#### **Endometriosis**

#### What is endometriosis?

Endometriosis is a condition in which tissue that forms the lining of the *uterus*, called the endometrium, grows in places in the body other than the uterus.

What are the most common places in the body where endometriosis occurs? Endometriosis most often appears in places within the pelvis:

- Ovaries
- Fallopian tubes
- Surface of the uterus
- Cul-de-sac (the space behind the uterus)
- Bowel
- Bladder and ureters
- Rectum

Endometrial tissue may attach to organs in the pelvis or to the *peritoneum*, the tissue that lines the inside of the pelvis and abdomen. In rare cases, it also may be found in other parts of the body, such as the lungs. Endometrial tissue that grows in the ovaries may cause a cyst (also known as an *endometrioma*) to form.

#### What are the effects of endometriosis?

Endometrial tissue outside the uterus responds to changes in *hormones*. It breaks down and bleeds like the lining of the uterus during the menstrual cycle. The breakdown and bleeding of this tissue each month can cause scar tissue, called *adhesions*, to form. Adhesions can cause pain. Sometimes, adhesions bind organs together. Endometriosis also may lead to *infertility*.

#### Who is at risk of endometriosis?

Endometriosis is most common in women in their 30s and 40s, but it can occur any time in women who menstruate. Endometriosis occurs more often in women who have never had children. Women with a mother, sister, or daughter who have had endometriosis also are more likely to have it.

# What are the symptoms of endometriosis?

The main symptom of endometriosis is pelvic pain. Pain may occur with sex, during bowel movements or urination, or just before or during the menstrual cycle. Menstrual bleeding may occur more than once a month.

The amount of pain does not always tell how severe this condition is. Some women with slight pain may have a severe case. Others who have a lot of pain may have a mild case. Many women with endometriosis have no symptoms. In fact, they may first find out that they have endometriosis if they are not able to get pregnant. In women who can get pregnant, many often find that symptoms are relieved while they are pregnant.

## How is endometriosis diagnosed?

If you have symptoms of endometriosis, your health care provider may do a physical exam, including a *pelvic exam*. The only sure way to tell if endometriosis is present is by looking directly inside the body. This can be done by *laparoscopy*. Sometimes a small amount of tissue is removed during the procedure and studied in a lab. This is called a biopsy.

If you have symptoms of endometriosis, and other causes of pelvic pain can be ruled out, you may receive treatment for endometriosis without having surgery.

### How is endometriosis treated?

Treatment for endometriosis depends on the extent of the disease, your symptoms, and whether you want to have children. It may be treated with medication, surgery, or both. Although treatments may relieve pain and infertility for a time, symptoms may come back after treatment.

### What medications are used to treat endometriosis?

In some cases of endometriosis, medications or nonsteroidal anti-inflammatory drugs (NSAIDs) may be used to relieve pain. These drugs will not treat any other symptoms of endometriosis.

Hormones also may be used to relieve pain. The hormones also may help slow the growth of the endometrial tissue and prevent the growth of new adhesions, but will not make them go away.

### What hormones are used most often for treatment?

The following medications are some of the hormones most often prescribed to treat endometriosis:

- Oral contraceptives—The hormones in birth control pills help keep the menstrual period regular, lighter, and shorter and can relieve pain.
- Gonadotropin-releasing hormone (GnRH) drugs—These drugs decrease estrogen levels by stopping its production by the ovaries. This causes a short-term condition that is much like *menopause*. These drugs can be given as a shot, an implant, or nasal spray. In most cases, endometriosis shrinks and pain is relieved with GnRH use. Side effects in women taking this medication may include
  - o hot flushes
  - headaches
  - vaginal dryness
  - decrease in bone density

Treatment with GnRH most often lasts at least 3 months. To help reduce the amount of bone loss from long-term use, your doctor may prescribe certain hormones or medications to take along with GnRH treatment. In many cases, this therapy also may reduce other side effects. After stopping GnRH treatment, you should have periods again in about 6–10 weeks.

• **Progestin**—Progestin works against the effects of estrogen on the tissue. Although you will no longer have a monthly menstrual period when taking progestin, you may have irregular vaginal bleeding. Progestin is taken as a pill or injection.

## What types of surgery are used to treat endometriosis?

Surgery to treat endometriosis most often is done by laparoscopy. During laparoscopy, endometriosis can be removed or burned away. Not all cases can be handled with laparoscopy. Sometimes a procedure called a *laparotomy* may be needed.

## What can I expect after surgery?

After surgery, you may have relief from pain. However, symptoms return within 1 year in about one half of women who have had surgery. Many patients are treated with both surgery and medications to help extend the symptom-free period.

If pain is severe and does not go away after treatment, a hysterectomy (surgery to remove your uterus) may be an option. Endometriosis is less likely to come back if your ovaries also are removed. After this procedure, a woman will no longer have periods or be able to get pregnant. There is a small chance that your symptoms will come back even if your uterus and ovaries are removed.

## Glossary

Adhesion: Scarring that binds together the surfaces of tissues.

Bladder: A muscular organ in which urine is stored.

Endometrioma: An ovarian cyst formed from endometrial tissue.

Fallopian Tubes: Tubes through which an egg travels from the ovary to the uterus.

*Hormones:* Substances produced by the body to control the functions of various organs.

*Infertility:* A condition in which a couple has been unable to get pregnant after 12 months without the use of any form of birth control.

**Laparoscopy:** A surgical procedure in which a slender, light-transmitting instrument, the laparoscope, is used to view the pelvic organs or perform surgery.

**Laparotomy:** A surgical procedure in which an incision is made in the abdomen.

**Menopause:** The process in a woman's life when ovaries stop functioning and menstruation stops.

*Ovaries:* Two glands, located on either side of the uterus, that contain the eggs released at ovulation and that produce hormones.

**Pelvic exam:** A physical examination of a woman's reproductive organs.

**Peritoneum:** The membrane that lines the abdominal cavity and surrounds the internal organs.

**Progestin:** A synthetic form of progesterone that is similar to the hormone produced naturally by the body.

**Rectum:** The last part of the digestive tract.

*Ureters:* A pair of tubes, each leading from one of the kidneys to the bladder.

*Uterus:* A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.

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