



Cervical
Cancer Vaccination



Cancer of the cervix (neck of the womb), or better known as cervical cancer, impacts a significant number of women globally. It develops when atypical cells in the lining of the cervix start to multiply abnormally and become cancerous.

Cervical cancer is one of the most common women cancers. However, it is now considered a potentially preventable cancer because of the availability of an effective vaccine and screening programme.

## What causes cervical cancer?

The Human Papillomavirus (HPV) is a common viral infection that affects 80 per cent of sexually active women at some point in their lives. It may frequently result in genital or skin warts. High-risk subtypes are known to be the primary cause of cervical cancers.

Transmission of HPV causing cervical cancer may occur by contact through a variety of routes including sexual activity. While there is no direct treatment for HPV infections, it is usually cleared by the body's immune system. In some cases, the infection persists and leads to precancerous or cancerous changes in the cervix.

# Who is eligible for the HPV vaccine?

Although the vaccines are more effective when given at a younger age between 9 and 14 years old due to better immunity, males and females up to 26 years old are encouraged to be vaccinated. Nevertheless, there remains a benefit in vaccination up to the age of 45 years old. Currently, Gardasil-9 is approved to be administered in both males and females up to 45 years old in Singapore.

It is also ideal for the vaccine to be administered before the first sexual contact. This will allow the immune system to be activated before one contracts HPV. The vaccine, however, does not protect against current HPV infections.





## How is the vaccine administered?

The HPV vaccine is given over two or three injections within six months.

- + Cervarix is administered at 0-, 1- and 6-months interval.
- + Gardasil and Gardasil-9 are administered at 0-, 2- and 6-months interval.
- In healthy girls and boys between 9 and 14 years old, a 2-dose regimen of Cervarix, Gardasil or Gardasil-9 is sufficient at 0 and 6 months interval.

It is important to complete the entire regimen to gain the maximum effectiveness.

# Is the vaccine safe?

The vaccine has been proven to be safe. There are only minor side effects such as headaches and soreness at the site of injection.



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# Will I be fully protected from all types of cervical cancers after being vaccinated?

No. Cervarix and Gardasil only provide protection against the two major HPV virus types that cause 70% of all cervical cancers while Gardasil-9 protects against 90%. Routine screening through Pap smear and HPV tests remains important for the other HPV subtypes not covered by vaccination as well as a very small number of non-HPV related cervical cancers. It is also important to reduce other risk factors such as smoking and having multiple sexual partners.



# What screening tests are available for cervical cancer?

A Pap smear is a simple test whereby cells from the surface of the cervix are collected and examined for abnormalities under the microscope. It is recommended that sexually active women between 25 and 29 years old undergo a Pap smear every 3 years.

An HPV test detects the presence of HPV infection. Women between 30 and 69 years old are encouraged to undergo an HPV test every 5 years.

Any abnormal Pap smear or HPV test results will require further investigations by your doctor.



# Notes

# **Notes**

### About the National University Centre for Women and Children

National University Centre for Women and Children (NUWoC) is a national university specialist centre that aims to empower women, children and their families to lead healthier lives. We provide comprehensive medical and surgical services ranging from pre-conception to child and maternal health.

NUWoC comprises the Department of Obstetrics & Gynaecology (0&G) and Khoo Teck Puat – National University Children's Medical Institute (KTP-NUCMI) of National University Hospital. It focuses on the right-siting of appropriate services in the community and builds complementary services in National University Health System's (NUHS) centres of excellence – Ng Teng Fong General Hospital and Alexandra Hospital.

Through a generous gift from the Estate of Khoo Teck Puat, KTP-NUCMI established an integrated outpatient facility with medical, diagnostic and rehabilitation services for children. We are also the only public specialist centre in Singapore that offers paediatric kidney and liver transplant programmes.

For more information about us, visit www.nuh.com.sg/NUWoC

### Emergency (24-hr)

Location NUH Main Building, Zone F, Level 1

Contact +65 6772 5000

### Women's Clinic - Emerald/Ruby

Location NUH Kent Ridge Wing, Zone D, Level 3, D03-06

Operating Hours 8.30am – 6pm (Mon to Thu), 8.30am – 5.30pm (Fri), 8.30am – 12.30pm (Sat)

Email appointment@nuhs.edu.sg

### Women's Clinic - Sapphire

Location NUH Kent Ridge Wing, Zone D, Level 3, D03-03

Operating Hours 8.30am - 6pm (Mon to Thu), 8.30am - 5.30pm (Fri), 8.30am - 12.30pm (Sat)

Email appointment@nuhs.edu.sq

### Women's Clinic - Jade [Former Clinic G]

Location NUH Kent Ridge Wing, Zone C, Level 3, C03-02 Operating Hours 8.30am – 6pm (Mon to Thu), 8.30am – 5.30pm (Fri)

Email appointment@nuhs.edu.sq

### **Fetal Care Centre**

 $\begin{array}{ll} \mbox{Location} & \mbox{NUH Kent Ridge Wing, Zone D, Level 3, D03-04} \\ \mbox{Operating Hours} & \mbox{8am} - 5.30 \mbox{pm (Mon to Thu), 8am} - 5 \mbox{pm (Fri)} \\ \end{array}$ 

Email appointment@nuhs.edu.sg

### Clinic for Human Reproduction

Location NUH Kent Ridge Wing, Zone D, Level 4, D04-02 Operating Hours 8am – 5pm (Mon to Fri), 8.30am – 12.30pm (Sat)

### Women's Clinic @ JMC

Location Jurong Medical Centre, Level 2

Operating Hours 8.50am – 11.30pm (Tue & Thu), 2pm – 5pm (Mon & Fri)

### **Jurong Clinic for Women**

Location 130 Jurong Gateway, #01-231

Operating Hours 9am – 12pm, 2pm – 5pm (Mon to Sat), 6pm – 9pm (Mon to Thu)

General Enquiry +65 6665 4277 Appointment Line +65 6908 2222

Email appointment@nuhs.edu.sg

### GS @ NTFGH

Location Ng Teng Fong General Hospital, Tower A – Specialist Outpatient Clinics, Level 7

Operating Hours 8.30am - 5.30pm (Mon to Fri), 8.30am - 12.30pm (Sat)

Appointment Line +65 6908 2222

Email appointment@nuhs.edu.sq

### **Our Patient Care Institutions**

National University Hospital
Ng Teng Fong General Hospital &
Jurong Community Hospital
Alexandra Hospital
National University Polyclinics
Jurong Medical Centre
National University Cancer Institute, Singapore
National University Heart Centre, Singapore
National University Centre for Oral Health, Singapore
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