

National Women's Health Resource Center

YOUR GUIDE TO
**Cervical
Health**



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INTRODUCTION

The Cervix

When is the last time you considered your *cervix*? If you've had children, it was probably when you were in labor. During those long, painful hours, you tracked every centimeter of dilation as if your cervix were a clock ticking off time until you could push. Maybe you thought about your cervix when you had your last *Pap smear*. After all, that's the point of a Pap smear — to check on the health of your cervix. Or, perhaps you've given a bit more thought to your cervix with all the discussion about the HPV vaccine and screening test.

Otherwise, our cervixes are just not something we tend to think about much.

A 2007 National Women's Health Resource Center survey of 1,000 women found that while many women appear to be knowledgeable about some aspect of the cervix, just 20 percent felt they were well-informed about this part of their anatomy. Only half knew that the cervix physically supports the organs above it — the ovaries, uterus and *fallopian tubes*; while less than half knew it prevented bacteria from traveling into the uterus and fallopian tubes, possibly played a role in sexual function and pleasure, secreted mucus to nourish sperm and protected the uterus from sexually transmitted infections.¹

Whether you're muddled about cervical health and everything associated with it, or you've connected most of the dots and feel fairly up-to-date, this guide's for you.

By the time you finish reading *Your Guide to Cervical Health*, you will be an expert on the importance of your cervix to your overall reproductive, gynecologic and sexual health. More important, you'll know how to make sure your cervix remains healthy.



YOUR CERVIX

Gateway to the Uterus

Picture your uterus as an upside-down pear. The fallopian tubes and ovaries stretch from the right and left sides at the top, while the cervix lies at the bottom, where the “pear” narrows. About an inch-and-a-half long and shaped like a column, it sits at the top of the vagina. The cervix is actually considered part of the uterus — the lower part, or neck. In fact, the word *cervix* comes from the Latin word for “neck.”²

If you could peer through your vagina to your uterus, you’d see the opening of your cervix. If you’ve never been pregnant, it looks like a smooth pink button with a rounded face and a small central hole (the *external os*).³ Once you’ve had a vaginal birth, however, that opening becomes wider and more gaping.

Although the cervix forms a very small part of the uterus, without it your uterus might flop around within your pelvis. That’s because several *ligaments*, or stretchy connective tissue, attach one end of your cervix to your pelvic bones and other pelvic organs. Although ligaments attached to the upper part of the uterus also help anchor the organ, the cervical ligaments play the most important role.

A REPRODUCTIVE DOORWAY

One way to think of your cervix is as a doorway between the inside world of your reproductive system and the outside world itself.

This doorway can remain firmly closed (when you’re pregnant), open slightly (when you’re ovulating or menstruating), or swing wide open (when you’re in labor). As you can imagine, this doorway is very strong, so strong it can keep an eight-pound fetus inside the uterus despite gravity’s downward pull.

When you’re not pregnant, however, that doorway only cracks open just a bit. This small opening is called the endocervical canal, or *endocervix*. The end that opens into the vagina is called the external os and the end that opens

into the uterus is called the *internal os*. Normally the endocervical canal opens just enough to let sperm slip through so they can fertilize an egg, and to allow blood to flow through during your menstrual cycle.

This canal is lined with a membrane. In the cervix, the cells that make up the membrane are called *columnar epithelium cells*. At the point where the cervical canal meets the vagina, called the *exocervix*, these cells abruptly change to *squamous cells*, identical to the lining of the vagina. This is called the “*transformation zone*,” and it is the area where abnormal cells are most likely to develop. Left alone, they may turn into cancer. You’ll learn more about cervical cancer on page 6.



For now, however, let’s return to that endocervical membrane and the cells lining it. These cells not only secrete mucus, but also have tiny hairlike structures called *cilia* that act like paddles to push sperm up through the canal.

Most of the month these cells secrete very little mucus. The mucus they do produce is acidic, thick and impenetrable, forming a plug at the entrance to the vagina to keep sperm *out* of the cervical canal. But once your ovaries release an egg and your body’s estrogen production rises, the mucus changes. It becomes less acidic, more plentiful, clearer and thinner. Now it’s designed to *help* sperm on their journey to the fallopian tubes so they can fertilize an egg. One way oral contraception keeps you from getting pregnant is by preventing the cervical mucus from thinning.

The mucus has another purpose: It produces an enzyme called *lysozyme* that prevents bacteria and other microorganisms from entering the uterus.

