ast summer, Miranda Lewis and her husband, Bruce, had just celebrated their one-year anniversary and were happily discussing when to start a family. Around that time Miranda's gynecologist called with some devastating news: The results of a recent biopsy revealed that she had cervical cancer.

Lewis had to have a portion of her cervix removed, but the cancer hadn't progressed far enough to harm her health any further, with one exception: her ability to have a normal pregnancy. "My doctor told me I didn't have the luxury of time if I wanted to get pregnant, because the cancer could return. And my cervix was weakened from the surgery, so it could open or thin early in the pregnancy, and I'd wind up on bed rest," says Lewis, who lives in Westfield, New Jersey.

Although the occurrence of cervical cancer has declined significantly over the past 20 to 30 years, approximately 4,100 women still die annually from the disease. The reason? Forty percent of women in this country don't have



Saving FERTILITY

annual Pap smears, the only screening test available for cervical cancer. And though a promising vaccine is currently in clinical trials, it only promises to protect against one type of strain, so Pap smears

will continue to be as important as ever to preserve health and fertility.

The Main Culprit

Your cervix is a canal-shaped organ connecting the vagina to the uterus. Its main purposes are to shuttle sperm

What does your
Pap smear have
to do with having
a baby? Just
about everything.

toward the uterus and support it during pregnancy. Sometimes, cervical cells increase in number and become cancerous. Fortunately, doctors know exactly

what's behind 90 percent of cervicalcancer cases: a sexually transmitted disease known as the Human Papilloma Virus (HPV). HPV has more than 100 strains, including genital warts, but only about 15 are associated with the development of cervical cancer, accord-

BY MARCY LOVITCH | ILLUSTRATIONS BY STEVEN DANA

ing to Diane Solomon, MD, senior investigator at the National Cancer Institute's Division of Cancer Prevention in Bethesda, Maryland.

According to the National Institutes of Health, the virus can live in your system for up to 15 years before symptoms surface, if at all, so many people are unaware they're even carriers. And HPV is tricky to prevent and control because it can be transmitted through skin contact around the genital and anal areas. Though any sexually active woman is at risk of getting the virus,



Regular Pap smears note cell changes in the cervix, so abnormalities are spotted before they become serious.

"having multiple sexual partners, smoking, or going three years or more without a Pap smear increases your risk of contracting cervical cancer," says Groesbeck Parham, MD, professor of obstetrics and gynecology, in the division of gynecologic oncology at the University of Alabama Medical Center at Birmingham. If you have abnormal Pap smear results, your doctor will test you for HPV.

A Simple Test

The good news is, if detected early, cervical cancer is virtually 100 percent curable and almost never requires extreme treatments such as chemotherapy or radiation. The key is to have an annual Pap smear, the test that's helped reduce cervical cancer rates by almost

75 percent during the last 50 years. The American Cancer Society now recommends that screening should be done once a year with the regular Pap test or every two years using the newer liquid-based Pap. Women with higher risk factors, however, may be screened more often. If you're pregnant, a Pap smear is routinely done at the first prenatal visit if one has not been done in the previous six months.

If you don't have your cervical cells examined regularly, "it ups the chance that an undetected abnormality could turn into an invasive cancer down the line," says Erica Breneman, MD, an obgyn at the Kaiser Permanente Medical Clinic in Oakland, California. And busy new mothers are often the patients who get lost in the shuffle. "New moms get

so involved in taking care of their family, they often neglect their own health, putting it on the back burner," says Carol L. Brown, MD, a gynecologic oncologist at Memorial Sloan Kettering Cancer Center in New York City.

The irony is, a Pap smear, which involves removing a small culture of cells from your cervix with a tiny brush, only takes about a minute to perform. The sample is then sent off to a lab and examined under a microscope by a specially trained technician or pathologist. Results will either come back negative or normal, which means no abnormality, or abnormal, which can signal the presence of precancerous or cancerous cells.

But if your doctor calls you with an abnormal result, don't panic. Often there can be a false positive reading. "A lot of factors can impact your Pap results and either mask or skew cells' appearance under a microscope, such as if you just had sex that morning, used a tampon, or are menstruating," says Lisa Mazzullo, MD, an assistant professor of obstetrics and gynecology at Northwestern University Medical School in Chicago. She suggests abstaining from sex (or douching) for 48 hours before your Pap, and waiting two to three days after your period to have one.

So how reliable are Paps? Researchers say 80 percent are accurate, with the responsibility for the 20 percent "false negative" and "false positive" results falling on the federally regulated laboratories. Although there are 2 to 3 million inconclusive Pap tests every year, most doctors agree that's still a small number given that there are 50 million Pap smears done annually. Paps have also improved greatly in the past few years, with the advent of a new Pap test called ThinPrep, which offers pathologists a clearer view of the cell sample than the conventional Pap smear, improving the detection of precancerous lesions by 65 percent.

If you do get an iffy Pap result, your doctor will most likely repeat the test. If those findings also come back abnormal,



there are several options your doctor will consider: He may perform a colposcopy, where the cervix and vagina are examined with a lighted magnifying instrument; cryosurgery, which destroys and freezes abnormal tissue; loop electrosurgical excision procedure (LEEP), in which cells are removed with an electrical current through a thin wire loop; or a cone biopsy, in which a large, cone-shaped portion of the cervix is removed. Pregnant women with abnormal Paps that indicate cancer may need to have a biopsy done in the second trimester. But unless the cancer is very invasive, treatment may be

delayed until after the baby is born.

The Pregnancy Connection

The mere presence of HPV usually doesn't have a negative impact on pregnancy. However, if a woman has had procedures to remove abnormal cells, such as a LEEP or a cone biopsy, her cervix may be shortened or weakened, "so the ability to carry a baby to term might be impacted," says Dr. Brown. During pregnancy, the cervix elongates and closes tightly, holding the uterus and its precious cargo in place. When the woman is ready to deliver, it effaces (thins) and dilates (opens). A weak or short cervix can efface and dilate prematurely, putting the pregnancy at risk for miscarriage or premature delivery. In such cases, doctors will sew the cervix shut (called "cerclage"), put the expecting mother on bed rest, or some combination. When she became pregnant with her first child, Miranda Lewis spent 21 weeks on bed rest. "It made me completely nuts," she says, "but my little boy was born healthy and fullterm."

An outbreak of genital warts during pregnancy is also a cause for concern. The warts can create an obstruction, and



HPV can complicate your pregnancy, but you can still have a healthy baby.

there's a danger to the baby as well. Genital warts may grow in the infant's throat. "In these cases, we'll do a c-section to avoid any transference of the virus," explains Dr. Mazzullo.

In the worst cases, when the cancer is invasive, doctors are forced to perform a radical hysterectomy, eliminating any chance of conceiving a child. It happened to Roseanne Wiedmann of Wayne, Pennsylvania. Wiedmann harvested her eggs before her operation, and she and her husband, Rich, went on to have two daughters by surrogates. "We wanted to have our own children, and thank God we were able to do that," she says.

Fortunately, hysterectomies are rare. In fact, most cervical cancer patients go on to have healthy babies, like Lewis. "When I found out I had cancer, I thought I'd never have a baby," she says. "I'm grateful that wasn't the case."

Marcy Lovitch writes frequently about health. She lives in Brooklyn.