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HPV

Also called: Human papillomavirus

What is HPV?

Human papillomavirus (HPV) is a group of more than 200 related viruses. Some of them are spread through sexual contact. Most people have been exposed to HPV. Usually, your immune system controls HPV infections, and they go away on their own and don't cause any health problems, but some need treatment.

There are two categories of sexually transmitted HPV. They are called low-risk HPV and high-risk HPV. Sometimes high-risk HPV infections can stay at the cervix (the lower part of a woman's uterus) for many years. This can lead to cell changes. If these changes are not screened for and treated, they may get worse over time and become cancer.

Low-risk HPV can cause warts [<https://medlineplus.gov/warts.html>] on or around your genitals [<https://medlineplus.gov/genitalwarts.html>] , anus, mouth, or throat.

High-risk HPV can cause various cancers:

- Cervical cancer [<https://medlineplus.gov/cervicalcancer.html>]
- Anal cancer [<https://medlineplus.gov/analcancer.html>]
- Oropharyngeal cancer, a type of head [<https://medlineplus.gov/oralcancer.html>] and neck cancer, also called throat [<https://medlineplus.gov/throatcancer.html>] cancer
- Vulvar cancer [<https://medlineplus.gov/vulvarcancer.html>]
- Vaginal cancer [<https://medlineplus.gov/vaginalcancer.html>]
- Penile cancer

Who is at risk for HPV infections?

HPV infections are very common. Nearly all sexually active people are infected with HPV soon after they become sexually active.

What are the symptoms of HPV infections?

Some people get warts from certain low-risk HPV infections, but the other types (including the high-risk types) have no symptoms.

If a high-risk HPV infection lasts for many years and causes cell changes, you may have symptoms. You may also have symptoms if those cell changes develop into cancer. Which symptoms you have depends on which part of your body is affected.

How are HPV infections diagnosed?

Health care providers can usually find out if you have warts by looking at them.

Nearly all cervical cancers are caused by a long-lasting infection with a high-risk type of HPV. Screening can prevent cancer by finding out if you need treatment for changes that might happen before cancer, called precancer.

Screening tests for HPV can include:

- For women, there are cervical cancer screening [<https://medlineplus.gov/cervicalcancerscreening.html>] tests that can find changes in the cervix that might lead to cancer. As part of the screening, women may have **Pap tests** [<https://medlineplus.gov/lab-tests/pap-smear/>] (sometimes called a Pap smear), **HPV tests** [<https://medlineplus.gov/lab-tests/human-papillomavirus-hpv-test/>] , or both. HPV tests use a sample of cervical cells.
- Your provider may also suggest a **colposcopy** [<https://medlineplus.gov/lab-tests/colposcopy/>] to check for abnormal cells.

What are the treatments for HPV infections?

An HPV infection itself cannot be treated. Because HPV causes cancer at other places in the body, testing for the HPV virus can be helpful to make other treatment decisions.

- **HPV infection.** Talk to your provider about whether you need other tests and how often you should be checked to prevent cervical cancer.
- **Warts.** There are medicines that you can apply to a wart. If they don't work, your provider could freeze, burn, or surgically remove them.
- **Cell changes caused by infection with high-risk HPV.** Treatments may include medicines you apply to the affected area or various surgical procedures.

People who have HPV-related cancers usually get the same types of treatment as people who have cancers that HPV does not cause. An exception to this is for people who have certain oral and throat cancers. They may have different treatment options.

Can HPV infections be prevented?


Correct usage of latex condoms greatly reduces, but does not completely eliminate, the risk of catching or spreading HPV. If you or your partner is **allergic to latex** [<https://medlineplus.gov/latexallergy.html>] , you can use polyurethane condoms. The most reliable way to avoid infection is to not have anal, vaginal, or oral sex.

Vaccines can protect against several types of HPV, including genital warts and some that can cause cancer. The vaccines provide the most protection when people get them before exposure to the virus. This means that it is best for people to get them before they become sexually active.



Ask your child's provider about when to vaccinate your child against HPV. If you're over age 26 and haven't been vaccinated, talk with your provider about the possible benefits of vaccination.

NIH: National Cancer Institute

Start Here

- **Human Papillomavirus** [<https://womenshealth.gov/a-z-topics/human-papillomavirus>]
(Department of Health and Human Services, Office on Women's Health)
Also in Spanish [<https://espanol.womenshealth.gov/a-z-topics/human-papillomavirus>]
- **Human Papillomavirus (HPV) Vaccines** [<https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hpv-vaccine-fact-sheet>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/cancer/causas-prevencion/riesgo/germenes-infecciosos/hoja-informativa-vacuna-vph>]



Diagnosis and Tests

- **Colposcopy** [<https://medlineplus.gov/lab-tests/colposcopy/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/colposcopia/>]
- **HPV Testing** [<https://www.cancer.org/cancer/risk-prevention/hpv/hpv-and-hpv-testing.html>] (American Cancer Society)
Also in Spanish [<https://www.cancer.org/es/cancer/prevencion-del-riesgo/vph/vph-y-pruebas-para-vph.html>]
- **Human Papillomavirus (HPV) Test** [<https://medlineplus.gov/lab-tests/human-papillomavirus-hpv-test/>]
 (National Library of Medicine)

Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-del-virus-del-papiloma-humano-vph/>]

- What You Need to Know about the New HPV Self-Collection Screening [<https://preventcancer.org/article/hpv-self-collection-screening/>] (Prevent Cancer Foundation)

Prevention and Risk Factors

- How to Protect against HPV [<https://www.cancer.org/cancer/risk-prevention/hpv/hpv-prevention.html>] (American Cancer Society)
- HPV and Pap Test Results: Next Steps after an Abnormal Cervical Cancer Screening Test [<https://www.cancer.gov/types/cervical/screening/abnormal-hpv-pap-test-results>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/tipos/cuello-uterino/deteccion/resultados-anormales-pruebas-vph-pap>]
- HPV Vaccination [<https://www.cdc.gov/hpv/vaccines/>] (Centers for Disease Control and Prevention)
- Protecting Against HPV: Common Viruses Can Lead to Cancer [<https://newsinhealth.nih.gov/2020/04/protecting-against-hpv>]  (National Institutes of Health)
Also in Spanish [<https://salud.nih.gov/recursos-de-salud/nih-noticias-de-salud/proteccion-contr-el-vph>]

Treatments and Therapies

- Do I Have to Get All My HPV Vaccine Shots? [<https://kidshealth.org/en/teens/hpv-shots.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/teens/hpv-shots.html>]
- HPV Vaccinations and Young Adults [<https://womenshealth.gov/hpvvaccine>] **Easy-to-Read** (Department of Health and Human Services, Office on Women's Health)
- Your Child's Vaccines: Human Papillomavirus (HPV) Vaccine [<https://kidshealth.org/en/parents/hpv-vaccine.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/parents/hpv-vaccine.html>]

Related Issues

- Human Papillomavirus (HPV) Vaccine Safety [<https://www.cdc.gov/vaccine-safety/vaccines/hpv.html>] (Centers for Disease Control and Prevention)

Specifics

- About Genital HPV Infection [<https://www.cdc.gov/sti/about/about-genital-hpv-infection.html>] (Centers for Disease Control and Prevention)
Also in Spanish [<https://www.cdc.gov/sti/es/about/acerca-de-las-infecciones-genitales-por-el-vph.html>]
- Cancers Caused by HPV [<https://www.cdc.gov/hpv/about/cancers-caused-by-hpv.html>] (Centers for Disease Control and Prevention)
- Cervical Cancer Screening [<https://www.cancer.gov/types/cervical/screening>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/tipos/cuello-uterino/deteccion#section/all>]
- HPV and Cancer [<https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hpv-and-cancer>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/cancer/causas-prevencion/riesgo/germenes-infecciosos/vph-y-cancer>]
- HPV and Oropharyngeal Cancer [<https://www.cdc.gov/cancer/hpv/oropharyngeal-cancer.html>] (Centers for Disease Control and Prevention)
Also in Spanish [<https://www.cdc.gov/cancer/es/hpv/oropharyngeal-cancer.html>]
- Recurrent Respiratory Papillomatosis or Laryngeal Papillomatosis [<https://www.nidcd.nih.gov/health/recurrent-respiratory-papillomatosis>]  (National Institute on Deafness and Other Communication Disorders)
Also in Spanish [<https://www.nidcd.nih.gov/es/espanol/papilomatosis-respiratoria-recurrente>]
- Should Kids and Teens Who Aren't Sexually Active Be Vaccinated Against HPV? [<https://kidshealth.org/en/parents/hpv-shot.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/parents/hpv-shot.html>]



Test Your Knowledge

- HPV and Genital Warts Quiz [https://medlineplus.gov/ency/quiz/000886_41.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/quiz/000886_96.htm]

Statistics and Research

- Cancers Linked With HPV Each Year [<https://www.cdc.gov/cancer/hpv/cases.html>] (Centers for Disease Control and Prevention)
Also in Spanish [<https://www.cdc.gov/cancer/es/hpv/cases.html>]
- HPV Vaccine: Access and Use in the U.S. [<https://www.kff.org/womens-health-policy/fact-sheet/the-hpv-vaccine-access-and-use-in-the-u-s/>] (KFF)

Clinical Trials



- ClinicalTrials.gov: Papillomavirus Infections [<https://clinicaltrials.gov/search?cond=%22Papillomavirus+Infections%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Papillomavirus Vaccines [<https://clinicaltrials.gov/search?cond=%22Papillomavirus+Vaccines%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: High-risk human papillomavirus genotype distribution and attribution to cervical lesions in... [<https://www.ncbi.nlm.nih.gov/pubmed/40753301>]
- Article: Monitoring the presence of human papillomavirus in public areas indicates non-sexual... [<https://www.ncbi.nlm.nih.gov/pubmed/40410731>]
- Article: Pattern of multiple human papillomavirus infection and type competition: An analysis... [<https://www.ncbi.nlm.nih.gov/pubmed/38619081>]
- HPV -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Papillomavirus+Infections%22%5Bmajr%3Anoexp%5D+AND+%22Alphapapillomavirus%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+2+Years%22+%5Bedat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29>]

