YOUR BODY & YOUR CONTRACEPTIVE CHOICES

The Female Body
The reproductive organs of women are well-hidden, so how it all works can be confusing. A look at the female anatomy from the outside to the inside reveals the following parts:

■ The vagina is a passageway from the outside of the body that ends several inches internally at the cervix, which is the opening to the uterus. The vagina is a "potential space" (like a balloon), and it expands to accommodate things like a penis or a baby passing through. You cannot lose anything in the vagina because it is like a pouch.

■ The cervix is located at the end of the vagina. It is the lower, narrow end of the uterus and looks like a small pink doughnut with a hole in the center. This hole is only large enough for blood to get out (during your period) and sperm to get in. This hole will dilate (or open) during labor to allow the passage of a baby into the birth canal (or vagina). The cervix can be felt by inserting the finger deep into the vagina.

■ The uterus is the womb. It is the size and shape of an upside-down pear. During your period, its muscles can contract and cause cramping. During pregnancy, it enlarges to accommodate the growing fetus.

■ The fallopian tubes connect the uterus and the ovaries.

■ The ovaries are two walnut-sized structures located on either side of the uterus. They make the hormones and eggs needed for pregnancy.

The Menstrual Cycle
The purpose of the menstrual cycle is to prepare the ovaries for ovulation (the release of a mature egg for possible fertilization) and to prepare the uterus for pregnancy. If an egg is produced and fertilized by sperm, it will implant into the lining of the uterus and grow, and there will be no menstrual period. If an egg is produced but not fertilized, it will be shed with the lining of the uterus two weeks later, and menstruation will occur.

Many women cycle every 28 days; however, it is normal for women to cycle every 21 to 35 days or more. A cycle is counted from the first day of one period to the first day of the next period. It is wise for a woman to keep a menstrual calendar because a change in her usual pattern may indicate a health concern.

When Are You Most Fertile?
In general, the time when you are most fertile occurs 14 days before your next period, when you ovulate (release an egg). After ovulation, the egg only lives 24 hours. However, sperm can live three to five days inside the body, waiting for the egg to mature.

Therefore, it is possible to become pregnant during five to six days of each menstrual cycle. In women who cycle every 28 days, this fertility occurs mid-cycle. Remember that fertility cannot be predicted with absolute certainty because no two women are exactly alike. Even an individual woman’s cycles may vary from month to month or be affected by stress.

Consider the Big Picture
Being sexually active places you at risk for many other concerns besides pregnancy. Sexually transmitted infections (STIs), such as chlamydia, herpes, and genital warts, are common on college campuses and in the general population. HIV is another major factor to consider. Once you have intercourse, you are at greater risk for cervical cancer and should start having Pap smears beginning at age 21. Your emotional and psychological health and your readiness for physical intimacy are also important parts of the big picture. Only you can see your own "big picture."

Abstinence
Remember when choosing your contraceptive options, remember that abstinence is the only method of birth control that is 100% effective.

Outercourse (Lower-Risk Intimate Behaviors)
Sometimes we forget that not all intimate contact places us at risk for pregnancy or diseases. “Outercourse” (physical intimacy with clothes on) carries no risk for pregnancy. Mutual masturbation where “wet to wet” external genital contact is strictly avoided is another way to avoid pregnancy and decrease risk for STIs. Outercourse requires self-control and a strong commitment to the method.

Choosing the Method for You
The rest of this brochure reviews a wide range of birth control options. They are divided into prescriptive methods (those that require a visit to a health care provider) and non-prescriptive methods (those that are available “over-the-counter” at pharmacies). If you are not sure which method(s) will be best for you, make an appointment with University Student Health Services to discuss your options.

EFFECTIVENESS: HOW DO THE METHODS COMPARE?
Contraceptive methods do work. Because research can’t determine how many women using birth control would have gotten pregnant without using them, the only thing that can be measured is failure rates. The table on the following page lists failure rates from numerous studies. These failure rates correspond to the percentage of women in the U.S. experiencing unintended pregnancies during the first year of use of a contraceptive method:

■ The “perfect use” rate refers to use of the method correctly with every act of sexual intercourse.

