

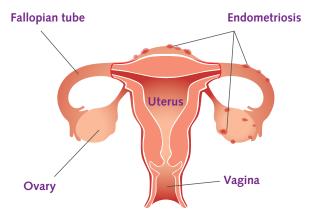
#### **ENDOMETRIOSIS**

Endometriosis is a chronic and relapsing condition where endometrial tissue, which normally lines the inside of the uterus, is found on other organs outside of the uterus.

The clumps of tissue that grow outside the uterus are often called *lesions* or *implants*. They are most often found on the ovaries, the fallopian tubes, the outer walls of the uterus, the intestines and other organs in the belly.

As you will learn by reading this booklet, endometriosis is NOT a cancerous condition and can be managed successfully by several methods.

Endometriosis can cause intense cyclic or constant pelvic or lower abdominal pain that interferes with your normal daily activities, as well as health and well-being.



# **CAUSES OF ENDOMETRIOSIS**

While the exact cause of this condition is unknown, there are several possible causes:

- Menstrual blood carrying endometrial cells may stream against the menstrual flow through the fallopian tubes and empty into the pelvic cavity.
- Endometrial cells could be present in the pelvic cavity as dormant lesions from birth.
- Lesions can appear if the immune system is not sufficiently active to prevent them from growing and spreading.
- Endometrial cells can circulate in the blood vessels and be delivered into the pelvic cavity.
- Some women may carry genes that make them more likely to develop endometriosis; research has found that the chances of developing endometriosis are 3 to 10 times greater for a woman whose mother or sister has the disease.



#### **COMMON SYMPTOMS**

Although symptoms may change over time, if you have endometriosis, you probably have one or more of the following:

- Cramping and menstrual pain
- Pelvic pain
- Pain during sex

# **Your symptoms**

Every woman has symptoms that are unique to her situation. They may get worse during monthly periods or appear in the middle of each cycle. What are your current symptoms?

# Answer Yes or No to the following questions:

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CRAMPS	YES	NO	
<ul> <li>Do you have to limit your normal activities each month due to painful periods?</li> </ul>			
<ul> <li>Are your cramps becoming more painful with each passing year?</li> </ul>			
<ul> <li>Do your cramps start in the middle of your menstrual cycle?</li> </ul>			
<ul> <li>When you have cramps, do you also experience nausea, vomiting or intestinal problems (e.g. constipation or diarrhea)?</li> </ul>			
PELVIC PAIN			
<ul> <li>Do certain movements or positions cause pelvic pain?</li> </ul>			
<ul> <li>Do you have lower back pain before or during your periods?</li> </ul>			
• Do you have pain when you urinate (pee) or when you defecate (poop)?			
PAIN DURING SEX			
<ul><li>Do you avoid having sex because of pain?</li></ul>			
• Do you feel deep-seated pain in your vagina during sex?			
• Is having sex more painful at certain times of the month or in certain positions?			

## YOUR MENSTRUAL CYCLE

In most women, the menstrual cycle is about every 28 days. Each month, the brain sends signals to your ovaries to produce sex hormones called estrogen and progesterone, which stimulate ovulation. During the first weeks of each cycle, the membrane lining inside the uterus thickens and grows. If there is no pregnancy, this membrane is eliminated as normal menstrual flow.

In those who are affected by endometriosis, the endometrial tissue (lesions) outside your uterus responds to changes in estrogen, an important female hormone. The lesions act like the tissue lining your uterus. During your monthly menstrual cycle, the lesions grow and then break down and bleed. The blood from lesions cannot flow out of your body, and can cause the surrounding tissue to become swollen and tender.

This repetitive monthly breakdown and bleeding can eventually cause inflammation and scarring which can cause pain, especially before and during menstruation.

Endometriosis lesions can vary in colour and shape. They may be as small as grains of sand or as large as a grapefruit.

# Lesions can cause painful bleeding during menstruation

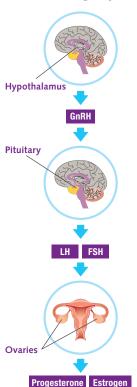


= Lesions

#### HORMONES AND ENDOMETRIOSIS

While the cause of endometriosis is not known, experts have observed that estrogen hormones make endometriosis worse. Women who are of childbearing age – from their teens into their 40s – have high levels of estrogen. Since endometriosis is an estrogen-dependent condition, it is during these years that women can develop endometriosis.

## How is estrogen produced?



The hypothalamus, a gland in your brain, secretes a hormone called **GnRH**, or gonadotropin-releasing hormone.

GnRH signals the pituitary gland, another gland in your brain, to release hormones called **LH** (luteinizing hormone) and **FSH** (follicle stimulating hormone).

LH and FSH stimulate your ovaries to produce **estrogen**, which acts on your endometrial tissue.

When women go through **menopause**, estrogen hormone levels drop and periods end for good. The symptoms of endometriosis tend to decrease when women enter menopause.

