

The Pap Test

Since it came into use more than 50 years ago, the Pap test has greatly reduced the number of cases of cervical cancer in the United States. The Pap test is used to find changes in the cells of the cervix that could lead to cancer. Most women should have Pap tests on a regular basis.

This pamphlet explains

- what the Pap test checks for and how it is performed
- who should have a Pap test and how often it should be done
- what happens if the result is abnormal
- accuracy of Pap test results

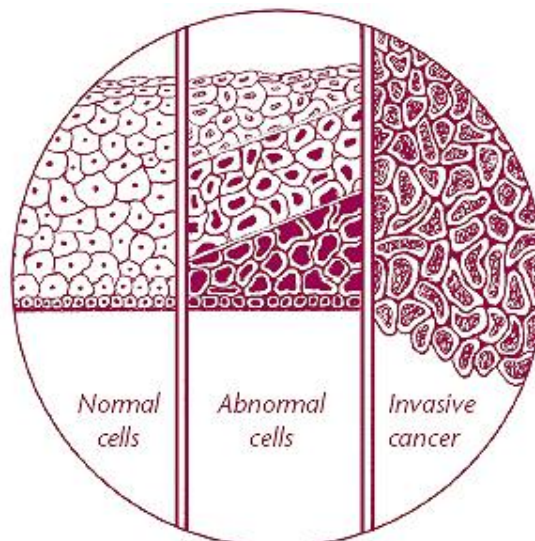
Regular Pap tests are an important part of all women's health care. It can find changes in the cells of the cervix that may lead to cancer.

What Is a Pap Test?

The cervix is the opening of the *uterus* at the top of the vagina. It is covered by a thin layer of tissue. This tissue is made up of cells. As these cells develop, the cells at the bottom layer slowly move to the surface of the cervix. During this process, some cells may become abnormal or damaged. Abnormal cells on the cervix may lead to cancer. These precancerous changes are called *dysplasia* or *squamous intraepithelial lesions (SIL)*. SIL can be either low-grade (mild dysplasia) or high-grade (moderate or severe dysplasia).

The Pap test, sometimes called a Pap smear or cervical cytology screening, is a simple test that can detect abnormal cervical cells. It is not the same as a *pelvic exam*. The Pap test allows early diagnosis and treatment so that the abnormal cells do not become cancer. Routine Pap tests help decrease the chance that abnormal cells are missed. If a Pap test misses abnormal cells this time, they may be found on your next Pap test.

The main cause of cervical cancer is a virus called *human*



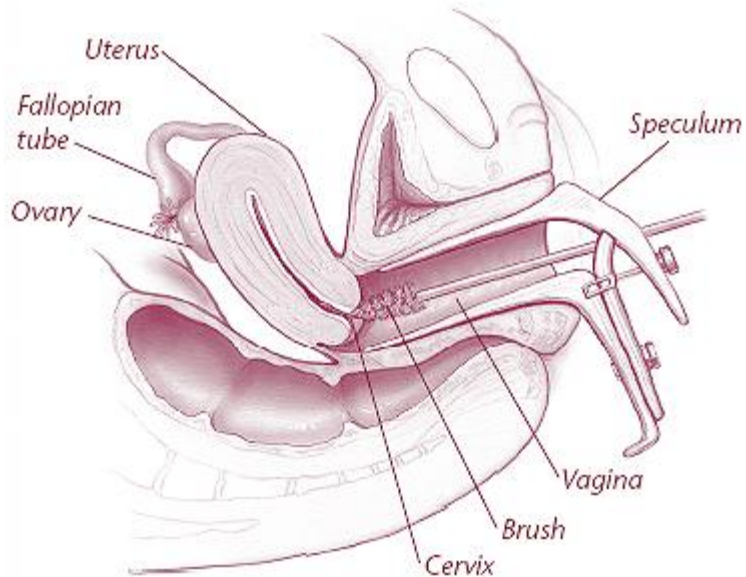
This enlarged view of cervical cells shows how abnormal cells can become cancer. This process often takes many years.

papillomavirus (HPV). There are many types of HPV. A few types cause cervical cancer. HPV is passed from person to person during sexual activity. Usually, a woman's **immune system** clears the virus quickly, and the infection goes away by itself. But in some women, HPV persists and causes changes in cervical cells. Cells infected with HPV look abnormal under a microscope and can be detected by the Pap test. Most of the time, these changes go away on their own without treatment.

How the Pap Test is Done

A Pap test is simple and fast. It takes less than a minute to do. With the woman lying on an exam table, a **speculum** is used to open the vagina. This device gives a clear view of the cervix and upper vagina.

A small number of cells are removed from the cervix with a brush or other tool. The cells are put into a liquid and sent to a lab, where they are placed on a glass slide. Sometimes, the cell sample is directly placed on a glass slide before it is sent to the lab. At the lab, the sample is examined using a microscope to see if abnormal cells are present. Many labs use a computer to examine the samples.



For the Pap test, a speculum is placed into the vagina. A small sample of cells is removed with a small brush or swab and a spatula. The sample is sent to a lab for testing.