■ The “typical use” rate refers to the actual use of the method, including incorrect or inconsistent use.

Keep in mind that failure rates in studies apply to groups, not to individuals. Even the best birth control in the world won’t protect you if you don’t use it or if you use it incorrectly. If you are careful about using your method as instructed, your failure rate may be much lower than that of others in the group.

Also keep in mind that using two methods of birth control at the same time dramatically lowers the risk of accidental pregnancy. For example, using a condom with any of the barrier methods (spermicide, diaphragm, sponge, etc.) lowers the failure rate to the same as that of taking the pill alone.
Disadvantages: Effectiveness is not altered by antibiotic use, vomiting, or diarrhea. Because absorption is not through the gastrointestinal tract, the ring’s effectiveness is not altered by antibiotic use, vomiting, or diarrhea.


Disadvantages: Needs to be taken at the same time every day for effectiveness. Possible side effects include spotting between periods, headaches, increase in blood pressure. Most side effects are uncommon and can be managed by changing pills. Serious side effects, such as crushing chest pain or blood clots, are rare. Does not protect against STIs.

NuvaRing (Vaginal Contraceptive Ring)

Description: A slender, flexible vaginal ring about the size of a silver dollar. Contains a combination of estrogen and progestin that is released as a continuous low dose into the body. Ring is inserted into the vagina and left in place for 21 days then removed for seven days, when menstrual bleeding should occur. A new ring is inserted after seven days.

How it works: Works exactly like birth control pills. The same hormones prevent ovulation, thicken cervical mucus, and alter the lining of the uterus.

Advantages: Very effective and convenient. Requires action only monthly. Because absorption is not through the gastrointestinal tract, the ring’s effectiveness is not altered by antibiotic use, vomiting, or diarrhea.

Disadvantages: Side effects similar to those seen with the pill. If the ring is expelled, it can be washed off with cool water and reinserted. Does not protect against STIs.

Ortho Evra (Contraceptive Patch)

Description: A thin beige patch that delivers continuous levels of synthetic estrogen and progestin through the skin and into the blood stream. Changed once a week for three weeks. Not worn during the fourth week, when menstrual bleeding should occur.

How it works: Works exactly like birth control pills. The same hormones prevent ovulation, thicken cervical mucus, and alter the lining of the uterus.

Advantages: Very effective and convenient. No daily pills to take. Because absorption is not through the gastrointestinal tract, the patch’s efficacy is not decreased by antibiotic use, vomiting, or diarrhea.

Disadvantages: Less effective in women who weigh more than 198 pounds. Needs to be replaced if it comes off. Does not protect against STIs.

Studies suggest that women who use the patch are exposed to 60% more estrogen than those taking the pill; this higher estrogen concentration may lead to a modest increased risk of life-threatening blood clots. However, this risk is still far less than that seen in pregnancy.

Progestin-only Mini Pill

Description: A synthetic hormone pill that contains progestin only. Very important that it is taken at the same time every day for effectiveness. If you are more than three hours late with this pill, a back-up method of contraception must be used for the next 48 hours.

How it works: Progestin thickens the cervical mucus and alters the lining of the uterus. Up to 40-50% of women using this pill continue to ovulate normally. That is why taking the mini pill at the same time every day is so crucial.

Advantages: High effectiveness when taken on time. Can decrease menstrual pain, menstrual bleeding, breast tenderness, and PMS symptoms. Can also be used while breastfeeding. A good option for women who cannot take estrogen due to health risks.

Disadvantages: Can cause irregular bleeding. Must be taken at the same time every day. Does not protect against STIs.

Depo-Provera Injections

Description: An injection or shot of synthetic progesterone given once every three months.

