Tips and Time-savers for Talking with Parents about HPV Vaccine

Recommend the HPV vaccine series the same way you recommend the other adolescent vaccines. For example, you can say “Your child needs these shots today,” and name all of the vaccines recommended for the child’s age.

Parents may be interested in vaccinating, yet still have questions. Taking the time to listen to parents’ questions helps you save time and give an effective response. CDC research shows these straightforward messages work with parents when discussing HPV vaccine—and are easy for you or your staff to deliver.

CDC RESEARCH SHOWS: The “HPV vaccine is cancer prevention” message resonates strongly with parents. In addition, studies show that a strong recommendation from you is the single best predictor of vaccination.

TRY SAYING: HPV vaccine is very important because it prevents cancer. I want your child to be protected from cancer. That’s why I’m recommending that your daughter/son receive the first dose of HPV vaccine today.

CDC RESEARCH SHOWS: Disease prevalence is not understood, and parents are unclear about what the vaccine actually protects against.

TRY SAYING: HPV can cause cancers of the cervix, vagina, and vulva in women, cancer of the penis in men, and cancers of the anus and the mouth or throat in both women and men. There are about 26,000 of these cancers each year—and most could be prevented with HPV vaccine. There are also many more precancerous conditions requiring treatment that can have lasting effects.

CDC RESEARCH SHOWS: Parents want a concrete reason to understand the recommendation that 11–12 year olds receive HPV vaccine.

TRY SAYING: We’re vaccinating today so your child will have the best protection possible long before the start of any kind of sexual activity. We vaccinate people well before they are exposed to an infection, as is the case with measles and the other recommended childhood vaccines. Similarly, we want to vaccinate children well before they get exposed to HPV.

CDC RESEARCH SHOWS: Parents may be concerned that vaccinating may be perceived by the child as permission to have sex.

TRY SAYING: Research has shown that getting the HPV vaccine does not make kids more likely to be sexually active or start having sex at a younger age.

CDC RESEARCH SHOWS: Parents might believe their child won’t be exposed to HPV because they aren’t sexually active or may not be for a long time.

TRY SAYING: HPV is so common that almost everyone will be infected at some point. It is estimated that 79 million Americans are currently infected with 14 million new HPV infections each year. Most people infected will never know. So even if your son/daughter waits until marriage to have sex, or only has one partner in the future, he/she could still be exposed if their partner has been exposed.

CDC RESEARCH SHOWS: Emphasizing your personal belief in the importance of HPV vaccine helps parents feel secure in their decision.

TRY SAYING: I strongly believe in the importance of this cancer-preventing vaccine, and I have given HPV vaccine to my son/daughter/grandchild/niece/nephew/friend’s children. Experts (like the American Academy of Pediatrics, cancer doctors, and the CDC) also agree that this vaccine is very important for your child.

CDC RESEARCH SHOWS: Understanding that the side effects are minor and emphasizing the extensive research that vaccines must undergo can help parents feel reassured.

TRY SAYING: HPV vaccine has been carefully studied by medical and scientific experts. HPV vaccine has been shown to be very effective and very safe. Like other shots, most side effects are mild, primarily pain or redness in the arm. This should go away quickly, and HPV vaccine has not been associated with any long-term side effects. Since 2006, about 57 million doses of HPV vaccine have been distributed in the U.S., and in the years of HPV vaccine safety studies and monitoring, no serious safety concerns have been identified.

CDC RESEARCH SHOWS: Parents want to know that HPV vaccine is effective.

TRY SAYING: In clinical trials of boys and girls, the vaccine was shown to be extremely effective. In addition, studies in the U.S. and other countries that have introduced HPV vaccine have shown a significant reduction in infections caused by the HPV types targeted by the vaccine.

CDC RESEARCH SHOWS: Many parents do not know that the full vaccine series requires 3 shots. Your reminder will help them to complete the series.

TRY SAYING: I want to make sure that your son/daughter receives all 3 shots of HPV vaccine to give them the best possible protection from cancer caused by HPV. Please make sure to make appointments on the way out, and put those appointments on your calendar before you leave the office today!
As a parent, you may have questions about vaccines for your pre-teen. Below is the information you need from pediatricians to be confident about your decision to vaccinate.

**HPV Vaccine**

**If my child is not sexually active, why does he/she need HPV vaccine?**

While it’s difficult to imagine your child engaging in sexual activity, especially since most do not wait until they are in the second half of their teen years to have sex, the AAP recommends HPV vaccination at 11-12 years of age for several reasons. HPV is spread by intimate skin-to-skin contact, not just sex. People need all 3 doses of the vaccine before ever coming into contact with the virus in order to be protected. Also, the immune system of an 11-12 year old responds better to the vaccine than that of an older teen.1,2

One study found that up to 80% of teens or pre-teens contracted HPV within 2-3 years of the first time they engaged in sexual activity,3 making it important that pre-teens receive the full series of 3 doses before first sexual activity. The Centers for Disease Control and Prevention (CDC) reports that as many as 64% of teen or pre-teen girls may be infected with HPV, and 75% of new cases of HPV are found in persons age 15-24 years.4 Even if your child waits until he/she is married and/or only has one partner in the future, your child could still be exposed to HPV by that partner.

**Will receiving HPV vaccine give my child permission to engage in sexual activity?**

As pediatricians, we understand this concern — we want teens to be mature before sexual activity and to follow their parents’ advice about sexual activity. Studies show that children who receive HPV vaccine do not have sex any earlier than those who only received other teen vaccines. This tells us that children do not see this vaccine as a license to have sex.5

**Why does my son need HPV vaccine if it protects against cervical cancer?**

HPV vaccine prevents cervical cancer, which, of course, only females can get. But HPV vaccine can protect both males and females by preventing genital warts and cancers of the mouth, throat, anus, and genitals.

A pre-teen boy who receives HPV vaccine can also protect his future partner. Men and women infected with HPV often have no symptoms. Women can get cervical cancer screening, but there is no such test for men. Men who are infected and don’t know it can spread HPV to a partner.

**Don’t condoms prevent the spread of HPV?**

Using condoms can prevent pregnancy and protect against several sexually transmitted infections. Unfortunately, HPV can be spread by intimate skin-to-skin contact and oral sex, not just sexual intercourse. Condoms only cover a limited amount of skin and HPV can be spread even if a condom is used every time a person has sex. For the best protection against HPV, parents should have their children vaccinated.

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3 Moscicki AB. HPV infections in adolescents. Disease Markers, 23, 4, 229-34.


All Pre-teen Vaccines

Do adolescent vaccines have serious side effects?

