

PATIENT EDUCATION



The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Vulvovaginal Health

Almost all women have questions at some time about vulvovaginal health. Many women wonder whether their genitals are “normal.” Vaginal symptoms like itching, burning, and pain are among the most common reasons why women see a **gynecologist**. Keeping your **vagina** and **vulva** healthy is an important part of maintaining overall health and well-being.

This pamphlet explains

- *what the vulva looks like*
- *changes in the vulva during puberty, pregnancy, and **menopause***
- *the vaginal environment*
- *self-care for vulvar and vaginal health*

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.

Changes That Occur During Puberty

Puberty starts when the **ovaries** begin to make a **hormone** called **estrogen**. The vulva changes during puberty in response to the 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.

The **hymen** is a thin membrane that partially covers the entrance to the vagina. The hymen sometimes can be torn or stretched during a woman's first experience with sex (usually though **sexual intercourse**) or

because of tampon use or medical procedures. The presence or absence of a hymen does not indicate “virginity.”

Appearance of the Vulva

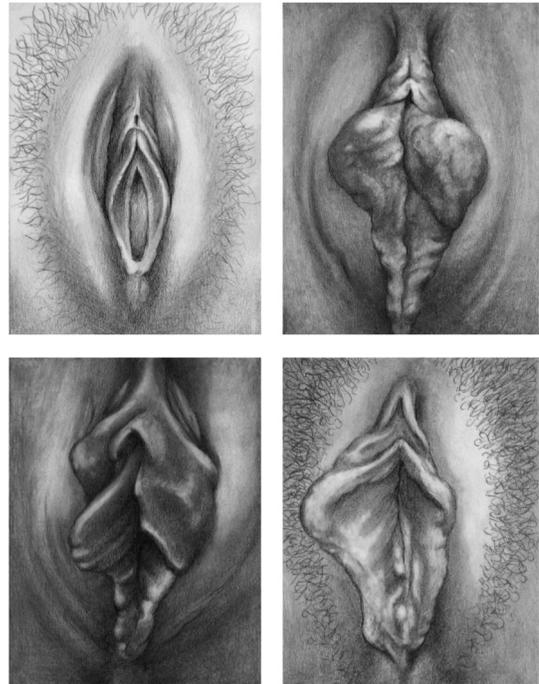
There is a wide range of normal genitalia and the appearance varies from woman to woman. The labia majora can range in width from one fourth of an inch to 2 inches. The labia minora often extend past the labia majora, but it also is normal if they do not. Some women have labia that are uneven in size. All of these differences are normal. In rare cases, uneven or enlarged labia minora can cause discomfort with wearing clothing, exercising, having sex, or inserting tampons. If these issues are bothersome, talk to your gynecologist or other health care professional.

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. Just like fashions and hairstyles, there also are trends in pubic hair grooming. 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. If you choose to groom your pubic hair, make sure that you do it safely, either by yourself or by a professional.

Changes in vulvar skin color can be a sign of a problem, including genital warts, infections, or skin disorders. Rarely, it can be a sign of vulvar cancer. Cancer is the growth of abnormal cells. Vulvar cancer can be caused by infection with **human papillomavirus (HPV)**.

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

What Is Normal?



The appearance of the vulva differs among women.

moles, or if you have any new bumps or painful swelling, itching, or burning that do not go away, contact your gynecologist.

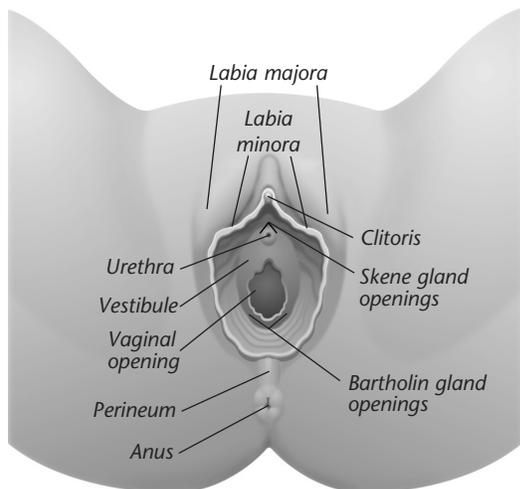
The Vaginal Environment

The vagina is the tube-like structure that leads from the **uterus** to the outside of the body. 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**.

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.