How it works: Virtually eliminates any chance of ovulation for at least three months. After one year of use, half of women no longer have any menstrual bleeding at all because of the lack of ovulation.

Advantages: Simplicity! You only have to do something once every three months to prevent pregnancy, and some women like not having periods. Another birth control option for women who cannot take estrogen due to health risks.

Disadvantages: Inability to predict when you will have a period or vaginal spotting. If planning a pregnancy in the next two years, be aware that infertility may continue for 6 to 18 months after the last injection. Weight gain is common. Possible risk of worsening depression. Does not protect against STIs. Studies show a decrease in bone density (thinning of the bones) while using Depo. Therefore, adequate calcium intake, vitamin D, and regular exercise should be used with Depo to protect against bone loss. See your health care provider for an osteoporosis risk assessment.
**Nexplanon/Implanon (Implantable Rod)**
www.paragard.com and www.mirena-us.com

**Description:** A small, thin implantable plastic rod that contains the hormone progesterin. Effective for up to three years.

**How it works:** Prevents ovulation, thickens cervical mucus, and changes the lining of the uterus.

**Advantages:** Long-lasting and cost-effective. No pills to take. Once removed, fertility returns quickly. Another birth control option for women who cannot take estrogen due to health risks.

**Disadvantages:** Causes changes in the menstrual cycle, including increased or decreased menstrual bleeding and spotting. Requires minor office procedures for insertion and removal. Does not protect against STIs. Initial cost is expensive. Not offered at University Student Health Services. Contact your OB/GYN or Planned Parenthood.

**Intrauterine Devices (IUDs)**
www.paragard.com and www.mirena-us.com

**Description:** A small plastic device that contains copper (ParaGard IUD) or the hormone progesterone (Mirena IUD). Inserted inside the uterus by a health care professional. A short string hangs into the vagina, where a woman can reach up and feel for its placement once a month after menses. ParaGard is effective for up to ten years and Mirena for up to five years.

**How it works:** Thought to prevent sperm from reaching or fertilizing the egg. Also alters the lining of the uterus, which may keep a fertilized egg from attaching to the lining of the uterus.

**Advantages:** One of the most effective forms of birth control available. Easily inserted and removed without surgery. Decreased cramping and bleeding with Mirena. Fertility returns quickly after removal.

**Disadvantages:** Possible increased cramping and bleeding with ParaGard. Serious problems are rare. Does not protect against STIs. Initial expense is high but cost-effective over the long run. Not available at University Student Health Services. Contact your OB/GYN or Planned Parenthood.

**Diaphragm**

**Description:** A dome-shaped, soft silicone cup that is filled with two teaspoons of contraceptive jelly or cream and inserted into the vagina to cover the cervix before sex. Should not be removed for up to six hours after sex. If intercourse occurs before the six hour time limit, the diaphragm is not removed, and an applicator is used to put extra spermicide into the vagina. Do not leave the diaphragm in the vagina for more than 24 hours. Check for holes or tears before use, and replace every two years.

**How it works:** Provides a physical barrier to sperm and also holds contraceptive jelly against the cervix to kill sperm.

**Advantages:** Birth control is completely in the hands of the woman. Very high effectiveness rate when used with a condom. May provide a barrier to STIs.

**Disadvantages:** Cannot be used during menses. Occasional minor vaginal irritation. Increased risk for bladder infections, especially in women who already have that tendency. (Urinating after sex may help flush out bacteria that cause bladder infections.) Must be refitted if a woman gains or loses ten pounds or more. Frequent use of nonoxynol-9 containing spermicides has been associated with the development of genital irritation, which may increase the risk of HIV transmission. Diaphragm fitting not available at University Student Health Services.

**NON-PRESCRIPTIVE METHODS**

**Male Condom**

Refer to our “Safer Sex and Condom Use” brochure for more information.

