

# HPV Vaccination

## HPV Vaccine Overview

Human papillomavirus (HPV) is a virus that causes cervical cancer and genital warts. Three HPV vaccines (brand names: Gardasil, Gardasil-9, and Cervarix) are globally available to prevent infection with types of HPV known to cause cervical cancer. These vaccines are safe, and they reduce the incidence of cervical abnormalities (“pre-cancer”) that can lead to cancer.

- Bivalent (Cervarix: effective against HPV 16, 18),
- Quadrivalent (Gardasil: effective against HPV 6, 11, 16 & 18),
- Nanovalent (Gardasil 9: effective against nine high risk virus)

Out of these three vaccines, quadrivalent is easily available in India. It is 95-100% efficacious to provide protection against HPV 16 & 18 infection (if given before the HPV infection or starting of sexual activity). In short, HPV vaccine prevent cervical cancer because >83% cervical cancer associated with HPV 16 & 18 infection in Indian women. Additionally Gardasil provides protection against genital warts with efficacy of 99-100%. Nanovalent vaccine is not easily available in India.

## What is hpv?

Human papillomavirus (HPV) is a virus that is spread by skin-to-skin contact, including sexual contact. There are more than 100 types of HPV virus. Among them HPV 16 & 18 type virus are responsible for cervical cancer in more than 83% cases.

## Who should be vaccinated?

- Maximum benefit of vaccination is achieved between 9 to 14 years of age in adolescent girls (as per American cancer society guidelines 2020).
- Females <15 years of age at the time of first dose: 2 dose schedule (0, 6 months) is recommended. (If interval between doses is shorter than 5 months then 3<sup>rd</sup> dose should be given at least 6 month after the first dose).
- Female  $\geq 15$  years of age at the time of first dose: 3 dose schedule (0, 2, 6 months) is recommended.
- If person with immunocompromised state or HIV infection (AIDS) then 3 dose schedule is necessary.

## **How long am I protected after HPV vaccination?**

Information about how long the vaccine protects against HPV infection is not available. However, there has been no evidence to suggest that the HPV vaccine loses any ability to provide protection over time.

## **Do I need cervical cancer screening after HPV vaccination?**

As per guidelines, regular cervical cancer screening is generally recommended beginning at age 25 to 65 years of age .

However, getting the HPV vaccine does not mean that you can skip cervical cancer screening in the future. Cervical cancer screening is required because vaccine neither eliminates infections acquired prior to vaccination nor provides protection from uncommon type HPV virus infection.

## **HPV Vaccine side effects and Precautions**

Like any medicine, vaccine can have side effects. Side effects are mild and get better within 1-2 days. HPV vaccine does not have effect on fertility of young girls.

Common side effects are

pain, redness or swelling at injection site

fever

fainting or dizziness (which happen with any vaccine)

Headache or Nausea

Muscle or Joint pain

The vaccine is not currently recommended during pregnancy, although there are no known risks to a fetus if the vaccine is given.

## **How effective is the vaccine?**

Studies have shown that:

- HPV vaccination in females is very effective in preventing HPV infections and cervical abnormalities (pre-cancers lesion).
- HPV vaccination in females reduces the risk of genital warts.
- HPV vaccination in males reduces the risk of developing genital warts and penile HPV infection, which may decrease the spread of HPV to sexual partners.
- HPV vaccination also reduces the risk of anal cancer in both males and females.

## **Where to get more information.**

Your health care provider is the best source of information for questions and concerns related to your specific medical problem.

