Strang Cancer Prevention Institute
Dedicated to promoting cure by early detection and research to prevent cancer since 1933

Cervical Cancer Screening and Prevention

1. Guidelines for Screening

Risk Factors

Primary risk factor:
Infection with high-risk human papilloma virus (hrHPV): primarily HPV-16 and/or HPV-18
Factors further increasing risk after HPV infection:
Immunosuppression (HIV; immunosuppressive drugs; organ transplant patients)
Sexual activity at an early age and multiple sexual partners (risk of HPV infection)
Smoking, including passive smoking
Use of birth control pills for more than five years
Multiple full-term pregnancies (three or more pregnancies)
Young age at first full-term pregnancy (younger than 17 years)
Intrauterine exposure to diethylstilbestrol (DES)
Using birth control pills for a long time (five or more years)

Start Cervical Cytology Screening

Cervical cancer screening includes the Pap test, or cervical cytology, for women 21-30, and, for women 30-65, the Pap test, an HPV test or a combination. Both tests use cells taken from the cervix. Cells are removed from the cervix with a brush or other sampling instrument. The cells usually are put into a special liquid and sent to a laboratory for testing:

- For a Pap test, the sample is examined to see if abnormal cells are present.
- For an HPV test, the sample is tested for the presence of 13–14 of the most common high-risk HPV types.

The frequency of testing and the type of test depend on age and health history.

- Women aged 21–29 years should have a Pap test alone every 3 years. HPV testing is not recommended.
- Women aged 30–65 years should have a Pap test alone every 3 years, or either a Pap test and an HPV test (co-testing) or an HPV test alone every 5 years.

- Cervical cancer screening should stop after age 65 years if there have not been any prior abnormalities. Abnormalities include moderate or severe abnormal cervical cells or cervical cancer. When there are either three negative Pap test results in a row or two negative co-test results in a row within the past 10 years, with the most recent test performed within the past 5 years screening can stop at 65.

Strang Cancer Prevention Institute has developed and updates guidelines for cancer screening and best practices for cancer prevention. Strang is synonymous with cancer screening and prevention. Strang was the first medical facility to introduce the Pap test into clinical practice which has saved millions of women's lives worldwide. Strang was opened by first lady Eleanor Roosevelt in 1933.

- Those who have had had a hysterectomy may still need screening. The decision is based on whether the cervix was removed, why the hysterectomy was needed, and whether there is a history of moderate or severe cervical cell changes or cervical cancer. Even if the cervix has been removed at the time of hysterectomy, cervical cells can still remain at the end of the vagina. If there is a history of cervical cancer or cervical cell changes, screening should continue for 20 years after the time of the hysterectomy.

- Women who have a history of cervical cancer, are infected with human immunodeficiency virus (HIV), have a weakened immune system, or who were exposed to diethylstilbestrol (DES) before birth may require more frequent screening than these routine guidelines.

- Having an HPV vaccination does not change screening recommendations. Women who have been vaccinated against HPV still need to follow the screening recommendations for their age group.
- Women who have been immunized against HPV-16 and HPV-18 should be screened the same as non-immunized women according to age.

- Women who have a normal Pap result and a positive HPV test result – perform genotyping for HPV types 16 and 18 or repeating both the Pap and HPV tests in one year.

- Women with an ASC-US Pap result and a negative HPV test should be followed by either HPV testing plus Pap or HPV testing alone at a minimum of 3 years.

- Women receiving a series of the HPV vaccine against HPV-16 and HPV- 18 should follow the same screening recommendations as nonimmunized women.

2. Cancer Prevention

Vaccines can protect males and females against some of the most common types of HPV that can lead to disease and cancer. These vaccines are given in three shots. It is important to get all three doses to get the best protection. The vaccines are most effective when given at 11 or 12 years of age.

