

Diagnostic Hysteroscopy Dilation and Curettage



Diagnostic hysteroscopy and dilation and curettage (D&C), are common gynecologic procedures performed to evaluate the inside of the uterus. Hysteroscopy allows your physician to see inside the uterine cavity (where you menstruate from) with a very small camera. This allows your physician to detect the presence of problems such as polyps (soft tissue growths) or fibroids (muscle growths) in the uterine cavity. If something is seen, it can usually be removed at the same time.

Dilation and curettage allows for removal of any tissue from the uterus to check for any pre-cancer or cancerous changes. This is often performed at the same time as a hysteroscopy. Hysteroscopic polypectomy is a surgery performed to remove uterine polyps. Uterine polyps are non-cancerous overgrowth of cells in the inner wall or lining of the uterus.

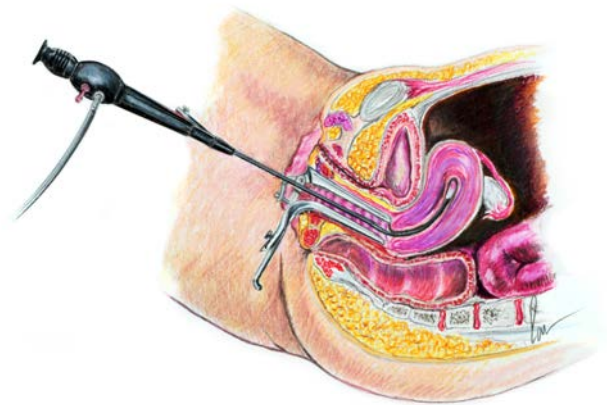
Why are these procedures performed?

Many women will experience abnormal uterine bleeding at some point during their lives. In many cases, evaluation of the uterus is an important part of the process. Hysteroscopy allows the physician to look directly inside the uterus, providing the most accurate diagnosis of possible causes of bleeding.

A very small camera, called a hysteroscope, is placed through the vagina, through the cervix (the opening of the uterus), and up into the uterine cavity. Tissue can be visualized and removed, either with the camera directly or with smaller instruments called curettes. The tissue is then evaluated by a pathologist who can check for the presence of changes such as cancer or precancer.

A woman may want to consider having a hysteroscopy and/or D&C if she has the following symptoms:

- Abnormal bleeding
- Heavy menstrual bleeding
- Difficulty becoming pregnant
- Bleeding after menopause



Top illustration: A cross section of the hysteroscope (camera) looking into the uterus. Bottom illustration: A hysteroscope viewing a polyp (growth) in the uterus.

Diagnostic Hysteroscopy, Dilatation and Curettage

What are the risks of this procedure?

While these are often referred to as minor procedures, as with any procedure, there are associated risks. These procedures can be performed in both an office setting as well as in the operating room (OR). Risks include:

- Risk of anesthesia (if performed in the OR)
- Bleeding
- Infection
- Perforation (making a hole) of the uterine wall
- Scar tissue formation in the uterus
- Too much fluid that is used during the procedure may be absorbed into the patient

What should I expect after surgery?

Recovery from these procedures should be minimal with rapid return to normal activities within a few hours to 1-2 days.

- Mild-to-moderate uterine cramping that is treated with over-the-counter pain medication
- Minimal-to-moderate bleeding or spotting
- Symptoms related to the use of general anesthesia, such as sleepiness
- Your physician may instruct you to avoid use of tampons or avoid sexual intercourse for a short time after your procedure

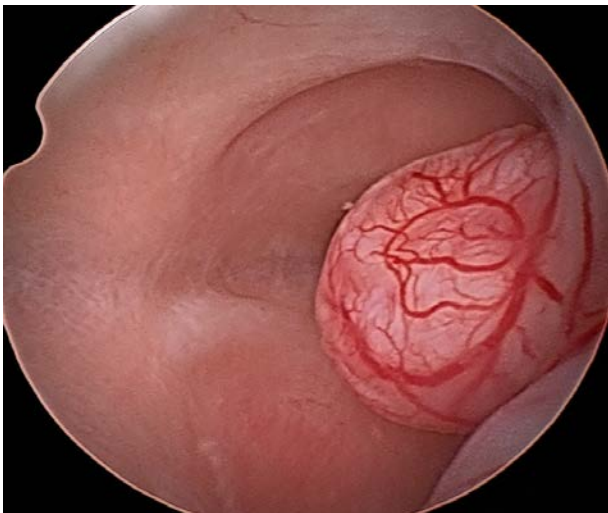


Image of a myoma in the uterine cavity

When should I call my doctor?

