BC WOMEN'S HOSPITAL & HEALTH CENTRE
An agency of the Provincial Health Services Authority

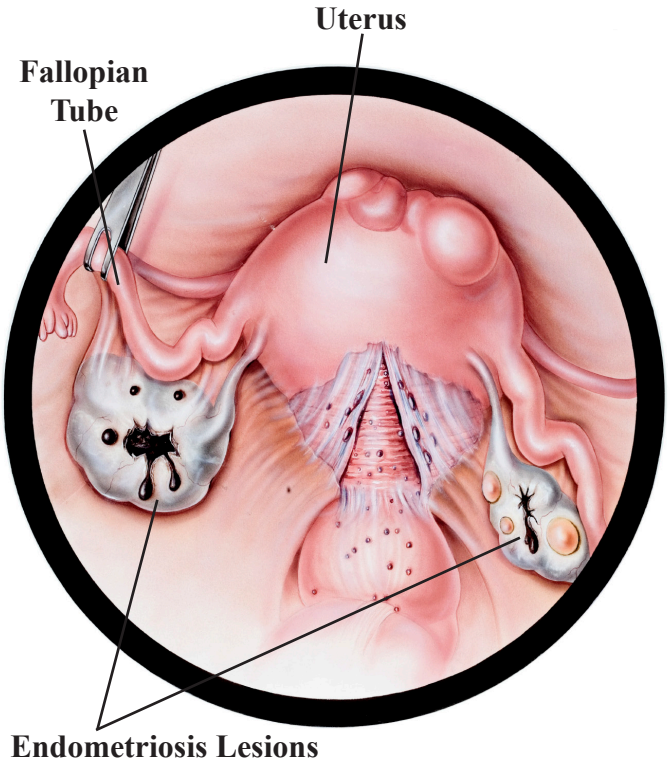
Surgery for Pelvic Pain and Endometriosis

www.bcwomens.ca

There are many different types of surgery for pelvic pain and endometriosis. The type that will most benefit a woman depends on the extent of her endometriosis and whether she wishes to remain fertile. If a woman hopes to someday become pregnant, the best treatment is done using laparoscopy.

Laparoscopy is a surgical procedure in which a laparoscope, a small telescope-like instrument is inserted into the abdomen through a small incision. It is used to diagnose and treat various conditions, including endometriosis.

Endometriosis lesions are spots of inflammation and endometrial tissue in the pelvis or on its lining (the peritoneum). A doctor can palpate (touch) the pelvis during an office visit to find and map these tender areas. Pain mapping may identify these areas even when they are very subtle (e.g., small white spots or little blisters). Other conditions can also be identified through pain mapping. This may be useful for women who have had a previous "normal" laparoscopy but continue to have pain and tender areas.



During surgery we remove the abnormal areas and allow healthy tissue to form during healing. This can improve fertility and decrease pelvic pain. The uterus, tubes or ovaries are not removed. This is called "conservative" surgery. This type of surgery is most effective for women who have deep dyspareunia (pain with sexual intercourse) or pain and tenderness toward the sides of the pelvis (lateral). Our Centre has a low rate of complications and recurrence of endometriosis lesions with this surgery.

Women who have menstrual cramps (dysmenorrhea) or central pelvic pain due to endometriosis may have only limited relief from laparoscopy. These symptoms are often caused by the uterus itself and require other treatments in addition to surgery or a different surgical procedure. (*See Procedures to Help with Central Pain and Menstrual Cramping, page 3*).