The cervix itself changes throughout the month. For most of the month it is firm and closed, like a pair of tightly clenched lips. But as you near ovulation, it relaxes, becoming soft and mushy, rising and opening like a smile (this also occurs when labor is near). Its smile is slight, however; the cervical canal doesn’t open wide enough to allow your menstrual blood to pass through until the lining of your uterus sheds. Menstrual cramps are believed to be related to this opening, which is why the early stages of labor — when the cervix is just beginning to open — often feels like really bad cramps.



CERVICAL INFECTIONS

As mentioned earlier, the cervix acts as a doorway or gatekeeper to the uterus, preventing bacteria and other microorganisms from infecting the uterus, fallopian tubes and/or ovaries. Thus it becomes a potential reservoir for numerous infections, such as the sexually transmitted bacteria that cause *gonorrhea*, *chlamydia* and *pelvic inflammatory diseases*, and the viruses that cause *herpes* and cervical cancer, among others.

An active cervical infection with a bacterium is called *mucopurulent cervicitis*. It includes chlamydia and gonorrhea, the two most common sexually transmitted infections (STIs) in the United States, found in an estimated 40 percent of women with an STI. While symptoms of cervicitis may include vaginal discharge, deep pelvic pain, burning while urinating and bleeding after sex, more than 60 percent of women with an infection have no symptoms.² Now let's take a closer look at the two most common STIs: chlamydia and gonorrhea.

Chlamydia

Chlamydia is caused by the bacterium *Chlamydia trachomatis*, transmitted during vaginal, anal or oral sex. It infects men and women, appearing in the *rectum* and even the throat. In women, however, it commonly infects the cervix and *urethra* (the tube that brings urine to the outside of the body). Left untreated, it can spread into the uterus or fallopian tubes and cause pelvic inflammatory disease (PID), a serious infection that can cause infertility, chronic pelvic pain, or *ectopic pregnancy*.⁴

Because chlamydia is so common, all sexually active women 25 and younger and older women who have multiple sexual partners or have begun a new sexual relationship, should be screened for the infection at least once a year. All pregnant women should also be screened, since the infection may lead to premature delivery. One recent study found that one in 20 women in the United States between the ages of 14 and 19 (4.6 percent) were infected with chlamydia.⁵ Another found 5.8 percent of more than 86,000 pregnant women seen at publicly funded prenatal clinics tested positive for chlamydia, with the highest rate of infection seen in the youngest women.⁵

Teenaged girls are most susceptible to chlamydia because their cervixes have not yet fully matured. Thus, more of the endocervical canal lining is exposed, providing a larger target for infection. As the cervix matures, the lining slides back into the uterus and reduces exposure. It may take fewer exposures when you're young to catch chlamydia than when you're older, experts say.⁶

Women with multiple sexual partners also have a high risk of contracting chlamydia because it's more likely that one or more of their partners will be infected.

Abstaining from sexual activity, limiting sexual activity to one partner and/or using a latex condom can significantly reduce your risk of contracting chlamydia or any other sexually transmitted infection.

Chlamydia is typically treated with oral antibiotics. If you are diagnosed with chlamydia, make sure your partner is tested and treated; otherwise you could be reinfected.

Gonorrhea

Gonorrhea is caused by *Neisseria gonorrhoeae*, a bacterium that thrives in warm moist areas of the body, including the reproductive tract and cervix. The bacterium infects men and women, often with no symptoms. If women do have symptoms, they are often mistaken for a bladder or vaginal infection because they include burning with urination and increased vaginal discharge. The infection can also occur in the throat from oral sex and in the rectum from anal sex.⁷

Like chlamydia, gonorrhea is spread only through sexual activity, although infected pregnant women can pass it on to their babies. In newborns the infection can cause blindness or joint and blood infections.

Left untreated, gonorrhea can cause pelvic inflammatory disease, infertility and chronic pelvic pain and can increase the risk of ectopic pregnancy. However, like chlamydia, the disease is very easily treated with antibiotics, although more antibiotic-resistant strains are appearing. If you are diagnosed with gonorrhea, make sure your partner is tested and treated; otherwise you could be reinfected.

Abstaining from sexual activity, limiting sexual activity to one partner and/or using a latex condom can significantly reduce your risk of contracting gonorrhea or any other sexually transmitted infection.

HPV AND CERVICAL CANCER

It's impossible to discuss cervical health without also talking about the *human papillomavirus (HPV)* and cervical cancer since this virus poses the greatest threat to your cervix.

