Background

If every woman in the world received adequate health care, almost none would die of cervical cancer. Effective treatments exist for pre-cancerous conditions and for cervical cancer that is diagnosed at an early stage. So, unless a woman has a compromised immune system, cervical cancer progresses very slowly and can be detected — and treated — long before it even has the potential to be life-threatening.

Cervical cancer used to be the leading cancer death among women in the U.S. With broader screening and treatment programs, the rates have fallen sharply. Yet, lack of access to screening and treatment services still results in thousands of unnecessary deaths. The Center for Disease Control and Prevention (CDC) estimates that 12,357 women were diagnosed with cervical cancer in the U.S. in 2009 (the last year for which data are available); more than 3,000 women die from cervical cancer every year.¹ Cervical cancer is more prevalent among women over age 30, and among African American and Hispanic women, possibly because of these communities’ lack of access to screening and treatment services.²

The Role of HPV

According to the CDC, almost all cases of cervical cancer are caused by the human papilloma-virus (HPV). HPV is the most common sexually transmitted infection (STI) in the United States; it is so prevalent that the CDC states: “nearly all sexually-active men and women will get at least one type of HPV at some point in their life.”³ “About 79 million Americans, most in their late teens and early 20s, are infected with HPV. Each year, about 14 million people become newly infected.”⁴

HPV usually goes away on its own without causing any damage — and often without showing any symptoms. It is important to remember that the vast majority of HPV cases do not result in cancer. If it doesn’t clear, however, HPV infection can lead to warts or cancer in the genitals, mouth, or throat. There are more than 150 types of HPV, but just two types (16 and 18) are believed to cause most (almost two-thirds) of all cervical cancer cases, and close to half of all vaginal, vulvar, and penile cancers.

Other Risk Factors

Along with having an HPV infection, there are some things that increase a woman’s risk for developing cervical cancer:⁵

Childbirth at Young Age: Giving birth to one’s first child before age 17 increases the risk of cervical cancer.
**Chlamydia:** Chlamydia is a common STI that, left untreated, can increase the risk of cervical cancer.

**Compromised immune system:** having HIV/AIDS or another disease that weakens the immune system and increases the risk of cervical cancer.

**Diet:** not consuming enough fruit and vegetables puts you at higher risk for cervical cancer.

**Family history:** if your mother or sister had cervical cancer, your risk is higher.

**Maternal Diethylstilbestrol (DES) use:** this hormonal drug was taken by women from the 1940s to 1970s to prevent pregnancy complications. Women whose mothers took DES (called “DES Daughters”) are at higher risk of developing cervical (and vaginal) cancer.

**Multiple births:** having three or more births increases the risk of cervical cancer.

**Obesity:** women who are above normal weight, as assessed by the Body Mass Index, have a higher rate of cervical cancer.

**Oral contraceptives:** Being on the pill for five or more years increases the risk of cervical cancer (the risk declines as soon as a person stops taking the pill, however).

**Smoking:** smoking is a risk factor for all cancers, including cervical cancer.

**Poverty:** is a significant risk factor mainly because low-income women often don’t have access to regular Pap tests and are, therefore, less likely to be screened for cervical cancer.

**Reducing the risk**

Of course, not all of these things can be prevented; you can’t impact whether your mother took DES or if she had cervical cancer. But, there are things you can do to minimize your risk for cervical cancer.

The most important single thing to do to prevent cervical cancer is to get regular health care checkups. In addition, using barrier methods of contraception (like condoms) correctly and consistently prevents the spread of STIs, and reduces the rate of cancer. Some research indicates using an intra-uterine device (IUD) lowers the risk of cervical cancer, even after it has been removed. Quitting smoking, eating a healthy diet, and exercising regularly are all good things to do — and they also help reduce the risk of cancer.

**Screening & Detection**

In the 1950s, the Papanicolaou (Pap) test was introduced. This test, named after the doctor who invented it, examines a sample of cervical cells under a microscope to identify any problems and detect cervical cancer early on. As a result of the Pap test, cervical cancer rates have declined dramatically: between “1955 and 1992, U.S. cervical cancer incidence and death rates declined by more than 60%.”

A second type of test, HPV DNA testing, is also used to examine cervical cells for the presence of high-risk HPV. Clinicians may order an HPV test to follow-up on an abnormal Pap test, but HPV DNA test is not meant for general screening or simply to determine HPV status.

The U.S. Preventive Services Task Force (USPSTF) recommends that women who have a cervix get a Pap test every three years from ages 21 to 65. Every five years from ages 30 to 65, the USPTF recommends that women get a Pap test plus the HPV DNA test. However, women with prenatal exposure to diethylstilbestrol (DES) should have a Pap test every year.

