



# **Human Papillomavirus (HPV) and the HPV Vaccine: Information for Health Educators**

**si**eccan

Sex Information & Education Council of Canada  
Conseil d'information & d'éducation sexuelles du Canada

# Human Papillomavirus (HPV) and the HPV Vaccine: Information for Health Educators

Health educators may frequently interact with youth who will soon be, or already are, eligible to receive the HPV vaccine through vaccination programs offered at their schools. These youth may have questions about HPV and/or the vaccine. This guide is intended to provide educators with up-to-date HPV information on HPV research and vaccination recommendations.

## About the HPV Vaccine

- The HPV vaccine works best when given to individuals before they are sexually active.
- The HPV vaccine is very safe. It is much safer to get the vaccine than to get an HPV infection.
- Youth under the age of 15 will receive two doses of the HPV vaccine, six months apart. Those who are 15 years-old or older or who are immunocompromised will get 3 doses.

## What is HPV?

Human papillomavirus (HPV) is the most common sexually transmitted infection (STI) in Canada (1) and around the world (2, 3).

- 75% of sexually active women and men will acquire at least one HPV infection in their lifetime (4).

## Most HPV infections are:

- **Transient** - they will go away without treatment (4).
- **Asymptomatic** - they have no symptoms.
- More than 90% of new HPV infections clear or become undetectable within 2 years (5).

## Did you know...

Both men and women remain at risk for HPV infection throughout adulthood (6, 7).

The prevalence of HPV is typically highest among young adults aged 20 to 24 years (8) and remains high in older age groups (9).

## How is HPV transmitted?

HPV can be transmitted by:

Genital-genital contact (vulva, vagina, penis, anus)

Oral-genital contact

Skin-to-skin touching during sexual activity (especially skin areas not covered by a condom)

- HPV is transmitted by direct sexual contact (e.g., penile-vaginal intercourse, penile-anal intercourse), or skin-to-skin contact with infected skin around the genitals (2).
- HPV can also be transmitted via oral sex which can cause oral HPV infections and subsequently lead to oropharyngeal cancer (cancer in the middle part of the throat, base of tongue, tonsils, soft palate, walls of pharynx) (10, 11).

# What are the health consequences of HPV?

**Some HPV types can cause the following cancers:** anal, cervical, head and neck (mouth, throat, nose, pharynx), penile, vaginal, vulvar

**Other HPV types can cause:** Genital warts

## In men:

HPV infections are responsible for the majority of anal, penile, oropharyngeal, and oral cavity cancers (12).

## In women:

HPV infections are responsible for nearly all cervical cancers and a majority of cancers of the anus, vulva, vagina, as well as head and neck cancers (12).

## How common is HPV among sexually active youth?

**HPV is common in young sexually active youth and adults – even in those who have not been sexually active for very long.**

A Canadian study examined HPV prevalence among 236 heterosexual university couples who had been dating for less than 6 months (13):

- **56%** of couples tested positive for HPV (one or both partners)
- **40%** of these cases were high-risk HPV types

In another study, 130 young women were tested for HPV after their first sexual intercourse and tested again at several follow-ups (14):

- **30%** of the women tested positive for HPV within 12 months of first intercourse
- Within 3 years, **50%** of the women tested positive for HPV

**The HPV vaccine does not protect against other sexually transmitted infections.**

**Women should get regular Pap tests once they become sexually active as the HPV vaccine does not protect against all cervical cancers.**

## How can young people reduce their risk of HPV infection?

### Condoms

- Using condoms correctly and consistently can help reduce the transmission of HPV (15, 16).
- However, HPV can be transmitted from skin-to-skin contact (from areas not covered by a condom) even if a condom is used (17).

