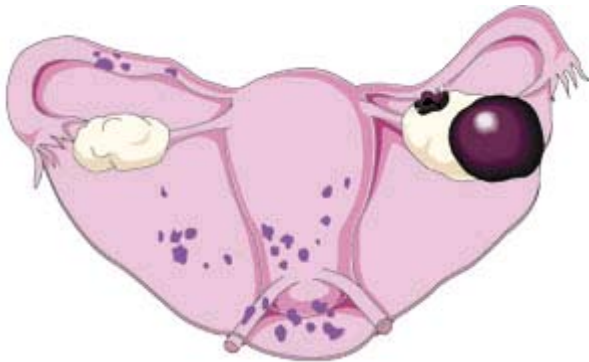




## **ENDOMETRIOSIS**

### **Introduction**

Endometriosis is a common disease that affects many millions of women. The disease occurs only in women who are still having their menstrual periods. Endometriosis can present itself in many different ways, but most common is pain in the pelvic region particularly during menstrual periods. Endometriosis can often be a cause of infertility. Many women with endometriosis may have no symptoms or problems at all.



### **What is endometriosis?**

The uterus is normally lined with a special layer of tissue called endometrium. Endometriosis is a condition where endometrium is found in parts of the body other than the lining of the uterus. The most common places that endometriosis is found is on the surfaces of the ovaries, the outer surface of the uterus, the fallopian tubes, the intestines (bowels), the bladder and the lining of the abdominal cavity (peritoneum).

### **What are the signs of endometriosis?**

The most common presentation is pain in the pelvic area that worsens during the menstrual period. Medically speaking this is called 'dysmenorrhea'. Other symptoms include painful intercourse, urinary frequency and urgency and infertility.

### **What causes endometriosis?**

The exact cause for endometriosis is unknown. One theory is that a portion of the menstrual flow, which contain live endometrium cell, goes backwards through the fallopian tubes and implants endometrial lining cells onto the pelvic organs.

### **How do the menstrual periods affect endometriosis?**

To better understand endometriosis one needs to have some understanding of the normal menstrual cycle.

The menstrual cycle is a complicated series of events that allows the female to make and release a fertile egg from the ovary and at the same time prepare the uterus to accept an egg, should it be fertilized by a sperm. The cycle is controlled by varying hormones released by the ovaries and the pituitary, a gland in the brain.

Most menstrual cycles last about 4 weeks or 28 days, but every woman has her own cycle length. We usually consider the start of the cycle to be just after the menstrual flow has started. Four to six days after the period the female hormones produced by the ovaries (particularly estrogens) cause the lining of the uterus (endometrium) to grow and thicken. This growth and thickening which includes increased blood flow to the area is done to prepare the uterus for a possible pregnancy. Approximately 2 weeks into the cycle the lining is

significantly thicker, and it is about this time that ovulation occurs. Ovulation is the release of an unfertilized egg from one of the ovaries. The released egg is then captured by the fallopian tube. The egg is transported down the fallopian tube and if a sperm unites with the egg at any point the egg is fertilized. The fertilized egg continues to move down the fallopian tube to the uterus and if the fertilized egg attaches to the endometrium a pregnancy results. If a pregnancy occurs, hormones produced by the fertilized egg allow the uterus to maintain its lining to provide nutrients for the growing embryo. If the egg is not fertilized, the egg dies and the hormone levels decrease. Due to the changing hormone levels, the lining of the uterus starts to disintegrate and is discharged out of the body at approximately 4 weeks. This, of course, is known as the menstrual period and represents the point in time at which the process begins over again.

### **What causes endometriosis symptoms?**

Normal discharged endometrial tissue is easily passed through the cervix and the vagina to the outside during the menstrual period. Unfortunately, endometriosis as described above creates dead tissue in places which have no outlet. The body surrounds the dying tissue with white blood cells and other types of cells. These cells will digest the dying tissue. The presence of white blood cells and the breakdown of dying tissue create a fair amount of inflammation which creates the pain and swelling. In time, the inflammation subsides as the dying tissue is removed by the body's internal mechanisms, but the cycle continues over and over as the hormone cycle repeats itself. The inflammation may create scar tissue or adhesions that bind the pelvic organs together. As mentioned above, the fallopian tubes, ovaries, the lining of the bowel and the bladder can all be affected by the scar tissue causing pain. Its effect on the ovaries and/or tubes creates the possibility of infertility. Urinary symptoms, particularly, urgency or an intense need to urinate even though the bladder may be empty occurs when the bladder surface is involved.