There are more than 100 strains of the human papillomavirus (HPV), about 40 of which cause sexually related infections. These include genital warts, abnormal cervical cells called *dysplasia* and invasive cervical cancer. The latter is primarily caused by high-risk HPV, with types 16 and 18 found in about 70 percent of cervical cancer cases. Certain HPV strains are also associated with vaginal, vulvar and anal cancers.⁸

The virus often infects women during their very first sexual experience and is very difficult to avoid, even with condoms. Within the first two years of the first incidence of intercourse, more than half of all women have acquired HPV. It is so common, in fact, that some researchers consider it an “inevitable consequence of sexual activity,” urging that no stigma be attached to its acquisition.¹⁰ Overall, an estimated 20 million men and women in the U.S. are infected with HPV, and about 6.2 million become infected each year.⁸

With the exception of genital warts, there are no noticeable symptoms of HPV infection. Simply catching the virus isn't the danger; in most cases, your body clears it easily with no symptoms. The worry is that the virus digs in and sets to work damaging cervical cells. It does this by changing the cells' DNA so they don't reproduce normally; eventually, these abnormal changes can become cancerous.⁸

A long-term HPV infection is more likely in women who have multiple sexual partners and so become infected over and over again. Studies find that persistent infections of HPV increase the risk of the cervical cancer precursor called *high-grade squamous intraepithelial lesion (SIL)* by more than 10 times.⁸

Preventing Cervical Cancer: the Vaccine

Until recently, preventing HPV infection was difficult if not impossible.

Today, however, there is a vaccine designed to prevent HPV infection.

Gardasil protects against four HPV viruses that cause about 70 percent of all cervical cancers. It also prevents some of the diseases caused by those viruses: precancers of the cervix, vulva and vagina, and genital warts.¹¹

The U.S. Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP) recommends that all 11- and 12-year-old girls receive the vaccine, although it can be given to those as young as 9. The vaccine is also recommended for females ages 13 to 26. It costs about \$360 for the three-shot series, and most insurance covers the cost.

Important tip: Since the Gardasil vaccine doesn't protect against viruses that cause about 30 percent of cervical cancers, you still need regular cervical cancer screenings even if you've been vaccinated.

Although sexually active young women might also benefit from the vaccine, there's a good chance they're already infected with the virus. The vaccine is not recommended for pregnant women or boys, although the manufacturer is investigating its efficacy in males.¹¹

Preventing Cervical Cancer: Screening

Even with the vaccine, most women reading this guide are beyond the stage at which the vaccine would be effective. Instead, the best way you can prevent cervical cancer is to identify very early cellular changes that could eventually become cancerous. The best way to do this? With annual Pap smears. Pap smears, which evaluate a sample of cells from your cervix, enable health care professionals to identify and treat precancerous cervical cell changes before they turn into cancer.

Today most medical organizations, including the American College of Obstetricians and Gynecologists (ACOG) and the United States Preventive Services Task Force, recommend that women begin receiving Pap smears at age 21 or within three years of becoming sexually active.

Since the Pap smear was introduced 50 years ago, the number of women diagnosed with cervical cancer has plummeted by 80 percent. This year, about 10,800 cervical cancers will be diagnosed, far fewer than the 50,000 that would have occurred without screening.¹¹

When you have a Pap smear, your doctor should receive the results in a couple of weeks. They may show:

- ❁ ***Benign (noncancerous) cellular changes.*** These result from inflammation caused by a number of things, including using a diaphragm or infection with trichomonas, a sexually transmitted vaginal infection.
- ❁ ***Atypical squamous cells of undetermined significance (ASCUS).*** These cellular changes appear abnormal for unknown reasons. It isn't possible to determine if the abnormality is caused by inflammation, infection or precancerous changes. Most physicians will therefore order reflex HPV testing (see table at right). These changes usually return to normal, either without treatment or after the infection is treated.
- ❁ ***Squamous intraepithelial lesion (SIL).*** This change is considered precancerous. SIL changes are divided into two categories: low-grade SIL and high-grade SIL.
 - ❁ ***Low-grade SIL,*** also called mild dysplasia or cervical intraepithelial neoplasia 1 (CIN 1), refers to early changes in the size, shape and number of cells on the surface of the cervix. Most return to normal without treatment. Others, however, may continue to grow or become increasingly abnormal in other ways and develop into a high-grade lesion.
 - ❁ ***High-grade SIL,*** also called moderate or severe dysplasia (CIN 2 or CIN 3) or carcinoma in situ. Cells in this category look very different from normal cells. They are less likely to return to normal and more likely to develop into cancer without treatment. These abnormal cellular changes are confined to the surface of the cervix.

