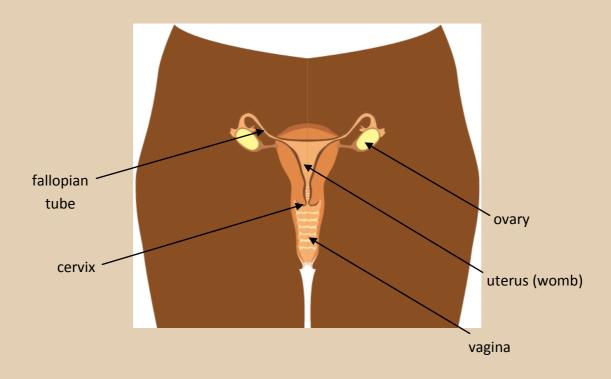
A Girl's Guide to Menstruation

By Sara Richardson, MPH, CHES

Illustrations by Laura Richardson, MLS

The Female Reproductive System



The internal organs of the female reproductive system include the ovaries, the fallopian tubes, the uterus, the cervix (opening of the uterus), and the vagina. Each month, hormones prepare the uterine lining for pregnancy. During the first part of the month, the hormone estrogen is responsible for thickening the lining of the uterus. On approximately day fourteen of the menstrual cycle, an egg is released from the fallopian tube. This process is called *ovulation*. If the egg is not fertilized by sperm and the woman does not become pregnant, the uterine lining and unfertilized egg will leave the body through the vagina. This results in bleeding that normally lasts for 2-7 days. This process is called *menstruation*.

The Menstrual Cycle



The cycle of preparing the uterus for pregnancy, ovulation, and then shedding of the uterine lining is referred to as the menstrual cycle. Normally, a woman's menstrual cycle is every 28 days; however, an adolescent's menstrual cycle may be shorter or longer.

The first day of bleeding is referred to as the first day of the menstrual cycle. Girls usually lose 1-4 tablespoons of blood each month. Menstruation is a normal and healthy process that makes pregnancy possible.



The Menstrual Cycle

Day 1 Day 14 Day 28

Menarche

Girls typically begin menstruating two years after breast development. A girl's first menstrual cycle is called menarche. The age of menarche is different across the globe. Diet and physical activity affect menstruation. Girls who are malnourished or who participate in hard exercise may begin menstruating later than their peers, or may have interruptions in their menstrual cycle. The menstrual cycle will continue until menopause, when the body stops ovulating. Menopause normally occurs around age 50.

Some women experience pain with their menstrual cycles. This is called *dysmenorrhea*. Pain during the menstrual cycle may be more severe in young women. Adolescents can also experience abnormal menstrual bleeding. Menstrual bleeding is considered abnormal if it:

- ◆occurs between periods
- ♦ is very heavy or continues for more than seven days
- ♦ occurs after sex
- ◆occurs after menopause

Women experiencing abnormal bleeding should visit their health care provider.



Sanitary Pads



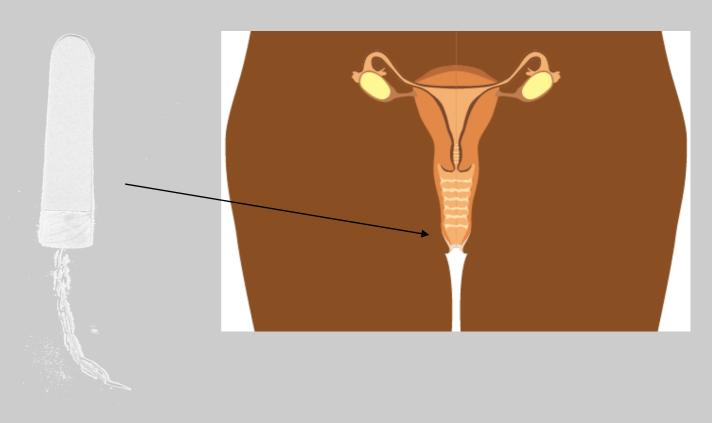
Sanitary pads are worn in underwear to absorb menstrual blood. Pads should be changed every three to four hours but may need to be changed sooner depending on how much blood is present. Today, sanitary pads are available in many varieties, with sticky backings to stay in place and sides to prevent leaks. Many are also designed to absorb odors and prevent the skin from becoming moist. While odor-absorbent pads may be preferred by some women, foul odors alert women to vaginal problems such as infections. Commercial sanitary pads should not be thrown down pit latrines or flushed down toilets.

The *Janipad* is a new type of sanitary pad. This pad is made from plant fibers and it is biodegradable. This product can be thrown down pit latrines because it will break down over time. Other sanitary pads that are made from biodegradable materials can also be thrown down pit latrines. Sanitary pads should never be flushed down toilets because they can clog the toilet.



Tampons

Tampons are inserted into the vagina to absorb menstrual blood. These products are available in many different sizes. Tampons are often available in *light*, *regular*, *super*, or *ultra*. These words refer to how absorbent the tampon is. If a women is bleeding a small amount, she may use a light tampon. If her bleeding is heavy, she may use a super or ultra tampon. Tampons should be changed every four to six hours, and may be left in place when bathing or swimming. Tampons must be removed within this time frame, or they may cause a serious infection called toxic shock syndrome (TSS). TSS will be discussed in the following pages.



Sea sponges & Menstrual Cups

Menstrual sponges (sea sponges) are inserted into the vagina to absorb menstrual blood, similar to a tampon. These products must be cleaned before they are inserted, to remove any germs that may be on the sponge. These products should be cleaned according to the manufacturer's instructions, for example, by boiling or soaking the sponge in a vinegar and water solution. Menstrual sponges can be reused for several years if they are properly taken care of.