From puberty to menopause, estrogen plays an important role in maintaining a healthy vagina. It helps keep the vaginal lining thick and supple. Estrogen encourages the growth of **lactobacilli**. These **bacteria** make a substance that keeps the vagina slightly acidic. The acidity protects the vagina from

The Vulva



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.

Vaginal infections can occur if anything disrupts the natural balance of the normally present bacteria. Two common infections are **yeast infection** and **bacterial vaginosis (BV)**:

1. 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 anti-yeast medication into the vagina or by taking a pill.
2. 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.

You may be able to prevent some of these problems by following certain hygiene measures. These measures help maintain the normal vaginal environment (see box).

Changes 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 the vulvar skin and the opening of the vagina may darken. These changes are normal. They often go away, but not always. 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 are caused by the weight of the uterus pressing down on a major blood vessel, which slows down blood flow from the lower body. They may be uncomfortable, but usually go away after pregnancy. The following tips may help relieve discomfort:

- Avoid constipation by eating a high-fiber diet and drinking plenty of liquids.
- Sitting for a long time puts pressure on the veins in your pelvic area. Get up and move around to shift the weight of your uterus off these veins.
- If you do get hemorrhoids, apply an ice pack, over-the-counter witch-hazel pads, or over-the-counter ointments to the area to relieve pain and reduce swelling.
- Try soaking in a warm (not hot) tub a few times a day.

Keeping the Vulva and Vagina Healthy

General Hygiene

- Always wipe from front to back after using the bathroom.
- Use only unscented and uncolored toilet paper.
- Do not use baby wipes, feminine sprays, and talcum powders.

For the Vagina

- Avoid douching, which washes away the away the protective bacteria of the vagina.
- Use menstrual pads or tampons that are deodorant-free and do not have a plastic coating.
- Avoid vaginal hygiene products, including perfumes and deodorants

For the Vulva

- Wash your vulva with plain soap that does not contain perfumes or dyes. Rinse with cool or lukewarm water.
- After rinsing, gently pat dry.
- Avoid using lotions and perfumed products on the inner vulva.
- If you are having mild vulvar irritation or discomfort, first stop using soap on the inner parts of your vulva. Clear water is perfectly adequate for washing.

Allow for Air to Circulate

- Wear pants and underwear that are not tight-fitting.
- Only wear underwear with a cotton panel.
- Wear pantyhose or tights that have a cotton crotch.

Changes in the vulva also 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. If you have perineal pain, try cold packs or cool witch hazel compresses. Sitz baths (sitting in warm water that is just deep enough to cover your buttocks and hips) can be helpful. Numbing sprays or creams also can be used to numb the area while you heal.

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 (see “Changes During Menopause”) can be used to help with this problem.

Changes During Menopause

Menopause is the time in a woman's life when the ovaries stop making estrogen and menstruation ends. The years leading up to menopause are called *perimenopause*. Perimenopause generally begins in the mid-40s. During this time, the amount of estrogen produced by the ovaries gradually decreases. Menopause marks the end of the reproductive years. The average age of menopause for women in the United States is 51 years.

Genitourinary Syndrome of Menopause

Common signs of perimenopause include changes in the menstrual cycle, hot flashes, and sleep problems. Decreasing estrogen levels also can affect the vagina and urinary tract. Over time, the vaginal lining can get thinner, dryer, and less elastic. The clitoris, labia, and opening of the vagina may get smaller, and the vagina may narrow and become shorter. The amount of vaginal discharge may decrease. The decrease in estrogen also may thin the lining of the urinary tract. As a result of these changes, many women have symptoms that are known as *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 1 in 10 and 1 in 4 menopausal women have at least one of these signs and symptoms.

Treatment Options for Genitourinary Syndrome of Menopause

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.

Lubricants and Moisturizers. You can buy vaginal moisturizers and lubricants over the counter. They can help relieve vaginal dryness and painful sexual intercourse. Because they do not contain hormones, these products have no effect on the vagina's thickness or elasticity.

Vaginal moisturizers replenish moisture and restore the natural acidity of the vagina. Moisturizers come prepackaged in one-dose applicators. You can use a moisturizer every 2–3 days as needed.

Lubricants can be used each time you have sexual intercourse. There are many types of lubricants. Water-soluble lubricants are easily absorbed into the skin and may have to be reapplied frequently. Silicone-based lubricants last longer and tend to be more slippery than water-soluble lubricants. Oil-based lubricants include petroleum jelly, baby oil, coconut oil, or olive

oil. Oil-based lubricants should not be used with latex condoms, because they can weaken the latex and cause the condom to break.