Adding HPV Screening

About half of all women diagnosed with cervical cancer have not had Pap screenings. But, the Pap test isn't foolproof, either; some women who are diagnosed with cervical cancer have been screened and had normal Pap results.¹² That's why the American Cancer Society and ACOG also recommend that women

Important tip: If you receive the HPV DNA test, ask your health care professional to use the high-risk HPV test, which tests for the viruses known to cause cervical cancer, not the low-risk test. About six to 10 percent of women older than 30 test positive for these high-risk viruses.¹²

30 and older (regardless of their Pap results) and any women with atypical cells on a Pap test receive a high-risk **HPV DNA test** (Hybrid Capture 2) to identify any HPV infection.

The results of the Pap smear *plus* the HPV test help your doctor determine the next course of action. Specifically, here is what the leading medical organizations recommend:

Pap Smear/HPV Test Results & Next Steps

PAP	HPV	MEANS	NEXT STEPS						
Negative	Negative	You have almost no risk of invasive cervical cancer for at least the next three to five years.	Screening due after three years						
Negative	Positive	You are about 20 times more likely to develop the type of cellular changes that can lead to cancer than women who are negative on both tests, but the risk at the time of the test is very low.	Another screening within six to 12 months						
Atypical Squamous Cells of Undetermined Significance (ASCUS)	Negative	Low risk of cervical cancer	Another screening in 12 months						
ASCUS	Positive	12.5 to 23 times more likely to have the type of cellular changes that can lead to cancer than women who are HPV negative but ASCUS.	<table border="0"> <tr> <td colspan="2">Colposcopy</td> </tr> <tr> <td><i>Positive</i></td> <td><i>Negative</i></td> </tr> <tr> <td>Manage depending on level of abnormality (may be abnormal cellular development, also called dysplasia, not cancer)</td> <td>Pap at 6 to 12 months; HPV at 12 months</td> </tr> </table>	Colposcopy		<i>Positive</i>	<i>Negative</i>	Manage depending on level of abnormality (may be abnormal cellular development, also called dysplasia, not cancer)	Pap at 6 to 12 months; HPV at 12 months
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<i>Positive</i>	<i>Negative</i>								
Manage depending on level of abnormality (may be abnormal cellular development, also called dysplasia, not cancer)	Pap at 6 to 12 months; HPV at 12 months								
Low-grade squamous intraepithelial lesions (LSIL)	Not needed because most with LSIL are HPV positive		Colposcopy						
High-grade squamous intraepithelial lesions (HSIL)	Not needed because most with HSIL are HPV positive		Colposcopy						

To improve the reliability of your Pap test, schedule your appointment two weeks after your last menstrual period and refrain from the following for at least 48 hours before the test:

❁ Sex



❁ Douching

❁ Using tampons, vaginal creams, suppositories, medicines, sprays or powders

Reduce Your Risk of Cervical Cancer

While the HPV virus is responsible for nearly all cases of cervical cancer, other things can increase the risk of cellular changes leading to cancer. These include:

- ❁ **Smoking.** Smoking cigarettes exposes your body to cancer-causing chemicals that can damage the DNA of cervical cells, adding to the damage from the HPV virus.
- ❁ **Infection with the bacterium that causes chlamydia.** Researchers don't know why chlamydia infection increases cervical cancer risk, but they suspect that your body's immune reaction to the bacterial infection damages normal cervical cells.
- ❁ **A diet low in fruits and vegetables.** Women who don't eat many fruits and vegetables miss out on protective antioxidants and phytochemicals shown to help prevent cervical cancer and other forms of cancer.
- ❁ **A compromised immune system.** If you're HIV positive or are taking immunosuppressive drugs, your immune system is less able to fight off cancers.
- ❁ **A family history of cervical cancer.** If your mother or sister had cervical cancer you may have a genetic tendency to the disease or genetic changes that make it more difficult to fight HPV infection.
- ❁ **Exposure in utero to diethylstilbestrol (DES),** a synthetic hormone prescribed to pregnant women between 1940 and 1971 to prevent miscarriages. About one in every 1,000 women whose mothers took DES while pregnant

develops vaginal or cervical cancer. For more information on DES exposure, contact the U.S. Centers for Disease Control and Prevention (CDC), toll-free: 1-888-232-6789, or online at www.cdc.gov.

