

## Evaluating Infertility

About 10% of couples in the United States are infertile. Couples may be infertile if the woman has not been able to conceive after 6–12 months of having sex without the use of birth control. The number of months depends on many factors, such as your age, your partner's age, and how long you have been trying to get pregnant.

If you and your partner are trying to have a child and you have not gotten pregnant, you may want to have an infertility evaluation. Tests can be done to find the cause of the problem. Based on the results of these tests, treatment may be needed. This pamphlet explains:

- What an infertility evaluation involves
- Testing for infertility
- Treatment options

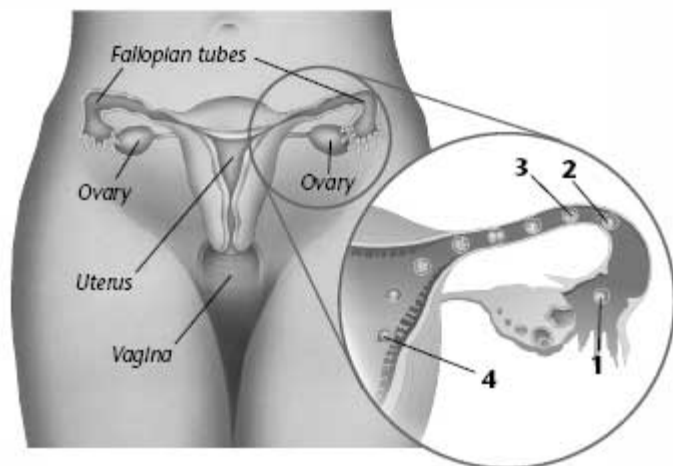
### Conception

The process of becoming pregnant starts with ovulation, the release of an egg from a woman's ovary. In an average 28-day menstrual cycle, ovulation occurs about 14 days after the first day of your last period. Once an egg is released, it can be fertilized for about 12–24 hours. Fertilization can occur if you have sex during or near the time you ovulate.

When the man ejaculates during intercourse, his semen releases into the *vagina*. Semen is the fluid that carries the sperm. Sperm travel up through the woman's cervix and out into the fallopian tubes. Sperm can live in the tubes for 3 days or more. If a sperm and egg join, fertilization occurs.

The fertilized egg then moves through the fallopian tube into the *uterus*. It attaches there and begins to grow. All these events must take place for pregnancy to occur. If there is a problem in this chain of events, infertility may result.

Before being treated for infertility, you and your partner must be evaluated by a doctor. This may help find out the cause of infertility.



*Each month during ovulation 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 tube and the two may 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).*

## Causes

Infertility may be caused by more than one factor. Some are easy to find and treat, while others are not. The factor may relate to the woman (65%) or the man (20%). In some cases, no cause can be found in either partner (15%).

The couple's age can be a factor. For healthy, young couples, the odds are about 20% that a woman will conceive in any one menstrual cycle. This figure starts to decline 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. For this reason, older couples may not want to wait 6–12 months to seek care if they are having problems conceiving.

Male factors most often involve problems with the amount or health of the sperm. Abnormal hormone levels may be a cause. Infection or scarring from a *sexually transmitted disease (STD)* also may be a cause. Female factors also may involve abnormal hormone levels. The ovaries may not produce enough eggs at the right time. Scarring or blockages in the cervix or tubes also may be a cause.

Lifestyle factors, such as poor nutrition, *anorexia*, and obesity can play a part in infertility. Exposure to a drug called diethylstilbestrol (DES) can cause problems. This might be a concern if you were born in the United States before the late 1970s or in another country before the 1980s. Other health problems also can play a role.