**Description:** A thin sheath worn on the erect penis during sexual intercourse. May be non-lubricated, coated with water-soluble jelly, or lubricated with spermicide. Latex condoms are recommended because natural lambskin does not block the passage of small viral particles such as HIV and herpes. Polyurethane condoms are available for people with latex allergies.

**How it works:** Acts as a mechanical barrier that blocks the passage of sperm. Needs to be placed on the erect penis before any genital contact. Leave about a ½ inch of space at the tip for the ejaculate, but make sure not to allow any air trapping in the condom. After ejaculation, the man needs to hold onto the base of the condom and withdraw immediately. Only water-based lubricants should be used. A new condom must be used with each act of intercourse.

**Advantages:** Provides protection against HIV and other STIs. Almost 100% effective if used with another barrier method, such as the sponge or diaphragm.

**Disadvantages:** Effectiveness dependent on user technique. Frequent use of nonoxynol-9 containing spermicides has been associated with the development of genital irritation, which may increase the risk of HIV transmission.

**Female Condom**

**Description:** A soft, loose-fitting plastic pouch that lines the vagina. Has a flexible ring at each end. The ring at the closed end is used to put the device inside the vagina and to hold it in place. The other ring stays outside the vagina and partially covers the vaginal lips.

**How it works:** Acts as a mechanical barrier that blocks the passage of sperm. Can be inserted up to eight hours before sex and should be removed after sex, before standing up. Prior to intercourse, the inner ring is inserted deep into the vagina. About 1 inch of the open end of the condom will stay outside the body. Make sure the penis goes into the pouch and that the pouch is not twisted. Add extra lubricant if the pouch feels like it is slipping. After intercourse, squeeze and twist the outside ring to keep the sperm inside the pouch, and gently pull the pouch out. A new female condom must be used with each act of intercourse.

**Advantages:** Birth control is in the hands of the woman. Warms up as soon as it’s inserted. Usually does not decrease sensation. May even enhance sensation.

**Disadvantages:** Cannot be used with a male condom and is not as effective as the male condom. About one in four women who use the female condom may become pregnant during a year. Occasionally the outer ring may get pushed inside the vagina. Other problems include minor vaginal irritation, discomfort, or breakage. However, these risks are decreased if enough lubrication is used. Female condoms also cost more than male condoms.

**Spermicide: Gels, Foams, Creams, Films, & Suppositories**

**Description:** Wide variety available over-the-counter. Includes reusable applicators that need to be washed, pre-filled disposable applicators, and suppositories. Most are used just prior to each act of intercourse.

**How it works:** Most contain nonoxynol-9 or octoxynol, which kill sperm. Specific directions in the packages tell you how to insert the method and what time recommendations and repeat applications are necessary. Most remain effective for only one hour after insertion. More spermicide should be inserted with each act of intercourse.

**Advantages:** When used with a condom, spermicides provide immediate back-up contraception if the condom should break. Effectiveness approaches 100% when condoms and spermicides are used together.

**Disadvantages:** Can be messy. Costs vary depending on product type (eg. Advantage 24 is more expensive). May cause vaginal irritation and burning. Frequent use of nonoxynol-9 containing products has been associated with the development of genital irritation, which may increase the risk of HIV transmission. Therefore, spermicides should not be used by women at high risk for HIV or women who are infected with HIV.
■ Plan B (Emergency Contraception)
www.planbonestep.com
Description: A back-up method for preventing pregnancy that may be used up to 120 hours (five days) following unprotected intercourse. Contains a progestin that is found in many birth control pills but in a larger dose. No prescription necessary if you are 17 or older.
How it works: Delays the release of an egg from the ovary. May also prevent fertilization and implantation.
Advantages: Up to 89% effective in preventing pregnancy if taken within 72 hours following unprotected intercourse. Available at University Student Health Services and local pharmacies.
Disadvantages: Does not work if you are already pregnant. Birth control methods used on a regular basis are much more effective and less expensive than emergency contraception.

