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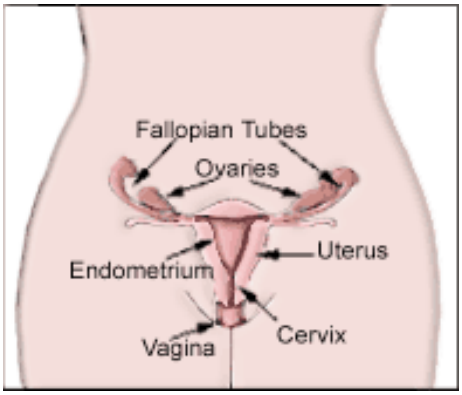
ROBERT WOOD JOHNSON MEDICAL SCHOOL
University of Medicine & Dentistry of New Jersey

The Cancer Institute of New Jersey℠
NCI CCC
A Comprehensive Cancer Center Designated by the National Cancer Institute

January Is Cervical Health Awareness Month

What Is the Cervix?

The cervix is part of the female reproductive system. It is the lower, narrow part of the uterus (womb). The uterus, a hollow, pear-shaped organ, is located in a woman's lower belly, between the bladder and the rectum. The cervix forms a canal that opens into the vagina, which leads to the outside of the body.



What Is Cervical Cancer?

Cancer occurs when cells become abnormal and divide without control or order. Like all other organs of the body, the cervix is made up of many types of cells. Normally, cells divide to make more cells only when the body needs them. If cells keep dividing when new cells are not needed, a mass of tissue forms. This mass of extra tissue, called a growth or tumor, can be benign or malignant.

- Benign tumors are not cancer. Cells from benign tumors do not spread to other parts of the body. Benign tumors are not a threat to life. Polyps, cysts, and genital warts are types of benign growths of the cervix.
- Malignant tumors are cancer. Cancer cells can invade and damage tissues and organs near the tumor. Also, cancer cells also can break away from a malignant tumor and enter the lymphatic system (which helps fight infection) or the bloodstream. This is how cancer can spread to other parts of the body, such as nearby lymph nodes (part of the system which helps fight infection), the rectum, the bladder, the bones of the spine, and the lungs. The spread of cancer is called metastasis.

Cancer of the cervix may also be called cervical cancer. Most cervical cancers are squamous cell carcinomas. Squamous cells are thin, flat cells that form the surface of the cervix.

Cells on the surface of the cervix sometimes appear abnormal but are not cancerous. Scientists believe that some abnormal changes in cells on the cervix are the first step in a series of slow changes that can lead to cancer years later.

What Are the Key Statistics About Cervical Cancer?

- It occurs most often in women over the age of 40.
- The number of cervical cancer cases has decreased over the past several decades.
- Both African-American and Hispanic women have higher rates of cervical cancer than white women.
- Death rates have also decreased over the past decades.
- Most women who get cervical cancer have not had a recent Pap smear.

Who's At Risk For Cervical Cancer?

By studying large numbers of women all over the world, researchers have found certain risk factors which increase the chance that cells in the cervix will become abnormal or cancerous. They believe that, in many cases, cervical cancer develops when you have two or more risk factors.

Research has shown that women who began having sexual intercourse before age 18 and women who have had many sexual partners have an increased risk of developing cervical cancer. Women who have had many sexual partners or whose partners have had many sexual partners may have an increased risk for cervical cancer at least in part because they are more likely to get a sexually transmitted virus. Women also are at increased risk if their partners began having sexual intercourse at a young age, have had many sexual partners, or were in the past married to women who had cervical cancer.

Scientists are studying the effects of sexually transmitted human papillomaviruses (HPVs). Some HPVs cause genital warts. In addition, some of these viruses cause the growth of abnormal cells in the cervix and these abnormal cells can develop into cancer. They have found that women who have HPV or whose partners have HPV have a higher-than-average risk of developing cervical cancer. However, most women who are infected with HPV do not develop cervical cancer, and the virus is not present in all women who have this disease. For these reasons, scientists believe that other factors act together with HPVs. For example, the genital herpes virus also may play a role. Further research is needed to learn the exact role of these viruses and how they act together with other factors in the development of cervical cancer.

Smoking also increases the risk of cancer of the cervix, although it is not clear exactly how or why. The risk appears to increase with the number of cigarettes a woman smokes each day and with the number of years she has smoked.

Women whose mothers were given the drug diethylstilbestrol (DES) during pregnancy to prevent miscarriage also are at increased risk. (This drug was used for this purpose from about 1940 to 1970.) A rare type of vaginal and cervical cancer has been found in a small number of women whose mothers used DES.

Several reports suggest that women whose immune systems are weakened are more likely than others to develop cervical cancer. For example, women who have the human immunodeficiency virus (HIV), which causes AIDS, are at increased risk. Also, organ transplant patients, who receive drugs that suppress the immune system to prevent rejection of the new organ, are more likely than others to develop precancerous lesions.

Some researchers believe that there is an increased risk of cervical cancer in women who use oral contraceptives (the pill). However, scientists have not found that the pill directly causes cancer of the cervix. This relationship is hard to prove because the two main risk factors for cervical cancer -- intercourse at an early age and multiple sex partners -- may be more common among women who use the pill than among those who do not. Still, oral contraceptive labels warn of this possible risk and advise women who use them to have yearly Pap tests (sometimes called a Pap Smear).

