

Birth Control

Most women can become pregnant from the time they are in their early teens until they are in their late 40s. About one half of all pregnancies are unplanned. Birth control helps a woman plan her pregnancies. Some methods of birth control also help protect against **sexually transmitted diseases (STDs)**. Today, there are many choices of birth control for women and men. This pamphlet will explain:

- How birth control works
- Types of birth control
- How to choose the best method for you



No matter which method of birth control you choose, be sure that you know how it works, how to use it, and what side effects may occur.

How Birth Control Works

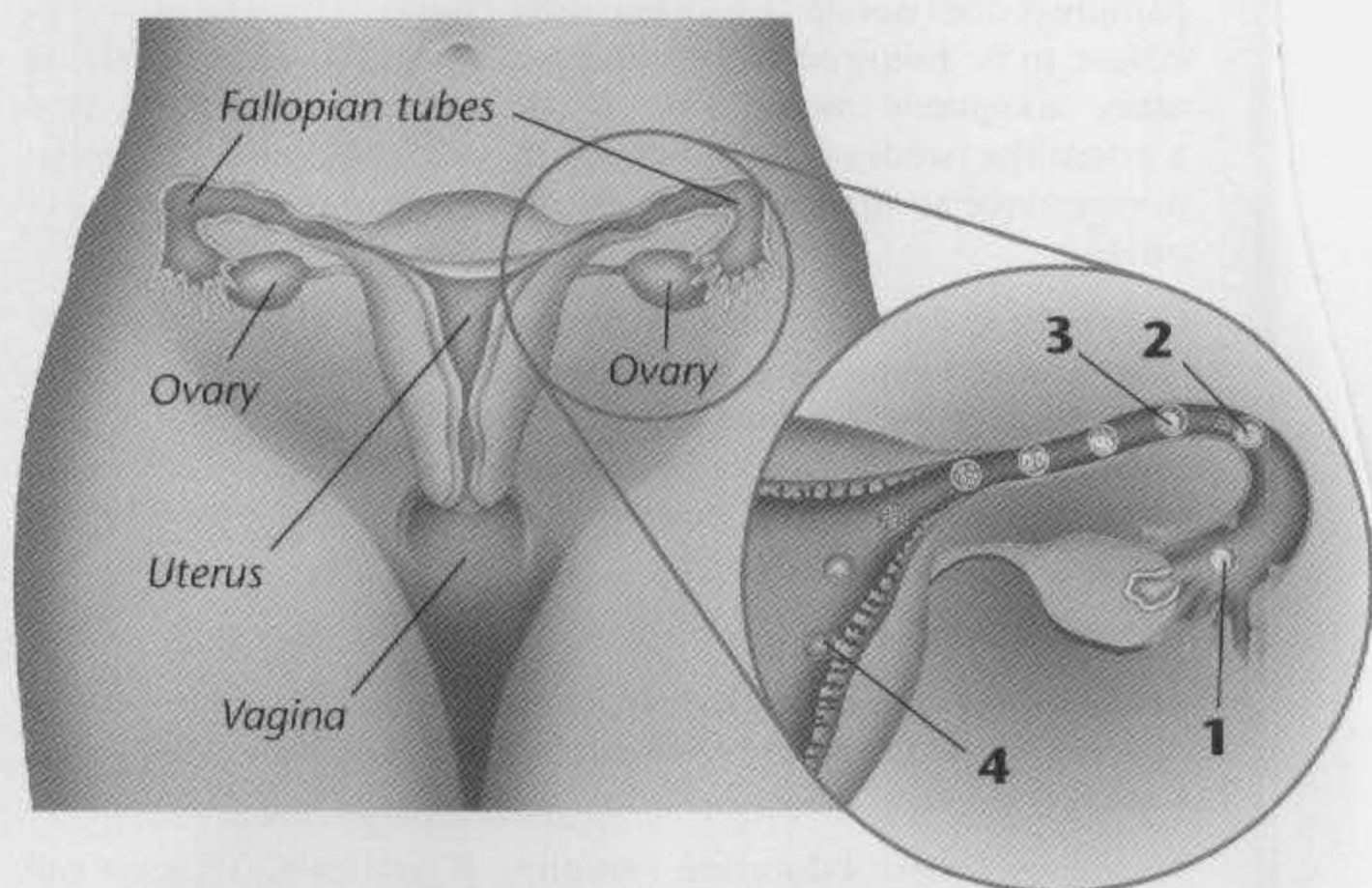
To understand how birth control works, you should know what happens during reproduction. A woman has two ovaries, one on each side of the uterus. Each month, one of the ovaries releases an egg into a fallopian tube. This is called ovulation. In most women, it occurs about 12–14 days before the start of the menstrual period.

