

# Treating Infertility

**A**bout 15% of couples in the United States are infertile. Infertility is a condition in which a couple has been unable to get pregnant after 12 months without the use of any form of birth control. Before being treated for infertility, you and your partner must be evaluated by a doctor. This may help pinpoint the cause or causes of infertility. The type of treatment you receive depends on what may be causing the infertility. This pamphlet will tell you about:

- Causes of infertility
- Treatment options
- Other choices

Infertility often can be treated. Lifestyle changes, medication, surgery, or assisted reproductive technologies may help.





## Infertility

For healthy, young couples having sexual intercourse, the odds are about 20% that a woman will become pregnant during any one menstrual cycle. This figure starts to decrease in a woman's late 20s and early 30s and decreases even more after age 35 years. A man's fertility also declines with age, but not as early. Many women and couples today choose to delay parenthood. Because they are older, they then may have problems conceiving.

Infertility may be caused by a problem with the woman, the man, the couple, or their lifestyle. **Sexually transmitted diseases (STDs)** also may reduce a couple's fertility. Infertility may be caused by more than one factor. Sometimes a cause of infertility cannot be found.

If you are unable to become pregnant after a year of unprotected sex, your doctor can evaluate you and your partner. If you are older than 35 years or have certain medical problems, tests may be done earlier.

## Treatments

To treat infertility, your doctor may suggest medication, surgery, or assisted reproductive technologies

or may refer you to a doctor who specializes in treating infertility. In some cases, treatments are combined to improve results. For instance, drugs and insemination may be used at the same time. Whether the problem is with one or both partners, a number of treatment options can be considered.

You should know the expected success rates of the treatment you use and how success is defined. Some clinics define success based on the number of live births. Others define success based on the number of pregnancies achieved (even if it does not result in a live birth). The Centers for Disease Control and Prevention (CDC) list the success rates for most clinics in the United States on their web site ([www.cdc.gov](http://www.cdc.gov)). Discuss the success rates of your options with your doctor.

If the problem is linked to lifestyle, there are things you can do to help. For instance, your doctor may suggest you change when and how often you have sex. You may need to lose or gain weight, increase or decrease exercise, or stop smoking.