**Pain:** Pediatricians do not like to cause discomfort to children of any age. Even though shots may hurt, getting a vaccine is not as bad as suffering from a serious disease such as meningitis or cancer. Talk with your pediatrician about ways to reduce pain during vaccination. Stroking the skin or applying pressure to the skin before the shot reduces the pain. In some offices, medication to numb the skin may be available.

**Fainting:** Your pediatrician may ask your child to sit for 15 minutes after getting a shot in case your child faints (syncope). Staying seated for 15 minutes reduces the main risk from fainting—getting hurt from falling.

**Vaccination at sick visits:** Many families are busy and it is hard to find time to visit the pediatrician’s office to get a shot. It is smart to get any vaccines that are due when your child is in the pediatrician’s office. This will reduce the chance that your child has to miss school, work, or other activities to receive vaccines.

**Safety:** All vaccines routinely recommended for pre-teens have been licensed by the Food and Drug Administration and found to be safe. The safety of each vaccine continues to be checked after it is licensed. Your pediatrician can provide you with a Vaccine Information Statement that explains the mild side effects that can occur after receiving shots.

Why is more than one dose of vaccine needed?

**HPV vaccine:** It is recommended that your child receives 3 doses of HPV vaccine at ages 11-12 for full protection. All 3 doses of the HPV vaccine are needed for the body to build up enough immunity to protect against infection. This is also true of many of the vaccines that babies get.

**Meningococcal vaccine:** One dose of meningococcal vaccine protects a person, but immunity may wane over time. A booster dose can “boost” immunity so that your child is still fully protected. Children should receive meningococcal vaccine as pre-teens to be fully protected for a few years and another dose at age 16 to boost immunity levels.

**Tdap:** Recently, there have been several outbreaks of pertussis (whooping cough) throughout the United States. One study has shown that this is due, in part, to waning immunity. It is possible that booster doses of pertussis vaccine (in Tdap) will be recommended in the future. Studies are still underway to determine exactly if and when they will be needed.

What is the cost of these vaccines? I’m not sure if I can afford them or if my insurance will cover them.

Pediatricians realize that healthcare can be costly for families. The Affordable Care Act (ACA) requires insurance companies to cover the cost of all recommended vaccines, which include those for teens and pre-teens. If your insurance plan has been unchanged since March 23, 2010, it may not have to follow these new rules. If this is the case, your insurance plan may require you to pay part of the vaccination cost or meet your deductible before it will pay for vaccinations. Talk with your pediatrician about options for paying this.

If your child does not have health insurance, has Medicaid or insurance that does not cover vaccines, or is American Indian or Alaskan Native, he/she qualifies to receive vaccines at no cost through the Vaccines for Children (VFC) Program. Most pediatricians provide VFC vaccines. If your pediatrician is not a VFC provider, your child should be able to receive vaccines at your local health department. Speak with your child’s pediatrician to learn more about the VFC program or visit: http://www.cdc.gov/vaccines/programs/vfc/parents/qa-detailed.html. To contact your VFC state, city or territory coordinator visit: http://www.cdc.gov/vaccines/programs/vfc/contacts-state.html.

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As parents, you do everything you can to protect your children’s health for now and for the future. Today, there is a strong weapon to prevent several types of cancer in our kids: the HPV vaccine.

HPV and Cancer
HPV is short for Human Papillomavirus, a common virus. In the United States each year, there are about 17,000 women and 9,000 men affected by HPV-related cancers. Many of these cancers could be prevented with vaccination. In both women and men, HPV can cause anal cancer and mouth/throat (oropharyngeal) cancer. It can also cause cancers of the cervix, vulva and vagina in women; and cancer of the penis in men.

For women, screening is available to detect most cases of cervical cancer with a Pap smear. Unfortunately, there is no routine screening for other HPV-related cancers for women or men, and these cancers can cause pain, suffering, or even death. That is why a vaccine that prevents most of these types of cancers is so important.

More about HPV
HPV is a virus passed from one person to another during skin-to-skin sexual contact, including vaginal, oral, and anal sex. HPV is most common in people in their late teens and early 20s. Almost all sexually active people will get HPV at some time in their lives, though most will never even know it.

Most of the time, the body naturally fights off HPV, before HPV causes any health problems. But in some cases, the body does not fight off HPV, and HPV can cause health problems, like cancer and genital warts. Genital warts are not a life-threatening disease, but they can cause emotional stress, and their treatment can be very uncomfortable. About 1 in 100 sexually active adults in the United States have genital warts at any given time.

HPV vaccination is recommended for preteen girls and boys at age 11 or 12 years
HPV vaccine is also recommended for girls ages 13 through 26 years and for boys ages 13 through 21 years, who have not yet been vaccinated. So if your son or daughter hasn’t started or finished the HPV vaccine series—it’s not too late! Talk to their doctor about getting it for them now.

Two vaccines—Cervarix and Gardasil—are available to prevent the HPV types that cause most cervical cancers and anal cancers. One of the HPV vaccines, Gardasil, also prevents vulvar and vaginal cancers in women and genital warts in both women and men. Only Gardasil has been tested and licensed for use in males. Both vaccines are given in a series of 3 shots over 6 months. The best way to remember to get your child all three shots is to make an appointment for the second and third shot before you leave the doctor’s office after the first shot.

Is the HPV vaccine safe?
Yes. Both HPV vaccines were studied in tens of thousands of people around the world. More than 57 million doses have been distributed to date, and there have been no serious safety concerns. Vaccine safety continues to be monitored by CDC and the Food and Drug Administration (FDA).

These studies continue to show that HPV vaccines are safe.

The most common side effects reported are mild. They include: pain where the shot was given (usually the arm), fever, dizziness, and nausea.

Why does my child need this now?
HPV vaccines offer the best protection to girls and boys who receive all three vaccine doses and have time to develop an immune response before they begin sexual activity with another person. This is not to say that your preteen is ready to have sex. In fact, it’s just the opposite—it’s important to get your child protected before you or your child have to think about this issue. The immune response to this vaccine is better in preteens, and this could mean better protection for your child.
You may have heard that some kids faint when they get vaccinated. Fainting is common with preteens and teens for many medical procedures, not just the HPV shot. Be sure that your child eats something before going to get the vaccine. It’s a good idea to have your child sit or lay down while getting any vaccine, and for 15 minutes afterwards, to prevent fainting and any injuries that could happen from fainting.

The HPV vaccine can safely be given at the same time as the other recommended vaccines, including the Tdap, meningococcal, and influenza vaccines. Learn more about all of the recommended preteen vaccines at [www.cdc.gov/vaccines/teens](http://www.cdc.gov/vaccines/teens)

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Help paying for vaccines

The Vaccines for Children (VFC) program provides vaccines for children ages 18 years and younger who are under-insured, not insured, Medicaid-eligible, or American Indian/Alaska Native. Learn more about the VFC program at [www.cdc.gov/Features/VFCprogram/](http://www.cdc.gov/Features/VFCprogram/)

Whether you have insurance, or your child is VFC-eligible, some doctors’ offices may also charge a fee to give the vaccines.

