smoking during pregnancy increases the risk of pregnancy complications, low birth weight, and birth defects
- Exposure to cigarette smoking during pregnancy can impact on the development of a female foetus' ovaries.

The facts about smoking and having a baby

- Smoking increases a woman's chance of experiencing a miscarriage or ectopic pregnancy. The risk of miscarriage increases with the amount smoked (1% increase in risk per cigarette smoked per day).
- Women who smoke reach menopause almost two years earlier than non-smokers and women who are exposed to second-hand smoke reach menopause more than a year earlier.

The Good News

- Stopping smoking can improve natural fertility and some of the effects of smoking can be reversed within a year of quitting.
- Women who stop smoking before conception or within the first three months of pregnancy reduce their risks of their baby being born prematurely to be compared with non-smokers.
- Women who stop smoking early in their pregnancy have babies with similar birth-weights to those of non-smokers. Women who stop before their third trimester can avoid much of the effect smoking has on birth-weight.

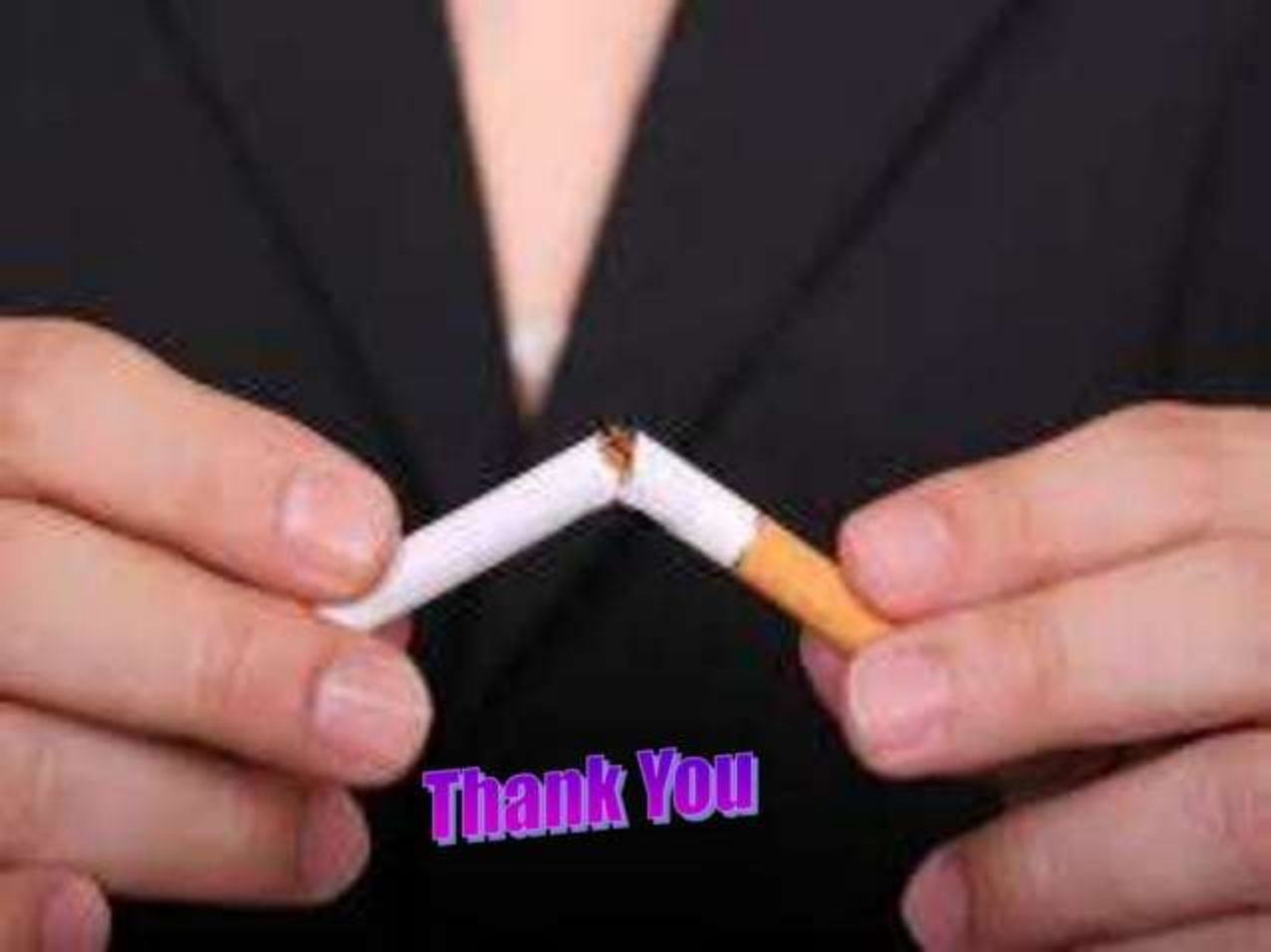
Related articles

- Topic: Smoking and Male Infertility: An Evidence-Based Review
  - Harley et al. (2015) conducted a stud and highlights the evidence that links smoking with male infertility.
- Relationship between semen quality and tobacco chewing in men undergoing infertility evaluation
  - Use of tobacco by a group of Indian men who were undergoing infertility, evaluation was strongly associated with a decrease in sperm quality and lesser extent with oligoasthenozoospermia or azoospermia.
- The hazardous effects of tobacco smoking on male fertility
  - Outlined comprehensively the hazardous effects of tobacco smoking on male fertility.

- Effects of cigarette smoking on erectile dysfunction
  - Cigarette smoking to erectile dysfunction, epidemiological associations.
- The Link Between Cigarette Smoking and Erectile Dysfunction: A Systematic Review
  - Smoking is strongly associated with ED. Endothelial dysfunction together with increased oxidative stress represent major pathophysiologic mechanisms, and smoking cessation may mitigate this effect.

Reference

- American Society for Reproductive Medicine: Smoking and infertility
- American Council on Science and Health: Cigarette Smoking and Sexual Health
- American Society for Reproductive Medicine: What am I doing that can cause infertility?
- Harlev, A., Agarwal, A., Gunes, S. O., Shetty, A., & du Plessis, S. S. (2015). Smoking and Male Infertility: An Evidence-Based Review. *The world journal of men's health*, *33*(3), 143–160. doi:10.5534/wjmh.2015.33.3.143


Thank You