

Human Papillomavirus Vaccine

Vaccine	HPV Types	Recommended Age	Schedule 2 Doses 0.5 mL IM	Schedule 3 Doses 0.5 mL IM	Special Populations
9vHPV (Gardasil®9, Merck)	6, 11, 16, 18, 31, 33, 45, 52, & 58	<ul style="list-style-type: none"> • 11-12 years • Minimum age 9 years • Maximum age 45 years⁴ 	<p>1st: 9-14 years</p> <p>2nd: Minimum of 5 months after 1st dose¹</p>	<p>1st: 15-45 years⁴ (may be given at 9 years)</p> <p>2nd: 1-2 months after the 1st dose (a minimum of 4 weeks after 1st dose)</p> <p>3rd: 6 months after 1st dose (at least 12 weeks after the 2nd dose and at least 5 months after the first dose)</p>	<p>MSMs, HIV+ Men & Transgender²</p> <ul style="list-style-type: none"> • Vaccinate through age 45 years <p>Children with a history of sexual abuse or assault</p> <ul style="list-style-type: none"> • Vaccinate beginning at age 9 years <p>Persons with Immunocompromising conditions³</p> <ul style="list-style-type: none"> • Vaccinate through age 45 years

¹If the second dose is administered at a shorter interval (<5 months), a third dose should be administered a minimum of 12 weeks after the first dose and 5 months after the first dose.

²(MSMs) men who have sex with men. Including men who identify as gay or bisexual, or who intend to have sex with men.

³Primary or secondary immunocompromising conditions that might reduce cell-mediated or humoral immunity, such as B lymphocyte antibody deficiencies, T lymphocyte complete or partial defects, HIV infection, malignant neoplasms, transplantation, autoimmune disease, or immunosuppressive therapy.

⁴Adults aged >26 years. Catch-up HPV vaccination is not recommended for all adults aged >26 years. Instead, shared clinical decision-making regarding HPV vaccination is recommended for some adults aged 27 through 45 years who are not adequately vaccinated. HPV vaccines are not licensed for use in adults aged >45 years.



Human Papillomavirus Vaccine Recommendations

General Recommendations

- 9vHPV vaccine is recommended for routine vaccination of females and males at 11-12 years of age, but can be given as early as 9 years of age.
- The 2-dose vaccination schedule is recommended for those who are starting the HPV series at 9-14 years of age
- The 3-dose vaccination series is recommended for those who are:
 - 9-14 years of age who have already received two doses of HPV vaccine less than 5 months apart will require a third dose
 - Starting the series at age 15-45 years
 - Immunocompromised, regardless of age

Cervical cancer screening. Provider should follow cervical cancer screening guidelines and recommendations.

Indications

- 9vHPV vaccine is indicated for the prevention of anogenital warts, and cervical pre-cancers & cancers.
- 9vHPV provides 94%-100% protection against 9 HPV strains (6, 11, 16, 18, 31, 33, 45, 52, & 58) that cause cervical cancers & 89% protection for women aged 24 through 45 years.

IP- B71-VHPV-V4 (8/26/19)

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General Recommendations (continued):

Catch-up Vaccination

- Catch-up HPV vaccination is recommended for all persons through age 26 years who are not adequately vaccinated.
- Use recommended routine dosing intervals (see Schedule above) for vaccine series catch-up.
- **Adults aged >26 years:** Catch-up HPV vaccination is not recommended for all adults aged >26 years. Instead, shared clinical decision-making regarding HPV vaccination is recommended for some adults aged 27 through 45 years who are not adequately vaccinated. HPV vaccines are not licensed for use in adults aged >45 years.

Persons vaccinated previously

- Persons who initiated vaccination with 9vHPV before their 15th birthday, and received 2 doses (0, 6 – 12 months) of any HPV vaccine or 3 doses (0, 1 – 2, 6 months) of any HPV vaccine are considered adequately vaccinated.
- Persons who initiated vaccination on or after their 15th birthday and received 3 doses of any HPV vaccine are adequately vaccinated.
- 9vHPV should be used to continue or complete a vaccination series started with 4vHPV or 2vHPV.

Special Populations

- **History of sexual abuse or assault:** Routine vaccination is recommended for children with a history of sexual abuse or assault, beginning at age 9 years.
- **MSM:** Routine HPV vaccination is recommended for all males through age 45 years.
- **Transgender:** Routine HPV vaccination is recommended through age 45 years for those not adequately vaccinated.

Medical Conditions

- Persons with a history of immunocompromising conditions³ that might reduce cell – mediated or immunity should receive 3 doses of HPV vaccine at 9 – 45 years of age.

Administration:

- Ideally, administration of the vaccine prior to potential exposure through sexual contact is recommended. However, vaccination of sexually active persons should still occur according to ACIP recommendations, if in the recommended age groups⁴.
- There is no need to restart the vaccine series if the HPV vaccine schedule is interrupted.

Contraindication

- Hypersensitivity such as a severe allergic reaction (e.g. anaphylaxis) after a previous dose of HPV vaccine or any vaccine component.

Precaution

- Because some people may develop syncope, sometimes resulting in falling with injury, observe patients for 15 minutes after the vaccine has been administered.

Pregnancy

- HPV vaccines are not recommended for use in pregnant women; No pre-vaccination testing (pregnancy, Pap or HPV testing) is recommended to establish the appropriateness of HPV vaccination. Any exposure to 9vHPV vaccine during pregnancy should be reported to the Merck vaccine pregnancy registry:
 - 1-800-986-8999 (Merck for 9vHPV only)
 - Merck pregnancy registry website: <http://www.merckpregnancyregistries.com/gardasil9.html> (for Gardasil 9 only)
- If a woman is found to be pregnant after initiating the HPV vaccine series, remaining doses should be delayed until after the pregnancy.
- Women who are breastfeeding or lactating can receive HPV vaccine.

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Reference:

- Meites E, Szilagyi PG, Chesson HW, Unger ER, Romero JR, Markowitz LE. Human Papillomavirus Vaccination for Adults: Updated Recommendations of the Advisory Committee on Immunization Practices. MMWR Morb Mortal Wkly Rep 2019;68:698–702.
DOI: <http://dx.doi.org/10.15585/mmwr.mm6832a3>. Accessed August 20, 2019.

Adverse Reactions

- Injection site: pain redness, swelling. Systemic: fatigue, headache, myalgia (muscle pain), gastrointestinal symptoms,
- arthralgia (joint pain) and fainting (syncope).

Vaccine Storage & Handling

- Store 9vHPV in the refrigerator between 35°F and 46°F (aim for 40°F). Do not freeze vaccine. Discard if vaccine has been frozen.