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Jacquelyn’s story: “I was healthy—and got cervical cancer.”

When I was in my late 20’s and early 30’s, in the years before my daughter was born, I had some abnormal Pap smears and had to have further testing. I was told I had the kind of HPV that can cause cancer and mild dysplasia.

For three more years, I had normal tests. But when I got my first Pap test after my son was born, they told me I needed a biopsy. The results came back as cancer, and my doctor sent me to an oncologist. Fortunately, the cancer was at an early stage. My lymph nodes were clear, and I didn’t need radiation. But I did need to have a total hysterectomy.

My husband and I have been together for 15 years, and we were planning to have more children. We are so grateful for our two wonderful children, but we were hoping for more—which is not going to happen now.

The bottom line is they caught the cancer early, but the complications continue to impact my life and my family. For the next few years, I have to get pelvic exams and Pap smears every few months, the doctors measure tumor markers, and I have to have regular x-rays and ultrasounds, just in case. I have so many medical appointments that are taking time away from my family, my friends, and my job.

Worse, every time the phone rings, and I know it’s my oncologist calling, I hold my breath until I get the results. I’m hopeful I can live a full and healthy life, but cancer is always in the back of my mind.

In a short period of time, I went from being healthy and planning more children to all of a sudden having a radical hysterectomy and trying to make sure I don’t have cancer again. It’s kind of overwhelming. And I am one of the lucky ones!

Ultimately I need to make sure I’m healthy and there for my children. I want to be around to see their children grow up.

I will do everything to keep my son and daughter from going through this. I will get them both the HPV vaccine as soon as they turn 11. I tell everyone—my friends, my family—to get their children the HPV vaccine series to protect them from this kind of cancer.

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What about boys?

One HPV vaccine—Gardasil—is for boys too! This vaccine can help prevent boys from getting HPV-related cancers of the mouth/throat, penis and anus. The vaccine can also help prevent genital warts. HPV vaccination of males is also likely to benefit females by reducing the spread of HPV viruses.

Learn more about HPV and HPV vaccine at [www.cdc.gov/hpv](http://www.cdc.gov/hpv)

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For more information about the vaccines recommended for preteens and teens:

[800-CDC-INFO](http://www.cdc.gov/vaccines/teens) (800-232-4636)

[http://www.cdc.gov/vaccines/teens](http://www.cdc.gov/vaccines/teens)
Como padres, ustedes hacen todo lo posible para proteger la salud de sus hijos en el presente y el futuro. En la actualidad, existe un arma poderosa para prevenir diferentes tipos de cáncer en nuestros hijos: la vacuna contra el VPH.

VPH y cáncer

VPH son las iniciales de virus del papiloma humano, un virus común. En los Estados Unidos, distintos tipos de cáncer relacionados con el VPH afectan aproximadamente a 17,000 mujeres y 9,000 hombres cada año. Estos tipos de cáncer se podrían prevenir con vacunas. En hombres y mujeres, el VPH puede causar cáncer de ano y cáncer de boca y garganta (de orofaringe). También puede causar cáncer de cuello de útero, vulva y vagina en mujeres y cáncer de pene en hombres.

En el caso de las mujeres, hay disponible pruebas para detectar la mayoría de los cánceres de cuello de útero con un examen de Papanicolaou. Lamentablemente, no existe una prueba de detección de rutina para otros cánceres relacionados con el VPH que afectan a mujeres y hombres. Estos cánceres pueden causar dolor, sufrimiento e incluso la muerte. Por eso es tan importante una vacuna que prevenga la mayoría de estos tipos de cáncer.

Más información acerca del VPH

El VPH es un virus que se transmite de una persona a otra durante el contacto sexual de piel con piel, incluyendo relaciones sexuales vaginales, orales y anales. El VPH es muy común en personas que se encuentran en los últimos años de la adolescencia y a principios de los 20. Casi todas las personas sexualmente activas tendrán el VPH en algún momento de sus vidas aunque la mayoría nunca lo sabrá.

La mayoría de las veces, el cuerpo combate naturalmente el VPH antes de que cause problemas de salud. Pero en algunos casos, el cuerpo no lo combate y el VPH puede causar problemas de salud, como cáncer y verrugas genitales. Las verrugas genitales no son una enfermedad que ponga en riesgo la vida, pero pueden causar estrés emocional y el tratamiento puede ser muy incómodo. En los Estados Unidos, aproximadamente 1 de 100 adultos sexualmente activos tienen verrugas genitales en algún momento.

Se recomienda la vacuna contra el VPH en preadolescentes de entre 11 y 12 años de edad

También se recomienda para niñas de 13 a 26 años de edad y para niños de 13 a 21 años de edad, que no hayan recibido la vacuna. Por lo tanto, si su hijo o hija no ha comenzado o finalizado la serie de vacunas contra el VPH, no es demasiado tarde. Consulte a su médico sobre cómo obtenerlas ahora.

Hay disponibles dos vacunas, Cervarix y Gardasil, para prevenir los tipos de VPH que causan la mayoría de los cánceres de cuello de útero y de ano. Una de las vacunas contra el VPH, Gardasil, también previene el cáncer de vulva y vagina en mujeres y las verrugas genitales en hombres y mujeres. Solo Gardasil ha sido probado y autorizado para usarse en varones. Ambas vacunas se administran en una serie de tres dosis durante seis meses. La mejor manera de recordar que su hijo debe recibir las tres vacunas es realizar una cita para la segunda y la tercera vacuna antes de salir del consultorio del médico después de la primera vacuna.

¿Es segura la vacuna contra el VPH?

Sí. Las dos vacunas contra el VPH han sido estudiadas en decenas de miles de personas alrededor del mundo. Se han distribuido más de 57 millones de dosis hasta la fecha y no ha habido problemas de seguridad graves. Los Centros para el Control y la Prevención de Enfermedades (CDC, por sus siglas en inglés) y la Administración de Alimentos y Fármacos (FDA, por sus siglas en inglés) continúan controlando la seguridad de las vacunas. Estos estudios siguen demostrando que las vacunas contra el VPH son seguras. Los efectos adversos más comunes que se informan son leves. Entre ellos se incluyen:

¿Por qué mi hijo necesita esa vacuna ahora?