A woman can get pregnant if she has sex around the time of ovulation. During sex, the man ejaculates sperm into the vagina. The sperm travel up through the cervix, through the uterus, and into the tubes.

If a sperm meets an egg in the fallopian tube, fertilization—union of egg and sperm—can occur (see figure below). The fertilized egg then moves down the fallopian tube to the uterus where it attaches and grows.

Birth control methods work in a number of ways. They may:

- Block the sperm from reaching the egg
- Kill sperm
- Keep eggs from being released each month
- Change the endometrium (lining of the uterus)
- Thicken the mucus in the cervix so sperm can not easily pass through it



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 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).

Methods of Birth Control

There are many methods of birth control. Each method has good points as well as side effects. Birth control allows a woman to plan her family—both the number and spacing of children. All of these methods are safe when used appropriately.

Certain types of birth control offer added health benefits. Discuss the pros and cons of each method with your doctor so you can choose the best method for you.

The birth control pill, injections, vaginal ring, skin patch, intrauterine device (IUD), diaphragm, Lea's Shield, and cervical cap require a prescription. Condoms and spermicides do not.

More than one method may be used at the same time. For instance, a barrier method may be used with any other method. Using a barrier method with another method increases the effectiveness. It also may help protect against STDs.

Comparing Birth Control Methods

<i>Method</i>	<i>Pregnancy Rates (%)*</i>	<i>Side Effects and Risks</i>
Spermicides	26	UTI, vaginitis, spermicide allergy
Male condom	14	Latex allergy
Female condom	21	—
Diaphragm	20	Latex or spermicide allergy, UTI, TSS
Cervical cap	20 (40 for women who've had a baby)	Latex or spermicide allergy, UTI, TSS
Lea's Shield	15	Abnormal bleeding or spotting, UTI, vaginitis
Combination pills	3	Headache, breast tenderness, nausea, irregular bleeding, missed periods, depression, cardiovascular problems
Progestin-only pills	3–6	More bleeding or spotting days than with combination birth control pills, prolonged or irregular bleeding, missed periods, headache, breast tenderness, nausea, dizziness, acne, hirsutism, weight gain, anxiety, depression
Vaginal ring	1–2	Headache, nausea, vaginal discharge, infection, weight gain, cardiovascular problems
Skin patch	1–2	Abdominal pain, allergic reaction on skin, breast tenderness, menstrual cramps, nausea, cardiovascular problems
Injection (DMPA)	0.3	Irregular periods, spotting, amenorrhea, headache, weight gain, worsening of depression, anxiety, acne, hirsutism, dizziness, slowing of bone growth, delay in return to fertility
Injection (monthly)	0.3	Headache, weight gain, worsening of depression, anxiety, acne, hirsutism, dizziness
IUD (Copper)	0.8	Heavy periods, irregular periods, painful periods, vaginal discharge
IUD (Hormonal)	0.1	Irregular periods, vaginal discharge
Withdrawal	19	—
Natural family planning	25	—
Female sterilization	0.5	Postsurgical complications
Male sterilization	0.15	Postsurgical complications

*Typical use: Based on how it is usually used, not on perfect use.

