

CONTRACEPTION

The term contraception refers to behavioral means or physical means to prevent pregnancy. Contraception is also known by the term birth control. Any couple that does not use contraception or birth control have a 85% chance of a pregnancy. You will notice that most of the birth control methods put the responsibility on the woman. More devices are being developed where the male either has responsibility or shares that responsibility.

Contraception is an extremely personal choice. Selection of a contraceptive considers personal preference, frequency of sex, medical history, religious views, convenience, initial and ongoing costs as well as disease prevention. However, with that said, it still boils down to safety and reliability for most couples.

Behavioral Methods

- A. Abstinence. Of course, the only way to 100% guarantee no pregnancy is not to have sexual intercourse. Reality, however, is a harsh teacher. Most teenagers do not practice abstinence and an interesting discussion would be to study at the mores of American society and with expectations and activities of men compared to women.
- B. Rhythm Method. This method is based on the idea of refraining from sex near the time of ovulation. Sex must be avoided 48 hours before ovulation and 24 hours after ovulation. The difficulty is predicting the time of ovulation. Just before ovulation, the female's temperature spikes and many women make the determination based on that. However, it takes two ovulations (and the recognition it is occurring) before the rhythm method works. Other factors such as stress may affect the date of ovulation. The rhythm method is notoriously unreliable. Twenty percent of couples typically have a pregnancy using this method. The rhythm method may also be used by many couples to increase their chance of pregnancy since they are predicting ovulation.
- C. Withdrawal Method. Also called coitus interruptus, the male withdraws his penis before ejaculation. Problems with this form of behavioral contraception should be obvious. Can the male, close to orgasm, withdraw in time? Also remember, some sperm can be found at the tip of the penis from the moment of erection and a pregnancy is possible even if there is a withdrawal prior to ejaculation. The withdrawal method fails 18% of the time.

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Physical and Physiological Methods

A. Barriers and Spermicides

- a. Male Condom. Originally used as a means of preventing sexually transmitted diseases (STD's), which by the way, still helps, the condom sheaths the penis in either natural (lamb intestine) or synthetic materials as latex, rubber, or polyethylene (new). Natural condoms, albeit more sensitive and capable of transmitting body heat, and are also more porous to viruses.

Condoms, of course, must be used properly to be effective at disease prevention and birth control. The use of condoms alone result in a failure rate of 12 per 100 couples. That number drops to 3 out of 100 when used in combination with a spermicide. Condoms are the second most popular form of birth control. The pill is the most popular.

- b. Female Condom

The female condom is a polyethylene or polyurethane sheath with flexible rings at each end. One end fits of the cervix to prevent entry of sperm into the uterus. The other end of the condom covers the external genitalia. It is as effective as the male condom with the same failure rate both by itself or with spermicides.

- c. Diaphragm

This form of birth control is similar to the female condom except it has no sheath. Instead, it is a rubber or latex dome which fits over the cervix to prevent sperm entry. However, this requires an examination by a physician along with a proper fitting. Like the female condom, it can be removed after intercourse and refitted by the female prior to intercourse. It should be used along with a spermicide. The failure rate with spermicide is 18 per 100.

B. Hormonal Methods

- a. Spermicides

Spermicides are chemical products inserted in a woman's vagina before sex that inactivate or kill sperm. They have been available for more than 40 years. The main chemicals used in spermicides are nonoxynol-9, octoxynol-9, menfegol, and benzalkonium chloride. There is recent evidence that condoms with nonoxynol-9 may actually increase the chance of HIV infection as opposed to the previous concept it may prevent HIV infection. The failure rate for spermicides used alone is 21%.

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- b. Female Birth Control Pill
This is the most common form of birth control in the United States. However, one must be cautioned that only the male and female condoms protect against disease. All other forms do not. The pill generally contains estrogen and progesterone which acts as a negative feedback on FSH. The drop in FSH inhibits follicle development and ovulation. Usually, women under 35 can tolerate the pill fairly well. However, past that age, there is an increase risk for heart disease, particularly heart attack. This is more pronounced in women who smoke, who have a history in their family of diabetes, hypertension and clotting disorders. The failure rate of the pill is one of the lowest – 3%. As a corollary, when a female comes off the pill to have children, the ovary seems to make up for lost time and can eject multiple eggs at one time, leading to twins, triplets, or even more. Once the female comes off the pill, it's best to wait a short period prior to trying to have children unless multiple births are preferred.
- c. Male Birth Control Implants
This method is still under development. However, if instituted, it will shift the responsibility of pregnancy directly to the male. Tests in humans are promising. The concept of the male “pill” is misleading. In reality, it will be an implant that alters the hormonal balance in the male, much like it does in the female pill. The effects, like the female pill, are reversible. The real problem with male birth control, such as the implant, is that it is easier to control the ejection of a single egg rather than control the production of millions of sperm. There are no data on failure rates at this time since the product is under development.
- d. Norplant® is the registered trademark of the Population Council, an international, nonprofit organization that conducts research on three fronts: biomedical, social science, and public health. It is now distributed commercially by Wyeth Pharmaceuticals, a global company. The technical name of Norplant® is progestin levonorgestral. It is considered a female form of contraception. It comes in a package with six matchstick-size silicone rubber tubed implants which are inserted all at once, usually under the skin in the upper arm. The insertion must be done by a physician. Implants are effective for five years and must be removed after that time. Norplant® is one of the most effective forms of birth control with a failure rate of 0.2% to 0.4%. The function is to suppress ovulation. Even if ovulation occurs, as it might with the female pill, Norplant® interferes with egg transport by changing the cilia in the oviduct and inhibits the endometrium from accepting implantation.