## Testing

The decision to begin testing depends on a number of factors. They include your age and your partner's age, as well as how long you have been trying to get pregnant. You and your partner will receive care as a couple. Testing involves an evaluation as follows:

- Physical exam
- Medical history
- Semen analysis
- Ovulation check
- Tests to check for a normal uterus and open fallopian tubes
- Discussion about how often and when you have sex

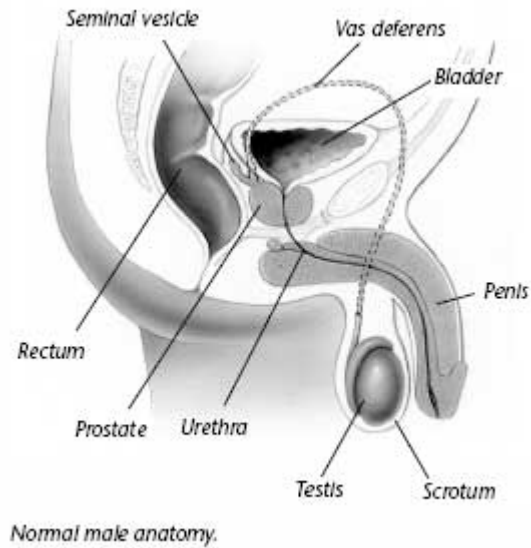
The basic workup of an infertility evaluation can be finished within a few menstrual cycles in most cases. Ask your doctor about the costs involved. Find out whether they are covered by your insurance.

## Basic Workup for the Man

A semen analysis is a key part of the basic workup for a man. It may need to be done more than once. The semen sample is obtained by *masturbation*. Sometimes it can be obtained at home. Sometimes it is obtained in a lab. Your doctor will give you instructions.

The semen sample then is studied in a lab. The doctor will study the sperm for:

- Number
- Shape
- Movement
- Signs of infection



The man may be referred to a urologist (a doctor trained in treating problems of the urinary tract). The urologist will perform an exam and tests may be done.

## Basic Workup for the Woman

The workup for a woman begins with a physical exam and health history. The health history will focus on key points:

- Menstrual function, such as irregular bleeding and pain
- Pregnancy history
- STD history
- Birth control

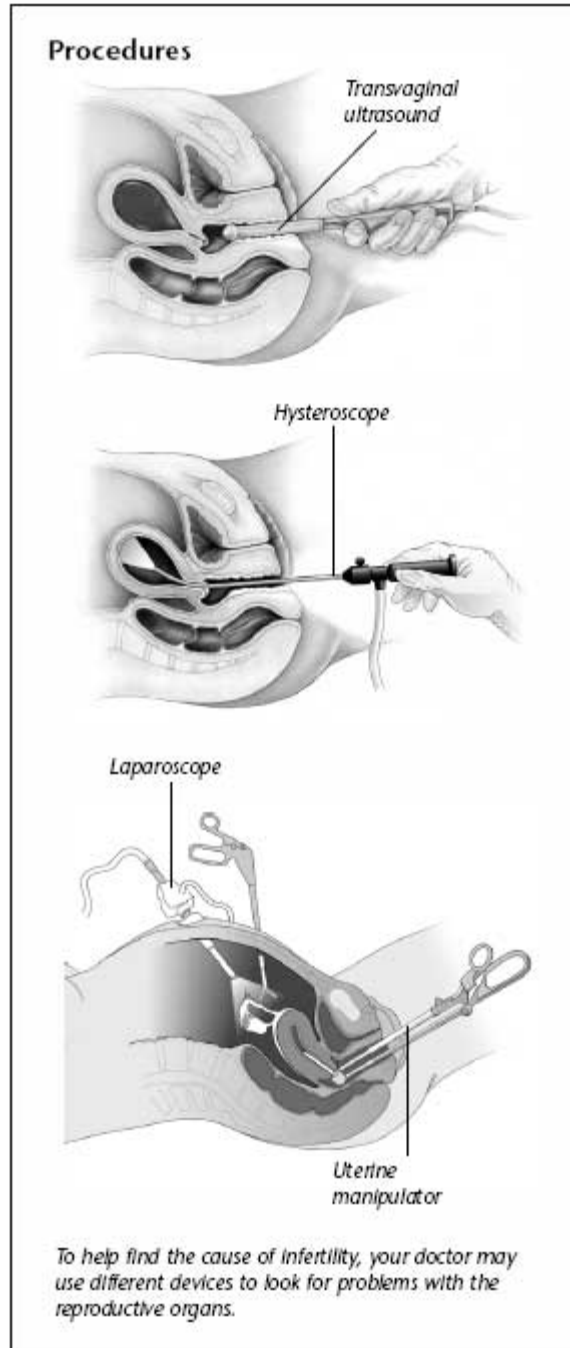
A *Pap test* and blood tests also may be done