Abbreviations: IUD, intrauterine device; OTC, over-the-counter; STD, sexually transmitted disease; TSS, toxic shock syndrome; UTI, urinary tract infection.

Barrier Methods

Barrier methods include spermicides, condoms (male and female), the diaphragm, the cervical cap, and Lea's Shield:

- *Spermicides* are chemicals that kill sperm. They are placed in the vagina close to the cervix. They include tablets, foam, cream, jelly, and film (thin sheets that contain spermicide).
- The *male condom* is a thin sheath made of latex (rubber), polyurethane (plastic), or animal membrane. It is worn by the man over his erect penis.
- The *female condom* is a thin plastic pouch that lines the vagina. It is held in place by a closed inner ring at the cervix and an outer ring at the opening of the vagina.
- The *diaphragm* is a small, round rubber dome that fits inside the woman's vagina and covers her cervix.
- The *cervical cap* is a small, thin rubber or plastic dome shaped like a thimble. It fits tightly over the cervix and stays in place by suction.
- The *Lea's Shield* is a dome-shaped silicone device with a loop for removal that fits inside the woman's vagina and covers her cervix.

Another type of barrier method is the sponge. Although it is not currently on the market, it was once available for sale in the United States and may be again in the future. The sponge is a doughnut-shaped device. It is made of a soft foam that is coated with spermicide. It is pushed up in the vagina to cover the cervix. It acts as a physical and chemical barrier between the sperm and the cervix.

Spermicides are chemical barriers. The other methods are physical barriers. They keep the sperm from getting to the egg. Combining spermicides with physical barrier methods provides more protection. Some barrier methods—such as the diaphragm, cervical cap, and Lea's Shield—rely on spermicides for their full effectiveness and should be used with each act of sex.

Some people may be allergic to latex. These people might consider using condoms made from plastic or animal membrane. Keep in mind, however, that condoms made from animal skin do not provide the same protection against STDs.

How to Use a Condom

Proper condom use helps protect you and your partner against STDs as well as pregnancy. A condom should be used any time you have sex with a man.

Only water-based lubricants can be used safely with a condom. It is unsafe to use oils or lotions, such as petroleum jelly, olive oil, or cold cream.

The most common type of condom fits over the penis. There is also a female condom that fits over the cervix.

To use the male condom, place the rolled-up condom over the tip of the erect penis. Hold the end of the condom to allow a lit-



tle extra space at the tip, then unroll the condom over the penis.

Right after ejaculation, grasp the condom around the base of the penis as it is withdrawn. Throw the condom away. It should never be reused.

To use the female condom, squeeze the inner ring between your fingers and insert it into the vagina as far as possible. Push the inner ring up until it is just behind the pubic bone. About an inch of the open end should be outside your body.

Right after ejaculation, squeeze and twist the outer ring and pull the pouch out gently. Throw the condom away. It should never be reused.



Barrier methods are effective when used the correct way every time you have sex. Even one act of sex without birth control can result in pregnancy.

Intrauterine Device

The IUD is a small, plastic device that is inserted and left inside the uterus to prevent pregnancy. Although there have been several types of IUDs, currently only two are available in the United States: the hormonal IUD and the copper IUD.

Both types of IUDs are T-shaped, but they work in different ways. The hormonal IUD releases a small amount of **progestin** into the uterus. This thickens the cervical mucus, which blocks the sperm from entering the cervix. It also thins the endometrium. This keeps a fertilized egg from attaching and makes menstrual periods light.

The copper IUD releases a small amount of copper into the uterus. A copper IUD does not affect ovulation or the menstrual cycle. It causes a reaction inside the uterus and fallopian tubes. This can prevent the egg from being fertilized or attaching to the wall of the uterus. It also reduces the sperm's ability to fertilize an egg.

A doctor must insert and remove the IUD. The hormonal IUD must be replaced every 5 years. The copper IUD can remain in your body for as long as 10 years.

The IUD does not protect against STDs. It may make them worse if you do get an infection.