Las vacunas contra el VPH ofrecen la mejor protección para los niños y las niñas que reciben las tres dosis de la vacuna y tienen tiempo para desarrollar una respuesta inmunológica antes de comenzar la actividad sexual con otra persona. Esto no significa que su hijo preadolescente esté listo para tener relaciones sexuales. De hecho, es justamente lo opuesto. Es importante proteger a su hijo antes de que usted o su hijo tengan que pensar en el tema. La respuesta inmunológica a esta vacuna es mejor en los preadolescentes y esto podría significar una mejor protección para su hijo.
incluyen dolor donde se administró la vacuna (por lo general, el brazo), fiebre, mareos y náuseas. Es posible que haya escuchado que algunos niños se desmayan cuando reciben la vacuna. El desmayo es común entre preadolescentes y adolescentes en diferentes procedimientos médicos, no solo en la vacunación contra el VPH. Asegúrese de que su hijo coma algo antes de ir a recibir la vacuna. Es una buena idea que su hijo se siente o se recueste cuando le den la vacuna y por 15 minutos después de recibir la vacuna para evitar que se desmaye y sufra lesiones que podrían producirse al desmayarse. La vacuna contra el VPH se puede administrar de manera segura al mismo tiempo que las otras vacunas recomendadas, incluidas las vacunas Tdap, antimięningocócica y antigripal.

Ayuda para pagar las vacunas

El Programa Vacunas para Niños (VFC, por sus siglas en inglés) proporciona vacunas para niños menores de 18 años de edad que no reciben suficiente seguro, no tienen seguro médico, son elegibles para Medicare o son indígenas americanos o nativos de Alaska. Para obtener más información sobre el programa VFC, visite http://www.cdc.gov/spanish/especialesCDC/ProgramaVacunas/

Aunque usted tenga seguro o su hijo sea elegible para el VFC, algunos consultorios pueden cobrarle también un cargo por administrar las vacunas.

La historia de Jacquelyn “Yo estaba sana y tuve cáncer de cuello de útero”.

Al final de mis 20 años y principios de mis 30, antes de que naciera mi hija, tuve algunos exámenes de Papanicoloau anormales y me hicieron pruebas adicionales. Me dijeron que tenía el tipo de VPH que puede causar cáncer y displasia leve. Durante tres años más, mis pruebas fueron normales. Pero cuando me realizaron el primer examen de Papanicoloau después de que naciera mi hijo, me dijeron que necesitaban realizar una biopsia. Los resultados dieron que era cáncer y mi médico me envió a un oncólogo. Afortunadamente, el cáncer estaba en un estadio temprano. Los ganglios linfáticos estaban limpios y no necesitaba radiación. Pero debían realizarme una histerectomía total.

Mi marido y yo hemos estado juntos por 15 años y planeábamos tener más hijos. Estamos tan agradecidos por nuestros dos hermosos hijos, pero esperábamos tener más, lo que no sucederá ahora.

Lo bueno fue que detectaron el cáncer a tiempo, pero las complicaciones siguieron teniendo un impacto en mi vida y en mi familia. En los próximos años, me tengo que realizar exámenes pélvicos y de Papanicoloau cada algunos meses, los médicos miden los marcadores de tumores y me deben realizar radiografías y ecografías con regularidad, por si acaso. Tengo tantas citas médicas que me alejan de mi familia, mis amigos y mi trabajo.

Lo peor es que cada vez que el teléfono suena y sé que es mi oncólogo, contengo la respiración hasta que me da los resultados. Tengo esperanzas de poder llevar una vida completa y sana, pero siempre pienso en el cáncer.

En tan poco tiempo, pasé de tener una vida sana y planificar más hijos a tener una histerectomía total e intentar asegurarme de no tener cáncer de nuevo. Es abrumador. Y soy una de las personas con suerte.

En última instancia, debo asegurarme de estar sana y estar presente para mis hijos. Quiero ver a mis nietos crecer. Haré todo lo posible para que mi hijo y mi hija no deban pasar por esto. Cuando cumplan los 11 años, los vacunaré contra el VPH. Le digo a todo el mundo, a mis amigos y familiares, que sus hijos necesitan la serie de vacunas contra el VPH para protegerlos de este tipo de cáncer.

¿Qué sucede con los varones?

Una de las vacunas, Gardasil, es para varones también. Esta vacuna puede ayudarles a los niños a evitar tener cánceres relacionados con el VPH, como el de boca y garganta, pene y ano. Esta vacuna también ayuda a prevenir las verrugas genitales. La vacunación contra el VPH en hombres también puede beneficiar a las mujeres al reducir el contagio de los virus de VPH. Para obtener más información sobre el VPH y la vacuna contra el VPH, visite http://www.cdc.gov/spanish/especialesCDC/VacunaVPH/

HPV Vaccine for Preteens and Teens

Why does my child need HPV vaccine?
This vaccine is for protection from most of the cancers caused by human papillomavirus (HPV) infection. HPV is a very common virus that spreads between people when they have sexual contact with another person. About 14 million people, including teens, become infected with HPV each year. HPV infection can cause cervical cancer in women and penile cancer in men. HPV can also cause anal cancer, throat cancer and genital warts in both men and women.

When should my child be vaccinated?
The HPV vaccine is recommended for preteen boys and girls at age 11 or 12 so they are protected before ever being exposed to the virus. If your teen hasn’t gotten the vaccine yet, talk to their doctor about getting it for them as soon as possible.

The HPV vaccine is given in 3 shots. The second shot is given 1 or 2 months after the first shot. Then a third shot is given 6 months after the first shot. Be sure that your child gets all 3 shots for full protection.

What else should I know about HPV vaccine?
There are two HPV vaccines. Girls and young women should get either HPV vaccine to prevent cervical cancer. One of the HPV vaccines also protects against genital warts and anal cancer in both females and males. Boys should get this HPV vaccine to prevent anal cancer and genital warts. Girls can get this vaccine to prevent cervical cancer, anal cancer and genital warts.

Both HPV vaccines have been studied very carefully. These studies showed no serious safety concerns. Common, mild adverse events reported during these studies include pain in the arm where the shot was given, fever, dizziness and nausea.

Some preteens and teens might faint after getting the HPV vaccine or any shot. Preteens and teens should sit or lie down when they get a shot and stay like that for about 15 minutes after the shot. This can help prevent fainting and any injury that could happen while fainting.

Serious side effects from the HPV vaccine are rare. It is important to tell the doctor or nurse if your child has any severe allergies, including an allergy to latex or yeast. HPV vaccine is not recommended for anyone who is pregnant.

HPV vaccination is recommended by the Centers for Disease Control and Prevention (CDC), the American Academy of Family Physicians, the American Academy of Pediatrics, and the Society for Adolescent Health and Medicine.

How can I get help paying for these vaccines?
The Vaccines for Children (VFC) program provides vaccines for children ages 18 years and younger, who are not insured or under-insured, Medicaid-eligible, American Indian or Alaska Native. You can find out more about the VFC program by going online to www.cdc.gov and typing VFC in the search box.