- ❁ **Long-term oral contraceptive (OC) use** (five or more years) slightly increases the risk of cervical cancer.¹³

Diagnosing and Treating Cervical Cancer and Precancer (Dysplasia)

Although the incidence of cervical cancer has dropped considerably in the United States in the past 50 years since screening programs became commonplace, it remains the second most common cancer among women in developing countries.⁸ In 2007, an estimated 11,150 cases of invasive cervical cancer will be diagnosed in the U.S., and 3,670 deaths will occur. Half of all women diagnosed with cervical cancer are between the ages of 35 and 55, and it rarely occurs in women younger than 20.¹⁴

There are usually no symptoms of cervical cancer until abnormal cervical cells become cancerous and begin spreading into nearby tissue. Then early symptoms might include a watery vaginal discharge and bleeding after sex, or spotting. That's why regular Pap smears are so important, particularly since most cervical cancers develop slowly.

As you saw from the chart on page 9, Pap findings combined with the HPV DNA test findings determine the next step. If you have an abnormal Pap, these include:

- ❁ **Colposcopy:** The doctor uses a colposcope to magnify and focus light on the vagina and cervix. Depending on the findings, you may require one or more of the following tests:
 - ❁ **Biopsy:** During this procedure, the doctor removes some sample tissue from the surface of the cervix. The tissue is examined under a microscope for evidence of cancer.
 - ❁ **Endocervical curettage:** A spoon-shaped instrument called a curette is used to scrape cells from inside the cervical canal to make a more precise diagnosis. This procedure evaluates the unseen portion of the cervix.

- ❖ **Cone biopsy:** Performed when biopsy or endocervical curettage reveals a problem requiring further investigation. The surgeon removes a “cone” of tissue from around the opening of the cervical canal. This procedure can also be used as a treatment to remove the suspect tissue.
- ❖ **Loop Electrosurgical Excision Procedure (LEEP):** This procedure is used to diagnose and treat cervical dysplasia. The doctor uses a loop device to remove the suspicious area of cells, then vaporizes the remaining tissue with radio waves to destroy any other dysplastic cells.

Various stages of cervical precancer (dysplasia) may be managed with a cone biopsy, LEEP, *cryosurgery* (in which the abnormal tissue is frozen with a gas) or electrosurgery, in which electricity is used to destroy the abnormal cells. Treatment for invasive cervical cancer (beyond dysplasia) depends on the stage of the cancer, its location, your medical condition and other factors.

More advanced cervical cancer may require a *hysterectomy*, either a *total hysterectomy* in which the uterus and cervix are removed or a *radical hysterectomy* in which the uterus, cervix, upper vagina and ligaments that support these organs are removed. Some women will also require radiation and/or chemotherapy.

Hysterectomy

In 2004, 617,000 women had hysterectomies, making it the most common gynecologic surgery and the second most common surgery in reproductive-aged women overall.^{15,16}

If you have cervical cancer, your doctor will remove your cervix during a hysterectomy. However, there are numerous other reasons women have hysterectomies (*fibroids*, endometriosis, heavy bleeding, *uterine prolapse*) and not all require removing the cervix. Here is an overview of the various types of hysterectomy and the surgical methods used:

- ❁ *Partial or subtotal hysterectomy.* In this procedure, the surgeon removes your uterus but leaves the cervix. This type of hysterectomy cannot be used for cervical cancer and requires that you still obtain regular Pap test screening.
- ❁ *Total hysterectomy.* In this type of hysterectomy, the uterus and the cervix are removed.
- ❁ *Hysterectomy and bilateral salpingo-oophorectomy.* In this procedure, the uterus, cervix, fallopian tubes and ovaries are removed. If you're still premenopausal, this surgery puts you into immediate menopause, also called "surgical menopause."
- ❁ *Radical hysterectomy.* This is the most extensive type of hysterectomy, typically reserved for reproductive cancers. The surgeon removes the uterus as well as part of the vagina, surrounding tissue and lymph nodes. It may also be paired with a bilateral salpingo-oophorectomy, in which the fallopian tubes and ovaries are removed.

SURGICAL PROCEDURES FOR HYSTERECTOMY

As with many gynecologic surgeries, hysterectomies can be performed in several ways. Make sure you discuss with your doctor which type of procedure will be used and why.¹⁷

- ❁ *Abdominal hysterectomy:* In this procedure, the surgeon cuts through the skin, muscle and fat in your abdomen to remove the uterus and any other organs or tissue that need to be removed. The doctor can use a vertical or horizontal incision. This procedure is performed under general or regional

anesthesia in the hospital and requires a hospital stay of three to six days and about six weeks for full recovery. This procedure is often used in women with a large uterus, particularly those with large fibroids, who are not good candidates for vaginal or laparoscopic hysterectomies (described below), and for those with cancer.¹⁸ A 2006 survey of 200 obstetricians/gynecologists found most still perform this form of hysterectomy.¹⁹

❁ ***Vaginal hysterectomy:*** In a vaginal hysterectomy, the surgeon inserts instruments through your vagina and cuts out the cervix to reach the uterus. This type of hysterectomy is typically used for smaller uteruses that aren't cancerous and to remove a prolapsed uterus. There is no external scarring, and your recovery is quicker than with an abdominal procedure because the muscle hasn't been cut. The procedure is performed in the hospital under regional or general anesthesia, and women generally spend one to three days in the hospital, with a total recovery time of about four weeks.