Significant complications from these procedures are unlikely. You should notify your health care provider if you experience the following:

- Difficulty breathing or shortness of breath
- Temperature above 100 degrees
- Severe nausea and vomiting
- Severe or heavy bleeding from the vagina
- Severe abdominal pain

Hysteroscopic Myomectomy



Uterine fibroids (also called myomas) are benign (non-cancerous) tumors that originate in the uterus and are made primarily of muscle tissue. Fibroids are the most common pelvic tumor in women and vary widely in size, number, and location within the uterus. If fibroids are located partially or totally inside the uterine cavity (where menstrual bleeding occurs) then they are called submucous. Approximately ten percent of all fibroids are the submucous type.

Submucous fibroids can cause heavy menstrual bleeding, painful menstrual periods (dysmenorrhea or cramps), and are a common cause of infertility (inability to become pregnant). Hysteroscopic myomectomy is the technique of removing uterine fibroids from inside the uterine cavity. This is performed under direct vision with the use of a small camera called a hysteroscope. It is a safe and effective procedure with minimal or no damage to the normal tissue of the uterus.

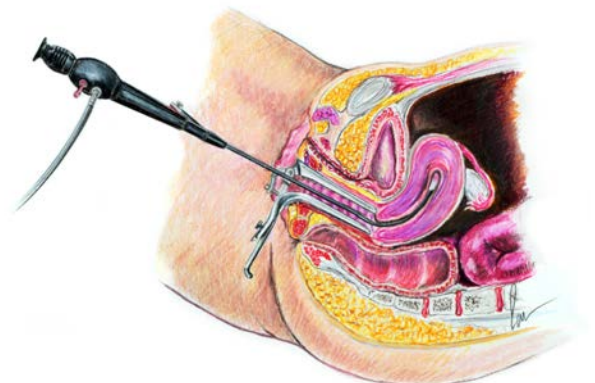
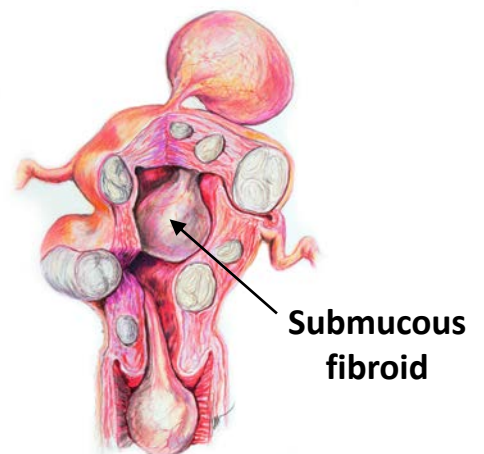
Why is hysteroscopic myomectomy performed?

By the time a woman is 50-years-old, she will have about a 50% chance of having fibroids. This likelihood can be higher for women in families with other female relatives who also have fibroids, such as a mother or sisters.

A gynecologist with specialized training or interest performs a hysteroscopic myomectomy. Specialized instruments such as a loop with electricity or a mechanical cutting device are used with the hysteroscope to remove submucous myomas.

A woman may want to consider having a hysteroscopic myomectomy if she has the following symptoms:

- Abnormal bleeding
- Heavy menstrual bleeding
- Difficulty becoming pregnant
- Pain or cramping symptoms



Top illustration: A uterus with different types of fibroids. Bottom illustration: A cross section of the hysteroscope (camera) looking into the uterus

Hysteroscopic Myomectomy

What are the risks of hysteroscopic myomectomy?

