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Genital warts in women (Beyond the Basics)

GENITAL WARTS OVERVIEW

Condyloma acuminata (genital warts) are a sexually transmitted infection that causes small, skin-colored or pink growths on the labia, at the opening of the vagina, or around or inside the anus. Genital warts are the most common sexually transmitted infection in the United States. Although warts affect both genders, more women have warts than men.

CAUSES OF GENITAL WARTS

Genital warts are caused by the human papillomavirus (HPV). There are over 100 different types of HPV, which can cause different types of problems. HPV types 6 and 11 are the major causes of warts, and types 16 and 18 are the major causes of cervical cancer. The wart-producing strains of HPV do not typically cause cancer. (See "Patient information: Cervical cancer screening (Beyond the Basics)".)

HPV is spread by direct skin-to-skin contact, including sexual intercourse, oral sex, anal sex, or any other contact involving the genital area (eg, hand-to-genital contact). It is not possible to become infected with HPV by touching a toilet seat. Most people with the virus do not have visible warts, but can still transmit the virus. Treating the warts may not decrease the chance of spreading the virus. Therefore, all people who are sexually active should be regarded as potential sources of HPV, not just those with visible warts.

Warts may appear weeks to a year or more after being exposed to the virus; it is not usually possible to know when or how you became infected.

GENITAL WARTS SYMPTOMS

Warts are skin-colored or pink, and may be smooth and flat or raised with a rough texture. They are usually located on the labia or at the opening of the vagina, but can also be around or inside the anus.

Most women with warts do not have any symptoms at all. Less commonly, there may be itching, burning, or tenderness in the genital area.

GENITAL WARTS DIAGNOSIS

Genital warts are diagnosed based on an exam. If your doctor or nurse is not certain that the area is a wart, he or she may perform a biopsy (remove a small piece of tissue). (See "Condylomata acuminata (anogenital warts)".)

GENITAL WARTS TREATMENT

There are many ways to treat genital warts: some involve using a medicine and some involve a procedure. Even with treatment, it is possible that the warts will come back within a few weeks or months. This is because treating the warts does not necessarily get rid of all of the virus (HPV) causing the warts. Some cells in the normal-appearing genital skin and vagina may remain infected with HPV. There is currently no treatment that will permanently get rid of HPV in all infected cells, but most people will clear the virus and the warts with their own immune systems within two years. (See "Treatment of vulvar and vaginal warts".)

The "best" treatment for warts depends on how many warts you have, where they are located, and you and your doctor or nurse's preferences. Warts do not necessarily need to be treated, especially if they are not bothersome.

Medical treatments — Medical treatments include creams or liquids that you or your doctor or nurse must apply to the wart. All of these treatments must be used one or more times per week for several weeks, until the wart(s) goes away.

Podophyllin — Podophyllin is a treatment that destroys the wart tissue. A doctor or nurse applies the solution directly to the wart(s) with a cotton swab, and you should wash the area one to four hours later. The treatment is repeated weekly for four to six weeks, or until the lesions have cleared. Side effects range from mild skin irritation to pain and skin ulcers. Podophyllin is not used in pregnant women.

Podofilox — Podofilox is similar to podophyllin, but you can apply podofilox (Condylox) at home. Using a cotton swab, you apply a gel or liquid solution to the wart(s) twice daily for three days in a row. Then you use no treatment for the next four days. You can repeat this cycle up to four times until the warts have gone away. Podofilox is not used in pregnant women. Side effects of podofilox are similar to those of podophyllin.

Bichloroacetic acid and trichloroacetic acid — Both bichloroacetic acid (BCA) and trichloroacetic acid (TCA) are acids that destroy the wart tissue. TCA is used most commonly, and must be applied by a doctor or nurse. The provider applies the acid to the wart once per week for four to six weeks, or until the warts go away. Side effects of TCA include pain and burning. TCA is safe for use during pregnancy.

Imiquimod — Imiquimod (Aldara) is a cream that triggers the immune system to get rid of the wart. You can apply the cream directly to the wart (generally at bedtime), and then wash the area with water six to 10 hours later. You use the cream three days per week for up to 16 weeks. Mild

irritation and redness are normal while using imiquimod, and mean that the treatment is working. Imiquimod is not recommended during pregnancy.

Interferon — Interferon is a medication that causes an immune response. It is available in several treatment forms (injection, topical gel), but studies have shown that it most effective when given as an injection into the wart.

Side effects of interferon include flu-like symptoms, fatigue, lack of appetite, and pain. Interferon is not usually recommended as a first-line treatment. It may be used in combination with surgical and/or other medical treatments, especially with warts that do not improve with other treatments. Interferon is not safe during pregnancy.

Sinecatechins — Sinecatechins (eg, Veregen) is a botanical product that can be self-administered. The exact mechanism of action of catechins is unknown, but they have both antioxidant and immune enhancing activity. The ointment is placed on each external wart three times each day for up to 16 weeks. It should not be used in the vagina or anus, in immunocompromised women, or in women with active herpes. It should be washed off of the skin before sexual contact or before inserting a tampon into the vagina, and it can weaken the latex in condoms and diaphragms.

In trials of this therapy, 5 percent of users discontinued the drug due to side effects and almost 90 percent reported local application site reactions, some of which were severe (pruritus, erythema, pain, inflammation, ulceration, edema, burning, induration, vesicular rash).