Where can I learn more?
For more information about HPV vaccines and the other vaccines for preteens and teens, talk to your child’s doctor or nurse. More information is also available on CDC’s Vaccines for Preteens and Teens website at www.cdc.gov/vaccines/teens.
Give a strong recommendation for HPV vaccine to increase uptake!

Dear Colleague:

The American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists (ACOG), American College of Physicians (ACP), the Centers for Disease Control and Prevention (CDC), and the Immunization Action Coalition (IAC) are asking you to urge your patients to get vaccinated against human papillomavirus (HPV).

HPV vaccine is cancer prevention. However, HPV vaccine is underutilized in our country, despite the overwhelming evidence of its safety and effectiveness. While vaccination rates continue to improve for the other adolescent vaccines, HPV vaccination rates have not. Missed opportunities data suggest that providers are not giving strong recommendations for HPV vaccine when patients are 11 or 12 years old. The healthcare provider recommendation is the single best predictor of vaccination. Recent studies show that a patient who receives a provider recommendation is 4–5 times more likely to receive the HPV vaccine.¹,²

What you say, and how you say it, matters. A half-hearted recommendation to a patient may not only result in the patient leaving your practice unvaccinated, but may lead the patient to believe that HPV vaccine is not as important as the other adolescent vaccines. The undersigned organizations hope that this letter, which provides key facts about HPV vaccine safety and effectiveness, will lead you to recommend HPV vaccination – firmly and strongly – to your patients. Your recommendation will reflect your commitment to prevent HPV-associated cancers and disease in the United States.

HPV-associated disease³

- Approximately 79 million persons in the United States are infected with HPV, and approximately 14 million people in the United States will become newly infected with HPV each year.
- Each year, an estimated 26,000 cancers are attributable to HPV; about 17,000 in women and 9,000 in men.
- Cervical cancer is the most common HPV-associated cancer among women, and oropharyngeal cancers are the most common among men.

▶ Despite these statistics, the use of HPV vaccination to prevent HPV infection is limited and immunization rates remain low.

Prevention of HPV-associated disease by vaccination

- Two vaccines (bivalent/HPV2 and quadrivalent/HPV4) are available to protect against HPV 16 and 18, the types that cause most cervical and other anogenital cancers, as well as some oropharyngeal cancers.
- The Advisory Committee on Immunization Practices (ACIP) recommends routine vaccination of girls age 11 or 12 years with the 3-dose series of either HPV vaccine and routine vaccination of boys age 11 or 12 years with the 3-dose series of HPV4.
- Vaccination is recommended for females through age 26 years and for males through age 21 years who were not vaccinated when they were younger.

▶ In 2012, only 33% of teenage girls ages 13–17 years had received 3 doses of HPV vaccine. This was the first year in which HPV vaccination coverage rates did not increase from the prior year.

**Safety of HPV vaccine**

- More than 175 million doses of HPV vaccine have been distributed worldwide and 57 million doses have been distributed in the United States.
- More than 7 years of post-licensure vaccine safety monitoring in the United States provide continued evidence of the safety of HPV4. Data on safety are also available from post-licensure monitoring in other countries for both vaccines and provide continued evidence of the safety of HPV2 and HPV4.
- Syncope can occur among adolescents who receive any vaccines, including HPV vaccine. ACIP recommends that clinicians consider observing patients for 15 minutes after vaccination.

▶ Regardless of a safety profile that is similar to the other adolescent vaccines, parents cite safety concerns as one of the top five reasons they do not intend to vaccinate daughters against HPV.

**Efficacy of HPV vaccines**

- Among women who have not been previously infected with a targeted HPV type, both vaccines have over 95% efficacy in preventing cervical precancers caused by HPV 16 or 18.
- HPV4 also demonstrated nearly 100% vaccine efficacy in preventing vulvar and vaginal precancers, and genital warts in women caused by the vaccine types.
- In males, HPV4 demonstrated 90% vaccine efficacy in preventing genital warts and 75% vaccine efficacy in preventing anal precancers caused by vaccine types.

▶ Since the vaccine does not protect against all HPV types, it does not replace other prevention strategies, such as regular cervical cancer screening.

**What you say matters; how you say it matters even more.**

Based on research conducted with parents and physicians, CDC suggests recommending the HPV vaccine series the same way you recommend the other adolescent vaccines.

Parents may be interested in vaccinating, yet still have questions. Taking the time to listen to parents’ questions helps you save time and give an effective response. CDC has created an excellent tip
As a healthcare provider, we urge you to improve the strength and consistency of your recommendation for HPV vaccination to your patients. Your recommendation is the number one reason why someone will get the HPV vaccine and be protected from HPV-associated cancers and disease.

Signed:

Reid B. Blackwelder, MD  
President  
American Academy of Family Physicians

Jeanne A. Conry, MD  
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Thomas Frieden, MD  
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Deborah Wexler, MD  
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Immunization Action Coalition

REFERENCES

Most sexually active people will get HPV at some point in their lives. But, most will never know it because HPV infection usually has no signs or symptoms. The body is usually able to clear the infection on its own, without causing any health problems.

However, HPV infection can progress to warts or cancer and there is no certainty about who will have these problems from HPV. Some groups, such as those who are immunosuppressed, men who have sex with men (gay or bisexual), and people with poor oral health are more likely to have problems from HPV infection.

About 4% of males (1 out of every 25 males) in the U.S. report having had genital warts.

HPV vaccine is recommended for all males ages 9 through 21 years of age. HPV vaccine also may be given to males 22 through 26 years of age. The 3-dose vaccine series is usually started at 11 or 12 years of age but can be started at 9 years of age. HPV immunization is a series of 3 doses of HPV vaccine, given over a 6-month period. If the series is interrupted and you have a long period of time between doses, you do not need any extra doses – just continue the series.

HPV Vaccine is Cancer Prevention

Human Papillomavirus (HPV) Vaccine for Boys and Young Men

For more information

The Centers for Disease Control and Prevention (CDC)
www.cdc.gov/std/hpv/
www.cdc.gov/vaccines/vpd-vac/hpv/vac-faqs.htm
www.cdc.gov/cancer/hpv/statistics/

The Vaccine Education Center at The Children’s Hospital of Philadelphia
www.chop.edu/service/vaccine-education-center/prevent-hpv/hpv-questions-answers.html
www.chop.edu/service/vaccine-education-center/a-look-at-each-vaccine/hpv-vaccine.html

The American Academy of Pediatrics
www2.aap.org/immunization/illnesses/hpv/hpv.html

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Project funded by the Vaccine Education Center at The Children’s Hospital of Philadelphia

What you need to know...
How safe is HPV vaccine for males?