Hormonal Contraception

With hormonal birth control, a woman takes hormones similar to those her body makes naturally. These hormones prevent ovulation. When there is no egg to be fertilized, pregnancy cannot occur. The hormones also cause changes in the cervical mucus and uterus that help prevent pregnancy. Hormonal pills, injections, rings, and patches are all very effective. For most women, the risk of serious complications is small. However, women older than 35 years who smoke should not use most types of hormonal methods because it increases their risk of heart attack and stroke.

Birth Control Pills. One of the most popular methods of hormonal birth control is the birth control pill (oral contraceptive). Most birth control pills are combination pills. They contain the hormones **estrogen** and progestin. There are many different

brands of pills with different doses of hormones. This variety allows a woman to find a pill that is right for her. Some pills contain only progestin.

Birth control pills help protect against certain types of cancer, such as cancer of the ovary and endometrium. Most experts agree that women who have no other risk factors do not have an increased risk of getting breast cancer. These women can take the pill.

The pill also helps to keep your periods regular, lighter, and shorter. This makes women less likely to have anemia (low blood iron). The pill also reduces menstrual cramps. It lowers your risk of *ectopic pregnancy*. Some types of birth control pills also can help treat acne.

Injections. One type of injection of hormonal birth control, called depot-medroxyprogesterone acetate (DMPA), provides protection against pregnancy for 3 months. This means a woman needs only four injections each year. During the time that the injection is effective, you don't have to do anything else to prevent pregnancy. Another type of injection is given every month and contains estrogen as well as a progestin. Injections may be good for people who

Emergency Contraception

If a woman has sex without any type of birth control or if she thinks her method has failed (for instance, a condom slipped or broke), she may want to use emergency contraception. In this method, certain doses of combination birth control pills are taken within 72 hours of sex without birth control.

You can obtain emergency contraception from your doctor, a family planning clinic, or a hospital emergency room. Talk to your doctor *right away* if you think you might need this protection. If you use emergency contraception within 72 hours of unprotected sex, your chance of getting pregnant is greatly reduced. Emergency contraception should not be used instead of birth control on a routine basis. Regular use of a birth control method is more effective and has health benefits that emergency contraception does not have.

find daily birth control methods inconvenient. Women who take DMPA injections tend to have irregular bleeding.

Vaginal Ring. The vaginal ring is a flexible, plastic ring that is placed in the upper vagina. The ring releases both estrogen and progestin continuously to prevent pregnancy. It is worn for 21 days, removed for 7 days, and then a new ring is inserted. During the week it is out, a menstrual period occurs. This is a lot like the way combination birth control pills work. A woman does not need to visit her doctor for insertion or removal of the ring. The ring may have benefits and risks like those of the birth control pill.

Skin Patch. The contraceptive skin patch is a small (1.75 square inch) adhesive patch that is worn on the skin to prevent pregnancy. It is a weekly method of hormonal birth control. The patch contains both estrogen and progestin and releases these hormones through the skin. A patch is worn for 1 week and then replaced with a new one on the same day of the week for 3 weeks in a row. During the fourth week, a patch is not worn, and a menstrual period occurs. This is another method that works a lot like combination birth control pills. A woman does not need to visit her doctor to apply or remove the patch. The patch may have benefits and risks like those of the birth control pill.

Natural Family Planning

Natural family planning used to be called the rhythm method or "safe period." It also is called periodic abstinence or, more recently, fertility awareness. It isn't a single method but a variety of methods. Natural family planning does not require drugs or devices. The success of these methods depends on you knowing when you ovulate and not having sex during the fertile period or using another method, such as condoms, during that time.

Types of natural family planning include:

- *Basal body temperature method*—Taking your temperature every day to detect the slight increase just after ovulation
- *Ovulation/cervical mucus method*—Noting changes in your cervical mucus
- *Symptothermal method*—Combining the basal body temperature and ovulation methods, as well as checking for other signs of ovulation

- *Calendar method*—Keep a menstrual calendar for 6 months to figure out your fertile period (also called the rhythm method)
- *Lactational amenorrhea*—Ovulation and menstruation usually are postponed in breastfeeding women. If a woman does not ovulate, she cannot become pregnant.