❁ ***Laparoscopically assisted vaginal hysterectomy (LAVH):*** In this procedure, the surgeon removes the uterus and cervix through the vagina, but part of the surgery is performed laparoscopically through tiny incisions near the navel. The recovery time is similar to that of a vaginal hysterectomy.

❁ ***Laparoscopic supracervical hysterectomy (LSH).*** In this procedure, the uterus is removed laparoscopically through three to four tiny incisions in the navel and abdomen, leaving the cervix intact. Less cutting and manipulation is required so there are fewer complications. You can also resume sexual intercourse earlier because the cervix is retained. LSH can be performed on an outpatient basis under regional anesthesia, but it can't be used if you have cervical cancer. It also isn't a good option if you have uterine prolapse, pelvic floor problems or certain anatomic configurations. If you have a history of cervical dysplasia, you should have at least three normal cancer screenings before undergoing the procedure. However, the vast majority of women are eligible for this form of hysterectomy.¹⁹

One study comparing outcomes of the four procedures — abdominal hysterectomy, vaginal hysterectomy, LAVH and LSH — in 117 women found that women undergoing LSH had less bleeding and fewer surgical and postsurgical complications. They were also less likely to experience painful intercourse after surgery and resumed their regular activities quicker than women undergoing any of the other procedures.²⁰

Regardless of which type of hysterectomy you have and even if your cervix has been removed, you should still have regular Pap smears.

KEEP THE CERVIX?

One question you should discuss with your surgeon before undergoing a hysterectomy is whether or not you can retain your cervix. In one panel discussion among several obstetricians/gynecologists, the doctors said that “patient preference” plays a major role in the decision of whether to use a laparoscopic or abdominal procedure and in deciding which procedure to choose.

Although the studies on the impact of cervical removal on sexual function are mixed, some doctors say their patients do better if the cervix remains. They suggest that retaining the cervix enables the vagina to open up more fully for sexual intercourse, improving the depth of the vagina for intercourse. Removing the cervix, on the other hand, can shorten the vagina, making intercourse more painful and/or difficult. They also suggest that any nerve damage occurring when the cervix is removed can make orgasm more difficult or less satisfying.¹⁹

A 2007 survey of 1,000 women conducted by the National Women’s Health Resource Center found that of the women surveyed, many feel that their cervix contributes to their sense of feeling like women. In addition, eight in 10 women surveyed responded that the cervix should not be removed during surgery, when possible, and when other preventive measures (i.e., Pap smears) can be used to assess the health of the cervix. Eighty-eight percent of these women stated that a healthy cervix was as important to them as having healthy breasts.

Comparing Treatment Options for Hysterectomy

TYPE OF HYSTERECTOMY	INCISION SITE	HOSPITAL STAY	RECOVERY TIME
Total abdominal hysterectomy	abdomen (4- to 6-inch)	3-6 days	6 weeks
Vaginal hysterectomy	vagina	1-3 days	4 weeks
Laparoscopic-assisted vaginal (LAVH) hysterectomy	vagina/naval tiny incisions in abdomen	1-3 days	4 weeks
Laparoscopic supracervical (LSH) hysterectomy	tiny incisions in the abdomen/ naval (less than 1/4 inch)	1 day or less	6 days

Source: www.Gynecare.com

QUESTIONS TO ASK YOUR HEALTH CARE PROFESSIONAL

The next time you see your health care professional, consider using the following questions to initiate a discussion about your cervical health:

1. How often should I have a Pap smear?
2. Which type of Pap should I have? Why?
3. Do you send my Pap test to a board-certified lab with a board-certified pathologist who oversees it?
4. How will I learn the results of the Pap test and/or HPV test?
5. Should I have the HPV DNA test? Why or why not?
6. If I'm infected with HPV, should I worry?
7. How often should I have a Pap and/or HPV screening?
8. What can I do to prevent HPV infection if I'm already sexually active?
9. What can I do to prevent infection with other sexually transmitted infections if I'm sexually active with more than one person?
10. Do I have the same risks for STIs if I'm gay?



