

A Quick Look at Using Human Papillomavirus (HPV) Vaccine

Vaccine	HPV Types	For Protection Against	Approved for Ages
9vHPV Gardasil-9® (Merck)	6, 11, 16, 18, 31, 33, 45, 52, 58	Cervical (including precancerous & dysplastic lesions), vulvar, vaginal, anal, penile, and oropharyngeal cancers and genital warts	Females: 9-26 years Males: 9-21 years; 22-26 years if high risk (see "Indications for Use")

Indications for Use and Schedule

- Routinely administer to males & females aged 11-12 years
- Vaccination series may start at age 9 years
 - Begin HPV vaccine at age 9 years for children with any history of sexual abuse or assault
- Catch-up: females aged 13-26 years & males aged 13-21 years
- Vaccinate males aged 22-26 years within a high risk group
 - Immunocompromised due to infection (including HIV), disease or medication
 - Men who have sex with men (including those who identify as gay, bisexual, or transgender)
- Consider vaccination for all other males aged 22-26 years

Vaccine Administration

- **Only** administer as an Intramuscular (IM) injection in the deltoid of the arm (preferred) or anterolateral thigh
 - If **not** administered IM, dose must be repeated
- 1-1.5 inch needle; 22-25 gauge
- Use professional judgment when selecting needle length
- Can be given simultaneously with other vaccines

Additional Vaccine Recommendation Points

- To ensure best protection & benefit from HPV vaccine, persons should complete all doses before sexual activity begins
 - However, sexually active persons aged 9 through 26 years without a complete series should be vaccinated
- ACIP recommends that immunocompromised males and females aged 9 through 26 years get 3 doses of HPV vaccine at 0, 1-2, 6 months because immune response to vaccination may have been attenuated
 - Includes those with primary 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
- The recommendation for an immunocompromised person to receive the 3-dose schedule of HPV vaccine **does not** apply to children aged 9 through 14 years with the following medical indications:
 - Asplenia, asthma, chronic granulomatous disease, chronic liver disease, chronic lung disease, chronic renal disease, central nervous system anatomic barrier defects (e.g., cochlear implant), complement deficiency, diabetes, heart disease, or sickle cell disease

Recommended Schedule:

- Initiating HPV vaccination **prior to** 15th birthday
 - Give 2 doses of HPV vaccine separated by 6-12 months
- Initiating HPV vaccination **on or after** 15th birthday
 - Give 3 doses of HPV vaccine (0, 1-2, 6 month schedule)
- Immunocompromised persons aged 9-26 years
 - Give 3 doses of HPV vaccine (0, 1-2, 6 month schedule), see "Additional Vaccine Recommendation Points" for further guidance
- Ensure minimum intervals are met
 - 2-dose schedule: 5 months between dose 1 & 2
 - 3-dose schedule: 4 weeks between dose 1 & 2, 12 weeks between dose 2 & 3, and 5 months between dose 1 & 3

Storage and Handling

- Store in a refrigerator unit between **36°-46°F (2°-8°C)**
 - Stand-alone storage units preferred
- Do **not** freeze vaccine
- Keep in the original box
- Shake well before use

- Persons turning 27 years of age who have started the HPV series but have not completed it can complete the series using the recommended intervals between doses, even though this means that the series is completed after 26 years of age
 - **NOTE:** HPV vaccine may not be covered by some insurances after 26 years of age
- Previous HPV vaccines that are no longer available: 2vHPV (Cervarix) and 4vHPV (Gardasil)
- Persons who initiated vaccination with 9vHPV, 4vHPV, or 2vHPV prior to their 15th birthday and received 2 doses of any HPV vaccine at 0, 6-12 months or 3 doses of HPV vaccine at 0, 1-2, 6 months are considered completely vaccinated
- Persons who initiated vaccination with 9vHPV, 4vHPV, or 2vHPV on or after their 15th birthday and received 3 doses of any HPV vaccine at 0, 1-2, 6 months are considered completely vaccinated
- If a person previously received 2vHPV, 4vHPV, or HPV vaccine type is unknown or not available, do not miss an opportunity; complete series with 9vHPV
- If the HPV vaccine schedule is interrupted, the series does not need to be restarted; the number of doses is based on age at administration of the 1st dose
- There is no current recommendation for revaccinating persons who previously completed a series of 2vHPV or 4vHPV with 9vHPV
- 9vHPV vaccine may be given to persons who have genital warts, are immunosuppressed, are breastfeeding, have a positive HPV test, have an equivocal or abnormal pap test, or are currently taking hormonal contraceptive measures

CONTRAINDICATIONS

- Allergic reaction to a previous dose of HPV vaccine or another component of the vaccine
- 9vHPV is contraindicated for persons with a history of immediate hypersensitivity to yeast

PRECAUTIONS

- Moderate or severe illness with or without fever
- While not contraindicated, HPV vaccine is not recommended during pregnancy (pregnancy test not necessary before vaccination)
 - If a woman becomes pregnant after starting the vaccine series, remaining doses should be delayed until after the pregnancy
 - If a vaccine dose is inadvertently administered during pregnancy, there is no indication for medical intervention
 - Report vaccination of pregnant women with 9vHPV to the registry at 800-986-8999

FURTHER POINTS

- 2vHPV and 4vHPV are no longer available; 2vHPV lots expired in November 2016, 4vHPV lots expired in May 2017
- Due to increased reports of syncope (fainting) in adolescents following vaccination, a 15-20 minute observation period is recommended for adolescents after receiving any vaccine
- The HPV Vaccine Information Statement (VIS) with information about the Michigan Care Improvement Registry (MCIR) can be found at www.michigan.gov/immunize or your local health department
- Document Gardasil-9 as “HPV9” in MCIR and as “9vHPV” on the vaccine administration record (VAR) and immunization record card
- Document Gardasil as “HPV4” in MCIR and as “4vHPV” on the VAR and immunization record card
- Document Cervarix as “HPV2” in MCIR and as “2vHPV” on the VAR and immunization record card

Publicly purchased HPV vaccine can be administered to males and females aged 9 through 18 years via the Vaccines for Children (VFC) Program. Eligible children include those who are uninsured, underinsured, Medicaid eligible, Native American or Alaskan Natives. Contact your local health department for more information.

Through the Michigan Adult Vaccine Replacement program (MI-VRP) and through Adult Medicaid, males and females aged 19 through 26 years can receive HPV vaccine based on the recommendations above. Under MI-VRP, males aged 22 through 26 years can receive HPV vaccine if within a high risk group. For persons covered by Adult Medicaid, private stock should be used and billed to Medicaid. Medicaid and MI-VRP will not cover an HPV dose given at/after age 27 years.

For additional information: MMWRs: Use of 9-Valent HPV Vaccine: Updated HPV Vaccination Recommendation of the ACIP (March 27, 2015) and Use of a 2-Dose Schedule for HPV Vaccination: Updated Recommendations of the ACIP (December 16, 2016) at www.cdc.gov/vaccines. Updates to this form will be posted at www.michigan.gov/immunize.