Estrogen Therapy. Estrogen therapy can relieve the signs and symptoms of GSM. Estrogen therapy is available only by prescription. There are several types of estrogen therapy.

Low-dose vaginal estrogen therapy is available as a vaginal cream, vaginal ring, and vaginal tablet. This is called local therapy. With local therapy, small doses of estrogen are 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. This type of therapy is recommended if you only need relief of vaginal symptoms. It is not as effective in treating hot flashes or sleep problems.

Estrogen also is available in a pill, skin patch, and a gel or spray applied to the skin. This is called systemic therapy. With systemic therapy, estrogen is released into the bloodstream and travels to the organs and tissues where it is needed. Systemic therapy is recommended if you need relief of vaginal and other symptoms of menopause, such as hot flashes. When taking systemic estrogen therapy, women who still have a uterus also need to take *progestin*. Progestin helps reduce the risk of cancer of the lining of the uterus that occurs when estrogen is used alone.

Estrogen therapy—with or without progestin—has many benefits, but it also has risks. It is important to weigh the benefits and the risks for your individual situation. Before deciding about therapy, talk to your gynecologist about what may work best for you based on your symptoms and your personal and family medical history.

Selective Estrogen Receptor Modulators. Selective estrogen receptor modulators (SERMs) are drugs that can stimulate certain tissues that respond to estrogen while not stimulating other tissues that respond to estrogen. One SERM has been approved to treat painful intercourse in postmenopausal women. Although SERMs are not estrogen, some may have risks similar to those of estrogen. If you are having symptoms of GSM and are interested in SERMs, talk to your gynecologist about their risks and benefits.

Finally...

Throughout your life, the way your vulva and vagina look will change over time. This includes during puberty, pregnancy, after childbirth, and menopause. There are steps you can take to maintain the health of your vagina and vulva. During menopause, there are ways to help ease some of the effects of lower estrogen levels.

Glossary

Antibiotics: Drugs that treat certain types of infections.

Bacteria: One-celled organisms that can cause infections in the human body.

Bacterial Vaginosis (BV): A condition in which the normal balance of bacteria is changed by an overgrowth of other bacteria. Symptoms may include vaginal discharge, fishy odor, pain, itching, and burning.

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

Clitoris: A female sex organ found near the opening of the vagina.

Estrogen: A female hormone produced in the ovaries.

Genitourinary Syndrome of Menopause (GSM): A collection of signs and symptoms caused by a decrease in estrogen and other sex hormones. Signs and symptoms can include vaginal dryness, pain with sex, bladder symptoms, frequent urinary tract infections (UTIs), burning, itching, and irritation.

Gynecologist: A doctor with special training and education in women's health.

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

Hormone: A substance made in the body that controls the function of cells or organs.

Human Papillomavirus (HPV): The name for a group of related viruses, some of which cause genital warts and some of which are linked to cancer of the cervix, vulva, vagina, penis, anus, mouth, and throat.

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. These bacteria help keep the vagina acidic and prevents overgrowth of unhealthy bacteria.

Menopause: The time when a woman's menstrual periods stop permanently. Menopause is confirmed after 1 year of no periods.

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

Microorganisms: Life forms that are invisible to the naked eye and can only be seen with a microscope. Bacteria are an example.

Ovaries: The organs in women that contain the eggs necessary to get pregnant and make important hormones, such as estrogen, progesterone, and testosterone.

Perimenopause: The time period leading up to menopause.

Perineum: The area between the vagina and the anus.

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

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

Puberty: The stage of life when the reproductive organs start to function and other sex features develop. For women, this is the time when menstrual periods start and the breasts 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 urethra and urethral opening.

Urethra: A tube-like structure. Urine flows through this tube when it leaves the body.

Uterus: A muscular organ in the female pelvis. During pregnancy, this organ holds and nourishes the fetus.

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

Varicose Veins: Swollen, twisted veins often caused by poor blood flow.

Vestibule: The tissue surrounding the opening of the vagina.

Vulva: The external female genital area.

Yeast Infection: An infection caused by an overgrowth of a fungus. Symptoms may include itching, burning, and irritation of the vulva or vagina and a thick, white discharge.

This information is designed as an educational aid to patients and sets forth current information and opinions related to women's health. It is not intended as a statement of the standard of care, nor does it comprise all proper treatments or methods of care. It is not a substitute for a treating clinician's independent professional judgment. For ACOG's complete disclaimer, visit www.acog.org/WomensHealth-Disclaimer.

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