

Genital Warts

Basics:

Genital warts, also called human papillomavirus (HPV), is a group of 70 or more viruses that infect the skin and cause warts. HPV is a very common virus, and it is likely that you will probably be exposed to one more strains of it during your lifetime. However, not everyone who is exposed develops an infection, and many people who are infected don't develop symptoms.

HPV can cause warts on the face, hands, feet, genitals, anus, or cervix, and other areas of the skin. Different strains of HPV tend to infect different parts of the body. The strains that cause common warts, flat warts, or plantar warts (warts on the bottom of the feet) are not the same strains that cause the sexually transmitted genital warts.

Most strains of HPV cause harmless warts that eventually disappear by themselves. The most common complications of warts include itching and occasional bleeding. In rare cases, warts may become infected with bacteria or fungi.

HPV infection of the cervix is associated with an increased risk of cervical cancer. A few strains of HPV cause a type of infection that can eventually lead to cervical cancer. More than 90% of cervical cancer cases are thought to be caused by HPV infection with these specific strains.

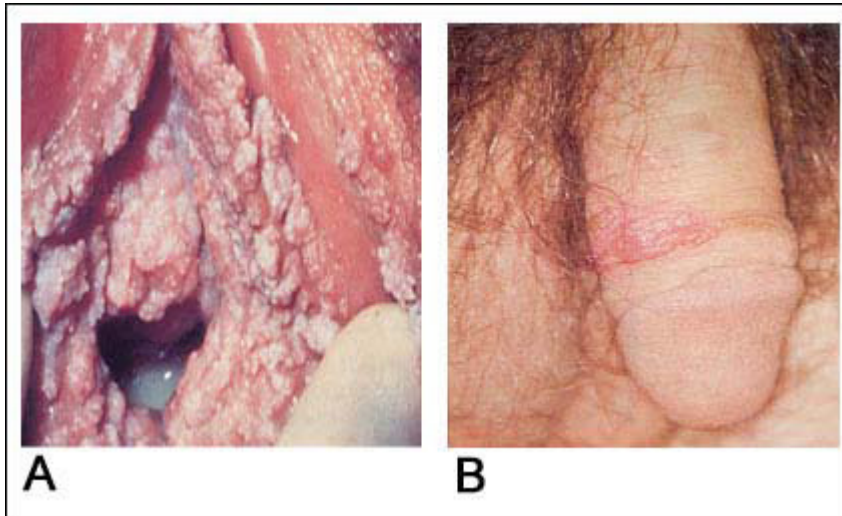
Causes:

HPV is usually spread by direct contact with a wart, but it can be spread through indirect contact as well. Warts on the skin can be spread from one part of the body to another fairly easily, usually by scratching and bringing the virus to a new location; however, nongenital warts are not very easily spread from one person to another.

HPV can survive outside the body, and does not require bodily fluids for transmission. Therefore, it is possible to contract HPV from surfaces that carry the virus, such as locker room floors.

HPV infection of the genitals, anus, vagina, or cervix is a sexually transmitted disease called condyloma acuminatum. [Figure 1] Condyloma acuminatum is one of the most common sexually transmitted diseases in the US. It is caused by specific strains of HPV that are transmitted from person to person during oral, anal, or vaginal intercourse. Not everyone who is infected with HPV, however, develops genital warts. As many as 50% of people with genital infections show no symptoms, but can still transmit the virus to others.

In rare cases, HPV can be passed from a mother to her child during birth. This potentially severe infection may cause warts to develop in a baby's throat. In some cases these warts can grow so quickly that they close off the airway, and may cause suffocation if a tracheotomy is not performed. The warts can be removed surgically or by laser, but recurrence is common. Oftentimes the warts disappear spontaneously at puberty.



Condyloma acuminatum in a female (A) and male (B) patient.

Symptoms:

The symptoms of HPV infection depend on the location of the infection and the type of virus. [Table 1] Common skin warts are flesh-colored, yellow, or brown. They are firm, dry, and rough, and are usually no longer than a half an inch in diameter. Plantar warts develop on the soles of the feet and may be quite painful. Instead of protruding outwards, plantar warts are flattened and pushed into the skin because of the weight of the body on the foot. Flat warts are common among children, and appear as smooth, yellow-brown spots primarily on the face; they may also develop on the neck, chest, arms, and legs.

Common Warts	Flesh-colored, yellow, or brown in color
	Firm, dry, and rough in texture
	Less than half an inch in diameter
Flat Warts	Smooth spots, yellow-brown in color
	Primarily located on the face, but also found on the neck, chest, or extremities
	Common in children, less common in adults
Plantar Warts	Flat, compressed warts on the soles of the feet
	Infiltrated with small blood vessels
	Often painful
Genital Warts	Generally flesh-colored, but may also be gray or pink
	Lesions may be small or large, flat or raised, single or clumped into a group that may look like a cauliflower

	In women, found on the vulva, around the vagina or anus, on the cervix, or on the groin or thighs
	In men, normally found on the penis or scrotum

Genital warts have a variety of appearances. Genital warts are flesh-colored and painless, but may also be gray or pink. They can be small or large, flat or raised, single or clumped into a group that may look like a cauliflower. In women, the warts appear on the vulva, in or around the vagina or anus, on the cervix, or on the groin or thighs. In men, genital warts normally develop on the penis or scrotum. The warts may also develop on the hands or mouth as a result of a virus that is transmitted during foreplay or oral sex. Many people with genital infections of HPV show no symptoms at all.