More than 40 million doses of HPV vaccine have been given in the U.S. since it was first licensed by the Food and Drug Administration (FDA) in 2006. The vaccine is very safe for both females and males. The most common side effect is soreness in the arm where you get the shot, which is common with many vaccines. Other side effects may include headache or fever. Also, many vaccines (including HPV vaccine) given to teens can cause fainting so your health care provider will likely recommend that teens sit or lie down for vaccine shots and wait in the office for 15 minutes just to be safe.

HPV-associated cancers in males

The Centers for Disease Control and Prevention (CDC) reports that around 12,100 HPV-associated cancers occur each year among males in the United States. Oropharyngeal cancers (back of the throat) are the most common HPV-associated cancers among males.

HPV vaccine for males

- Helps prevent warts in the genital area (penis, testicles, groin, thighs, and area in or around the anus)
- Helps prevent cancers in the genital area and in the throat
- Helps prevent infecting others with HPV

HPV can also infect the throat (oropharyngeal HPV). It can be passed to sexual partners and does not require intercourse to be spread. Any kind of genital contact, including oral sex, can spread HPV. You can pass on HPV even if you do not have a wart or other symptoms.

Of genital warts, 90% are caused by HPV types 6 or 11. The HPV vaccine recommended for males contains HPV types 6 and 11 and so is effective against the most common causes of genital and anal warts.

Which HPV vaccine is recommended for males?

There are two HPV vaccines available in the United States. However, only one of them (Gardasil®) is approved by the U.S. Food and Drug Administration (FDA) for males. Gardasil® includes the HPV strains (types 6 and 11) that cause anal and genital warts and the strains (types 16 and 18) that cause cancer. HPV vaccine is most effective when all doses are given before sexual contact. The vaccine can be used for males 9 through 26 years of age. Cervarix® brand HPV vaccine is approved only for females and should not be given to males.

Is HPV vaccine new? Should I wait before getting the vaccine?

How safe is HPV vaccine for males?

More than 40 million doses of HPV vaccine have been given in the U.S. since it was first licensed by the Food and Drug Administration (FDA) in 2006. The vaccine is very safe for both females and males. The most common side effect is soreness in the arm where you get the shot, which is common with many vaccines. Other side effects may include headache or fever. Also, many vaccines (including HPV vaccine) given to teens can cause fainting so your health care provider will likely recommend that teens sit or lie down for vaccine shots and wait in the office for 15 minutes just to be safe.

HPV is common and often goes unrecognized. The only sure way to not give or get HPV infection and genital warts is to abstain from sexual activity. If you are ever going to be sexually active, get the protection from HPV vaccine now.

Does using condoms prevent HPV?

Correct and consistent male condom use might lower the chances of giving or getting genital HPV but such use is not fully protective because HPV can infect areas that are not covered by a condom.

Can males be tested for HPV?

Tests for HPV are now available to help providers screen females but HPV tests are not approved for screening males.

How is HPV disease treated?

There is currently no treatment for the HPV infection itself. Treatments for HPV are directed at the symptoms such as removing warts or treating cancers.

Since HPV is sexually transmitted, why immunize at younger ages? Provide protection now, before the person is sexually active. Some young people may mistakenly think that only intercourse can spread sexually transmitted diseases, or think that condoms protect against all sexually transmitted diseases. Most sexually transmitted diseases can be spread from one person to another by many types of contact including vaginal, anal, and oral contact. And condoms do not guarantee complete protection against pregnancy or sexually transmitted diseases including HPV.

In addition, many males and females (especially in their tween and teen years) may not plan ahead. HPV vaccine at least helps to prevent infection with the most common causes of anal and genital warts, and some cancers.
HPV and Oropharyngeal Cancers in Rhode Island

There is an alarming rise in Human Papilloma Virus (HPV)-associated oropharyngeal cancers among Rhode Island males since the 1990s. Oropharyngeal cancers are the most common type of HPV-associated cancer among Rhode Island males. The implications for cancer prevention and control efforts are discussed in this brief based on the Rhode Island-specific epidemiological review.

Oral and Pharyngeal Cancer in Rhode Island

Cancer of the oral cavity or pharynx is one of the top ten most occurring cancers in Rhode Island. During 2005-2009 there were 16 new oral and pharyngeal cancer cases reported annually per 100,000 Rhode Island male adults [age-adjusted to 2000 US population]. The incidence rate of oral and pharyngeal cancer is comparable to leukemia (17 per 100,000 males) and higher than pancreatic cancer (13 per 100,000 males). Newly reported and diagnosed oral and pharyngeal cancers among men are twice as high as women.

The consequences of oral and pharyngeal cancer can be devastating when detected in a later stage of cancer growth, e.g., Impairment of speech, eating, and swallowing functions, and facial disfigurement.

The Connection between Oropharyngeal Cancer and Human Papilloma Virus (HPV)

The majority of oral and pharyngeal cancers develop on the lips, floor of the mouth, gingiva, and anterior two-thirds of the tongue. Although genetic and environment-related factors also have been identified as risk factors for oral and pharyngeal cancer, tobacco use and heavy alcohol consumption are considered major causes of approximately 75% of all oral and pharyngeal cancers. The incidence of oral and pharyngeal cancer has declined since the number of smokers in the United States has substantially decreased since the 1970s.

Recent national cancer statistics suggest that a subset of oral and pharyngeal cancers, primarily those of the oropharynx (the rear of the oral cavity, including the base of the tongue and the tonsils, Figure 1), has increased steadily since the 1970s. Epidemiologic and pathologic study results indicate that development of these base-of-the-tongue and the tonsillar cancers is causally associated with sexually transmitted Human Papilloma Virus (HPV) infections, in particular Type 16 (HPV-16), that are also responsible for cancers in the cervix, anus, and penis. Substantial evidence has recently mounted in favor of the distinction between HPV-associated and non-HPV-associated oral and pharyngeal cancers. HPV-associated and non-HPV-associated oral and pharyngeal cancers are distinct in clinical and patho-biological features, patient risk factor profiles, detection, and management of disease. Compared with cancers associated with traditional risk factors (i.e. tobacco and alcohol use), HPV-associated oropharyngeal cancers are more likely to occur among younger white males (<60 years), and those who practice certain sexual behaviors but who never smoked or heavily consumed alcohol.

About the Data Source:

The Rhode Island Cancer Registry has collected, managed, and analyzed data about cancer cases and cancer deaths since 1986. The registry has been supported in part by the Centers for Disease Control and Prevention (CDC) National Program of Cancer Registries (NPCR) since 1995. The state of Rhode Island collects cancer reports from medical facilities such as hospitals, physicians’ offices, therapeutic radiation facilities, freestanding surgical centers, and pathology laboratories.

