

# What You Should Know About Infertility

**I**f you and your partner have been trying to get pregnant for a year or longer, chances are that one or both of you may have fertility problems. Infertility is a common reproductive health problem, affecting more than 6 million American couples—about 10% of the population who are in their reproductive years. The stress of infertility and its treatments is overwhelming. Learning as much as possible can help to make the stress more manageable.

## What Is Infertility?

Infertility is defined as the inability to conceive a child within 1 year of having unprotected sexual intercourse. The process of conception is fairly complex. Hundreds of variables must occur in a precise manner for conception to occur and for the pregnancy to continue successfully for 9 months. When just one variable is impaired, it can cause infertility. Even the most fertile couple has only a 20% to 25% chance of getting pregnant in any given month.

## What Causes Infertility?

Infertility may be caused by a single factor either in you or your partner, or a combination of factors that may prevent conception or continuation of a pregnancy. About one third of cases are caused by problems that affect men, while one third can be attributed to problems that affect women. One third of cases are due to a combination of

problems from both partners.

**Female Infertility.**—About 35% of female infertility problems are caused by damaged or blocked fallopian tubes. Tubal inflammation (salpingitis), usually caused by the sexually transmitted disease chlamydia, can cause scarring in the fallopian tubes. This can block or damage the tubes and prevent the fertilized egg from getting to the uterus. Tubal inflammation and infection may go unnoticed, or may cause pelvic pain, unusual vaginal discharge, or fever.

Ovulation disorders account for approximately 25% of infertility cases in women. Ovulation is regulated by the hypothalamus and pituitary gland in a woman's brain, along with the sex hormones, luteinizing hormone and follicle-stimulating hormone. Any disruption in the communication among these components can cause problems with ovulation. The most common symptoms of ovulation problems are irregular or absent menstrual periods. Other conditions that can interfere with ovulation include elevated levels of the hormone prolactin (the hormone that stimulates production of breast milk), polycystic ovary syndrome, and early menopause. Benign uterine fibroids, pelvic adhesions, general health and life-style, and exposure to

toxic substances can also impair fertility. Your health care provider can explain these conditions and how they can affect your fertility.

Endometriosis is found in about 35% of infertility cases. This condition occurs when tissue that makes up the lining of the uterus grows outside the uterus, usually on the ovaries or the lining of the abdomen. This misplaced tissue can cause scarring and inflammation. The connection between endometriosis and infertility is not completely understood. Endometriotic cysts in the ovary are often associated with infertility. Also, the scar tissue formed by endometriosis around the ovaries and fallopian tubes may prevent the egg from reaching the fallopian tubes.

Certain medications, thyroid problems, cancer and its treatment, and chronic medical conditions such as diabetes and lupus can also cause fertility problems in women.

**Male Infertility.**—More than 90% of male infertility cases are caused by abnormal sperm production or function and problems in sperm delivery. Other conditions that can affect male fertility include a man's general health and life-style (cigarette smoking, alcohol consumption, and substance abuse), exposure to toxic substances, and testicular exposure to excessive heat such as frequent use of hot tubs or saunas, which can hinder sperm production.

## When Should I Seek a Medical Consultation?

If you and your partner have no known reproductive health problems and have

*This Patient Handout was prepared by Amanda J. Bach using materials from the American Society for Reproductive Medicine (<http://www.asrm.org>), the National Women's Health Resource Center (<http://www.healthywomen.org>), and the Mayo Clinic ([www.mayoclinic.com](http://www.mayoclinic.com)).*

## Infertility

not been able to conceive for 12 months, you should seek medical help. Consider talking with a reproductive endocrinologist (a doctor who specializes in infertility) if you are age 35 years or older and have not been able to conceive after several months of trying; have irregular menstrual cycles; known fallopian tube problems; a history of miscarriage; a medical condition (such as diabetes) that can cause fertility problems; or if your partner has a sperm deficiency or abnormality.

### How Is Infertility Diagnosed?

For both partners, the standard infertility evaluation should include a medical history and physical examination to rule out any underlying medical conditions that may be affecting fertility, as well as blood tests to determine hormone levels. A man's evaluation also will include a semen analysis to count the number of sperm and to detect any abnormalities in the shape or movement of the sperm. A woman's evaluation also will include confirmation of ovulation and a hysterosalpingogram. This is an X-ray of the uterus and fallopian tubes that is used to identify any blockage or other problems. Laparoscopy is another procedure used to diagnose the possible cause of infertility. A thin, lighted viewing device called a laparoscope is inserted through a small incision in the abdomen to examine the uterus, ovaries, and fallopian tubes for abnormalities or scarring. Endometriosis is commonly found using laparoscopy.

**Unexplained Infertility.**—For about 10% to 15% of couples, a specific reason for their infertility is not found. A diagnosis of unexplained infertility is made when all other causes have been ruled out by the standard infertility examination of both the man and woman. This does not mean that there is no reason for their infertility; it means that the reason is not known.

### How Is Infertility Treated?

Treating your infertility will depend on its cause, how long the problem has existed, your age and your partner's age, and what you are willing to do. Fertility treatments make pregnancy possible for many couples who seek treatment.

Most infertility cases are treated with fertility drugs or surgery to repair reproductive organs. Fertility drugs are used to regulate ovulation by correcting hormonal imbalances or to stimulate the normal process of ovulation. Fertility drugs are injected or taken in pill form, and they can cause physical and emotional side effects. Your health care provider can discuss with you how different fertility drugs work, any possible risk factors, and other concerns you may have about fertility drug treatments.

In-vitro fertilization (IVF) is another widely used type of infertility treatment. In-vitro fertilization procedures involve the handling of eggs and sperm outside the body in a laboratory, and often are used together with fertility drugs. In vitro fertilization, or IVF, is the most commonly used form of assisted reproductive technology (ART), resulting in about 45,000 births each year in the United States. First, you take fertility drugs to ensure you have enough eggs for the procedure; then the eggs are removed from your ovaries and combined with sperm in a laboratory dish. If fertilization occurs, the resulting embryos are transferred into your uterus. Gamete intrafallopian transfer, or GIFT, is similar to IVF, but the combined eggs and sperm are immediately placed into your fallopian tubes so fertilization can occur naturally. Zygote intrafallopian transfer, or ZIFT, is similar to GIFT, but fertilization is ensured before the zygote is transferred to your fallopian tubes. Intracytoplasmic sperm injection, or ICSI, is a highly specialized procedure

## Resources

### Association of Reproductive Health Professionals

(<http://www.arhp.org>)

### American Society for Reproductive Medicine

(<http://www.asrm.org>)

### National Women's Health Resource Center

(<http://www.healthwomen.org>)

### International Council on Infertility Information Dissemination

(<http://www.inciid.org>)

in which a single sperm is injected into a single egg and the resulting embryo is placed in your uterus. Sometimes, with IVF or ICSI, a procedure called assisted hatching is used to improve embryo implantation in the uterus. Before the embryo is transferred to the uterus, its outer covering is thinned with a special solution to make it easier for the cells of the embryo to emerge and implant in the wall of the uterus. Other ART options are available such as using donor eggs or donor sperm with IVF or other procedures, or surrogacy, when the fertilized egg is placed into another woman's uterus and she carries the pregnancy to term.

### Coping With Infertility

Infertility causes emotional, physical, and financial stress that most couples aren't prepared to deal with. You and your partner will experience a lot of unfamiliar and uncomfortable feelings during this time, and it is important to understand that the feelings you have are real and natural reactions to infertility and the stress of treatment. Do not hesitate to seek counseling and let those caring for you give you the support you need.