

The Pap Smear

What is the Pap Smear?

The Pap Smear is a prepared slide of cells from the cervix which can be reviewed by a *Cytotechnologist* or *Pathologist*. The test gets its name from George Papanicolaou who first performed the test – first on the mice he was studying and later on his wife. The pap smear is obtained by gently scraping the cells from the surface layer of the cervix (this is the opening to the uterus found at the top of the vagina). Pap smears can also be performed on vaginal cells and will rarely be performed on other body parts as well. The cells are then spread out on a slide and sprayed with a fixative (conventional pap) or placed into a vial of preservative (liquid based cytology). These cells are then reviewed under the microscope by someone trained to identify normal and abnormal cells.

Why is the Pap Smear such an important part of my routine health care?

The Pap Smear is the single best screening test modern medicine has to offer. For a screening test to be effective it must identify a common process which has important clinical implications at a point in the process when it can be treated. The beauty of the Pap smear is that it detects abnormal cells on the cervix BEFORE cervical cancer develops. This allows your provider to follow and treat these abnormal cells effectively *preventing* cancer from developing.

Who should get a Pap Smear?

Because cervical cancer has been linked to a sexually transmitted virus known as HPV (see below), every woman who is sexually active should be getting a pap smear. A woman should get her first pap smear at the age of 21 or within 3 years of initiating sexual activity, whichever comes first. Women who are over the age of 35, are in a mutually monogamous relationship, and have had 3 negative pap smears in a row can decrease the frequency of screening to once every three years. However, these women should still have annual pelvic exams as the pap smear does not evaluate vulvar, vaginal, uterine or ovarian status. There is some debate about when women can stop getting a pap smear. Data shows that post menopausal women screened every 2-3 years have a low risk of developing cervical cancer. The American Cancer Society recommends discontinuing screening in low risk women at age 70. Low risk women would be those who are in mutually monogamous sexual relationships or are not sexually active and have never had an abnormal pap smear.

Another question that is raised frequently is whether a woman still needs a pap smear after a hysterectomy. Women who undergo a “supracervical” hysterectomy still have their cervix present and should continue to have routine pap smears. For a woman who has had her cervix removed, however, the answer is not straightforward. The pap smear can detect changes which may precede vaginal cancer, but vaginal cancer is very rare. From a population standpoint, it is not cost effective to do pap smears on women who have had a hysterectomy because the number of cancers prevented will be quite low compared to the cost of screening. From an individual patient’s standpoint the issue may look different. Any woman who has a history of abnormal pap smears should probably

receive a vaginal pap smear at least periodically. The frequency should be determined on an individual basis as there is little evidence to guide this decision. For women who have never had an abnormal pap smear it is not unreasonable to discontinue pap smear screening, although I will still recommend to most of my patients that we screen every 3-5 years.

What does it mean to have an abnormal Pap Smear?

As I outlined above, the purpose of the pap smear is to detect cellular changes in the cervix BEFORE cervical cancer develops. A report of an abnormal pap smear means that some abnormal cells have been seen. Sometimes these cells are due to precancerous change and sometimes they are due to other things like low estrogen, infection or inflammation. In most cases where the cause of the abnormality is unclear, we now screen for the Human Papilloma Virus (HPV). This sexually transmitted virus is known to be associated with cervical cancer and its absence is very reassuring that cervical cancer will not develop from the abnormal cells present on the pap smear. If there is evidence of HPV however, further evaluation of the cervix needs to be carried out. This would include a procedure called colposcopy where a provider looks at the cervix through a magnifying instrument. During the colposcopy exam the provider tries to identify where on the cervix the abnormal cells are located. These cells are then biopsied to see if they look highly suspicious for progression to cancer. If they show only mild changes they will likely be followed with periodic pap smear screening and possibly repeat colposcopy. Sixty-percent of these low-grade changes resolve on their own. If however, the cells look highly suspicious for progression to cancer, your provider will likely recommend that you undergo treatment to remove those cells.

Getting the most out of your Pap Smear

While pap smear screening is very effective at preventing cervical cancer by identifying pre-cancerous changes, no test is perfect. All tests have both a false positive and false negative rate. There are some steps you can take to improve the quality of the pap smear you receive and minimize the risk of a false positive or negative. In the twenty-four hours before a pap smear is obtained you should avoid intercourse, use of contraceptive jelly or foam, use of intravaginal medication and douching. Make sure to discuss with your health care provider any vulvar or vaginal symptoms you are having BEFORE the pap smear is obtained. If an infection is present your pap smear may be more sensitive if the infection is treated first. It may make sense to reschedule your pap, your provider can help you to make this decision. With the liquid based pap smears now performed a pap smear can be obtained when you are on your menses. The pap smear will, however, be more likely to result in false positives or negatives if you have it performed while you are not menstruating.