Vital information about cancer cases and cancer deaths is necessary for public health agencies to report on cancer trends, address the state’s cancer burden, assess the impact of cancer prevention and control efforts, participate in research, and respond to reports of suspected increases in cancer occurrence.

For more information visit:

Rhode Island Cancer Registry
www.health.state.ri.us/programs/cancerregistry/index.php

National Program of Cancer Registries (NPCR)
www.cdc.gov/cancer/npcr/about.htm
HPV-associated Oropharyngeal Cancer Trends in Rhode Island

Newly diagnosed oral and pharyngeal cancers included in this report were retrieved from the Rhode Island Cancer Registry from 1987-2009. Based on the literature review on anatomic site preference of HPV, the malignant oral and pharyngeal cancers were classified into two groups: (1) “HPV-associated oropharyngeal cancers” detected in the base of the tongue, lingual and palatine tonsils, and certain sites within the oropharynx (n=835), and (2) comparison cancers mostly in the oral cavity and in the larynx, in parallel with previous epidemiologic report (n=2,461). Table 1 summarizes specific cancer classification codes and descriptions used to categorize subsets of oral and pharyngeal cancers by HPV association.

It should be noted that not all “HPV-associated” cases directly reflect HPV infection because Cancer Registry data does not indicate whether or not HPV is present in a tumor. The term “HPV-associated” in this brief refers to cancers that have been shown in the literature to be strongly associated with HPV infection. In 2000-2005, more than 70% of the cancer were confirmed HPV-positive in studies that tested HPV prevalence in oropharyngeal cancer tissue samples from population-based cancer registries and hospital-based cases.7,8

Table 1. ICD-O-3 topography code* and anatomic site description used to define HPV-associated oropharyngeal and comparison cancers.6

<table>
<thead>
<tr>
<th>ANATOMIC SITES OF HPV-ASSOCIATED OROPHARYNGEAL CANCER</th>
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<tbody>
<tr>
<td>C019 (Base of tongue)</td>
<td></td>
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<tr>
<td>C024 (Lingual tonsil)</td>
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<tr>
<td>C028 (Overlapping lesion of tongue)</td>
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<tr>
<td>C090-099 (Palatine tonsil)</td>
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<tr>
<td>C102, 108, 109 (Oropharynx)</td>
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<tr>
<td>C140 (Pharynx)</td>
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<tr>
<td>C142 (Waldeyer’s ring)</td>
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<tr>
<td>C148 (Overlapping lesion of lip, oral cavity and pharynx)</td>
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<tr>
<th>COMPARISON ANATOMIC SITES</th>
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<tbody>
<tr>
<td>C020-023, C029 (Tongue)</td>
<td></td>
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<tr>
<td>C030-039 (Gum)</td>
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<tr>
<td>C040-049 (Floor of mouth)</td>
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<tr>
<td>C050-059 (Soft and hard palate)</td>
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<tr>
<td>C060-069 (Other/unspecified parts of mouth)</td>
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<tr>
<td>C100, 101, 103 (Oropharynx)</td>
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<tr>
<td>C320-329 (Larynx)</td>
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* International Classification of Disease for Oncology, 3rd Edition, [ICD-O-3]

Terminology:

Oral and pharyngeal cancer is a comprehensive term to include cancer of the lip, tongue, floor of the mouth, palate, gingiva and alveolar mucosa, buccal mucosa, salivary gland, tonsil, oropharynx, nasopharynx, and hypopharynx.

Oropharyngeal cancer includes cancer of oropharynx that refers the palatine and lingual tonsils, the posterior one-third (base) of the tongue, the soft palate, and the posterior pharyngeal wall.

Figure 1. Schematic View of oral cavity and oropharynx

National Cancer Institute, Surveillance, Epidemiology and End Results (SEER) Program Training Module

Prepared by the Oral Health Program, Rhode Island Department of Health, 3 Capitol Hill, Providence, RI 02908
In accordance with national trends, annual age-adjusted incidence rates of potentially HPV-associated oropharyngeal cancers among Rhode Island men increased from 1987 through 2009, (45% increase from 5.3 per 100,000 [1987-1991] to 7.7 per 10,000 [2007-2009]), whereas the incidence rates of comparison sites steadily decreased over the same period (24% decline from 17.9 per 100,000 to 13.6 per 10,000). There is a trend in HPV-associated oropharyngeal cancer that is escalating for males at an alarming rate. (Figure 2).

The incidence rates of both HPV and non-HPV-associated cancers among women have remained stable during the period of 1987 through 2009 (Figure 3).

The difference in age at diagnosis between the two types of oral and pharyngeal cancers was assessed. Compared with cancers in the comparison sites, HPV-associated oropharyngeal cancers are more likely to be diagnosed at a younger age, particularly among male. The average age of oropharyngeal cancer diagnosis at the HPV preferred anatomic sites, among men, is 61 years, compared to cancers at the comparison sites of 64 years old. Women's ages, when oral and pharyngeal cancers were diagnosed, are not significantly different by HPV association (Figure 4 and 5).

*Data source: Rhode Island Cancer Registry. Rates are age-adjusted to the 2000 U.S. Standard population.
Conclusion: Implications for Oral and Pharyngeal Cancer Prevention and Control

The Cancer Registry confirms an alarming rise in HPV-associated oropharyngeal cancers among Rhode Islanders in the last twenty years. Among males, oropharyngeal cancers are the most common type of HPV-associated cancers. According to the 2007–2009 Cancer Registry, the oropharyngeal cancer incidence rate is 7.7 per 100,000 males; while anal and penile cancer incidences are 1.6 and lower than 1 per 100,000 males for the same period.

HPV plays a specific and unique role in oral and pharyngeal cancer development. The connection between HPV infections and oral and pharyngeal cancer suggests important implications for cancer prevention, research, and control initiatives. The risk factors, morbidity, and mortality of HPV-associated oropharyngeal cancers, most notably the cancers found in the base of the tongue and tonsils, differ from those of cancers in the oral cavity. As the tumors commonly develop close to the throat, HPV-associated oropharyngeal cancers are not as easily detected by traditional visual and tactile oral and pharyngeal cancer examinations and are more likely to be undetected until a later stage. Patients with HPV-associated cancers typically have a higher survival rate, a better response to radiation and chemotherapy, and a more favorable prognosis.  

Dental and medical care professionals should be more vigilant about the types of oral and pharyngeal cancers that can affect younger patients regardless of the presence of the traditional risk factors, particularly chronic tobacco and alcohol use. Healthcare professionals are encouraged to communicate with their patients about HPV as a cause of oropharyngeal cancer.