Find an Expert

- American Cancer Society [<https://www.cancer.org/>]
- Centers for Disease Control and Prevention [<https://www.cdc.gov/>]
Also in Spanish [<https://www.cdc.gov/spanish/>]
- National Cancer Institute [<https://www.cancer.gov/>] 
Also in Spanish [<https://www.cancer.gov/espanol/>]
- National Institute of Allergy and Infectious Diseases [<https://www.niaid.nih.gov/>] 

Children

- Get Your Child the HPV Vaccine [<https://odphp.health.gov/myhealthfinder/doctor-visits/vaccines-shots/get-your-child-hpv-vaccine>] (Office of Disease Prevention and Health Promotion)
Also in Spanish [<https://odphp.health.gov/espanol/myhealthfinder/visitas-doctor/vacunas/vacuna-tus-hijos-vph>]
- Here's Why Your Preteen Needs the HPV Vaccine [<https://www.healthychildren.org/English/safety-prevention/immunizations/Pages/How-to-Talk-to-Your-Preteen-About-HPV-Vaccine.aspx>] (American Academy of Pediatrics)
Also in Spanish [<https://www.healthychildren.org/spanish/safety-prevention/immunizations/paginas/how-to-talk-to-your-preteen-about-hpv-vaccine.aspx>]
- Vaccinating Your Preteen: Addressing Common Concerns [<https://www.healthychildren.org/English/safety-prevention/immunizations/Pages/Vaccinating-Your-Preteen-Addressing-Common-Concerns.aspx>]


(American Academy of Pediatrics)

- Why Age 9? [https://hpvroundtable.org/wp-content/uploads/2023/05/HPV_Roundtable-HPV_Why_Age_9_Sales_Sheet_WEB.pdf] (American Cancer Society) - **PDF**

Teenagers

- HPV Vaccine [<https://kidshealth.org/en/teens/hpv-vaccine.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/teens/hpv-vaccine.html>]
- HPV Vaccine for Preteens and Teens [<https://www.cdc.gov/vaccines/parents/diseases/hpv-basics-color.pdf>]
(Centers for Disease Control and Prevention) - **PDF**
Also in Spanish [<https://www.cdc.gov/vaccines/parents/diseases/hpv-basics-color-sp-508.pdf>]
- HPV Vaccine Safety and Effectiveness [<https://www.cdc.gov/vaccines/partners/downloads/teens/vaccine-safety.pdf>]
(Centers for Disease Control and Prevention) - **PDF**

Men

- HPV Infection: A Cause of Cancer in Men? [<https://www.mayoclinic.org/diseases-conditions/hpv-infection/expert-answers/hpv/faq-20057761?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/hpv-infection/expert-answers/hpv/faq-20057761?p=1>]
- What Men Need to Know about HPV [<https://www.ashasexualhealth.org/what-men-should-know/>]
 (American Sexual Health Association)

Women

- Human Papillomavirus (HPV) Vaccine [<https://mothertobaby.org/fact-sheets/hpv-vaccine-pregnancy/>]
(Organization of Teratology Information Specialists)
Also in Spanish [<https://mothertobaby.org/es/hojas-informativas/la-vacuna-del-vph/>]

Patient Handouts

- Cervical cancer - screening and prevention [<https://medlineplus.gov/ency/patientinstructions/000419.htm>]
(Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000419.htm>]
- Condom Use: An Overview [<https://www.cdc.gov/condom-use/>] (Centers for Disease Control and Prevention)
- HPV test [<https://medlineplus.gov/ency/article/007534.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007534.htm>]
- HPV vaccine [<https://medlineplus.gov/ency/article/007436.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007436.htm>]



MEDICAL ENCYCLOPEDIA

Cervical cancer - screening and prevention [<https://medlineplus.gov/ency/patientinstructions/000419.htm>]

Genital warts [<https://medlineplus.gov/ency/article/000886.htm>]

HPV test [<https://medlineplus.gov/ency/article/007534.htm>]

HPV vaccine [<https://medlineplus.gov/ency/article/007436.htm>]

Oral human papillomavirus infection [<https://medlineplus.gov/ency/article/007762.htm>]

Related Health Topics

Cervical Cancer [<https://medlineplus.gov/cervicalcancer.html>]

Cervical Cancer Screening [<https://medlineplus.gov/cervicalcancerscreening.html>]

Genital Warts [<https://medlineplus.gov/genitalwarts.html>]

National Institutes of Health

The primary NIH organization for research on *HPV* is the National Institute of Allergy and Infectious Diseases [<http://www.niaid.nih.gov/>]

Other Languages

Find health information in languages other than English [<https://medlineplus.gov/languages/hpv.html>] on *HPV*

NIH MedlinePlus Magazine

Cervical Cancer Survivor Urges Young People to Get HPV Vaccine [<https://magazine.medlineplus.gov/article/cervical-cancer-survivor-urges-young-people-to-get-hpv-vaccine>]

HPV and Cervical Cancer: What You Need to Know [<https://magazine.medlineplus.gov/article/hpv-and-cervical-cancer-what-you-need-to-know>]

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