

# **Vulvovaginal Health**

- What is the vulva?
- What is the hymen?
- How does the vulva change during puberty?
- How do I know if my vulva is normal?
- Do I need to groom my pubic hair?
- What should I do if I notice changes in my vulvar skin color?
- What causes normal vaginal discharge?
- How can I tell if my vaginal discharge is normal?
- How does my body work to keep my vagina healthy?
- What can happen if the balance of bacteria in my vagina is disrupted?
- What causes yeast infection?
- What causes bacterial vaginosis?
- What vulvovaginal changes can occur during pregnancy?
- What vulvovaginal changes can occur after pregnancy?
- What vulvovaginal changes can occur during menopause?
- What are the signs and symptoms of genitourinary syndrome of menopause (GSM)?
- What treatment options are available for GSM?
- Glossary

#### What is the vulva?

The external female genital area is called the *vulva*. The outer folds of skin are called the labia majora, and the inner folds are called the *labia minora*. Within the *labia minora* is the *vestibule*.

The **vagina** and **urethra** open into the vestibule. On either side of the opening of the urethra are the openings to tiny glands called **Skene glands**. Two additional glands, called **Bartholin glands**, are located on either side of the vaginal opening. The **clitoris** is located at the top of the labia minora. It actually extends deep inside the body. The visible part is called the glans, which is partially covered by a fold of tissue called the clitoral hood. The **perineum** is the area between the anus and the vagina.

#### What is the hymen?

The *hymen* is a thin membrane that partially covers the entrance to the vagina. It sometimes can be torn or stretched during a woman's first experience with sex (usually through **sexual intercourse**) or because of tampon use, sporting activities, or medical procedures. Not every girl is born with a hymen. The presence or absence of a hymen does not indicate "virginity."

#### How does the vulva change during puberty?

The vulva changes during *puberty* in response to an increase in *estrogen* and other *hormones*. The labia minora grow and widen. Pubic hair begins to grow. Pubic hair increases in amount over time and becomes thicker and curlier. The vulva also may change in color. In adults, the color can range from light pink to dark brown-red or black. Color also can vary with different ethnicities.

#### How do I know if my vulva is normal?

There is a wide range of normal genitalia and the appearance varies from woman to woman. The labia majora can range in width from one fourth of an inch to 2 inches. The labia minora often extend past the labia majora, but it also is normal if they do not. Some women have labia that are uneven in size. All of these differences are normal.

# Do I need to groom my pubic hair?

Most women have the same general pattern of pubic hair—an upside-down triangle. But there can be differences in the amount and texture of pubic hair among women. Some women choose to remove some or all of their pubic hair, but there is no medical or hygienic reason to do so. Some ways for removing the hair can increase the risk of infection. Injury can occur during shaving or waxing.

#### What should I do if I notice changes in my vulvar skin color?

It is a good idea to become familiar with what is usual for your own vulva. If you see changes in the skin color (redness, dark- or light-colored spots), including moles, or if you have any new bumps or painful swelling, itching, or burning that do not go away, contact your gynecologist.

## What causes normal vaginal discharge?

At puberty, the vagina begins to produce discharge. This discharge is normal. It is mostly water and also contains **microorganisms**. The discharge naturally keeps the genital area clean and healthy by removing dead cells from the lining of the vagina. The amount and makeup of normal discharge change throughout the **menstrual cycle**.

#### How can I tell if my vaginal discharge is normal?

Normal vaginal discharge is clear to white and does not have a noticeable odor. Signs of abnormal discharge include a change in the color, odor, amount, or consistency from what is usual for you. A certain amount of vaginal odor is normal. If the odor is strong and noticeable, an infection or other problem may be the cause. If you feel that you need to cover up the odor, you may have a medical condition that needs treatment. Sprays, deodorants, and douches are not recommended and may make things worse.

# How does my body work to keep my vagina healthy?

Estrogen helps keep the vaginal lining thick and supple and encourages the growth of *lactobacilli*. These *bacteria* make a substance that keeps the vagina slightly acidic. The acidity protects the vagina from harmful, disease-causing microorganisms. Yeast also may be present in the healthy vagina. The natural acidity of the vagina helps keep yeast and other microorganisms from growing out of control.

#### What can happen if the balance of bacteria in my vagina is disrupted?

Vaginal infections can occur if anything disrupts the natural balance of the bacteria that normally are present in your vagina. Two common infections are **yeast infection** and **bacterial vaginosis**.

#### What causes yeast infection?

A yeast infection is caused by an overgrowth of yeast in the vagina. This can result from lubricants, spermicides, taking **antibiotics** (which destroy the "good" bacteria in the vagina), or pregnancy. The most common symptoms are itching and burning of the vulva. Yeast infections can be treated either by placing antiyeast medication into the vagina or by taking a pill.

#### What causes bacterial vaginosis?

Bacterial vaginosis is caused by an overgrowth of the bacteria that normally live in the vagina. The main symptom is increased discharge with a strong odor often described as "fishy." This infection is treated with antibiotics, either taken by mouth or inserted into the vagina.

#### What vulvovaginal changes can occur during pregnancy?

During pregnancy, the levels of the hormones estrogen and *progesterone* increase. As more estrogen and more blood flows to the vaginal area, your vulva may become swollen. The color of your vulvar skin and the opening of your vagina may darken. You may have more normal vaginal discharge. Hormonal changes also may cause changes in the balance of yeast and bacteria in the vagina. Vaginal infections are more common during pregnancy.