The USPSTF does not recommend that women under 21 get either the Pap or HPV DNA tests, since the tests are unlikely to find any problems at such a young age. Similarly, the USPSTF does not recommend HPV DNA tests for women under 30, because almost everyone will test positive for the virus at least once. Even though the virus almost always goes away on its own, a positive HPV test increases both health care costs and patient anxieties, and the screening guidelines are designed to minimize both.

New tests are also being developed (including tests that analyze HPV’s messenger RNA) that may prove to be better at identifying diseases. The NCI also describes efforts to develop technologies to enable women to collect samples...
at home, get results back faster, and cost less. These sorts of tests will be particularly useful in screening women in developing nations and/or medically-underserved communities that lack access to health services and information.9

**HPV Vaccines**
The Food and Drug Administration (FDA) has approved two vaccines — Cervarix and Gardasil — for use in preventing infection with the highest-risk strains of HPV. Cervarix protects against HPV types 16 and 18 (the highest-risk strains of HPV) and is approved for girls ages 9 to 26. Gardasil protects against HPV types 16 and 18 as well as types 6 and 11, so it provides additional protection against genital warts and anal cancer. Gardasil is approved for both girls and boys ages 9 to 26. The Federal Advisory Committee on Immunization Practices (ACIP) also recommends "catch up vaccination" for both females and males aged 13 to 18 who have not been previously vaccinated or who did not complete the full vaccination series.

Both Gardasil and Cervarix only work to prevent HPV infection; they won’t stop or treat an infection that is already there. That is why the vaccine should be given before a person becomes sexually active and at-risk for exposure to HPV through sexual activity. The vaccines also do not prevent other HPV types that can also cause cancers. So, people who have gotten the vaccine still should have regular Pap tests to screen for abnormalities.10

In June 2013, a new study was published that compared HPV rates in women and girls before and after the vaccines’ introduction, in order to assess the vaccines’ effectiveness. The study compared HPV’s prevalence before HPV vaccination programs began (in 2003-2006) and after the vaccines’ introduction (in 2007-2010). The study “reveals that, since the vaccine was introduced in 2006, vaccine-type HPV prevalence decreased by 56 percent among female teenagers 14-19 years of age.”11 While studies have shown vaccine efficacy over 5-6 years, longer-term data are not yet available to determine exactly how long the vaccines work to protect people.

For more information on the vaccine, see the NHWN Fact Sheet.

Under the new health care law, women of every age are eligible to receive the HPV vaccine without any cost-sharing requirements, when it is provided by an in-network provider. Find more information at healthcare.gov.

**After Abnormal Pap smear**—
When a Pap test shows abnormal results, your doctor will need you to come in for follow-up treatment. Often, a repeat Pap test is done a few weeks or months after the original one, to see if the HPV resolves itself. Remember that HPV often goes away on its own, and that a Pap test can be abnormal without it being cancer!

An abnormal Pap test often means that other tests will be performed to assess the presence of cancer or pre-cancerous cells. These tests include colposcopy (with biopsy of the area with the abnormal cells) and endocervical scraping.

Cervical cancer care has improved a great deal in the past few decades and the current five-year survival rate is almost 75 percent (this means that almost 75 percent of women diagnosed with this cancer are still alive five years later). According to the NCI, most “cervical cancer patients receive radiation plus concurrent chemotherapy as part of their treatment. Cisplatin is the most common chemotherapy agent used for cervical cancer.”12

For more information on treatment of cervical cancer, see the websites listed below. The NWHN encourages women to inform themselves and be involved in any treatment decisions.

**The NWHN’s Position**
The NWHN supports public health approaches that emphasize regular, low-tech screening for all women. We support cervical cancer screening to identify pre-cancerous conditions and timely access to treatment and care, which will prevent cancer from developing. We believe all women should have access to the screening, treatment, and information they need to stay healthy — including Pap tests and follow-up.

We urge health care providers to address the barriers that women face in access-
ing services, including those caused by poverty, race/ethnicity, language, and other factors.

The NWHN also believes the HPV vaccines are an important tool to prevent future HPV infections and cervical cancer, but that additional research is needed to assess the vaccines’ safety, long-term effects, and use in subgroups (like older women).

**Resources**

American Cancer Society:  
- Cervical Cancer Overview
  - What is DES
Centers for Disease Control and Prevention:  
- Cervical Cancer
- HPV Vaccine Information for Young Women
- HPV Overview
National Cancer Institute  
- HPV and Cancer
- Cancer Therapy
National Latina Institute for Reproductive Health:  
- Statement on the HPV Vaccine
National Library of Medicine:  
- HPV
- Our Bodies, Ourselves:  
  - Unique to Women: HPV Vaccines
Food and Drug Administration  
- Vaccine Information Sheets — Cervarix
- Vaccine Information Sheets — Gardasil

**Contact Us**
The National Women’s Health Network is committed to ensuring that women have access to accurate, balanced information. For more information, email us at healthquestions@nwhn.org or call the Women’s Health Voice at (202) 682-2646. Stay informed, connect with us on Facebook and Twitter.

**References**