Girls and women: Two vaccines (Gardasil and Cervarix) are available to protect females against the types of HPV that cause most cervical cancers. One of these vaccines (Gardasil) also protects against most genital warts. Gardasil has also been shown to protect against anal, vaginal and vulvar cancers. Either vaccine is recommended for 11- and 12-year-old girls, and for females 13 through 26 years of age, who did not get any or all of the shots when they were younger. These vaccines can also be given to girls beginning at 9 years of age. It is recommended to get the same vaccine brand for all three doses, whenever possible.

Boys and men: One available vaccine (Gardasil) protect males against most genital warts and anal cancers. This vaccine is available for boys and men, 9 through 26 years of age. For those who choose to be sexually active, condoms may lower the risk of HPV. To be most effective, they should be used with every sex act, from start to finish. Condoms may also lower the risk of developing HPV-related diseases, such as genital warts and cervical cancer. But HPV can infect areas that are not covered by a condom - so condoms may not fully protect against HPV.

People can also lower their chances of getting HPV by being in a monogamous relationship with one partner; limiting their number of sex partners; and choosing a partner who has had no or few prior sex partners. But even people with only one lifetime sex partner can get HPV. It may not be possible to determine if a partner, who has been sexually active in the past, is currently infected.

CERVICAL CANCER SCREENING
BENEFITS AND HARMS - FREQUENTLY ASKED QUESTIONS (FAQs)

What is the Pap test?
In 1943 the Papanicolaou (PAP) test was introduced by Strang based on the discovery of the test by Dr. Papanicolaou. The test examines cells from the cervix to determine if they are undergoing change that indicates a high risk of cervical cancer.

What is the benefit of the Pap test?
Since the Pap test was introduced in the 1950s, the frequency and death rate of cervical cancer has fallen by at least 70%.

Who should have a Pap test?
The first Pap test is recommended at 21 and if normal every 3 years until age 29. Women aged 30 to 65 years should be screened with cytology and HPV testing ("cotesting") preferably every 5 years.

What are the possible results of a Pap test?
The test takes about 10 days to get the results.

Pap test results may be:
- Negative –normal
- Abnormal – this can be caused by infection, pre-cancer or cancer

Your physician will advise you what to do if the test is abnormal.

Are additional tests done with the Pap test?
Human papilloma virus (HPV) testing is also carried out in women over 30 in conjunction with the Pap test. HPV causes nearly all cancers of the cervix if it is persistent. HPV infection occurs in about 50% of sexually active women age 20-24 but most HPV infections disappear spontaneously. In 10-20% HPV persists but takes many years to cause cervical pre-cancer or cancer.

What is done if HPV testing is negative?
Repeat testing is carried out 5 years later.

What is done if HPV cotesting is positive?
If the HPV test shows that the virus is a high-risk type you will be checked by your doctor more frequently. It does not mean that cervical cancer will develop. HPV cannot be treated but early changes in the cells covering the cervix that indicated cervical cancer is more likely to occur can be treated.

Women cotesting HPV positive and Pap test cytology negative should be followed with either:

Repeat cotesting in 12 months or immediate HPV testing for HPV16 alone or for HPV16/18. If cotesting is repeated at 12 months, women testing positive on either test (HPV positive or LSIL or more severe cytology) should be referred to colposcopy; women testing negative on both tests (HPV and Pap test should return to routine screening.

If immediate HPV testing for HPV16 or HPV16/18 is positive referral to a gynecologist for colposcopy; women testing negative for HPV16 or HPV16/18 should be cotested in 12 months, with management of results as described above.

Colposcopy is a gynecological examination using a microscope to examine the cervix and identify any areas of abnormal tissue from which a biopsy may be taken.

What are the potential harms of screening?

The increased detection of unimportant abnormalities and false positives are the primary potential sources of harm. This can result in increased evaluations, including repeated Pap tests and biopsies; possible unnecessary treatment for low-grade lesions. Psychological distress may occur in women diagnosed with low grade lesions that may not have been clinically important. HPV testing may have potential harms which include stigma, partner discord, adverse effects of labeling some women as being at high risk for cervical cancer, and the potential undermining of routine PAP testing which is known to be highly effective.

Your primary care physician or gynecologist will do the Pap test.

If there is an abnormality you can be evaluated by a gynecologist