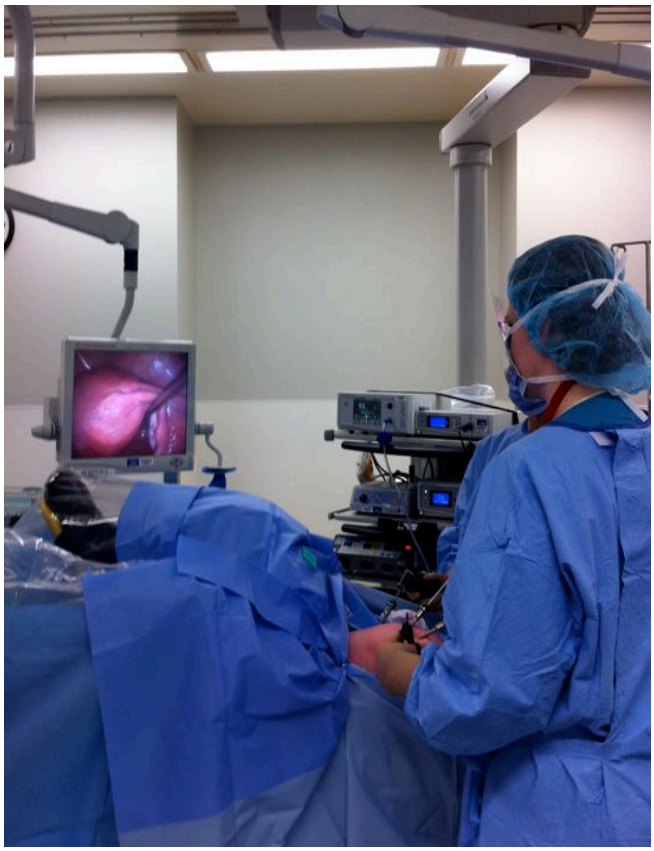
A. Procedures to Remove Endometriosis

1. *Laparoscopic Cautery* (burning the endometriosis lesions)

The first treatment for minimal to mild (stage I – II) endometriosis is to use laparoscopy and cautery (heat) to destroy the lesions. This is effective in many cases if the lesions are on the surface and do not have nodules. It is done as a daycare procedure. Most Gynecologists in British Columbia offer this service.

cont'd...

Laparoscopy



2. *Laparoscopic Excision of Endometriosis* (removing the endometriosis lesions)

If the lesions have nodules and are large and deeper, cautery may not be successful. It can also be risky if the lesions are on or near areas such as the bowel or ureters (urine drainage tubes). In these cases, and in cases where cautery has been tried and was not successful, laparoscopic excision may be more effective. During the procedure, the affected tissue is removed using electrosurgery. This helps prevent bleeding and scarring. After the tissue is removed, it is examined under a microscope to confirm the diagnosis. Healing occurs quickly (new peritoneum will cover the area one week later).

B. Procedures to Treat Endometriomas

Endometriosis on the ovaries and other areas may form cysts which are called endometriomas. The cysts may attach to the side of the pelvis and sometimes to the bowel. If the cysts leak, they cause pain, inflammation, and scarring. Endometriomas that are 4 cm or greater tend to grow and to leak.

We recommend removing the cysts if they are large or if a woman:

- has pelvic pain,
- is experiencing infertility, or
- is over 40, even if symptoms are not an issue.

There is some concern that cysts could become malignant (cancerous) in the future, but this has not been proven.

1. *Laparoscopic Ovarian Cystectomy and Excision of Endometriosis* (removal of the cysts and endometriosis lesions)

To remove the endometrioma,

- the ovary is separated from the structure it is attached to ,
- the cyst is drained,
- the shell of the cyst is separated from the ovary, and
- the ovary is left to heal naturally.

As the eggs surrounding the cyst are easily damaged, a careful surgical technique is very important. No stitches and minimal cautery are used in an effort to save as many eggs as possible.

Sometimes after the surgery there may not be enough remaining ovarian tissue for the ovary to function. This may occur if a woman has had a previous cyst removed or is over 40 and has not gone through menopause. It may also happen when the endometriomas are large, have leaked, and the ovary has become attached to other structures.

The cysts are attached to the other structures by plaques of endometriosis. If pain is the main problem, the plaque(s) may be removed at the same time as the cyst is removed. Otherwise the plaque(s) may continue causing pain, and need to be removed later.

At times, an endometrioma is in a place that is covered completely by attachments to the bowel and uterus. This is not common, and is most often seen in women who have had open abdominal surgery. In such cases, the cysts cannot be reached by laparoscopy and so, a laparotomy (“bikini incision”) is done.