Surgical treatment — Surgical treatments include treatments that remove the wart (called excision) and treatments that destroy (freeze, burn) the wart. These treatments are often used in combination. Some surgical treatments can be done in the office while others are done in the operating room. Surgical treatments are considered safe in pregnancy, and may be recommended for:

- Warts that do not respond to medical therapy
- Large areas of warts, where medical therapy alone is often inadequate
- Warts involving the vagina, urethra, or anus
- Areas that have pre-cancerous changes in addition to warts

Cryotherapy — Cryotherapy uses a chemical to freeze the wart. The treatment can be done in the office, and does not usually require any anesthesia.

Cryotherapy often causes pain during the procedure; other side effects can include skin irritation, swelling, blistering, and ulceration. Cryotherapy is not usually a first-line treatment. Cryotherapy can be used during pregnancy.

Electrocautery — Electrocautery uses electrical energy to burn away warts. Treatment is usually done in an operating room using local anesthesia to prevent pain.

Excision — Excision involves using surgery to remove the wart. Most people are treated in the operating room using anesthesia to prevent pain. Rarely, excision causes pain, scarring, and infection.

Laser — Lasers produce light energy, which destroys warts. Physicians who perform laser treatment require specific training and specialized equipment. Laser treatment is done in the operating room using local anesthesia to prevent pain.

Laser therapy may be recommended if you have multiple warts spread over a large area. Risks of laser surgery include scarring, pain, and changes in the skin (usually lightened color).

GENITAL WARTS FOLLOW UP

Getting rid of warts does not necessarily mean that the virus causing the warts (HPV) is gone. If warts come back, they usually do so within three to six months of treatment. This problem is more common in women with a weakened immune system (such as diabetes, HIV, or certain medications).

GENITAL WARTS PREVENTION

HPV vaccine — A vaccine, Gardasil, is available for prevention of genital warts. Gardasil helps prevent infection from four types of HPV (types 6, 11, 16, and 18), which helps to prevent most cases of cervical cancer (caused by HPV 16 and 18) and genital warts (caused by HPV 6 and 11).

Another vaccine, Cervarix, helps prevent infection from two types of HPV (types 16 and 18), thus it helps to prevent most cases of cervical cancer, but not genital warts.

Both vaccines are safe. An article about the HPV vaccine is available separately. (See "Patient information: Human papillomavirus (HPV) vaccine (Beyond the Basics)".)

Sexual contact — Avoiding people who have genital warts or HPV can reduce your risk of becoming infected with HPV. However, from a practical standpoint this is difficult, as many people are infected with HPV and do not have any visible warts. Condoms do not provide complete protection against warts or HPV; areas not covered by the condom can spread HPV from one person to another.

If you have genital warts or HPV and you are worried about infecting your sex partner, have an honest talk before you have sex. Explain that you have HPV and that it is very common and most people are asymptomatic. There is no test for looking for HPV on the vulva. There is a test to find HPV on the cervix, but this does not check for the type of HPV that causes vulvar warts. Cervical HPV and vulvar HPV are usually different.

WHERE TO GET MORE INFORMATION

Your healthcare provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our web site (www.uptodate.com/patients). Related topics for patients, as well as selected articles written for healthcare professionals, are also available. Some of the most relevant are listed below.

Patient level information — UpToDate offers two types of patient education materials.

The Basics — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

Patient information: Genital warts (The Basics)
Patient information: Human papillomavirus (HPV) vaccine (The Basics)
Patient information: Screening for sexually transmitted infections (The Basics)
Patient information: Syphilis (The Basics)
Patient information: Urethritis (The Basics)

Beyond the Basics — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

Patient information: Cervical cancer screening (Beyond the Basics)
Patient information: Human papillomavirus (HPV) vaccine (Beyond the Basics)

Professional level information — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

Anal intraepithelial neoplasia: Diagnosis, screening, prevention, and treatment
Carcinoma of the penis: Epidemiology, risk factors, staging, and prognosis
Clinical features, staging, and treatment of anal cancer
Clinical trials of human papillomavirus vaccines
Condylomata acuminata (anogenital warts)
Epidemiology of human papillomavirus infections
Recommendations for the use of human papillomavirus vaccines
Treatment of vulvar and vaginal warts
Virology of human papillomavirus infections and the link to cancer

The following organizations also provide reliable health information.

- National Library of Medicine

(www.nlm.nih.gov/medlineplus/healthtopics.html)

- American Cancer Society

(www.cancer.org, search for HPV)

- National HPV and Cervical Cancer Public Education Campaign

Telephone: 1-866-280-6605
(www.cervicalcancercampaign.org)

- National Institute of Allergy and Infectious Diseases

(www.niaid.nih.gov/factsheets/stdhpv.htm)

- Center for Disease Control and Prevention

(www.cdc.gov/std/HPV/STDFact-HPV.htm)

- American Social Health Association

(www.ashastd.org/std-sti/hpv/genital-warts.html)

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Literature review current through: Jul 2013. | This topic last updated: Jul 30, 2013.
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Top

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2. Stanley MA. Genital human papillomavirus infections: current and prospective therapies. J Gen Virol 2012; 93:681.