**The HPV vaccine is the most effective way to prevent HPV and HPV-related cancers.**

**The 9-valent HPV vaccine protects against: HPV types that cause genital warts (types 6, 11) and HPV types that cause cancer (types 16, 18, 31, 33, 45, 52, 58) (2)**

## Canada's National Advisory Committee on Immunization (NACI) recommends HPV vaccination (12).

- **Recommended** for males and females between the ages of 9 and 26 years
- **May be used** in males and females over 26 years

Source: Canada's National Advisory Committee on Immunization (NACI) (12)

### Does receiving the vaccine lead to risky sexual behaviour?

Receiving the HPV vaccine has **NOT** been linked to earlier first intercourse or an increase in risky sexual risk behaviours.

- Two international reviews (20+ studies) found no connections between HPV vaccination and sexual risk behaviours (e.g., age of first sexual activity, pregnancy rate, non-HPV STI rate) among females (18, 19).
- In a recent analysis of HPV vaccination among Ontario girls, researchers found no differences in non-HPV STI rates or pregnancies by Grade 12 between groups of adolescent girls who were either eligible or ineligible for the HPV vaccine (20).

### HPV Resources for Young People

#### What You Need to Know About HPV: Information for Youth (factsheet)

**Spread the Word, Not the Disease: The Facts on the Human Papillomavirus from Canada's Experts.** Society of Obstetricians and Gynaecologists of Canada (SOGC). <http://hpvinfo.ca>



**What YOU Need to Know About HPV**

**What is Human Papillomavirus (HPV)?**  
HPV or human papillomavirus is the most common sexually transmitted infection (STI) in the world.  
Most people who are sexually active will get HPV at least once in their lifetime.  
HPV can cause genital warts and cancers but there is a vaccine that prevents these problems from happening.

**How is HPV spread?**  
You can get HPV by having penis/vagina sex, penis-to-penis sex, or oral sex with a person who has HPV.  
Most people who have HPV don't have symptoms and don't know they have HPV.  
HPV can be passed between partners during sexual activity.

**What happens if you get HPV?**  
People with HPV usually don't have any signs or symptoms of the infection. Usually HPV gradually goes away by itself.  
Sometimes HPV does not go away and can cause health problems.

**There are over 100 different types of HPV**

**HPV and Cancer**  
Some types of HPV can cause cancer in the following parts of the body:  
• Cervix  
• Anus  
• Vagina/Vulva  
• Penis  
• Throat, base of the tongue, tonsils (called oropharyngeal cancer)

**HPV and Genital Warts**  
Some types of HPV can cause warts.  
The warts form in the genital area including on and around the vagina, penis, and anus.  
Genital warts can be treated by a doctor and will go away but a person may need to be treated several times before the warts go away completely.



**hpvinfo.ca**

Spread the word not the disease

Administered by the Society of Obstetricians and Gynaecologists of Canada

## HPV

## HIV

## HSV

What's the difference?

**HPV: Human papillomavirus** is a group of over 100 different types of viruses. Some HPV types cause cancer; some HPV types cause genital warts.

**HIV: Human Immunodeficiency Virus** is a virus that attacks the body's immune system. Without treatment, HIV can develop into Acquired Immunodeficiency Syndrome (AIDS).