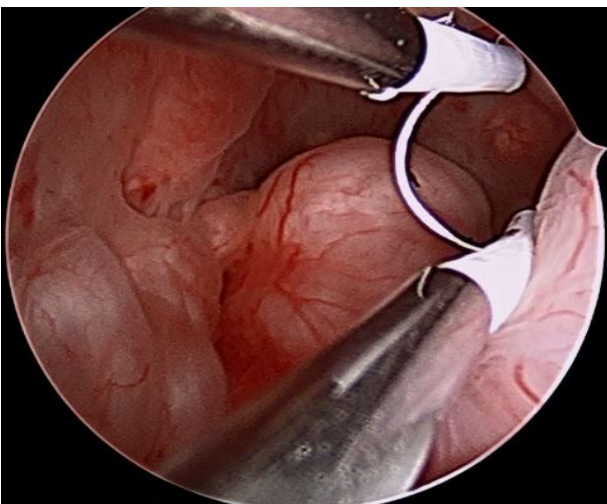
Every procedure will have some risk, or possibility of having a complication or bad outcome. Hysteroscopic myomectomy takes place entirely inside the uterine cavity and therefore has less risk to the patient than other types of surgeries that also treat fibroids. Some of the risks of hysteroscopic myomectomy include the following:

- Damage or cuts to the cervix, or opening of the uterus
- Putting a hole in the uterus, which may lead to more procedures
- Inability to completely remove the fibroid with one surgery
- Too much fluid that is used during the procedure may be absorbed into the patient
- Development of adhesions (scar tissue) inside the uterine cavity weeks or months after the procedure

What should I expect after surgery?

Because the entire procedure is performed inside the uterine cavity, symptoms after surgery are minimal. Generally, these symptoms will only last for several hours to a day or two after the procedure. Common symptoms after hysteroscopic myomectomy include the following:

- Mild-to-moderate uterine cramping that is treated with over-the-counter pain medication
- Bleeding or spotting that may be heavy or last for several weeks
- Symptoms related to the use of general anesthesia, such as sleepiness and fatigue
- Eventual improvement in bleeding issues or fertility (ability to get pregnant)



A small wire loop with electricity is used with a hysteroscope (camera) to remove fibroids

When should I call my doctor?

Serious complications following hysteroscopic myomectomy are not likely to happen. However, notify your surgeon if you experience any the following symptoms:

- Difficulty breathing or shortness of breath
- Temperature above 100 degrees
- Severe nausea and vomiting
- Severe or heavy bleeding from the vagina
- Inability to urinate or have a bowel movement

Laparoscopic or Robotic Myomectomy



Uterine fibroids (also called myomas) are non-cancerous growths that originate from the uterus. Up to 70% of women will have fibroids by age 50, and 25% of these women will have significant symptoms. Symptoms of uterine fibroids can include heavy menstrual bleeding, prolonged periods, pelvic pain, pressure on other organs (called bulk symptoms), or planning your life around periods. Symptoms often depend on the size and location of the fibroids in the uterus.

Laparoscopic or robotic myomectomy is a procedure for removing uterine fibroids (growths). Your surgeon first makes a few small surgical cuts in your abdomen (or belly). She then places a small camera through one of these cuts to see inside. She uses the other small surgical cuts to insert tiny (robotic) instruments that can remove the fibroids (growths) in little pieces. This is called minimally-invasive surgery because the small size cuts are less damaging for your body. The other way surgeons perform an abdominal myomectomy is to make one large surgical cut in your abdomen (usually 5 to 7 inches long). Women who have laparoscopic (or minimally invasive) myomectomies recover more quickly, have less pain, and have fewer infections.

Why is this procedure performed on patients?