These methods often are combined to prevent pregnancy. You need to know your body well and you and your partner must be willing to follow the method. This method can only work when you follow it correctly at all times.

Withdrawal

The withdrawal method prevents pregnancy by not allowing sperm to be released in the woman's vagina. This requires the man to take his penis out of the woman before he ejaculates. For this method to work, he must withdraw every time the couple has sex. Drawbacks are that sperm can be present in the fluid produced by the penis before ejaculation and some men fail to withdraw completely or in time.

Sterilization

Sterilization for women and men works by permanently blocking the pathways of egg and sperm. This can be done by surgery. The sterilization procedure for women is called tubal sterilization. The procedure for men is called vasectomy. There also is a nonsurgical method for women (see box).

Tubal sterilization is done by *laparoscopy* and *minilaparotomy*. The fallopian tubes are closed by tying, banding, clipping, blocking, or cutting them, or by sealing them with electric current. The surgery often is performed under *general anesthesia*. Sometimes women have sterilization right after the birth of a child. This is called postpartum sterilization.

Vasectomy involves cutting a man's *vas deferens* so that sperm cannot mix with semen. The tubes that carry sperm to the penis are clamped, cut, or sealed so that the ends do not join again. The man is given *local anesthesia*. Surgery is done in the doctor's office or a clinic.

Sterilization is meant to be a permanent form of birth control. If there is a chance you may want to have a baby later, you should not choose this

New Option for Sterilization

Women who want a permanent method of birth control now have an option that does not involve surgery. With this method, a tiny springlike device is inserted through the vagina into each fallopian tube. This device causes scar tissue to build up in the tubes. This build-up blocks the fallopian tubes and prevents the sperm from reaching the egg. It takes 3 months for the scar tissue to grow, so women should use another method of birth control during this period. This device can be inserted in a doctor's office.

method. Attempts to reverse it may not work. Reversal procedures require major surgery, are expensive, and are rarely covered by insurance.

Choosing a Method

At any given time, a couple may find one method of birth control suits their needs better than others. Most women and couples use many methods over their lifetime. Here are some things to think about when choosing a method:

- How well the method works
- How likely you are to use it
- What side effects it has
- How much it costs, month by month and over time
- Whether it helps protect against STDs

All methods have a chance of failure. When a method is used correctly each time, the failure rates are lower. Any method of birth control described here can work well if it is used correctly. Choose a method you will be able to use on a regular basis. If your method fails, you may want to consider emergency contraception.

When choosing a method of birth control, you should also think about preventing STDs. Use of condoms is the best way to prevent STDs. They should be used with other methods if you are at risk of STDs.

Finally . . .

No matter which method of birth control you choose, be sure that you know how it works, how to use it, and what side effects may occur. Even with methods that do not need a prescription, you need to learn how to use the method. A doctor, nurse, or family planning counselor can teach you. The more you know about birth control and your own needs, the easier it will be to choose a method that's right for you.

Glossary

Ectopic Pregnancy: A pregnancy in which the fertilized egg begins to grow in a place other than inside the uterus, usually in the fallopian tubes.

Estrogen: A female hormone produced in the ovaries that stimulates the growth of the lining of the uterus.

General Anesthesia: The use of drugs that produce a sleeplike state to prevent pain during surgery.

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

Local Anesthesia: The use of drugs that prevent pain in a part of the body.

Minilaparotomy: A small abdominal incision used for a sterilization procedure in which the fallopian tubes are closed off.

Progestin: A synthetic form of progesterone (a female hormone that is produced in the ovaries and makes the lining of the uterus grow) that is similar to the hormone produced naturally by the body.

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]).

Vas Deferens: A small tube that carries sperm from a male testis to the prostate gland.