2. *Laparoscopic Salpingoophorectomy*
(removal of ovary(ies) and fallopian tubes)

Sometimes it is necessary to remove an ovary to get permanent relief from pain. When an ovary is removed, the fallopian tube is also usually removed as it is closely attached to the ovary and has no useful function when the ovary is gone. There is also some recent evidence indicating that the fallopian tubes may be the cause of some cancers that were previously thought to be ovarian in origin.

Removing an ovary (and tube) is a good choice for women who have:

- cysts that recur,
- thick scar tissue attachments,
- large areas of endometriosis on the pelvic sidewall,
- had other unsuccessful surgeries for their pain, or
- do not want any more pregnancies.

The removal of one ovary does not affect hormone levels or the timing of menopause. It also does not affect pregnancy rates. Despite these facts, removal of one ovary is always considered a last resort.

For women who have completed their families and have severe pain on both sides, we recommend removing both ovaries, fallopian tubes and all of the endometriosis and scar tissue.

This gives the best chance for "pelvic silence".

Removal of the ovaries and fallopian tubes can be done by laparoscopy most of the time, even for advanced disease (85%). Sometimes a laparotomy is required.

A laparotomy is a more complex procedure and has a higher risk of complications. If a laparotomy is required, you will be in hospital for 24 to 48 hours and your recovery time will be longer, 4-6 weeks in some cases. Sometimes, it is necessary to involve another specialist in your care (another gynecologist, a urologist, or a bowel surgeon.) We will talk to you about the option that is best for you.

There is an excellent overview of endometriosis surgeries at www.endometriosis.org, click on "surgery".

C. Procedures to Help With Central Pain and Menstrual Cramping

The following treatments can help women who:

- have both central pain and severe menstrual camping, or
- cannot tolerate hormone treatments such as birth control pills or progestins.

These treatments are usually done at the same time as surgery to remove endometriosis and endometriomas.

1. *Levonorgestrel (Mirena®) IUD*
(Intrauterine Device)

The levonorgestrel (Mirena®) IUD is inserted into the uterus. It releases a steady dose of Progestin which affects the uterus but does not circulate throughout the body. This hormone stops the effects of estrogen on the lining of the uterus (endometrium). As a result, the lining does not produce the prostaglandins that cause muscles to cramp. This relaxes the muscles of the uterus and also decreases inflammation and pain.

The small dose of Progestins in this IUD does not stop ovulation, so the usual hormone cycle continues. The period is much lighter than before but spotting or irregular bleeding can occur for the first few months. Within one year, most women have very little menstrual flow. The IUD provides protection from pregnancy for five years. When it is removed, a woman becomes fertile again after 4 to 8 weeks.

Many studies show that this IUD can help to relieve a woman's menstrual pain. It can also increase the time she is free of symptoms after surgery for pelvic pain.

If you choose this option, you will need to buy the IUD at a Pharmacy (approximately $350.00.) Bring it on the date of your surgery. It works best to insert the IUD during a menstrual period to minimize abnormal bleeding. If surgery will

not be during your period, it helps to thin the endometrium by:

1. Taking birth control pills for 2 to 4 weeks before your surgery date, and
2. Stopping the birth control pills 4 days before your surgery date.

If you cannot take birth control pills, a progestin or other hormonal preparation may be considered.

2. *Laparoscopic Presacral Neurectomy*
(removal of a group of nerves)

Presacral neurectomy is the surgical removal of the group of nerves that send pain signals from the uterus to the brain.

One study showed that this procedure increases the amount of time a woman is pain-free and reduces her overall pain. The only side effects were mild constipation and sometimes, difficulty with urination. There have been other studies of presacral neurectomy but the results have not been clear.

This procedure is done by laparoscopy. It has a small, but real risk of complications because it is in an area of the pelvis that is close to major blood vessels. That means that any injury of the blood vessels requires open surgery and possibly blood transfusions. Our Centre has not had any complications after 50 procedures. We believe it is a "second line" option for women with extremely severe dysmenorrhea who cannot tolerate hormone treatments.

