

Reproductive Facts

Patient fact sheet developed by the
American Society for Reproductive Medicine



Nonhormonal Contraception

Despite a large number of contraceptive options available, it is still thought that 45% of pregnancies in the United States are unintended. Therefore, it is important to choose a contraceptive that can be used consistently and correctly.

When choosing a birth control method, it is important to consider how well it works to prevent pregnancy, how easy it is to use, how long it lasts, whether it can be reversed, any side effects, how much it costs, and if it also protects you against sexually transmitted infections (STIs).

How does contraception work?

Contraceptive agents work in many ways to prevent pregnancy. They are usually divided into those that are either hormonal or nonhormonal. Most hormonal contraceptives work by hormone levels to prevent eggs from being able to be released from the ovary or by changing the environment inside of the uterus so an embryo cannot implant and grow. In contrast, nonhormonal contraceptive agents or devices work by preventing sperm from fertilizing an egg.

Barrier contraception

Barrier contraceptives prevent sperm from entering the uterus and fallopian tubes. The barrier may be chemical (spermicide) or physical (male and female condoms, diaphragm, cervical cap, Lea's shield, contraceptive sponge).

Diaphragms and cervical caps must be fitted by an experienced health care provider and must be left in the vagina for 6 to 8 hours after sex. Condoms and the contraceptive sponge do not require a prescription. Barrier methods do not have many side effects unless you or your partner are allergic to the material (latex) from which the method is made.

Barrier methods of contraception have a failure rate (number of failures per 100 people who use the method) that ranges from 15% (male condom) to 20% (diaphragm, cervical cap) to 32% (cervical cap or sponge) of the time. When two barrier methods are used together (like a diaphragm and a condom), they become more effective (up to 95%). If the barrier method breaks or falls out during sex, a female may consider taking emergency contraception (the "morning-after" pill). Some barrier contraceptives, like male and female condoms, can also protect against sexually transmitted infections.

Natural family planning

Each month, a female produces an egg, which is released from the ovary and travels through the fallopian tubes to the uterus. When the egg is released, this is called ovulation. The time during which the egg moves from the ovary to the uterus lasts a few days and is the only time in which a female can become pregnant. Couples who use natural family planning have to determine when the woman is ovulating and avoid having sex during that time.

There are ways that you can tell if you are ovulating and should not have sex:

- **Keeping track of menstrual periods** : ovulation occurs two weeks before the next menstrual period. Therefore, having a calendar of 3-4 cycles will provide an estimate of when ovulation may take place.
- **Recording body temperature each morning** : basal body temperature falls prior to ovulation with a rise after ovulation. Normal body temperature is between 96°- 98° Fahrenheit. After ovulation, the temperature goes slightly, between 1° - 2° Fahrenheit, to about 97° - 99° Fahrenheit.
- **Observing cervical mucus**; it will be thinner and "stretchier" right before ovulation, like an egg-white consistency.
- **Breastfeeding** : women may not ovulate when they are breastfeeding. This may depend on the frequency of breastfeeding. Exclusive breastfeeding (i.e., breastfeeding no less than every 4 hours) can effectively prevent pregnancy 98% of the time.

Reproductive Facts

Patient fact sheet developed by the
American Society for Reproductive Medicine



Another commonly practiced method of natural family planning is withdrawal, in which the male does not ejaculate inside the vagina at the time of male orgasm. However, this method has a high rate of failure as about 22 out of 100 people will get pregnant if only using this method in a year.

The use of natural family planning can fail 2% to 25% of the time, depending on the experience of the couple practicing this method. People with irregular periods, abnormal bleeding, or pelvic infections cannot use natural family planning because they cannot predict when they may ovulate. Certain medications and medical conditions can change a female's cervical mucus or body temperature, so these people should not use natural family planning.

Intrauterine devices

Intrauterine devices (IUDs) are safe and effective forms of long-term reversible contraception. There are two types of IUDs: one containing progestin (a hormone) and the other containing copper. A provider places the device in the female's uterus, and it can be used for between 3-12 years.

Failure rates with IUDs range from 0.1% to 0.8%. Both types of IUDs work by preventing the egg from developing normally. They also impair sperm movement when the sperm enters the uterus, which decreases the chances that an egg will be fertilized. The IUD may also cause changes to the lining of the uterus that could prevent a fertilized egg from implanting. The side effects include a slight increased risk of pelvic infection caused by the placement of the IUD and changes in period bleeding patterns.

Surgery

Sterilization is the most used form of nonhormonal contraception around the world; but it is a permanent procedure. Depending on the type of procedure used, only small surgical incisions are required. However, some forms of sterilization may not necessitate a larger surgery.

A tubal ligation involves the separation of the fallopian tubes into two segments using a ring, clip, stitch, or electric current. This prevents the egg from moving through the tube and keeps the sperm from reaching the egg. Most methods of sterilization in females work right away. The failure rate is less than 1%. If a female does become pregnant after sterilization, there is a 33% risk of a tubal ectopic pregnancy (a dangerous condition in which a fertilized egg stays in the fallopian tube). There is some evidence that tubal ligation may lower the risk of ovarian cancer.

Another method of female sterilization involves placing a spring-like coil through the cervix and into the uterus. These coils are placed into the area of the uterus where the fallopian tubes enter. Placement of these coils can be performed in the physician's office or in the hospital by using a hysteroscope, which is a small telescope that is connected to a television camera. This procedure does not involve incisions. It may take three to six months for scar tissue to form around the coils to completely block the tubes. If the tubes remain blocked, the failure rate should be similar to surgical tubal ligation.

In men, sterilization is called vasectomy. Before ejaculation, sperm travel through a tube called the vas deferens. At the time of vasectomy, the tubes are tied, cut, clipped, or sealed to prevent the release of sperm. This procedure is highly effective, with a failure rate of less than 1%. However, a vasectomy is not effective right away. There may still be sperm in the semen for up to three months after the vasectomy is performed, and men should use backup contraception for at least eight ejaculations or up to 12 weeks. There is no increase in testicular or prostate cancer in men after a vasectomy.

Revised 2023