The Centers for Disease Prevention and Control’s (CDC) Advisory Committee on Immunization Practices recommends the vaccination, HPV4; Gardasil, Merck & Co., Inc. (since 2006), or HPV2; Cervarix, GlaxoSmithKline (since 2009), against HPV for females, and HPV4; Gardasil, Merck & Co., Inc. for males (since October 2011). Current HPV vaccination efforts effectively target cervical cancers in women as well as anal cancers and genital warts in both women and men. HPV vaccinations may offer opportunities to prevent infection and reduce the burden of HPV-associated oropharyngeal cancers. As a result of national and state HPV vaccination education and promotion, and the recent HPV vaccine recommendation to include male adolescents and young adults, a growing number of vaccinated Rhode Island teens and young adults will become protected against HPV. Clinical trials have yet to determine the efficacy of a HPV vaccine to prevent certain types of oral and pharyngeal cancer but recent studies have shown that more than 70% of oropharyngeal cancers are attributable to HPV infection. Potential effectiveness in preventing and reducing oropharyngeal cancer through HPV vaccination is promising.

Oropharyngeal cancer prevention efforts, including referrals to tobacco cessation programs and alcohol addiction and abuse treatment, should be continuously practiced in dental offices. Tobacco and alcohol use remain the primary risk factors for the majority of oral and pharyngeal cancers.
Human papillomavirus (HPV) is a virus that can lead to genital warts and various forms of cancer, including those of the cervix and other reproductive organs. Although most people don’t know it, the virus can also cause cancers of the head and neck. HPV is the most common sexually transmitted infection in the United States and around the world; in fact, each year, 300,000 women die from cervical cancer caused by HPV.

Q. What is human papillomavirus?
A. Human papillomavirus (HPV) is a family of viruses that commonly infect the genital area and lining of the cervix. Some types of HPV infect the genital areas of men and women, causing warts. Genital warts may be unsightly, but they are generally not harmful. Other types of HPV cause cervical cancer, as well as other cancers of the reproductive organs. On occasion, HPV infections can lead to cancers of the head and neck.

Q. How common is HPV?
A. HPV is the most common sexually transmitted infection in the United States and around the world. More than half of sexually active people will be infected with HPV at some time in their lives. Twenty million Americans are currently infected with HPV and another 6 million become infected every year. Half of those newly infected with HPV are between 15 and 24 years of age.

Q. How do you get HPV? How can you avoid it?
A. HPV in the genital area is passed from one person to another through genital contact, most often, but not always, during sex. The best way to avoid HPV infection is to abstain from any sexual activity. You can also lower your chance of getting HPV by having sex with only one person who isn’t infected with HPV. But most people who have HPV don’t know they have it, so it can be hard to avoid. Although condoms are recommended as a way of decreasing sexually transmitted infections, they don’t offer complete protection against HPV.

Q. Can’t I avoid cervical cancer by getting routine Pap tests?
A. Not always. Once, cervical cancer was the most common cause of U.S. cancer deaths. The Pap test changed that. HPV infection causes changes in the cervix that can result in cancer. The Pap test is performed by scraping cells from the cervix and examining them to see whether they show changes consistent with the early development of cancer (called precancerous changes). If these changes are detected, the doctor can perform surgery on the affected areas before cancer develops. Typically, the length of time from infection with HPV to development of cervical cancer is decades. So, although most HPV infections occur in teenagers and young adults, cervical cancer is more common in women during their 40s and 50s.

The Pap test is one of the most effective cancer screening tests and has dramatically reduced the incidence of cervical cancer in the United States. But the test isn’t entirely predictive of cancer, and not all women get tested as often as they should. Further, the Pap test will not detect cancer caused by HPV in areas other than the cervix.

For the latest information on all vaccines, visit our Web site at vaccine.chop.edu
**Q. Is there a vaccine to prevent HPV?**

A. Yes. There are two vaccines to prevent HPV. Studies in thousands of girls and young women found the vaccines to be safe and effective in preventing persistent infections caused by HPV. Studies in boys and young men found that the HPV vaccine was safe and prevented anal and genital warts. Both vaccines protect against the types of HPV that cause 70 percent of cervical cancers; however, one, called Gardasil®, also protects against the types of HPV that cause about 90 percent of anal and genital warts.

Both vaccines are given as a series of three shots. The second shot is given one or two months after the first, and the third shot is given six months after the first.

**Q. How is the HPV vaccine made?**

A. The HPV vaccine is made using a protein from the surface of the virus. One vaccine, Gardasil, protects against four different types of HPV, and the second, Cervarix®, protects against two types. Both protect against the types of HPV that most commonly cause cervical cancer, but only Gardasil protects against the most common causes of genital warts. For this reason, only Gardasil is approved for use in boys.

**Q. Who should get the HPV vaccine?**

A. The HPV vaccine is recommended between 11 and 12 years of age. The vaccine can be given to those as young as 9 years of age. It is also recommended for all teenagers and adults between 13 and 26 years of age if they did not get the vaccine when they were younger. Since girls were originally the only ones recommended to get the vaccine, some people wonder why boys are now recommended to get the vaccine also. First, because boys can get genital warts as well as cancer caused by HPV, they will benefit from receiving the HPV vaccine; in fact, about one-third of the cancers caused by HPV occur in males. Second, by immunizing boys, they will be less likely to transmit the virus to their sexual partners. Finally, studies in boys lagged behind those in girls, but the vaccine has now been shown to be safe and effective in boys as well.

**Q. Is the HPV vaccine safe?**

A. Yes. Because the HPV vaccine is made using only a single protein from each type of the virus, it can't cause HPV and, therefore, can't cause cervical cancer. The most common side effect of the vaccine is redness and tenderness at the injection site. The vaccine may also cause a slight fever.

Because people of the age group recommended to get the HPV vaccine might faint, it is recommended they remain at the doctor's office for about 15 minutes after receiving this or other vaccines.

Although adverse events such as blood clots, neurological damage, and death have been reported following the HPV vaccine, scientific studies have not found these events to be caused by the vaccine.

**Q. Do young women who get the HPV vaccine still need to get Pap tests?**

A. Yes. Because the HPV vaccine will protect only against HPV types that cause 70 percent of cervical cancers, women should continue to be screened with routine Pap tests.

**Q. Do women who have received the HPV vaccine still need to worry about sexually transmitted infections?**

A. Yes. The HPV vaccine does not prevent other sexually transmitted infections such as syphilis, gonorrhea, chlamydia or herpes. Also, the vaccine doesn't protect against all HPV types.

This information is provided by the Vaccine Education Center at The Children's Hospital of Philadelphia. The Center is an educational resource for parents and healthcare professionals and is composed of scientists, physicians, mothers and fathers who are devoted to the study and prevention of infectious diseases. The Vaccine Education Center is funded by endowed chairs from The Children's Hospital of Philadelphia. The Center does not receive support from pharmaceutical companies.

vaccine.chop.edu