3. *Laparoscopic Uterine Suspension*
(lifting of the uterus)

The position of the uterus in the pelvis may be anteverted (body of the uterus is tipped forward toward the bladder) or retroverted (body of the uterus is tipped backward and faces the top of the back part of the vagina). If it is in the retroverted position, it can be hit during intercourse and cause pain. Pain mapping helps to identify this problem.

In this procedure, a stitch is put in the round ligaments that hold the uterus to make them shorter. This pulls the uterus back up into an anteverted position. The only complication may be a pulling sensation in the groin area, which is temporary and usually goes away within 1 - 2 weeks. In a small number of cases, the ligaments stretch over time and cause the uterus to go back to its retroverted position causing the pain to return. Fertility and pregnancy are not affected by this procedure.

D. Complications:

Laparoscopic procedures seldom have complications and any problems that occur are usually minor (urinary infection, bleeding or infection at the small incision). Major complications are very rare (less than one in 1000 cases) but it is important to be aware of them.

Major complications that can occur during surgery are:

- excessive bleeding (hemorrhage)
- injury to the bowel
- injury to the bladder or ureter (urine drainage tube)

In these cases the abdomen may need to be opened with an incision (laparotomy) to repair the problem.

Post-operative complications may include:

- Hemorrhage - If there are many small blood vessels that have been cauterized, they may re-open and continue to bleed or form a hematoma (blood clot) Hematomas usually heal on their own but can make recovery slower and more painful. A blood transfusion and laparotomy may be needed to stop the bleeding.
- Bowel obstruction - A bowel obstruction after laparoscopic surgery is very unusual but is more common after a laparotomy (1 in 200 cases). The bowel may attach to the surgical area during healing. It is usually managed in hospital without surgery, but some cases may require a second surgery to repair.
- Infection - Infection is very rare. A kidney and bladder infection may develop if a

catheter is used during surgery. Sometimes the area around the incision becomes infected. This can be easily treated.

- Cautery injury to the ureters, bladder or bowel - These are extremely rare but possibly life-threatening complications. They need to be treated as an emergency. We will give you detailed information about the signs and symptoms of these complications and contact information, when you are discharged after your procedure.

E. Recovery

The recovery time from laparoscopy varies. After laparoscopic surgery for excision of endometriosis, most women can return to regular activities after one week. If the procedure is for diagnosis only, most return to regular activities within 2 days.

When the procedure is more involved, it may take 2 weeks to fully recover. If a laparotomy was required, recovery can take 4-6 weeks. After the procedure, you should gradually feel better each day.

It is important to listen to your body and not overdo activities such as heavy lifting, aerobic exercise and sexual activity. Wait until there is little pain (2 to 4 weeks).

Contact us if, after surgery, you:

- have increasing abdominal pain,
- have an enlarged abdomen,
- vomit,
- have a fever (temperature above 38C or 100F),
- feel very weak,
- faint, or
- have chest pain, difficulty breathing or leg pain/swelling.

Call our Registered Nurse at 604-875-2580 during office hours or go to an Emergency Room (take your post-operative letter). If you live in the Vancouver area, our doctors are part of a call group at Vancouver General Hospital for after-hours care.

F. Scheduling Your Procedure:

If you make the decision to have surgery while you are at an office appointment, you will be able to complete the required forms at that time and then you will be put on a waiting list. We will contact you to tell you the date of your surgery. We will mail you a list of instructions as soon as your surgical date is confirmed. If you need to cancel your surgery for any reason please give us at least two weeks' notice. Last minute cancellation results in non-use of precious operating room time and will affect other women who are waiting.

After your procedure we will give you a note and possibly photographs that explain the procedure and the findings along with any other important details. This is your personal surgical record and should be taken to any doctor if you experience any problems.

If you have any questions about the scheduling of your procedure, please contact our **surgical booking secretary** at **604-875-2558.**

Developed by the BC Women's Centre for Pelvic Pain & Endometriosis http://www.womenspelvicpainendo.com/