HPV infection of the cervix usually has no physical symptoms unless cancer develops. The changes in the cells on the surface of the cervix caused by HPV can be detected by Pap tests (see below), but generally this infection has no physical symptoms unless cancer develops.

Risk Factors:

Engaging in unsafe sexual practices increases the risk of contracting sexually transmitted HPV. Having unprotected sex increases your risk of contracting the virus. Having multiple sex partners also increases your risk of coming in contact with someone who is infected with the virus, as does having sex with someone who has sex with multiple partners. Having sex as a teenager increases a woman's risk of developing cervical cancer.

Diagnosis:

A doctor will generally diagnose warts on the skin by physical appearance alone. Common warts and flat warts have a distinct physical appearance, and can easily be diagnosed by sight. Plantar warts can be distinguished from calluses by scraping off a small amount of the surface skin. Calluses will consist only of hardened skin, whereas plantar warts will have small blood vessels scattered throughout the wart.

During your initial consultation for genital warts, your doctor will get a medical history and perform a physical examination. If you suspect you have genital warts, your doctor will start with a medical history, and may ask you questions about your sexual history as well as specific questions about how your symptoms developed. These questions are particularly important for women, as the answers will provide information about their risk for developing cervical cancer.

The doctor may ask a woman if there is any chance she is pregnant, because some of the drugs used to treat genital warts (e.g., podophyllin) should not be used by pregnant women.

After the history, your doctor will perform a physical examination to identify any genital warts. To check for warts inside the vagina or on the cervix, the doctor may use a colposcope, an instrument that magnifies areas of suspected abnormalities.

Changes to the cervix caused by HPV are most commonly found during routine Pap tests. The Pap test, or Pap smear, is a routine part of the gynecological exam. During the exam, the doctor inserts an instrument called a speculum into the vagina to hold the vaginal walls apart so the cervix can be seen clearly. A cotton swab or brush is used to scrape a few cells from the mucus membranes where the cervix and vagina meet. The cells are placed on a glass slide and sent to a laboratory for examination. If the test comes back abnormal, your doctor may recommend further diagnostic tests. It is important to remember that Pap tests often yield false-positive results, so an abnormal result needs to be confirmed with additional tests.

Prevention and Screening:

The risk of contracting genital warts can be reduced through safer sexual practices. For people who have sexual relationships, the risk of contracting HPV can be reduced through safer sexual practices, including using condoms.

Having a monogamous sexual relationship—a relationship in which uninfected partners have sex exclusively with each other—can reduce your risk of contracting HPV.

Consistent and proper use of condoms during sex can reduce the risk of contracting genital warts. Latex and polyurethane condoms provide an impenetrable barrier to HPV, and when used with every sexual encounter, they provide effective prevention against infection. Condoms should only be used before their expiration date, and when no obvious signs of defects or damage are visible. They should be worn before any sexual contact is made, and each condom should be used only once. Only water-based lubricants should be used with condoms; petroleum jelly, vegetable oil, or other oil-based lubricants can damage the condom and cause it to tear.

Self Care:

Many remedies for common skin warts are available without a prescription at drugstores. Many nonprescription wart remedies are available in the form of ointments, plasters, or lotions. They usually include strong chemicals that destroy skin cells, and should be used with caution because they destroy healthy as well as abnormal cells. It is difficult to determine the efficacy of these treatments, however, because most warts eventually disappear by themselves.

Genital or anal warts should not be treated with over-the-counter medications. Most nonprescription wart remedies contain caustic chemicals that could harm the sensitive skin around the genitals or anus, and therefore should not be used to treat genital or anal warts.

Drug Therapy:

Your doctor is the best source of information on the drug treatment choices available to you.

Other Therapies:

Warts can be removed by cryotherapy, electrosurgery, or laser therapy. Cryotherapy is a process in which liquid nitrogen is used to freeze off the wart. In electrosurgery, an electric current is passed through the wart to kill the tissue. With laser therapy, a powerful laser burns the tissue off one layer at a time. Cryotherapy is most often recommended because it is fast, inexpensive, relatively painless, and is often effective. Cryosurgery is also used to destroy HPV altered cells of the cervix to reduce the risk of developing cervical cancer. Regardless of the therapy used, repeat treatments may be required to completely eliminate the wart.

Surgery:

Your physician may recommend surgical removal of your warts. Excision of the wart is one of the options available, but for most people it is less desirable than freezing the wart or using a topical medication. For example, doctors generally don't recommend surgically removing plantar warts because the surgery can cause a scar at least as painful as the wart itself.

Special Circumstances:

During pregnancy, genital warts may grow large enough to obstruct the birth canal. Hormonal changes during pregnancy can cause pre-existing genital warts to grow. In some cases, the warts grow so large that they block the birth canal. In these cases, surgically removing the warts or a C-section may be required for delivery.

Prognosis:

In most cases, warts on the skin will eventually disappear by themselves. Skin warts are most common among young children and teenagers, and eventually disappear on their own. The process, however, can take months to several years, and if the wart is painful or causes embarrassment, treatment may be desirable.

Regardless of treatment, many warts recur. Approximately 25% of people who have their warts removed will have a recurrence within three months. Smaller warts and warts that have been present for short periods of time are the ones most likely to respond to treatment and not recur.

None of the currently available treatments will cure HPV infection. All of the currently available treatments for HPV infection are designed to treat the symptoms, primarily by removing the warts. None of the treatments, however, will eliminate HPV from the body.

Vaccines to prevent HPV transmission are in development, but are not likely to become available in the near future.

Follow-Up:

Once your warts have disappeared, there is no need for follow-up unless the warts recur.