**Tests.** There are many tests to see if ovulation occurs. Some are done by the woman, and others are done by the doctor.

- **Urine test.** This test can be done by the woman at home with a kit. It is a way to predict ovulation. This test measures *luteinizing hormone (LH)*, which is what makes ovulation occur. If the test result is positive, it means ovulation is about to occur. Sometimes these kits are used with basal body temperature charts.
- **Basal body temperature.** This test can be done by the woman at home. It is a way to tell that ovulation has occurred. After a woman ovulates, her body temperature increases a bit. To measure it, a woman takes her temperature by mouth every morning before she gets out of bed (basal temperature). She records it on a chart for two or three menstrual cycles. Other tests may be done, depending on a woman's risk factors.

**Procedures.** Procedures are used to look at a woman's reproductive organs. They check if the uterus is normal and the fallopian tubes are open. The tests you have depend on your factors and symptoms.

- **Hysterosalpingography (HSG).** This test is an X-ray that shows the inside of the uterus and fallopian tubes. In most cases, it is done right after a menstrual period. A small amount of dye is placed in the uterus through a thin tube inserted through the cervix. An X-ray is then taken. The dye outlines the inside of the uterus and fallopian tubes. If it spills from the tubes, it shows that the tubes are open.
- **Transvaginal ultrasound.** This test checks the ovaries and uterus by using sound waves to produce pictures of pelvic organs. First a device (a transducer) shaped like a wand is lubricated and inserted into the vagina. A machine displays an image of the organs.
- **Hysteroscopy.** This procedure lets the doctor look inside the uterus. A thin telescope-like device, called a hysteroscope, is placed through the cervix. The uterus may be filled with a gas or liquid to reveal more information. During this procedure, the doctor can correct minor problems or get a sample of tissue to study. The doctor also may decide other procedures are needed.
- **Laparoscopy.** This procedure lets the doctor view the tubes, ovaries, and the outside of the uterus. A small telescope-like device, called a laparoscope, is inserted through a small cut (about 1¼ - 2 inches or less) at the lower edge of the navel. Fluid is placed in the uterus to see if it spills from the ends of the tubes. This shows if the tubes are open or blocked. The doctor also can look for pelvic problems, such as *endometriosis* or scar tissue.



You may be given pain relief for some of these procedures.

## Treatment

Infertility can be treated in many ways, including lifestyle changes, medication, surgery, and assisted reproductive technologies. The choice depends on the cause. After your evaluation, talk with your doctor about the best treatment options for you and your partner. You also may choose adoption or to live without children.

## Finally...

If you have not been able to conceive after 6–12 months of having sex without using birth control, you may want to think about having an infertility evaluation. Certain tests may help find the cause of the infertility. If a problem is found, steps can be taken to treat it.

## Glossary

**Anorexia:** An eating disorder in which a distorted body image leads a person to diet excessively.

**Cervix:** The lower, narrow end of the uterus, which protrudes into the vagina.

**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.

**Luteinizing Hormone (LH):** A hormone produced by the pituitary glands that helps an egg to mature and be released.

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

**Pap Test:** A test in which cells are taken from the cervix and vagina and examined under a microscope.

**Sexually Transmitted Disease (STD):** A disease that is 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]).

**Uterus:** A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.

**Vagina:** A passageway surrounded by muscles leading from the uterus to the outside of the body, also known as the birth canal.