

# Patient information from BMJ

Last published: Sep 07, 2021

## HPV (human papillomavirus) vaccine

The HPV vaccine is designed to protect against the human papillomavirus (HPV).

HPV is the main cause of cervical cancer, which kills many thousands of women each year.

### What is human papillomavirus?

HPV is probably most commonly known as the virus that causes **warts**, including **genital warts**.

But HPV is usually harmless and causes no symptoms at all.

Most people who are not vaccinated will be infected with HPV at some point during their lives, usually with no ill effects, as the body's immune system fights off the infection.

### HPV and cervical cancer

In some people, the immune system doesn't manage to fight off the infection. If this happens, it can cause serious health problems. For example, HPV is the main cause of **cervical cancer**.

In 2020 about 850 women in the UK died of cervical cancer. In the US the number was more than 4,000.

Cervical cancer affects the **cervix**, which is the lower part of the uterus (womb). It sits between the lower part of the uterus and the vagina.

Women who are diagnosed with early-stage cervical cancer can usually be cured with surgery. But most women diagnosed with late-stage cervical cancer will not survive.

HPV can also cause other types of cancer, including cancers that affect the vulva, vagina, penis, anus, and the mouth and throat (called oropharyngeal cancer).

### Who needs the HPV vaccination?

#### Young people

HPV spreads easily through unprotected sex. It is the most common sexually transmitted infection (STI).

## HPV (human papillomavirus) vaccine

But it can also spread through other kinds of intimate touching, without actually having sex. For example, the virus is commonly present on the hands, in the mouth, and around the genitals.

For example, in the UK, boys and girls are offered the vaccine when they are around **12 and 13 years old**.

The vaccine is given in **two doses**. The second dose is given between six months and two years after the first dose. It's important to have **both doses** for the best protection.

### Catch-up vaccines

Young people who missed out on the vaccine programme at school might still be able to have the vaccine, depending on where you live.

For example, in the UK, you can still have the vaccine up to the age of 25 years. So if you (or your child) missed out on the vaccine for any reason, or just missed one of the doses, talk to your doctor about getting the vaccine.

### Men who have sex with men

Men who have sex with men (or MSM for short) might be able to get the vaccine over the age of 25, depending on where you live. For example, in the UK, this group is offered the vaccine up to the age of 45 years.

### Transgender people

Some transgender people might have an increased chance of HPV infection. So, depending on where you live, you might be able to get the HPV vaccine.

For example, in the UK, many transgender people can have the vaccine up to the age of 45 years. If you are a trans person and you think you might benefit from the HPV vaccine, talk to your doctor.

## Is there anyone who shouldn't have the vaccine?

It's very rare, but some people have a severe allergic reaction to the vaccine. You shouldn't have this vaccine if you are allergic to any of its ingredients. Tell your doctor or the medical staff giving the vaccine about any allergies you have.

For example, you shouldn't have the second dose of the vaccine if you had an allergic reaction to the first dose.

The staff giving the vaccine will have been trained in how to treat a severe allergic reaction.

## Is it safe?

The HPV vaccine is fairly new compared to some vaccines that have been used for many years, such as the tetanus vaccine. But many millions of people have now been vaccinated, and no major safety issues have been found.

## HPV (human papillomavirus) vaccine

Like all vaccines, the HPV vaccine can cause side effects in some people. These are usually mild and short term. They include:

- redness, swelling, and pain where the injection was given (called the injection site)
- a headache
- fever
- nausea
- pain in the arms or legs, and
- a rash.

Some people also have breathing problems after this vaccine, but this is extremely rare.

### How is the vaccination given?

The HPV vaccine is given as an injection into the upper arm. The second dose is given between six months and two years after the first. It's important to get both doses for the best protection.

### How well does the vaccine work?

The HPV vaccine is fairly new compared with some vaccines, so we don't have as much information about how well it works as we do for other vaccines.

For example, the cancers caused by HPV can take many years to develop, so it will be some years before we have a clear picture of how many cancers have been prevented.

But studies suggest that there has already been a large fall in the number of dangerous infections, and in cervical problems in women who have been vaccinated.

The vaccine only seems to offer protection against HPV for about ten years. This means that it's important for women to keep up with their cervical cancer screening (PAP smear) appointments.

To find out more about screening, see our leaflet on *Cervical cancer*.

The patient information from *BMJ Best Practice* is regularly updated. The most recent version of Best Practice can be found at [bestpractice.bmj.com](https://bestpractice.bmj.com). This information is intended for use by health professionals. It is not a substitute for medical advice. It is strongly recommended that you independently verify any interpretation of this material and, if you have a medical problem, see your doctor.

Please see BMJ's full terms of use at: [bmj.com/company/legal-information](https://bmj.com/company/legal-information). BMJ does not make any representations, conditions, warranties or guarantees, whether express or implied, that this material is accurate, complete, up-to-date or fit for any particular purposes.

© BMJ Publishing Group Ltd 2024. All rights reserved.

**What did you think about this patient information guide?**



## HPV (human papillomavirus) vaccine

Complete the [online survey](#) or scan the QR code to help us to ensure our content is of the highest quality and relevant for patients. The survey is anonymous and will take around 5 minutes to complete.

