

Contraception

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Contraception is defined as any method used to prevent pregnancy by one or both sexual partners. It has been practiced since ancient time. Not until recently, however, have methods been devised that are reliable, safe, and varied enough to satisfy most people.

No single method of contraception is ideal from every point of view. Some methods are unquestionably more reliable - others have fewer side effects. Ease of use and protecting yourself and your partner against sexually transmitted diseases is also important.

There are many different contraceptive choices which are grouped into several broad categories. Most couples, at least early in life, likely will choose from the reversible methods of birth control. However, the most effective method of contraception known, except complete abstinence, is permanent sterilization which many couples consider later in their relationship.

Oral contraceptives

The pill is the most popular and one of the most effective reversible contraceptive methods available today. Oral contraceptives are available in two types. The combination pill contains synthetic *estrogen* and *progesterone* hormones that inhibit release of an egg and alter the mucus secretions of the vagina so that sperm can not penetrate the cervix. The progestin only pill ("mini pill") contains only progesterone. The combination pill is considered more reliable, although both enjoy a very high success rate with failure less than 1% per year with consistent use. The combination pill is available in one and three month cycles.

Most women can safely use the pill until menopause. However, the combination pill is not usually recommended for smokers over 35 because they have a greater risk of heart disease and blood clots. The pill does not raise your risk of getting breast cancer over your lifetime. In fact the pill reduces the incidence of ovarian and uterine cancer by 50% after one year of use. The pill does not affect the health of future children or cause birth defects - even if you get pregnant while taking the pill.

Transdermal Patch

OrthoEvra is a skin patch designed to deliver 7 days' worth of continuous progestin and estrogen through the skin and into the blood. A full month cycle consists of 3 consecutive 7-day patches followed by a 1 patch-free week. The patch is applied to the lower

abdomen, buttocks or upper body. The failure rate was similar to the pill but may be less effective in women over 198 pounds. The adhesive reliability of the patch is not affected by heat, humidity, swimming, bathing, exercise, or skin moisture. There is no effect on weight gain and side effects are similar to other contraceptives.

Intramuscular injection

Available in 3 month injections, these are among the most reliable methods of birth control available. Failure rates less than 0.3% are typical. Additional shots can be given as long as contraception is desired.

Depo-Provera protects against pregnancy for three months. The ingredient is a chemical similar to progesterone and acts by preventing eggs from ripening. It also changes the lining of the uterus which makes it less likely for pregnancy to occur. Once pregnancy is desired, most women can get pregnant within 12 - 18 months of the last injection. The most common side effects are irregular menstrual bleeding, unpredictable spotting, or lack of periods, which usually decrease over time. Proven benefits include reduced uterine cancer, pelvic inflammatory disease and endometriosis.

Intravaginal ring

NuvaRing is a contraceptive device that releases a steady level of estrogen and progesterone in the vagina. The ring is two inches in diameter and can be inserted by the woman herself by compressing it between her thumb and forefinger and placing it high in the vagina, just under the cervix. It is inserted about 5 days after the beginning of the menstrual cycle and worn continuously for 3 weeks. It is then removed by the woman and a fresh ring can be inserted 7 days later. The dosage of hormone is lower than the lowest dose pill and because it is not absorbed by the intestine, common birth control pill side effects, such as nausea and vomiting, can be avoided. Effectiveness is as good as or better than the pill. Irregular bleeding was the most common side effect occurring 5% of the time. Only 8% of women can feel the ring.

Condom

There are now 2 types of condoms available - the traditional or "male" condom and the newer "female" condom. The male condom ("rubber") is the second most popular form of contraception in the United States and remains the most widely used device throughout the

world. In addition to providing protection against pregnancy and disease, condoms are easily available and are now being manufactured in materials thin enough to eliminate sensation interference.

