



CERVICAL INTRAEPITHELIAL NEOPLASIA (CIN)

WHAT IS CIN?

CIN, cervical intraepithelial neoplasia, is a disorder in the surface and lining of the cervix (the beginning of the uterus from the vagina). In essence, cervical intraepithelial neoplasia, or cervical dysplasia, is the presence of abnormal cells on the cervix. The detection of these abnormal cells is done through a Pap smear performed by your doctor.

WHAT CAUSES CIN \ ABNORMAL CELLS?

It is thought that a virus called human papilloma virus (HPV) is associated with, or causes, the development of abnormal cells on the cervix. While it is estimated that more than 6 million women in the United States have HPV infection, most women do not develop the abnormal cells. Some patients with HPV infection appear to be at minimal increased risk for development of abnormal cervical cells or cervical cancer, while others develop the abnormal cells more readily.

Studies do suggest that the major risk factor for development of abnormal cervical cells, or invasive cancer of the cervix, is HPV infection. HPV infection far outweighs other known risk factors such as the number of children you have had, number of sexual partners, socioeconomic status, and smoking history. There are a number of types of the HPV virus. It is been shown that patients infected with types 16, 18, and 31 are more likely to have CIN, or microinvasive cancer, on biopsy while patients with types 16 and 18 have an 11-fold risk of rapid development of high-grade dysplasia.

HOW IS CIN DIAGNOSED?

The first step in diagnosis is to have your routine Pap smear. If the Pap smear is abnormal, your doctor will then perform a colposcopy exam. This procedure is used to examine the cervix through a lighted magnification system. At the time of the procedure, your physician will place a speculum into the vagina so that he or she can view the cervix. The cervix is then cleaned with acetic acid (vinegar). Abnormal areas have an abnormal architecture and are typically white and raised. A small biopsy is taken of the abnormal areas and then sent for a pathologic exam. The procedure usually takes about 10 to 15 minutes to complete. Once completed, your doctor will be able to tell you the extent and nature of the dysplasia.

WHAT CAN BE DONE FOR CIN?

The removal of the lesions caused by CIN is the most common procedure. Your doctor may perform removal of the lesions in one or more of the following ways:

- Cryosurgery (freezing)
- Laser surgery
- Surgical Excision (Conization)
- Loop Electrosurgical Excision Procedure (LEEP) - use of a small wire loop electrode attached to an electrosurgical generator that painlessly removes the lesions by way of electrical current.

During cryosurgery the cervix is frozen, whereas with laser ablation surgery, the abnormal cells are removed using light energy. Cervical conization and LEEP are procedures that remove a cone-shaped portion of the cervix that can be sent for further pathologic examination. These procedures are preferred if your doctor needs to have the tissue analyzed at a pathology lab, or if the diagnosis is uncertain. The major advantage of the LEEP procedure is that it can be done in the office, whereas the cervical conization requires an outpatient hospital procedure.

FOLLOW-UP PROCEDURES

You may want to take over-the-counter pain medication such as ibuprofen for cramping. Typically, you will schedule a follow-up appointment 2 to 4 weeks after the procedure. Your doctor will want to perform a PAP smear every 3 to 4 months for 1 to 2 years following the procedure to check for recurrence. If you experience any abnormal pain or bleeding after the procedure, contact your doctor immediately.

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