What Are the Signs and Symptoms of Cervical Cancer?

Precancerous changes of the cervix usually do not cause pain. In fact, they generally do not cause any symptoms and are not found unless a woman has a pelvic exam and a Pap test.

Symptoms usually do not appear until abnormal cervical cells become cancerous and invade nearby tissue. When this happens, the most common symptom is abnormal bleeding. Bleeding may start and stop between regular menstrual periods, or it may occur after sexual intercourse, douching, or a pelvic exam. Menstrual bleeding may last longer and be heavier than usual. Bleeding after menopause (the time of life when a woman's menstrual periods stop permanently) also may be a symptom of cervical cancer. Other symptoms of cervical cancer are vaginal discharge that has a foul smell, unusual color, or is more than usual.

These symptoms may be caused by cancer or by other health problems. Only the healthcare team can tell for sure. It is important for a woman to see her doctor if she is having any of these symptoms.

Can Cervical Cancer Be Found Early?

If all women had pelvic exams and Pap tests regularly, most precancerous conditions would be found and treated before cancer develops. That way, most invasive cancers could be prevented. Any invasive cancer that does occur would likely be found at an early, curable stage.

In a pelvic exam, the healthcare team checks the uterus, vagina, ovaries, fallopian tubes, bladder, and rectum. The healthcare team feels these organs for any abnormality in their shape or size. An instrument called a speculum is used to widen the vagina so that the healthcare team can see the upper part of the vagina and the cervix.

The Pap test is a simple test to detect abnormal cells in and around the cervix. A woman should have this test when she is not menstruating; the best time is between 10 and 20 days after the first day of her menstrual period. For about 2 days before a Pap test, she should avoid douching or using spermicidal foams, creams, or jellies or vaginal medicines (except as directed by a doctor), which may wash away or hide any abnormal cells.

A Pap test can be done in a doctor's office or a health clinic. A wooden scraper (spatula) and/or a small brush is used to collect a sample of cells from the cervix and upper vagina. The cells are placed on a glass slide and sent to a medical laboratory to be checked for abnormal changes.

The American Cancer Society recommends that:

- Cervical cancer screening should begin about 3 years after a woman begins having vaginal intercourse, but no later than 21 years of age.
- Cervical screening should be done every year with regular Pap tests or every 2 years using liquid-based Pap tests. At or after age 30, women who have had 3 normal test results in a row may get screened every 2 to 3 years. A doctor may suggest getting the test more often if a woman has certain risk factors such as a history of abnormal pap smears or human immunodeficiency virus (HIV) infection or a weakened immune system.
- Women 70 years of age and older who have had 3 or more normal Pap test results and no abnormal results in the last 10 years may choose to stop cervical cancer screening.

Screening after a total hysterectomy (with removal of the cervix) is not necessary unless the surgery was done as a treatment for cervical cancer or pre-cancer. Some other special conditions may require continued screening. Women who have had a hysterectomy without removal of the cervix should continue cervical cancer screening at least until age 70.

Can Cervical Cancer Be Prevented?

Absolutely! Best methods to prevent cervical cancer are:

- Delay first sexual intercourse if you are young
- Have fewer sexual partners
- Quit smoking or avoid secondhand smoke
- Use a condom if you are sexually active
- Avoid long-term use of oral contraceptives
- Have testing, (including a Pap Test) to detect HPV and pre-cancers
- Get the HPV vaccine if you are under 27
    - The HPV vaccine, Gardasil® or Cervarix®, is most effective when given to young women **before** they become sexually active. The vaccine does not protect against **all** cancer-causing types of HPV, so Pap tests and "safe sex" are still necessary.

What Will Happen if My Pap Smear is Abnormal?

Many times if your Pap test is abnormal, your healthcare tam will suggest an exam in the office called a colposcopy. During this exam a colposcope, which is like a magnifying glass, is used to look at the cervix and vagina. Abnormal areas can be biopsied and looked at under the microscope. The results of this test help your healthcare team to make treatment recommendations.

Cancer Prevention Clinical Trials

For information about nationwide cancer prevention trials, you can call the National Cancer Institute at 1-800-4 CANCER or visit their Web site at www.cancer.gov.

Expert Advice from The Cancer Institute of New Jersey

Dr. Darlene Gibbon is a gynecologist at The Cancer Institute of New Jersey.

> "It is very exciting that we can prevent cervical cancer by a simple pelvic exam and Pap smear. I strongly encourage women to have this screening test done. Many women stop having pelvic exams once they are done having children. However, it is important to continue having regular gynecologic check-ups so that pre-cancerous conditions can be treated".

Where Can I Find Further Information?

The Resource and Learning Center
732-235-9639
www.cinj.org/rlc

National Cancer Institute
1-800-4-CANCER
www.cancer.gov

The American Cancer Society
1-800-ACS-2345
www.cancer.org

National Cervical Cancer Coalition
(818) 909-3849
www.nccc-online.org

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