The male condom must be put on before there is any contact between the penis and the vaginal area. The few drops of semen that often discharge as the penis first becomes totally erect can contain enough sperm to fertilize the egg and result in pregnancy. Condoms infrequently break or tear if used correctly and are most effective when used with a spermicidal agent.

The female condom (Reality) is a thin, soft, loose-fitting pouch with two flexible rings at either end. One ring helps hold the device in place inside the woman's vagina over the cervix while the other ring rests outside the vagina. It works in a similar way as the traditional condom by providing a barrier between sperm and egg. However, the two condoms should not be used at the same time. Failure rates are 15-21% with both types.

Sponge

The *sponge* (TodaySponge) has been reintroduced in the US and is available without a prescription. It's a soft, round device made of polyurethane foam that contains a spermicide. The sponge is inserted into the vagina up to 24 hours before intercourse and is left in place for at least 6 hours afterwards. It shouldn't be worn for more than 30 hours in a row.

Diaphragm

The *diaphragm* is a soft, rubber, dome-shaped cap surrounded by a flexible ring that is easily inserted into the vagina (with a little practice) to cover the entrance of the cervix. Before intercourse, it should be coated with spermicidal jelly to provide both a chemical and mechanical barrier. It must be left in place for 6 hours after intercourse, but not longer than 24 hours.

A diaphragm should be checked for proper fit about once a year, especially after pregnancy, abortion, or a significant change in weight. They should also be checked periodically for holes or other damage. Side effects can include cervical irritation. Failure is typically about 18% per year.

Spermicides

Spermicides help prevent pregnancy by killing sperm. They also help protect against some STDs. Spermicides come as foams, jellies or creams that are put into the vagina. They work best when used with condoms, but still have a 21% failure rate per year.

Intrauterine devices

An *intrauterine device* (IUD) is a very effective flexible T-shaped contraceptive device that is inserted into the uterus by your doctor. Once in place, no further contraceptive precaution is necessary. The IUD may be in place for 5-10 years depending upon the type. All IUD's are supplied with a string that extends outward into the vagina so that a woman can make sure the device is in place. It is convenient and readily reversible.

IUD's are generally safe for most women, especially those in stable, exclusive relationships.

Rhythm

This method, also known as *periodic abstinence*, entails avoiding sexual intercourse during the *ovulation* phase of the menstrual cycle (when eggs are released from the ovaries). There are several ways to determine when ovulation is taking place, including counting the number of days from the beginning of the last period and watching for a slight rise in temperature that usually accompanies ovulation. However, none of these practices are foolproof. Most women who use the rhythm method will have to avoid intercourse for a significant amount of time each month. The rhythm method should not be used by women whose menstrual cycles are irregular. The pregnancy rate using the rhythm method is notably high, about 20% per year.

Withdrawal

This is the oldest method of contraception, and one that is still widely practiced in many parts of the world. It involves the withdrawal technique (*coitus interruptus*) in which the penis is withdrawn just before orgasm and the semen is deposited outside the vagina. This method is considered both unreliable and unsatisfactory, and tends to cause tension during the sex act. It is not generally recommended and has a high failure rate.

Sterilization

Female sterilization involves interrupting the fallopian tube so that the egg can not pass from the ovary to the uterus. The most common technique is to perform a *tubal ligation* (tie the tubes) either immediately following delivery of a child or during a minor operation in the hospital. It is considered to be a permanent form of contraception - attempts to undo the sterilization are very expensive and not very successful. The most common side effect is slight increase in cramping during the first few menstrual periods. A newer form called Essure involves placing a small device in each of the fallopian tubes causing permanent scarring. This can be done as an outpatient and does not require an incision.

Male sterilization, also known as *vasectomy*, involves interrupting the tube which carries sperm from the testicles to the penis. This is usually performed as a minor surgical procedure in the office. It also is considered an irreversible and permanent form of contraception. The operation does not change the production of the male hormone or the ability to maintain an erection.

In summary

- For more information contact your doctor or the American Academy of Family Physicians at familydoctor.org