Who Should Have a Pap Test and How Often

Regular Pap tests are an important part of all women's health care. You should start having Pap tests at age 21 years. How often you should have a Pap test depends on your age and health history:

- Women younger than 30 years should have a Pap test every 2 years.
- Women aged 30 years and older should have a Pap test every 2 years. After three normal Pap test results in a row, a woman in this age group may have Pap tests every 3 years if
 - she does not have a history of moderate or severe dysplasia
 - she is not infected with **human immunodeficiency virus (HIV)**
 - her immune system is not weakened (for example, if she has had an organ transplant)
 - she was not exposed to diethylstilbestrol (DES) before birth

Having a Pap test every 2 years is a change from the yearly screening that many women have had in the past. But studies have shown that the risk of cervical cancer is the same in women who have screening every 2 years compared with women who have yearly screening. Also, in women 30 years and older who have had three normal Pap results in a row, the risk of developing severe dysplasia is low. Therefore, screening every 3 years for these women is a safe option. It is important to discuss your own situation with your health care provider. You should still see your health care provider every year for well-woman care and any reproductive health care or information.

It is not clear when a woman can stop having Pap tests. Some experts recommend that a woman who is aged 65 years or 70 years can stop having Pap tests after three normal results in a row within the past 10 years. However, if you have certain risk factors, you should continue to have routine Pap tests. These risk factors include being sexually active and having had multiple partners or a previous history of abnormal Pap test results.

If you have had a *hysterectomy*, talk to your doctor about whether you still need routine Pap tests. Whether you need to continue having Pap tests depends on why your hysterectomy was needed, whether your cervix was removed, and whether you have a history of moderate or severe dysplasia.

What Happens if the Result is Abnormal?

Many women have abnormal Pap test results. An abnormal result does not mean that you have cancer. It only means that abnormal cells have been found. It often takes years before abnormal cells can become cancer. Cells that are mildly abnormal may go away on their own.

You most likely will have additional testing after an abnormal Pap test result. This testing can be simply a repeat Pap test in 6 months or 12 months, an HPV test, or a more detailed examination called a *colposcopy* (with or without a *biopsy*).

HPV Testing

If you are 30 years or older, you also can be tested for the cancer-causing types of HPV at the same time you have your Pap test. Testing for these types of HPV in women 30 years and older can help predict whether dysplasia will be diagnosed in the next few years, even if Pap test results are normal. If the results of both your HPV test and Pap test are normal, the chance that you will develop mild or moderate dysplasia in the next 3–5 years is very low. You do not need to have these tests again for another 3 years.

Sometimes, the sample taken for your Pap test also can be used for the HPV test. Sometimes, two cell samples are taken. It depends on the type of Pap test your health care provider uses.

You may be wondering why HPV testing is not recommended for women younger than 30 years. HPV infection is very common in younger women, but it usually goes away on its own. A positive HPV test result in a young woman (showing that she does have one of the cancer-causing HPV types) will most likely become negative without any treatment. Routine HPV testing in young women, therefore, is not recommended.

If results of follow-up tests indicate precancerous changes, you may need treatment to remove the abnormal cells. Whether you need treatment depends on many factors:

- Your age
- The type of abnormal result (mild, moderate, or severe dysplasia)
- How long the abnormal cells have been present

There are several techniques that are used to remove abnormal cells. Your health care provider will discuss with you which one is right for your specific situation. You will need follow-up testing after treatment and will need to get regular Pap tests after the follow-up is complete.

Is the Pap Test Always Accurate?

As with any lab test, Pap test results are not always accurate. Sometimes, the results show abnormal cells when the cells are normal. This is called a “false-positive” result. A Pap test also may not detect abnormal cells when they are present. This is called a “false-negative” result. Many factors can cause false results:

- The sample may contain too few cells.
- There may not be enough abnormal cells to study.
- An infection or blood may hide abnormal cells.
- Douching or vaginal medications may wash away or dilute abnormal cells.

Your doctor may suggest a repeat Pap test to check the results. A repeat test increases the likelihood that abnormal cells, if present, will be detected.

Finally...

The Pap test finds cell changes that may lead to cancer of the cervix. Routine Pap tests can help find problems early. If a Pap test finds abnormal cells, your doctor will suggest further tests or treatment.

Glossary

Biopsy: A minor surgical procedure to remove a small piece of tissue that is then examined under a microscope in a laboratory.

Colposcopy: Viewing of the cervix, vulva, or vagina under magnification with an instrument called a colposcope.

Dysplasia: A noncancerous condition that occurs when normal cells are replaced by a layer of abnormal cells. Dysplasia can be mild, moderate, or severe.

Human Immunodeficiency Virus (HIV): A virus that attacks certain cells of the body’s immune system and causes acquired immunodeficiency syndrome (AIDS).

Human Papillomavirus (HPV): The name for a group of related viruses, some of which cause genital warts and are linked to cervical changes and cervical cancer.

Hysterectomy: Removal of the uterus.

Immune System: The body's natural defense system against foreign substances and invading organisms, such as bacteria that cause disease.

Pelvic Exam: A manual examination of a woman's reproductive organs.

Speculum: An instrument used to hold open the walls of the vagina.

Squamous Intraepithelial Lesion (SIL): A noncancerous condition that occurs when normal cells on the surface of the cervix are replaced by a layer of abnormal cells.

Uterus: A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.