If your health care professional tells you that you have an abnormal Pap smear or a positive HPV test, consider using the following questions to initiate a discussion:

1. What do my Pap results mean, exactly?
2. Do these results mean I'm more likely to develop cervical cancer?
3. What treatment options are available? Why are you recommending this option?
4. Can the abnormality return?
5. What is the likelihood that this will "cure" the abnormality?

6. What is your experience in treating this type of cervical abnormality?
7. How often should I be examined for abnormalities in the future?
8. What are the chances that my daughter will have cervical abnormalities too?
9. If the results show invasive cervical cancer, do you have specialty training to help me determine my next steps and treat me?

If your health care professional recommends a hysterectomy — for any reason — consider using the following questions to initiate a discussion:

1. Why are you recommending a hysterectomy over other options?
2. Why do you think this specific procedure is best for me?
3. What are the pros and cons of a less invasive procedure?
4. Why do you recommend removing the cervix as well as the uterus when I don't have cancer?
5. What are the overall complication rates of this procedure?
6. How will my pain be managed?
7. How long will it take to recover?
8. When can I expect to return to my normal activities, like exercising and sexual activity?



Resources

FOR MORE INFORMATION

American Association of Gynecologic Laparoscopists

1-800-554-2245

www.aagl.org

American Cancer Society

1-800-227-2345

www.cancer.org

American College of Obstetricians/Gynecologists

202-638-5577

www.acog.org

Association of Reproductive Health Professionals

202-466-3825

www.arhp.org

National Cancer Institute — Cervical Cancer Information

1-800-422-6237

www.cancer.gov/cancertopics/types/cervical

North American Menopause Society

440-442-7550

www.menopause.org

Planned Parenthood

1-800-230-PLAN

www.plannedparenthood.org

Society of Gynecologic Oncologists

312-235-4060

www.sgo.org

U.S. Centers for Disease Control and Prevention

Sexually Transmitted Diseases Division

1-800-311-3435

www.cdc.gov/std/default.htm

Glossary

CERVICAL HEALTH TERMS TO KNOW

Abdominal hysterectomy: A surgical procedure in which the uterus is removed through an incision in the abdomen.

Atypical squamous cells of undetermined significance (ASCUS): A Pap smear that is not clearly normal or abnormal. This usually indicates there is potential for cells to alter and requires additional testing. It is one of four classifications for abnormal Pap smears. This classification is at the lowest end of the danger scale, but indicates that over time these cells could develop into precancerous cells in some women.

Benign: Not cancerous.

Bilateral salpingo-oophorectomy: Surgical procedure in which the fallopian tubes and ovaries are removed.

Biopsy: The removal and microscopic examination of a sample of tissue to determine if cancer cells are present.

Cervical cap: A smaller version of the diaphragm, this rubber cap fits over the cervix to block sperm. Women who want to use a cervical cap must have it specially made to fit them exactly.

Cervical intraepithelial neoplasia (CIN): This is a common precancerous form of dysplasia (abnormal cell development). Removing the uterus and cervix was once standard practice for treating CIN. Effective treatments, including excising, burning or freezing the diseased portion of the cervix, are now generally recommended for CIN instead of hysterectomy, depending on the severity and location of the abnormality, age, clinical status and a woman's interest in preserving her childbearing ability.

Cervix: The doughnut-shaped gateway between the vagina and the uterus. The cervix is coated with mucus, which can be thick or thin, depending on a woman's monthly hormone levels. Because of its anatomical position, it is an easy target for infection.

Chlamydia: A common sexually transmitted disease caused by a bacterium called *Chlamydia trachomatis*. The bacterium can be transmitted during vaginal, oral or anal

sexual contact with an infected person. If left untreated, chlamydia can cause infertility.

Cilia: Microscopic cellular hairs.

Colposcopy: A special exam that allows closer inspection of your cervix. A special microscope — a colposcope — is used to magnify the cervix and identify the location, size and area of abnormal cells.

Columnar epithelium cells: The cells that line the cervical membrane or endocervical canal.

Cone biopsy: Performed when a biopsy or endocervical curettage reveals a cervical problem requiring further investigation. The surgeon removes a “cone” of tissue from around the opening of the cervical canal. This procedure can also be used as a treatment to remove the suspect tissue.

Cryosurgery: Using liquid nitrogen to freeze and destroy cells.

Curette: A spoon-shaped instrument used to scrape cells from inside the cervical canal.

Dysplasia: A benign but possibly precancerous condition that occurs when normal cells on the cervical surface are replaced by abnormal cells.

