



# Smoking and Infertility

## Patient Preparation

Evidence that cigarette smoking is detrimental to female and male reproductive health is increasing. Couples attempting pregnancy should avoid smoking beforehand. The following is a summary of scientific data from the latest research on cigarette smoking and its effect on reproductive health.

### **WOMEN'S REPRODUCTIVE HEALTH AND SMOKING**

Smoking can increase the time it takes to become pregnant by:

- Reducing fertilization of eggs
- Allowing fewer embryos to develop after fertilization
- Causing higher miscarriage rates

Smoking has a prolonged toxic effect on the way a woman's ovaries function. Prolonged exposure to tobacco damages ovarian follicles that contain eggs.

The ovaries of women who smoke demonstrate:

- Fewer mature eggs retrieved during IVF
- Eggs that are prone to abnormalities
- Diminished ovarian reserve and thus increased the risk for premature ovarian failure.
- An earlier onset of menopause

Women who smoke have an increased risk of:

- Pelvic Inflammatory Disease (PID) up to 70% more than non-smokers
- Infertility due to Fallopian tube disease
- Infertility attributed to Cervical factor
- Ectopic pregnancy

There is a 34% reduction in pregnancy rate among women who smoke during their assisted reproduction treatments, compared to women who never smoked.

Pregnant women who smoke have a higher incidence of:

- Bacterial vaginosis which is associated with late pregnancy miscarriage
- Pre-term labor
- Delivery of low-birth weight infants at added risk of infant mortality and morbidity.

### **MEN'S REPRODUCTIVE HEALTH AND SMOKING**

Men are also affected by cigarette smoking. Clinical and research studies have shown that smoking has direct toxic effects on the testicle and on hormone production which affects the production of sperm.

Smoking may increase their risk of:

- Male infertility
- Erectile dysfunction
- Miscarriage in your partner: Recent findings show a significant increase in miscarriage from second hand smoking by husband or when both partners are smokers.

The sperm of men who smoke show:

- A decreased count
- Reduction in motility (percentage of sperm that can swim quickly and straight)
- An increase in the number of abnormal sperm

The good news is that men who quit smoking showed eventually an improvement in their sperm count, motility, and number of normally-shaped sperm (morphology).

### **CONCLUSION**

Quitting cigarette smoking can have a positive impact in your efforts to conceive a baby and your overall health.

It is important to also remember that smoking during pregnancy causes lower birth weights and second hand smoke can cause respiratory problems for your baby. So smoking is best avoided if your goal is conception and a healthy baby.

Reference:

Robert J. Stillman, Smoking and Infertility. Submitted to the Prevention of Infertility Committee for the American Society of Reproductive Medicine.

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