### **Can the endometriosis spread?**

Yes. During periods of sloughing live endometrial cells may migrate and cause new areas of endometriosis. At other times the local areas of endometriosis can slough completely causing a remission in symptoms. Endometriosis tends to wax and wane with some cycles being worse than others. Endometriosis can occur only in women who are having menstrual periods. After menopause, endometriosis is not usually a problem because of the lack of cycling hormones. Endometriosis seems to be most common in women between the ages of 30 and 40, although it can occur in women much earlier. Endometriosis is more common in women whose mother or sisters have had similar conditions. The reasons why some women develop endometriosis and others do not are not clear.

### **Can I prevent myself from getting endometriosis?**

There is no absolute way to prevent one from getting endometriosis.

### **How common is infertility if I have endometriosis?**

Women who have endometriosis have more problems with infertility than those that don't. This means that they have a lesser chance of becoming pregnant. Many women find out that they have endometriosis only after they have been unsuccessful in achieving a pregnancy. About 30% of infertile women have endometriosis as their primary cause. The endometriosis in these circumstances can be treated often with good results.

### **Can I develop cancer with endometriosis?**

The development of cancer in women with endometriosis is very rare but it can happen. Any continued pain or problem that doesn't seem to have normal cycling should be brought to the attention of your physician.

### **How is a diagnosis of endometriosis confirmed?**

Ordinarily we can get a good idea if endometriosis is present by your medical history and menstrual cycle background. Occasionally examinations will be required during and between your menstrual periods in order to see if changes have occurred. Often times the scar tissue and swelling endometriosis tissue can be felt. The most accurate way of diagnosing endometriosis, however, is to actually look at the pelvic organs using



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laparoscopy and obtain a biopsy showing endometriosis in affected areas. Laparoscopy is a telescopic examination of the pelvic organs and is done with a general anesthetic in a short stay surgery setting. A special telescope is inserted just below the belly button or umbilicus into the abdominal cavity. Visual inspection of the ovaries, uterus, fallopian tubes, bowels and bladder can be done. At the time of laparoscopy biopsies may be taken to confirm the diagnosis of endometriosis. Adhesions or scar tissue can be treated or broken up using scissors or cautery or laser treatments.

### **How can endometriosis be treated?**

There are many treatment options for endometriosis. The treatment used will depend on the symptoms present, the organs involved, and the pregnancy desires of the patient.

### **Hormone treatments**

By preventing or suppressing the normal menstrual cycle, we are often able to control endometriosis. As mentioned above, the endometriosis swells and grows in response to rising female hormone levels in the early part of the menstrual cycle. By blocking the rising and falling hormone levels, the endometriosis does not slough and pain is usually controlled. The disadvantage, of course, is that while the patient is taking these medications pregnancy cannot occur. However, patients with infertility are often treated in such a way in hopes of allowing the endometriosis to quiet down and then the hormone treatments are stopped. Some women can become pregnant at this point. Hormone treatment can be accomplished two ways. The more traditional method is to simply use birth control pills on a continuous basis, which is the pills are not cycled. Alternatively is the use of special drugs to inhibit the release of controlling hormones from the brain. The drugs (leuprolide or Lupron®, goserelin or Zoladex®) are called gonadotropin-releasing hormone analogs. They suppress all release of hormones from the ovaries and thereby stop the cycling of endometriosis. These drugs are given for 6 months using a monthly injection. The drugs must be given in the doctor's office.

### **Surgery and Laparoscopic Surgery**

Laparoscopy with surgical removal and cutting of scar tissue is often used. The surgical procedures are dependent on the location and amount of endometriosis as well as the indications or reasons for doing the procedure. A woman who has no desire for additional children might be treated more aggressively than a woman who wishes to enhance fertility. When endometriosis is significantly present, certain areas must be completely removed using regular surgical approaches. In some advanced cases, where pregnancy is not desired, removal of all the pelvic organs or total hysterectomy (uterus, tubes and ovaries) is indicated.

Each patient with endometriosis is different. Pregnancy issues often dictate the treatment regimens. Some women cannot take birth control pills for treatment because of the possible side effects of those medications. Because of these differences, every patient with endometriosis needs to have the disease explained to them in detail and the decisions about treatment including surgery or medical treatment needs to be discussed completely. Obviously risks and complications and no guarantees of success can be made with any treatment with regards to pain or fertility. This needs to be completely outlined to each woman seeking treatment.

### **Summary**

Endometriosis is a very complex problem which affects each individual differently. Please don't hesitate to ask us if you have any questions or need more information about endometriosis.