#### DIAGNOSIS OF ENDOMETRIOSIS

#### The medical evaluation

Endometriosis, or other causes of your symptoms, can only be diagnosed after a thorough medical evaluation. Your healthcare professional will begin by asking you questions about your symptoms. A pelvic exam and one or more tests may be needed. Your healthcare professional will then help plan a treatment that's right for you.

#### Medical history

Your past history of menstrual, intestinal, and urinary problems can help determine the cause of your condition. You may be asked questions such as:

- How old were you when you had your first period?
- Did you begin having cramps or other menstrual symptoms immediately or only after a few years?
- Do you have a family member (mother, aunt, sister) with endometriosis?

Your answers to these types of questions can help your healthcare professional make a diagnosis.

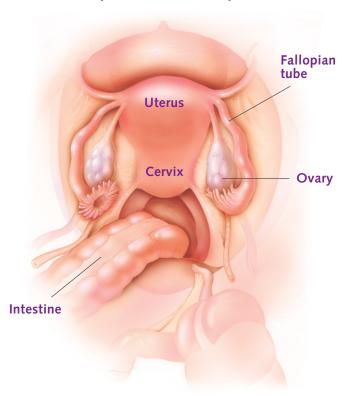
# STAGES OF ENDOMETRIOSIS

Your healthcare professional can use laparoscopy to assess the stage of your endometriosis. These stages are important to plan your treatment and monitor your progress.

Stages are classified as follows: minimal (Stage I), mild (Stage II), moderate (Stage III), or severe (Stage IV).

Several factors are considered during staging, including the number, size and location of lesions. The stage also depends upon the surface area affected and on how close the lesions are to other organs.

# Your healthcare professional can use this picture to show you the location of any lesions



# TREATMENT OPTION: HORMONE THERAPY

Hormone-based medications can be used to treat endometriosis. These may include:

- combined hormonal contraception (CHC)
- · progesterone-based medications
- GnRH agonists with 'add-back' therapy (low doses of estrogen and/or progestin)
- GnRH antagonists
- other remedies to help manage symptoms of endometriosis

# Combined hormonal contraception (CHC)

CHC can be taken continually, without the usual seven-day break each month. This method prevents you from menstruating, and may be a useful option for women who experience the most severe symptoms during their period.

#### How combined hormonal contraception works

This therapy reduces the pain caused by endometriosis by suppressing menstruation and inhibiting the growth of endometriosis lesions.

#### Side effects of combined hormonal contraception

Possible side effects include:

- Headache
- Nausea
- Breast tenderness
- Breakthrough bleeding

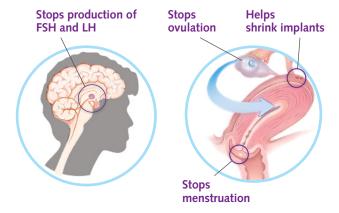
Please consult your healthcare professional regarding other possible adverse events with combined hormone-based therapy.

#### **Progestin therapy**

Progestin therapy is widely used for birth control and has also been studied for the relief of endometriosis pain. It can be administered in a pill form or as an injection. This therapy can be a good option for women with endometriosis who have had a hysterectomy.

#### How progestin therapy works

Progestin therapy helps to lessen the effects of the estrogen that stimulates endometriotic growth in your body.



#### Side effects of progestin therapy

With injection-based progestin therapy there can be a delay between when therapy is stopped and when ovulation resumes. For this reason, this is not an effective option if you are planning to get pregnant in the near future. As well, progestin therapy may be associated with irregular breakthrough bleeding.

Please consult your healthcare professional regarding other possible adverse events with progestin-based therapy.

#### Intrauterine system (IUS)

The IUS is an effective birth control method that consists of a T-shaped medicated intrauterine contraceptive device which is placed into your uterus. This may be an effective therapy for lessening your pain caused by endometriosis.

#### How the intrauterine system works

The device releases a progestin hormone (levonorgestrel) which counteracts the effects of estrogen. The IUS can provide continuous therapy for up to five years or until it is removed by a healthcare professional.

#### Side effects of intrauterine system

Side effects are similar to other hormonal therapies, including:

- Irregular bleeding or spotting for the first 3 6 months
- Headaches
- Nausea
- Depression
- Breast tenderness

Please consult your healthcare professional regarding other possible adverse events with the IUS.

#### **GnRH** agonist therapy

A GnRH agonist (or gonadotropin-releasing hormone agonist) is a hormone, given by injection or nasal spray. It will cause you to stop menstruating. This effect helps reduce the pain associated with endometriosis and minimize endometrial lesions.

#### How GnRH agonist therapy works

Treatment with a GnRH agonist leads to a decrease in estrogen, to the levels that women have after menopause.

#### Side effects of GnRH agonist therapy

The side effects of this type of medication tend to be similar to symptoms you might experience in menopause due to the decrease in estrogen levels:

- Loss of bone mineral density (BMD)
- Hot flushes
- Mood swings
- · Vaginal dryness
- Headaches

Please consult your healthcare professional regarding other possible adverse events with GnRH agonists.

