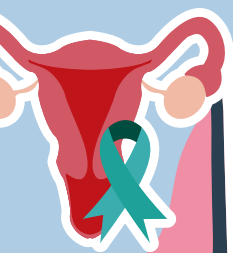


A VACCINE AGAINST CANCER? YES, REALLY.

Created by Megan Hill

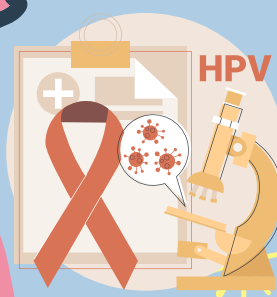
THE INVISIBLE ENEMY

Most people think of vaccines as protection against infectious diseases like measles or COVID-19. But what if a vaccine could prevent cancer? Cervical cancer is one of the most common cancers in women worldwide, and almost every case begins with infection by the Human Papillomavirus (HPV). This discovery changed the future of cervical cancer prevention.



MEET HPV

HPV is a group of over 200 viruses, but not all are dangerous. Two high-risk types, HPV-16 and HPV-18, are linked to around 70% of cervical cancers. Unlike many cancers caused by genetics or lifestyle, cervical cancer often starts with a preventable viral infection, making it a unique target for vaccination.



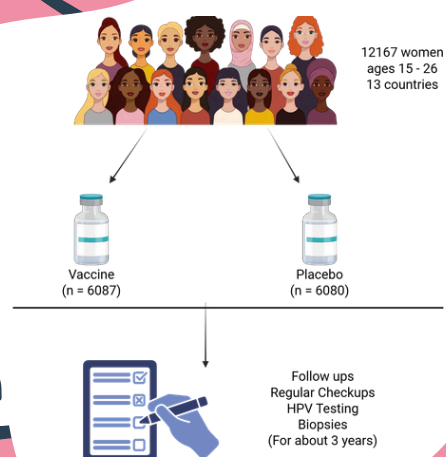
CAN A VACCINE STOP CANCER?

Scientists developed the quadrivalent HPV vaccine, which targets HPV types 6, 11, 16, and 18. But could preventing HPV infection also prevent the dangerous precancerous changes that eventually lead to cervical cancer? To answer this, researchers launched one of the largest HPV vaccine trials ever conducted.



PUTTING IT TO THE TEST

More than 12,000 women aged 15–26 from 13 countries were randomly assigned to receive either the HPV vaccine or a placebo. Researchers followed them for several years, using Pap smears, HPV DNA testing, and biopsies to determine whether dangerous cervical lesions developed.



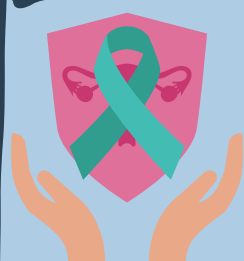
THE RESULTS

The results were remarkable. Among women who had never been infected with HPV-16 or HPV-18, the vaccine prevented 98% of high-grade precancerous cervical lesions caused by these viruses. The vaccine worked best before exposure to HPV, showing that early vaccination is key to preventing disease before it begins.

98%

A FUTURE WITHOUT CERVICAL CANCER?

This landmark study showed that preventing HPV infection can also prevent the chain of events leading to cervical cancer. While regular cervical screening remains essential, widespread HPV vaccination has the potential to dramatically reduce cervical cancer cases worldwide. Sometimes, the best way to fight cancer is to stop it before it starts.



REFERENCE:

Group, F.I.S. 2007. Quadrivalent vaccine against human papillomavirus to prevent high-grade cervical lesions. N Engl J Med. 356(19):1915–1927. DOI:10.1056/NEJMoa061741.