Menstrual cups are also inserted into the vagina and collect menstrual blood. They can be reused for several years and must be cleaned properly according to the manufacturer's instructions. Normally, this is done by rinsing the cup in clean water or a vinegar and water solution.

Sea sponges and menstrual cups require clean water (water free of germs that can make you sick) for washing the product and clean hands for inserting the product. These products should not be used in regions where there is not access to clean water. Using these products without properly washing them could cause serious infections of the reproductive tract.

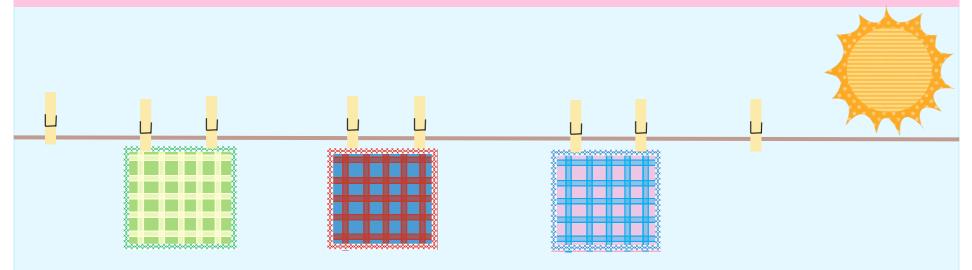
Sea sponge



Menstrual Cup



Homemade Menstrual Hygiene Products



Commercial menstrual hygiene products can be expensive and difficult to properly throw away. Women can make their own menstrual hygiene products by placing old rags or cloths in their underwear. These rags or cloths should be cleaned with water and soap and then dried, before placing them in underwear. Rags and cloths should be dried outside on a clothes line in the sun to reduce the number of germs present. Rags and cloths should be changed frequently, like commercial sanitary pads.

Complications Resulting from Unhygienic Menstrual Practices

Females who participate in unsafe menstrual practices, such as using unclean rags or inserting unclean foreign objects into their vaginas, are at risk for reproductive tract infections. Reproductive tract infections can become serious and must be treated by a health care provider.

Inserting objects into the vagina can be a risk factor for toxic shock syndrome (TSS). TSS can result from infection with certain types of bacteria. Inserting menstrual sponges or cups that have not been cleaned properly can cause TSS. Also, leaving tampons in longer than the recommended time can cause TSS. Symptoms of TSS include:

- ♦ fever
- ◆headache
- ◆ nausea
- ◆vomiting
- ♦ muscle aches
- ♦ seizures

Individuals with these symptoms should see their health care provider immediately.

Reproductive tract infections that are not treated can lead to:

- infertility (not able to become pregnant)
- miscarriage
- ectopic pregnancies (a pregnancy that happens outside the womb)
- increased risk of HIV transmission (the virus that causes AIDS)

References

- Adams Hillard, P. J. (2008). The 5-minute obstetrics and gynecology clinical consult. Philadelphia, PA: Lippincott Williams and Wilkins.
- Adhikari, P., Kadel, B., Dhungel, S., & Mandal, A. (2007). Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal. *Kathmandu University Medical Journal*, *5*(19), 382-386.
- Averbach, S., Sahin-Hodoglugil, N., Musara, P., Chipato, T., & van der Straten, A. (2009). Duet® for menstrual protection: a feasibility study in Zimbabwe. *Contraception*, 79, 463–468.
- Farage, M., Elsner, P., & Maibach, H. (2007). Influence of usage practices, ethnicity, and climate on the skin compatibility of sanitary pads. *Archives of Gynecology and Obstetrics*, *275*, 415–427. doi 10.1007/s00404-006-0273-5
- Food and Drug Administration [FDA]. (2009). CPG Sec. 345.300 menstrual sponges. *Inspections, Compliance, Enforcement, and Criminal Investigations*. Retrieved from http://www.fda.gov/ICECI/ComplianceManuals/CompliancePolicyGuidanceManual/ucm123803.htm
- Gavin, M. (2010). Pads and tampons. Retrieved from http://kidshealth.org/kid/grow/girlstuff/pads_tampons.html
- Garg, R., Goyal, S., & Gupta, S. (2012). India moves towards menstrual hygiene: Subsidized sanitary napkins for rural adolescent girls—Issues and challenges. *Maternal and Child Health Journal*, 16, 767–774. doi 10.1007/s10995-011-0798-5
- Lawan, U. M., Yusuf, N. W., & Musa, A. B. (2010). Menstruation and menstrual hygiene amongst adolescent school girls in Kano, North western Nigeria. *African Journal of Reproductive Health*, 14(3), 201-207.
- Lidman, K., Thornander, S., Hoogendijk, M., Vedeler, L. M., & Tobiassen, K. (2009). *New Sense in Nuisance*. Retrieved from http://www.janipad.com/Jani_report.pdf
- Stewart, K., Powell, M., & Greer, R. (2009). An alternative to conventional sanitary protection: Would women use a menstrual cup? Journal of Obstetrics and Gynaecology, 29(1), 49–52.
- U.S. Department of Health and Human Services [DHHS]. (2009, October 21). *Menstruation and the menstrual cycle*. Retrieved from http://www.womenshealth.gov/publications/our-publications/fact-sheet/menstruation.pdf
- U.S. National Library of Medicine. (2012, August 15). *Toxic shock syndrome*. Retrieved from http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001676/