

# PARENTS PACK

MONTHLY UPDATES ABOUT  
VACCINES ACROSS THE LIFESPAN

## DYK why HPV doesn't mean cheating? Take our quiz.

February is the month for love. People are thinking about flowers, chocolates and moments with their special someone. But at the Vaccine Education Center, we often get questions about something less carefree that couples deal with — human papillomavirus, or HPV, and the questions don't arrive only in February. Couples deal with HPV diagnoses throughout the year.

HPV is one of the most common sexually transmitted diseases (STD). In fact, most people will be exposed to HPV at some point in their lives. For most, the infection resolves, and they don't know they were even infected. But for those who develop genital warts or an HPV-associated cancer, the finding can come with not only the emotions of such a diagnosis but also accusations of being unfaithful.

So, during this month for love, see what you know about HPV and find out why an HPV diagnosis should not be considered evidence of cheating.

See what you know about HPV by taking this multiple-choice quiz.

### 1. How does HPV spread?

- A. Penetrative sex (oral, anal or vaginal)
- B. Genital-to-genital exposure
- C. French kissing
- D. Two of these
- E. All of these

### 2. Does a condom prevent spread of HPV?

- A. Yes
- B. No
- C. Maybe

### 3. What kind of infection does HPV cause?

- A. Dormant infection that lives silently in cells and only replicates at certain times
- B. Persistent infection that replicates in cells continuously
- C. Short-lived infection that the immune system clears
- D. Two of these

### 4. Which of these individuals can be diagnosed with an HPV-associated cancer?

- A. Someone who has never had sexual intercourse.
- B. Someone who has been with multiple partners in the last 5 years.
- C. Someone who recently started a new relationship.
- D. Someone who has been in a monogamous relationship for 15 years.
- E. Any of these people.

### 5. If a person is exposed to HPV while performing oral sex, which of their cells may the virus infect?

- A. Cells in their mouth or throat
- B. Cells in their anus
- C. Cells in their reproductive organs
- D. All of these

### 6. Which of these people could benefit from getting the HPV vaccine? (Choose all that apply.)

- A. An 11-year-old who is not yet sexually active
- B. An 18-year-old who is starting college
- C. A 25-year-old who has been in several intimate relationships
- D. A 44-year-old who is in a long-term monogamous relationship

## February 2022

### Trivia Corner



**What vaccine leads to a stronger immune response than what would occur after natural infection?**

- a) HPV vaccine
- b) Hepatitis B vaccine
- c) Rotavirus vaccine
- d) Chickenpox vaccine

Check the answers and  
find out more on the back!

## NEWS & NOTES

For links to referenced resources in the following section, visit the online version of the article, [bit.ly/3AQCCMz](https://bit.ly/3AQCCMz).

### Myocarditis and teens infographic

Myocarditis, or inflammation of the heart, has been associated with receipt of COVID-19 mRNA vaccine in a small number of people, particularly young men. However, most people do not realize that myocarditis can also be a result of COVID-19 infection. As such, choosing not to vaccinate to protect against myocarditis without considering the risk of myocarditis from infection is not considering all factors. To help with considering the relative risks of both vaccination and infection, the VEC recently released a new infographic.

### Video: "What should I know about COVID-19 vaccine boosters?"

To address the confusion surrounding booster doses of COVID-19 vaccine, particularly for young people, Dr. Paul Offit, VEC Director, recently discussed what to consider in an updated version of the video, "What Should I Know About COVID-19 Vaccine Boosters?"

### Updated COVID Q&A

The VEC recently updated our four-page COVID-19 Q&A to include the latest information about COVID-19 vaccines, including common questions related to who should get vaccinated, pregnancy and breastfeeding, how the vaccines work, what they contain (ingredients), and what we know about their safety.

### Can you name 7 types of misinformation?

The U.S. Surgeon General's office recently released a nice infographic to remind everyone of the common types of health-related misinformation to watch out for when online. The types can be applied to all kinds of online misinformation and include:

- Memes
- Websites designed to look legitimate, but which intentionally misinform
- Edited images
- Cherry-picked statistics
- Partial quotes, altered to suggest something different was being said
- Misleading graphics
- Edited videos

While some people share these items to point out errors or because they find them to be amusing, the best thing to do when faced with bad information is to let it die in your feed. Don't share it or give it attention.

[Continued on next page]



**Trivia Answer:** The correct answer is A. The HPV vaccine, which prevents cervical cancer in women, elicits a stronger immune response and thus provides greater protection against the virus than if a person gained immunity to the virus from infection. Hib and tetanus vaccines also provide greater protection than acquiring immunity through natural infection.

