

# PATIENT EDUCATION HANDOUT

## Human Papillomavirus

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Human papillomavirus (HPV) refers to a single virus with numerous subtypes that can be spread between sexual partners through skin-to-skin contact, sexual activity (including vaginal, anal, and oral) or through the use of shared toys or other objects. The subtypes of HPV can be considered either **low** or **high risk**.

- **Low-risk** HPVs have the potential to cause no disease, but some can cause warts on or around the mouth, throat, anus, or genitals. HPV6 and HPV11 are the most common of the low-risk subtypes, but there are numerous subtypes in this category
- **High-risk** HPVs can cause several types of cancer. There are 15 high-risk subtypes with HPV16 and HPV18 that are responsible for most related cancers. These can include cervical cancer, oropharyngeal cancer, anal cancer, penile cancer, vaginal cancer, or vulvar cancer. High-risk HPVs in the United States cause 3% of all cancers in women and 2% of all cancers in men.

### WHO IS AT RISK?

Anyone who is sexually active can be infected regardless of sex, gender, or sexual orientation. Most sexually active people are already infected with HPV.

### SYMPTOMS

Most infections do not cause cancer because your immune system can control the infection to not cause cancer. Certain high-risk infections cannot be controlled and can persist for many years.

Infection with high-risk strains usually **does not** cause any symptoms. If the infection develops into cancer, there can be symptoms such as bleeding, pain, or swollen glands.

### SCREENING

Cervical cancer is currently the only HPV-related cancer that can be screened for. The screening test is an HPV test, Pap test, and the HPV/Pap co-test for both high-risk HPV and cervical cell changes. Women and anyone assigned female at birth should schedule a Pap smear with their primary care provider **once they turn 21 years of age**. Even if a patient is sexually active before 21 years, their immune system typically clears the infection, therefore not warranting a Pap smear before 21 years old. HPV testing continues until the patient is **65 years old** or if the patient has had a hysterectomy and cervix removed. After the test, your provider will notify you of your results and your next steps.

### TREATMENT OPTIONS

The HPV infection itself cannot be treated. Precancerous changes seen on Pap smears can be treated with a procedure to remove the tissue. Genital and anal warts or lesions can generally be treated in the office unless they develop into full-blown cancers. HPV-related cancers are usually treated the same as other cancers in that body region.

### WHY DO DOCTORS RECOMMEND THE HPV VACCINE IN TEENS?

The HPV vaccine protects your child from certain cancers later in life. Early protection works the best because it protects your child before they ever even come in contact with the virus.

**85%** of people will get an HPV infection at some point in their life. Infections with HPV types that can cause cancer or warts have dropped **88%** among teenage girls. HPV is estimated to cause about **36,500** cases each year. **33,700** of these cancers can be prevented by preventing the infection that causes them.

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### VACCINATION RECOMMENDATIONS

Both males and females can get the HPV vaccine. The HPV vaccine series (*Gardasil 9*) is recommended at age 11 or 12 years, but it can be received as early as 9 years old. The vaccine is recommended for everyone up to age 26 years. For those 27 to 45 years, your doctor can talk with you about whether they recommend the vaccination series for you.

- If you start the series **before your 15th birthday**, you will receive **two doses**. The second dose should be received 6 to 12 months after the first dose
- If you start the series **after your 15th birthday**, you will receive **three doses**. The second dose is received 1 to 2 months after the first dose, and the third dose is received after 6 months
- Anyone who is considered immunocompromised should receive the three-dose series

### PRECAUTIONS AND CONTRAINDICATIONS TO THE VACCINE

People with a history of an allergic reaction to yeast and those who are currently moderately or severely ill are cautioned against receiving the vaccine. The vaccine is not recommended during pregnancy.

Some adverse reactions can include pain or redness at the injection site, fever, dizziness, fainting, nausea, headache, muscle, or joint pain. These are usually mild and short term.

### SOURCES

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