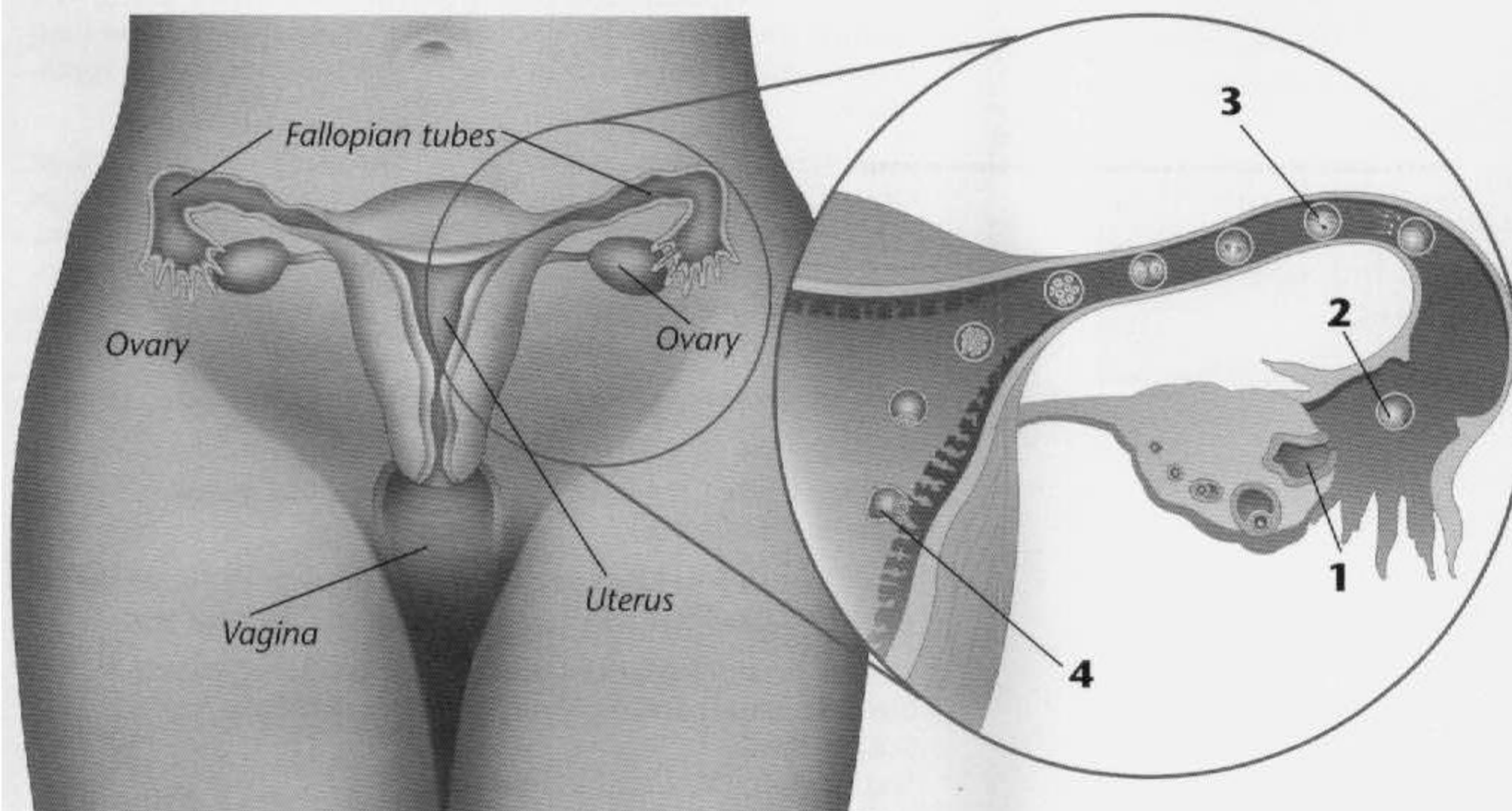
Medical treatment may be needed to help you become pregnant. If so, you should be aware of what is involved. Some treatments require much expense and effort from both partners. You may want to check your health insurance to see if the treatments are covered.

### Ovulation Induction

If the woman does not ovulate (release an egg from one of her ovaries), she may be given medications to cause ovulation. Some women who ovulate need to release more eggs in order to get pregnant.

The medication used most often to cause ovulation is clomiphene citrate. It may be used for several cycles. The dosage may be increased over time if ovulation does not occur.

If pregnancy does not occur after treatment with clomiphene citrate, a medication called hMG



With normal ovulation, each month an egg is released (1) and moves into one of the fallopian tubes (2). If a woman has sex around this time, an egg may meet a sperm in the fallopian tube and the two will join (3). This is called fertilization. The fertilized egg then moves through the fallopian tube into the uterus and becomes attached there to grow during pregnancy (4).



may be given by injection. This drug stimulates the eggs to develop. Blood tests and **ultrasound** often are used to monitor the development of eggs.

Most women who take ovulation induction drugs begin to ovulate regularly. If there are no other problems, more than half of these women become pregnant within 6 treatment cycles. If a woman does not start ovulating, other tests may be done.

A **multiple pregnancy** may occur with the use of these drugs. The risk is higher with hMG than with clomiphene citrate. Rarely, a condition called **ovarian hyperstimulation syndrome** may arise. If you are at risk for this condition, treatment may be altered, and you will be closely monitored.