These symptoms can be relieved with 'add-back therapy', which consists of low doses of estrogen and/or progestin. Add-back therapy is routinely given when a GnRH agonist is prescribed.

#### **GnRH** antagonist therapy

A GnRH antagonist (or gonadotropin-releasing hormone antagonist) therapy is used to help treat the painful symptoms related to endometriosis, such as pain during or between periods, and pain or discomfort in the belly or pelvic region.

#### How GnRH antagonist therapy works

GnRH antagonist therapy works to lower the amount of estrogen in your body. The decrease of estrogen levels causes the tissues growing outside of your womb to break down relieving the painful symptoms. This therapy often helps to reduce the painful symptoms of endometriosis within one month, as well as lowering the amount of other pain medications needed to treat these symptoms.

#### Side effects of GnRH antagonist therapy

The most common side effects that may occur with this type of medication are:

- Hot flush
- Headache
- Feeling sick to your stomach (nausea)

Please consult your healthcare professional regarding other possible adverse events with GnRH antagonists.

Other common side effects of GnRH antagonists are: anxiety, menstrual bleeding changes, difficulty sleeping, runny nose, stuffy nose, sore throat, sinus infection or common cold, and joint pain.

#### Danazol

Danazol is a hormone that is taken orally which causes you to stop menstruating and is effective in relieving the pain of endometriosis.

#### How danazol works

Danazol is a weak male hormone that lowers the level of estrogen and progesterone in a woman's body.

#### Side effects of danazol

Side effects of danazol include:

- Weight gain
- Acne
- Excessive hair growth
- Raised cholesterol levels
- Breast atrophy

Please consult your healthcare professional regarding other possible adverse events with danazol.

# TREATMENT OPTION: SURGERY

In some cases, surgery is advised to treat endometriosis. The procedure can vary greatly, from minor surgery to complete removal of all reproductive organs. Your healthcare professional will discuss the choices for surgery and their effects on fertility. Your age, severity of endometriosis, and the desire to bear children are important factors to consider in deciding on the surgical option that's best for you.

# Surgical laparoscopy

A laparoscope is often used in the diagnosis, but also for the treatment of endometriosis. Guided by a video image and miniscule instruments, the physician can remove the lesions. Laparoscopy is a minimally invasive method that requires only a few tiny abdominal incisions, which limits the amount of bleeding, scarring and post-operative pain. This procedure is often performed as an outpatient procedure. After returning home, you may need three to ten days for a full recovery.

#### Laparotomy

This major abdominal surgical procedure results in the surgeon removing endometriosis patches. Laparotomy involves making a much larger incision in the abdomen than in laparoscopy and is sometimes referred to as open surgery. Laparotomy is only performed when the patient cannot be treated with laparoscopy or a hysterectomy.

# Hysterectomy

In advanced stages of endometriosis, when all other medical and less invasive surgical remedies have been tried and failed, the removal of the uterus with or without the ovaries may be the only treatment that relieves the patient's symptoms. In some cases, when endometrial damage is severe, a total hysterectomy may be required where the surgeon removes the ovaries and fallopian tubes along with the uterus. However, removal of the ovaries is only done when absolutely necessary. Major surgery is often a last resort to treat endometriosis.

#### LIVING WITH ENDOMETRIOSIS

Once you know that you have endometriosis, you will need to think about your treatment choices. There are also some things you can do to help yourself feel better.

#### Lifestyle changes

If you are diagnosed with endometriosis, your healthcare professional will discuss lifestyle changes with you. Changes to your exercise and relaxation routines, and maintaining good eating habits to stay healthy may help ease the symptoms of endometriosis.

#### **Controlling intense emotions**

In addition to bouts of pain, you may experience emotional problems or sudden mood changes. You may feel irritated, confused, or depressed. Don't suffer in silence. Talking it over with someone you trust can do a world of good.

#### Pain management

Some of the therapies used to treat endometriosis may take at least one menstrual cycle to become effective. For this reason, your healthcare professional may recommend pain relief medication for use until the long-term treatment begins to work.

You can take non-prescription medications, such as non-steroidal anti-inflammatory drugs (examples are aspirin and ibuprofen). They are more effective if you start taking them before you expect the pain to start, and repeating every six hours to maintain effective relief.

# **EARLY DETECTION**

Having cramps or intense pain during your period is not normal. A teenager who suffers from intense cramps or excessive bleeding should be examined by a healthcare professional. This is even more important if a close relative has endometriosis.

## Hope for the future

Researchers continue to conduct research into causes of endometriosis and new treatments continue to be investigated.

# FOR MORE INFORMATION ABOUT ENDOMETRIOSIS

Please visit **www.yourperiod.ca**, presented by the Society of Obstetricians and Gynaecologists of Canada (SOGC).

Should you require any additional information regarding your condition and/or your treatment, speak with your healthcare professional.



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