Go to [vaccine.chop.edu/trivia](http://vaccine.chop.edu/trivia) to play **Just the Vax**, the Vaccine Education Center's trivia game, where you can find this question and others like it.

## DYK why HPV doesn't mean cheating? Take our quiz. [cont.]

### 1. How does HPV spread?

The answer is E, all of these. While most people realize that penetrative sex can spread HPV, they may not realize that genital-to-genital exposure can also spread the virus from one person to another. French kissing may also spread the virus, but this occurs less commonly. Regular kissing, including kissing one's children, would not be likely to spread the virus.

Because this virus replicates in cells that line the surface of our oral (e.g., throat) and genital areas (e.g., anus, cervix, vagina), these cells can be physically disrupted, leaving viral particles on surfaces that may touch susceptible areas of the other person during intimacy.

### 2. Does a condom prevent spread of HPV?

The answer is C, maybe. Condoms can decrease your chance of being infected with HPV, but they are not foolproof. First, they do not cover all areas that may be infected with HPV. Second, the virus can be transmitted without intercourse.

### 3. What kind of infection does HPV cause?

The answer is D, two of these. Both B and C can occur. Most people experience a relatively short-lived infection (months), but some people experience a persistent infection in which the virus replicates for years, or even decades, in their cells. Over time, persistent infections can cause cellular changes that lead to cancer.

### 4. Which of these individuals can be diagnosed with an HPV-associated cancer?

The answer is E, any of these people. People can be infected with HPV without having sexual intercourse. The likelihood of exposure increases with the number of partners a person has, and HPV will often spread early in a relationship as the person is newly exposed to the virus. While cancer doesn't typically develop until years later, the infection is typically spread early during the relationship. Likewise, even during a new relationship, someone could be diagnosed with cancer resulting from a persistent infection introduced during a previous relationship. Finally, even if someone has been in a long-term, exclusive relationship, they or their partner could have a persistent infection that leads to cellular changes resulting in cancer. This is why an HPV-associated cancer diagnosis should not be viewed as evidence of cheating.

### 5. If a person is exposed to HPV while performing oral sex, which of their cells may the virus infect?

The answer is A, cells in their mouth or throat. If the only intimacy was oral sex, the virus would likely only be found in their oral cavity as the HPV virus does not spread through the bloodstream. However, if there was other intimacy (e.g., genital-to-genital), even without intercourse, additional areas, like the anus or reproductive tract, could be exposed.

### 6. Which of these people could benefit from getting the HPV vaccine? (Choose all that apply.)

All of the answers apply (A-D). Any of these individuals could benefit from the HPV vaccine. The HPV vaccine protects against 9 types of HPV; however, it does not protect against types to which one was previously exposed. For this reason, HPV vaccine is of most benefit prior to initiation of intimate relationships, which is why it's recommended for all 11- to 12-year-olds. In fact, the vaccine can be given as early as 9 years of age. Those younger than 15 years of age also only need 2 doses instead of 3 doses. The second dose should be given at least 6 months after the first dose to build a robust immunologic memory.

Those 15 years and older require 3 doses. The second dose should be given 1 to 2 months after the first dose, and the third dose should be at least 6 months after the first dose. The vaccine cannot treat an ongoing infection, but even after someone has been intimate, it is unlikely that they were exposed to all 9 types of HPV that the vaccine protects against.

People younger than 27 years of age are recommended to get the HPV vaccine if they did not get all recommended dose or if they missed getting it at a younger age.

Those 27 to 45 years of age are recommended to discuss vaccination with their healthcare provider. In the answer provided here, a 44-year-old in a long-term monogamous relationship may decide not to pursue vaccination; however, it is important for adults younger than 45 years of age to be aware that the vaccine is not approved for use in those older than 45. Since people are living longer and may be intimate with new partners later in life, this group could still potentially benefit from vaccination.

If you want to learn more about HPV infection or vaccination, check out the VEC's dedicated page, [prevent-HPV.org](http://prevent-HPV.org), which has answers to almost 100 HPV-related questions. These questions have been submitted to our team over time and have been de-identified and added to sections of the page related to HPV infection, pregnancy, testing and treatment, and vaccination. If you don't find your question, simply email us by using the form on the webpage.

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If you have any comments about this newsletter or suggestions about how we can make our program more helpful, please send them to [contactPACK@chop.edu](mailto:contactPACK@chop.edu).