### **Surgery**

If the fallopian tubes are blocked, surgery may be done to open or remove them. Surgery also may be done to:

- Remove growths such as polyps or fibroids
- Remove scarring from a previous surgery, infection, or **endometriosis**
- Treat endometriosis (if found)

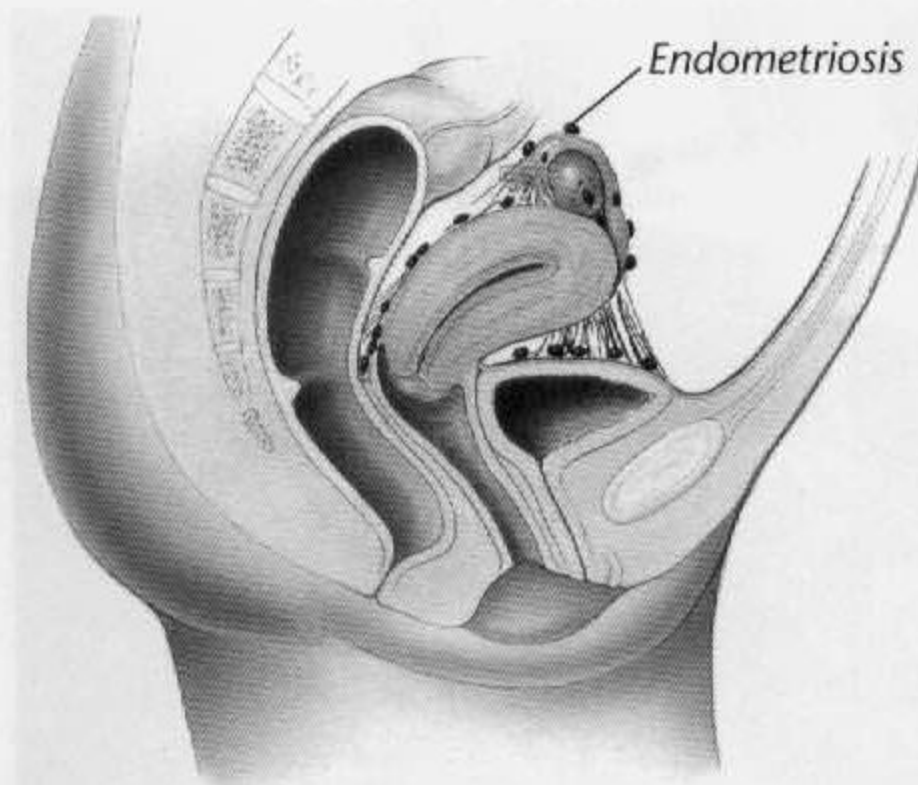
If the problem is with the man's sperm, surgery can sometimes correct it. The success of surgery depends on the type and extent of the problem.

### **Assisted Reproductive Technologies**

Assisted reproductive technologies (ART) involve processing human eggs and sperm or both to help an infertile couple conceive a child. This is done in a lab. Sometimes, ART treatments use donor eggs or donor sperm. The sperm also may be obtained through **masturbation** or with a special condom used during intercourse. In some cases, sperm may be obtained surgically through **sperm aspiration** or **testicular biopsy**. Following are some of the ART treatments available to couples trying to conceive.

**Insemination.** With insemination, sperm is placed in a woman's uterus by means other than sex. In most cases, the sperm are treated in a lab to decrease the risk of infections and increase the chance of fertilization. Around the time of ovulation, the sperm are placed into the uterus by the doctor.

The woman's partner or a donor may provide the sperm for insemination. Sperm from a donor is frozen, and the donor is checked to be sure he is



*Endometriosis may be the cause of infertility. If it is found, surgery may be needed to treat it.*

free of certain medical problems. These problems include some genetic disorders and STDs, including **human immunodeficiency virus (HIV)**. Talk with your doctor about the specific tests that are done at the lab where you are treated.

**In Vitro Fertilization.** With in vitro fertilization (IVF), sperm from the man are used to fertilize eggs from the woman in a lab. The fertilized egg then is placed in the woman's uterus to grow.

For IVF, eggs are removed from the ovary just before ovulation. Medication usually is used to cause more than one egg to mature. Eggs are removed with a needle that is inserted through the vagina and into the ovary. Ultrasound is used to guide the needle. The eggs then are withdrawn through the needle. Pain relief or a sedative may be given. Either your partner's or a donor's sperm may be used for IVF.