Ectopic pregnancy: Ectopic pregnancy refers to a fertilized egg implanted outside the uterus, often caused by scarring or blockage of the fallopian tubes. The most common site is within the fallopian tubes, and this is referred to as tubal pregnancy. Although less common, pregnancy can occur in the ovary and abdomen.

Endocervix: The opening within the cervix.

Endocervical curettage: A procedure in which a curette is used to scrape cells from inside the cervical canal to make a more precise diagnosis. This procedure evaluates a portion of the cervix that cannot be seen.

Endometriosis: When the uterine lining grows outside the uterus and gets stuck to other organs or structures within a woman's body. It is a common cause of pelvic pain.

Exocervix: Lower third of the cervix.

External os: End of the cervix where it meets the vagina.

Fallopian tubes: Two tubes attached to the top of the uterus leading to the ovaries.

Each tube is four to five inches long with its wide end near the ovary. When an egg is released from one of the ovaries, it will travel through the fallopian tube toward the uterus. The egg is most likely to be fertilized in the fallopian tube if sperm are present. Infection can cause tube tissue to scar and close up.

Fibroids: Fibroids are balls of muscular tissue that grow inside the uterus, on the surface of the uterus or in the muscular wall of the uterus. They are virtually never cancerous. Half of the women who have fibroids never experience symptoms and require no treatment. But, even small fibroids can cause heavy and/or longer menstrual bleeding. Fibroids may contribute to infertility in some women, possibly because they interfere with an embryo's ability to attach itself to the uterus.

Herpes: A chronic sexually transmitted disease that causes blister-like sores on the genitals, lips and face; in rare cases, can also affect the eyes, fingers or brain.

High-grade squamous intraepithelial lesion: Immature cells that are precancerous.

HPV DNA test: The first FDA-approved test for the human papillomavirus is called the Hybrid Capture II. It detects many HPV types using DNA amplification technology. The test is not reliable to use alone but is a valuable diagnostic tool when used in conjunction with Pap testing.

Human papillomavirus (HPV): A group of viruses that cause the most common sexually transmitted disease — genital warts. Infection can also occur without visible warts and is the major cause of abnormal Pap smears and cervical cancer in women. HPV infection is incurable but often treatable.

Hysterectomy: Surgery to remove a uterus.

Internal os: End of the cervix where it meets the uterus.

Laparoscopically assisted vaginal hysterectomy (LAVH): Performing part of a vaginal hysterectomy laparoscopically.

Laparoscopic supracervical hysterectomy (LSH): Removing the uterus laparoscopically, leaving the cervix.

Ligaments: Stretchy bands of cord-like tissue that connect bone to bone.

Loop Electrocautery Excision Procedure (LEEP): Procedure used to diagnose and treat abnormal precancerous changes (dysplasia) using a loop device to remove the

suspicious area of cells. Remaining tissue is then vaporized with radio waves to destroy any other cancerous cells.

Low-grade squamous intraepithelial lesion: A condition characterized by a few immature cells among mostly mature cells; the abnormal cells extend through one-third the thickness of the cervical skin.

Lysozyme: An enzyme in the cervical mucus that destroys microorganisms.

Pap smear: A test in which cells are scraped off the cervix and examined for abnormalities; used to detect changes that might precede cervical cancer; such as human papilloma virus (HPV).

Partial or subtotal hysterectomy: Surgical procedure in which the uterus is removed.

Pelvic inflammatory disease (PID): This is a broad term that can include infection of the cervix (cervicitis) and the uterus (endometritis). The formal medical term for PID is salpingitis and refers primarily to infection of the fallopian tubes, which if left untreated can cause abscesses, leading to scarring and infertility.

Radical hysterectomy: Surgical procedure in which the uterus, cervix and other reproductive tissue are removed; often used when a woman has cancer.

Rectum: The last five to six inches of the colon leading to the outside of the body.

Squamous cells: Cells that line the lower end of the cervix and the vagina.

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

Total hysterectomy: Surgical procedure in which the uterus and cervix are removed.

Transformation zone: The area of the cervix where the membranous columnar epithelium cells change to squamous cells, and where abnormal cells are most likely to develop.

Trichomoniasis: A sexually transmitted disease primarily affecting the vagina.

Urethra: The small tube that carries urine from the bladder out of the body.

Uterine prolapse: Sagging or dropping of the uterus when ligaments that hold it in place become stretched.

Vaginal hysterectomy: Removing the uterus and cervix through the vagina instead of with an abdominal incision.

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