**HSV: Herpes simplex virus** causes blister-like lesions on the genitals and cold sores on the mouth.

## References

- (1) Public Health Agency of Canada. Human papillomavirus (HPV) infections: Revised October 2014. *Canadian Guidelines for Sexually Transmitted Infections*. <http://www.phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/section-5-5-eng.php#footnote27>
- (2) Centers for Disease Control and Prevention. Use of 9-valent human papillomavirus (HPV) vaccine: Updated HPV vaccination recommendations of the advisory committee on immunization practices. *Morbidity and Mortality Weekly Report* 2015; 64(11): 300–304.
- (3) Trottier H, Franco EL. The epidemiology of genital human papillomavirus infection. *Vaccine* 2006; 24, Suppl 1: S4–15.
- (4) Koutsky LA. Epidemiology of genital human papillomavirus infection. *American Journal of Medicine* 1997; 102(5A): 3–8.
- (5) Hariri S, Dunne E, Saraiya M, Unger E, Mankowitz L. Chapter 5: Human papillomavirus. *VPD Surveillance Manual*, 5th Edition 2011. Centers for Disease Control and Prevention. <http://www.cdc.gov/vaccines/pubs/surv-manual/chpt05-hpv.pdf>
- (6) Lindau ST, Drum ML, Gaumer E, Surawska H, Jordan JA. Prevalence of high-risk human papillomavirus among older women. *Obstetrics and Gynecology* 2008; 112: 979–989.
- (7) Giuliano AR, Lee J, Fulp W, et al. Incidence and clearance of genital human papillomavirus infection in men (HIM): A cohort study. *Lancet* 2011; 377(9769): 932–940.
- (8) Satterwhite CL, Torrone E, Meites E, et al. Sexually transmitted infections among US women and men: Prevalence and incidence estimates, 2008. *Sexually Transmitted Diseases* 2013; 40: 187–93.
- (9) Han J, Beltran BS, Wong JW, et al. Prevalence of genital human papillomavirus infection and human papillomavirus vaccination rates among US adult men: National Health and Nutrition Examination Survey (NHANES), 2013–2014. *JAMA Oncology* 2017; 3(6): 810–816.
- (10) Chaturvedi AK, Engels EA, Anderson WF, Gillison ML. Incidence trends for human papillomavirus-related and -unrelated oral squamous cell carcinomas in the United States. *Journal of Clinical Oncology* 2008; 26: 612–619.
- (11) Ward G, Mehta V, Moore M. Morbidity, mortality and cost of HPV-related oropharyngeal cancer: impact of 2-, 4- and 9-valent vaccines. *Human Vaccines & Immunotherapeutics* 2015: <http://dx.doi.org/10.1080/21645515.2015.1095415>
- (12) National Advisory Committee on Immunization (NACI). Updated Recommendations on Human Papillomavirus (HPV) Vaccines: 9-valent HPV vaccine and clarification of minimum intervals between doses in the HPV immunization schedule. 2016. Ottawa, ON: Public Health Agency of Canada.
- (13) Burchell AN, Tellier P, Hanley J, et al. Influence of partner's infection status on prevalent human papillomavirus among persons with a new sex partner. *Sexually Transmitted Diseases* 2010; 37(1): 34–40.
- (14) Winer RL, Feng Q, Hughes JP, et al. Risk of female human papillomavirus acquisition associated with first male sex partner. *Journal of Infectious Diseases* 2008; 197: 279–282.
- (15) Public Health Agency of Canada. *Human papillomavirus (HPV) prevention and HPV vaccines: Questions and answers*. <http://www.phac-aspc.gc.ca/std-mts/hpv-vph/hpv-vph-vaccine-eng.php>
- (16) Pierce Campbell CM, Lin HY, Fulp W, et al. Consistent condom use reduces the genital human papillomavirus burden among high-risk men: The HPV infection in men study. *Journal of Infectious Diseases* 2013; 208: 373–384.
- (17) Public Health Agency of Canada. *Human papillomavirus (HPV) and men: questions and answers*. <http://www.phac-aspc.gc.ca/std-mts/hpv-vph/hpv-vph-man-eng.php>
- (18) Kasting ML, Shapiro GK, Rosberger Z, et al. Tempest in a teapot: A systematic review of HPV vaccination and risk compensation research. *Human Vaccines & Immunotherapeutics* 2016; 12(6): 1435–1450.
- (19) Madhivanan P, Pierre-Victor D, Mukherjee, S, et al. Human papillomavirus vaccination and sexual disinhibition in females: A systematic review. *American Journal of Preventive Medicine* 2016; 51(3): 373–383.
- (20) Smith LM, Kaufman JS, Strumpf EC, et al. Effect of human papillomavirus (HPV) vaccination of clinical indicators of sexual behaviour among adolescent girls: The Ontario Grade 8 HPV Vaccine Cohort Study. *CMAJ* 2015; 187(2): E74–E81.