The eggs are combined with healthy sperm and watched in the lab to see if they become fertilized. A few days later, one or more fertilized eggs (embryos) are placed in the woman's uterus through her vagina. This is called embryo transfer. The unused fertilized eggs can be frozen and stored for later use.

The success rate of IVF depends on the woman's age and the reason for the infertility. As with ovulation medications or other procedures, possible side effects of IVF include a multiple pregnancy and ovarian hyperstimulation syndrome.

**Gamete Intrafallopian Transfer.** Gamete intrafallopian transfer (GIFT) is similar to IVF. Like IVF, eggs are removed from the ovaries using a needle





and ultrasound guidance. Unlike IVF, eggs are fertilized in the woman's body, not in a lab. During **laparoscopy**, eggs and sperm are placed in the fallopian tube, where fertilization may result. GIFT has about the same success rates as IVF. It is more costly, though. The possible side effects include a multiple pregnancy and ovarian hyperstimulation syndrome.

**Zygote Intrafallopian Transfer.** Zygote intrafallopian transfer (ZIFT) is a combination of IVF and GIFT. With this procedure, the eggs from a woman's ovaries are fertilized in a lab and one or more embryos are placed in the fallopian tubes rather than the uterus. This is done by laparoscopy.

The success of this technique is about the same as IVF and GIFT. It also is more costly. The possible side effects include a multiple pregnancy and ovarian hyperstimulation syndrome.

**Intracytoplasmic Sperm Injection.** Intracytoplasmic sperm injection (ICSI) is most often done if there is a problem with the man's sperm. Healthy sperm are removed from the man's semen and eggs are retrieved from the woman. The sperm may be obtained through masturbation or using a special condom during intercourse. Sometimes sperm aspiration or testicular biopsy may be used if sperm cannot be obtained through masturbation.

In a lab, one sperm is injected into each egg's center. The eggs are checked later to see if any are fertilized. Fertilized eggs, which have now developed into an embryo, are then placed in the

woman's uterus to grow. They also may be frozen for later use.

ICSI offers some couples who have had few options in the past a way to conceive their own child. Pregnancy rates with ICSI are about the same as those with IVF.

### **Other Choices**

You and your partner should give careful thought to all your options. You may want to think about other choices, such as adoption or childfree living. Discuss your feelings with your partner. Sometimes counseling can help to sort out these feelings. Support groups made up of other infertile couples also may help.

### **Finally...**

Infertility often can be treated. Lifestyle changes, medication, surgery, or assisted reproductive technologies may help. After your evaluation, talk with your doctor about treatment options for you and your partner. Infertility evaluation and treatment requires a big commitment from both partners.

## **Glossary**

**Endometriosis:** A condition in which tissue similar to that normally lining the uterus is found outside of the uterus, usually on the ovaries, fallopian tubes, and other pelvic structures.

**Human Immunodeficiency Virus (HIV):** A virus that attacks certain cells of the body's immune system and causes acquired immunodeficiency syndrome (AIDS).

**Laparoscopy:** A surgical procedure in which a slender, light-transmitting instrument, the laparoscope, is used to view the pelvic organs or perform surgery.

**Masturbation:** Self-stimulation of the genitals, usually resulting in orgasm.

**Multiple Pregnancy:** A pregnancy in which there are two or more fetuses.

**Ovarian Hyperstimulation Syndrome:** A condition caused by overstimulation of the ovaries that may cause painful swelling of the ovaries and fluid in the abdomen and lungs.

**Sexually Transmitted Diseases (STDs):** Diseases that are spread by sexual contact, including chlamydial infection, gonorrhea, genital warts, herpes, syphilis, and infection with human immunodeficiency virus (HIV, the cause of acquired immunodeficiency syndrome [AIDS]).

**Sperm Aspiration:** The removal of sperm from part of the male reproductive tract, such as the epididymis, vas deferens, or testicle.

**Testicular Biopsy:** A procedure to obtain a sample of tissue from the testicles.

**Ultrasound:** A test in which sound waves are used to examine internal structures.