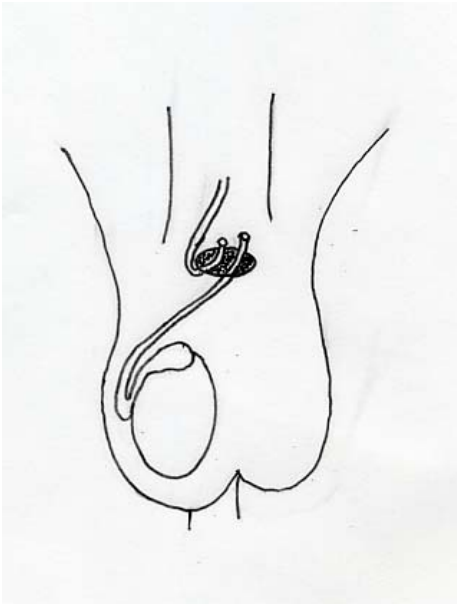
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- e. Depo-Provera® is a progesterone based contraception developed by Pfizer. It is injected by a physician four times a year to prevent ovulation. One added benefit is it may significantly reduce menstruation or stop it all together to alleviate some of the side affects of a period. The most common side effects of the drug are irregular periods or spotting, nervousness, dizziness, stomach discomfort, headache, and fatigue. Other side effects may be loss of bone density and weight gain or weight loss. It is considered as effective as Norplant®.

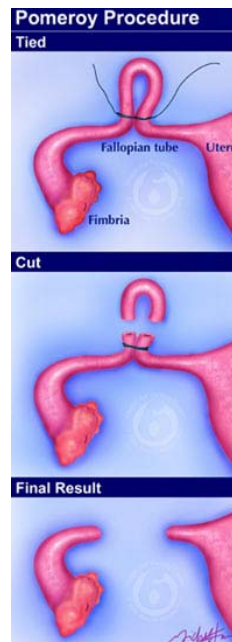
C. Surgical Sterilization

There are two forms of surgical birth control: vasectomies for males and tubal ligations for females.

- a. A vasectomy is the severing of the vas deferentia to prevent sperm transfer from the testes. It is often done in the doctor's office under local anesthetic. Interestingly, it is not 100% effective. The failure rate is 0.15% - the best of any form except abstinence, but still imperfect. The drawback is mostly psychological for the male and reversing the procedure is often not successful.
- b. Tubal Ligation is the alternate form of vasectomy. Again, the procedure is seldom reversible. The procedure is more complicated than in the male and must be carried out with general anesthesia. The process takes place by small abdominal incisions with the use of a viewing device. Failure rate is 0.4%.



Vasectomy



Tubal Ligation

Courtesy of
Medical Director
Chapel Hill Tubal Reversal Center
www.tubal-reversal.net

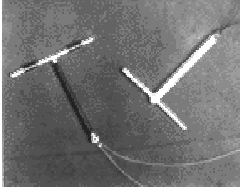
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Blocking Implantation

There are two major forms of birth control that block the implantation of the developing fetus in the uterus.

- c. IUD (Intrauterine Device)
This is a curved piece of plastic inserted in the uterus for 1 to 4 years. It prevents the blastocyst (stage of development of the fetus) from attaching to the wall of the uterus. Some IUD's have been removed from the market in the United States because of uterine perforation and other complications. Two IUD's are now manufactured in the U.S. and are considered safe. They must be implanted by a physician. IUD's have made something of a comeback in recent years. Failure rate is 3%.
- d. RU486, or the morning after pill, was developed by Dr. Edouard Sakiz, CEO of Exelgyn, a subsidiary of Vidal pharmaceuticals. The technical name is mifegyne or mifeprax. It was developed in France and only recently was approved by the FDA in the United States. It still is controversial in the US because of the antiabortion controversy. RU486 is sometimes referred to as the abortion pill. It is taken orally, usually after intercourse but can work up to 63 days of the trimester of a pregnancy. Mifeprax blocks a hormone needed for your pregnancy to continue. When used together with another medicine called misoprostol, Mifeprax ends your pregnancy. Bleeding and cramping are the most common side effects. It is considered to be 95 to 97% effective in terminating a pregnancy.

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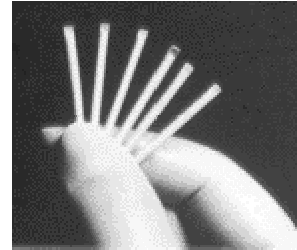
Courtesy of Planned Parenthood Federation of America.



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