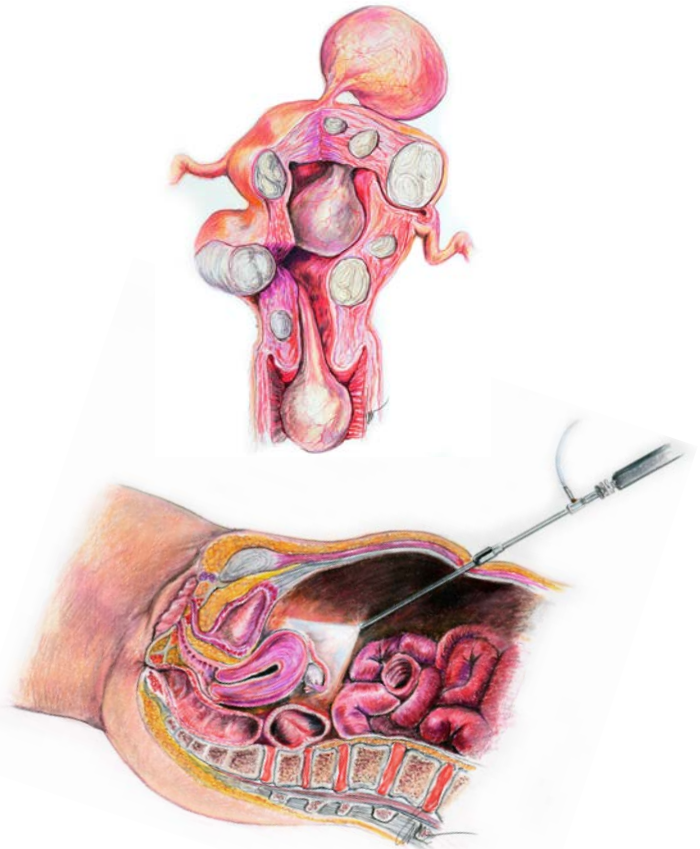
Laparoscopic or robotic myomectomy is used for women with symptomatic fibroids who want to save their uterus.

Benefits of the surgery:

- Saves the uterus
- Removes the entire fibroid
- Faster recovery than traditional abdominal surgery done through a large incision

Alternatives to this procedure can include:

- Not having any treatment
- Medication to manage bleeding
- Procedure to decrease blood supply to the uterus (uterine artery embolization)
- Burning of fibroids (radiofrequency ablation)
- Removal of uterus (hysterectomy)



Top illustration: Different types of fibroids in a uterus.
Bottom illustration: A cross-sectional view of a laparoscope (camera) inside the abdomen.

Laparoscopic or Robotic Myomectomy

What are the risks of this procedure?

There is a small chance of having a complication or problem when you have surgery. Your risk could be higher if you have had surgery before or have other medical conditions. Some risks include:

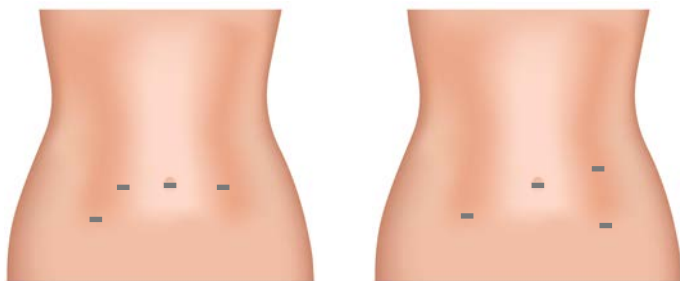
- Bleeding during or after the surgery
- Infection
- Injury to your bladder, intestines, or other structures near your uterus
- Blood clots in your legs or lungs
- Hernia (weakness or a tear in the wall of your abdomen)
- Need to switch to a laparotomy (surgery through one large incision)
- Up to a 30% chance of recurrence of fibroids requiring further treatment or repeat surgery
- Complications in pregnancy including requiring a C-section for delivery and need for closer monitoring in pregnancy (please consult an obstetrician early in pregnancy)

What should I expect after surgery?

Everyone recovers at a different pace after surgery. Many patients are able to get back to most of their usual activities by two weeks after surgery. Common symptoms after laparoscopic treatment of fibroids include:

- Irregular vaginal bleeding
- Fatigue or sleepiness from anesthesia
- Pain or cramping in your stomach and soreness from your surgical cuts
- Shoulder pain
- Constipation (difficulty emptying bowels)

Do not put anything in your vagina for at least two weeks (no tampons or sexual intercourse).



Examples of laparoscopic and robotic myomectomy surgical cuts

When should I call my doctor?