■ Sponge
www.todaysponge.com
Description: A circular, pillow-shaped polyurethane sponge with an attached loop containing one gram of nonoxynol-9 spermicide. The Today Sponge is the only brand available in the U.S. Do not use the sponge if you are allergic to sulfa.
How it works: Covers the cervix and blocks sperm from entering the uterus. Also releases spermicide. To use, moisten sponge with tap water and insert deep into the vagina. Can be inserted up to 24 hours before intercourse. Must be left in place for at least six hours after the last time you have intercourse. Remove by pulling the attached loop. Should not be worn for more than 30 hours in a row.
Advantages: Safe, simple, and convenient. Birth control is in the hands of the woman. Use with a condom for maximum protection against STIs and pregnancy.
Disadvantages: Can be messy and cause vaginal irritation. Frequent use of nonoxynol-9 containing products has been associated with the development of genital irritation, which may increase the risk of HIV transmission. Use of the sponge may slightly increase the risk of toxic shock syndrome, which is rare but serious. Therefore, do not use the sponge during your period or immediately after a miscarriage, childbirth, or abortion. Do not leave the sponge in place for more than 30 hours. The sponge is not available at University Student Health Services. Check with local pharmacies or Planned Parenthood.

■ Vaginal Contraceptive Film (VCF)
Description: A thin 2 inch square of translucent material composed of nonoxynol-9, polyvinyl alcohol, and glycerin. Comes in boxes containing 12 individually wrapped squares.
How it works: Film is folded in half, placed over the fingertip, and pushed high into the vaginal canal. Insert no less than 15 minutes and no more than one hour before intercourse. Your fingers should be dry, and the film should be inserted quickly. VCF absorbs water from the vaginal canal, turning into a gel that kills sperm and helps to inactivate STIs. After an hour, the film dissolves and is washed away with the body’s natural fluids. Use one VCF with each act of intercourse.
Advantages: Economical and easy to use. Less association with vaginal irritation than some other barrier methods. Effectiveness approaches 100% if used with a condom.
Disadvantages: Does not protect against herpes, HPV, or HIV. In fact, frequent use of nonoxynol-9 containing products has been associated with the development of genital irritation, which may increase the risk of HIV transmission. VCF can offer some protection against other STIs. Effectiveness depends on how well the user follows the instructions given above. Remember that VCF tends to dissolve quickly when wet. VCF is not available at University Student Health Services. Check with local pharmacies.

■ Natural Family Planning
Description: These methods are recommended only for women who have very regular, predictable menstrual cycles and who have no reason to be concerned about STIs. Natural family planning uses different methods to predict ovulation and therefore the potentially fertile days of your cycle. The idea is to avoid intercourse during this time period. The highest rate of pregnancy occurs with intercourse one to two days before ovulation.

Natural family planning requires a high level of education about the methods used and daily attention to changes in your body. Remember that natural family planning does not protect against STIs.

If you are interested in these methods, please ask for more information from the clinic staff. There are also local classes available. Contact Planned Parenthood (355-4358) for more detailed information.

■ Cycle Beads
www.cyclebeads.com
Description: A color-coded string of beads representing a woman’s menstrual cycle.
How it works: A rubber ring is moved daily along the cycle beads in order to determine which days you are fertile (the days around ovulation). Avoid having sex during these days. This method is a type of natural family planning.
Advantages: Very effective for women with cycle lengths of 26 to 32 days. No side effects. Inexpensive. Can be used to prevent or plan a pregnancy.
Disadvantages: Not effective for women with irregular cycles or regular cycles less than 26 days or longer than 32 days.

■ Withdrawal
Description: Common wisdom is that withdrawal is better than nothing, but it puts the woman at risk for both pregnancy and STIs. It also puts all the power and contraceptive effectiveness into the hands of the male partner. No matter how good his control is, pre-ejaculate may leak, carrying sperm and/or disease(s). University Student Health Services does not recommend using the withdrawal method as a primary form of birth control.

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