Some women may develop **varicose veins** in the vagina, vulva, and anus (these usually are called **hemorrhoids**) during pregnancy. They may be uncomfortable, but they usually go away after pregnancy.

# What vulvovaginal changes can occur after pregnancy?

During childbirth, the skin of the perineum stretches to accommodate the baby's head. Sometimes, the skin and tissues of the perineum tear. Minor tears may heal on their own without stitches, but some tears need surgical repair. Another problem after childbirth is vaginal dryness, especially if you are breastfeeding. Vaginal dryness can be caused by changes in hormone levels. Lubricants and local estrogen therapy can be used to help with this problem.

#### What vulvovaginal changes can occur during menopause?

Decreasing estrogen levels can affect your vagina and urinary tract during **menopause**. Over time, your vaginal lining can get thinner, dryer, and less elastic. The decrease in estrogen also may thin the lining of your urinary tract. As a result of these changes, many women have symptoms that are known as **genitourinary syndrome of menopause (GSM)**.

## What are the signs and symptoms of genitourinary syndrome of menopause (GSM)?

Signs and symptoms of GSM include the following:

- Vaginal burning and itching
- · Decreased lubrication during sex, leading to painful intercourse
- Bleeding after sex
- More frequent vaginal and urinary tract infections
- Frequent urination

All of these changes can affect a woman's enjoyment of sex and the way she feels about herself. It is estimated that between 10% and 40% of menopausal women have at least one of these signs and symptoms.

### What treatment options are available for GSM?

Many treatment options are available to address the signs and symptoms of GSM. Some are available over the counter without a prescription. Others need to be prescribed by your gynecologist or other health care professional. Treatment options include the following:

- Vaginal moisturizers and lubricants—Moisturizers and lubricants can help relieve vaginal dryness and painful sexual intercourse. You can buy moisturizers and lubricants over the counter.
- Local estrogen therapy—With low-dose vaginal estrogen therapy (vaginal creams, vaginal rings, and vaginal tablets), a small dose of estrogen is released directly into the vaginal tissue. The estrogen helps restore the natural thickness and elasticity to the vaginal lining and also relieves dryness and irritation.
- Systemic estrogen therapy—With this type of estrogen therapy (pills, skin patches, or gels or sprays applied to the skin), estrogen is released into the bloodstream and travels to the organs and tissues where it is needed. Women who still have a uterus also need to take *progestin* when taking estrogen therapy. Progestin helps reduce the risk of cancer of the lining of the *uterus* that occurs when estrogen is used alone.
- Selective estrogen receptor modulators (SERMs)—These medications stimulate certain tissues that respond to estrogen while not stimulating other tissues that respond to estrogen. Although SERMs are not estrogen, some may have risks similar to those of estrogen.

#### Glossary

**Antibiotics:** Drugs that treat certain types of infections.

Bacteria: One-celled organisms.

**Bacterial Vaginosis:** A type of vaginal infection caused by the overgrowth of a number of organisms that are normally found in the vagina.

Bartholin Glands: Two glands located on either side of the vaginal opening that produce a fluid during sexual activity.

Clitoris: An organ that is located near the opening of the vagina and is a source of female sexual excitement.

**Estrogen:** A female hormone produced in the ovaries.

**Genitourinary Syndrome of Menopause (GSM):** Signs and symptoms that include vaginal dryness, thinning of the lining of the vagina and urethra, and painful sexual intercourse caused by decreased estrogen levels after menopause.

Hemorrhoids: Swollen blood vessels located in or around the anus.

**Hormones:** Substances made in the body by cells or organs that control the function of cells or organs. An example is estrogen, which controls the function of female reproductive organs.

Hymen: A membrane at the entrance of the vaginal opening.

Labia Majora: The outer folds of tissue of the external female genital area.

Labia Minora: The inner folds of tissue of the external female genital area.

**Lactobacilli:** A type of bacteria normally found in large numbers in the vagina. They make lactic acid that helps keep the vagina acidic.

**Menopause:** The time in a woman's life when menstruation stops; defined as the absence of menstrual periods for 1 year.

**Menstrual Cycle:** The monthly process of changes that occur to prepare a woman's body for possible pregnancy. A menstrual cycle is defined from the first day of menstrual bleeding of one cycle to the first day of menstrual bleeding of the next cycle.

**Microorganisms:** Life forms, such as bacteria, that are invisible to the naked eye and that can only be seen with a microscope.

**Perineum:** The area between the vagina and the anus.

**Progesterone:** A female hormone that is produced in the ovaries and that prepares the lining of the uterus for pregnancy.

Progestin: A synthetic form of progesterone that is similar to the hormone produced naturally by the body.

Puberty: The stage of life when the reproductive organs become functional and secondary sex characteristics develop.

**Sexual Intercourse:** The act of the penis of the male entering the vagina of the female (also called "having sex" or "making love").

Skene Glands: Glands located on either side of the urethral opening.

Urethra: A tube-like structure through which urine flows from the bladder to the outside of the body.

Uterus: A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.

Vagina: A tube-like structure surrounded by muscles leading from the uterus to the outside of the body.

Varicose Veins: Swollen, twisted veins that often result from poor blood flow.

Vestibule: The space within the labia minora into which the vagina and urethra open.

Vulva: The external female genital area.

Yeast Infection: Infection caused by one-celled organisms called yeast.

## If you have further questions, contact your obstetrician-gynecologist.

**FAQ190:** Designed as an aid to patients, this document sets forth current information and opinions related to women's health. The information does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to the institution or type of practice, may be appropriate.

Copyright November 2015 by the American College of Obstetricians and Gynecologists