Serious problems after laparoscopy are uncommon, but notify your surgeon if you develop:

- Difficulty breathing or shortness of breath
- Heavy vaginal bleeding
- Pain not controlled by your pain medications
- Severe nausea and vomiting
- A temperature over 100 degrees
- Trouble urinating or having a bowel movement

Laparoscopic or Robotic Treatment of Endometriosis



Endometriosis is a condition where tissue from inside the uterus implants outside the uterus. Endometriosis tissue is frequently located close to the ovaries (where eggs are made), fallopian tubes (tubes that carry eggs to the uterus), on the peritoneum (the inside lining of the abdomen or belly), or on other organs. It can be associated with the inability to get pregnant, abnormal bleeding, and pelvic pain (with or without periods, sexual intercourse, bowel movements or urination). It can also show up as a type of cyst on the ovary called an endometrioma or “chocolate cyst.”

Endometriosis is found by surgical intervention, examination (biopsy), and removal of the suspected tissue. A laparoscopy is the best approach for this purpose. Small incisions are made in the abdomen under general anesthesia and gas is used to stretch the abdomen. A camera or laparoscope is used to look directly at the pelvis and special instruments are used to remove any endometriosis tissue. It is important to have a complete discussion with your doctor before surgery. Because it is so difficult, this procedure requires a surgeon with specialized training in endometriosis surgery.

What is this procedure used for?

Some reasons to consider surgery in patients with suspected endometriosis are:

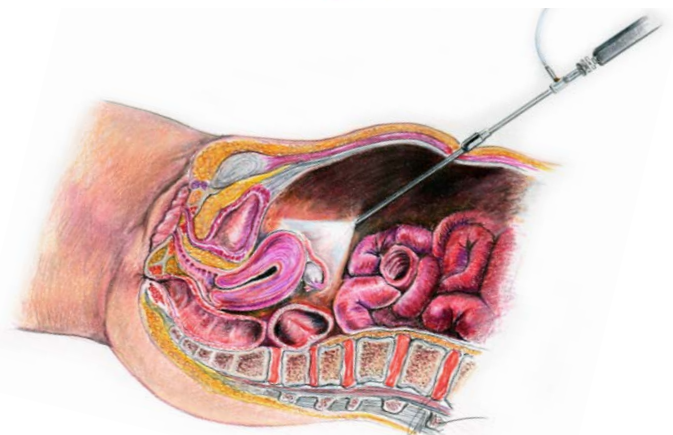
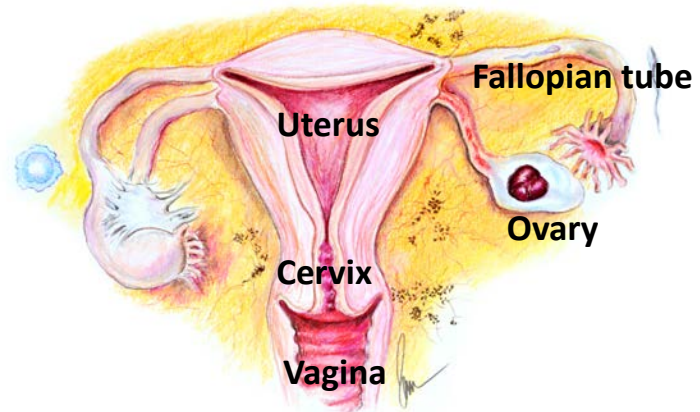
- Failed medical treatment
- Unresolved pain
- Endometriosis cysts
- Suspected involvement of other organs
- Infertility (inability to get pregnant)

The goals for endometriosis surgery are to:

- Confirm that the patient has the disease
- Remove endometriosis tissue
- Improve pain
- Restore normal body structure
- Treat infertility (inability to get pregnant)

Different surgical procedures can be offered for endometriosis. These include:

- Removing or burning endometriosis (excision or ablation)
- Ovarian cystectomy (removal of endometrioma cyst)
- Removal of endometriosis deep within the reproductive organs (deep infiltrating endometriosis)
- Removal of uterus with or without ovaries



Top illustration: Endometriosis implants and scarring (adhesions). Bottom illustration: A cross-sectional view of a laparoscope (camera) inside the abdomen.

Laparoscopic/Robotic Treatment of Endometriosis

What are the risks of this procedure?

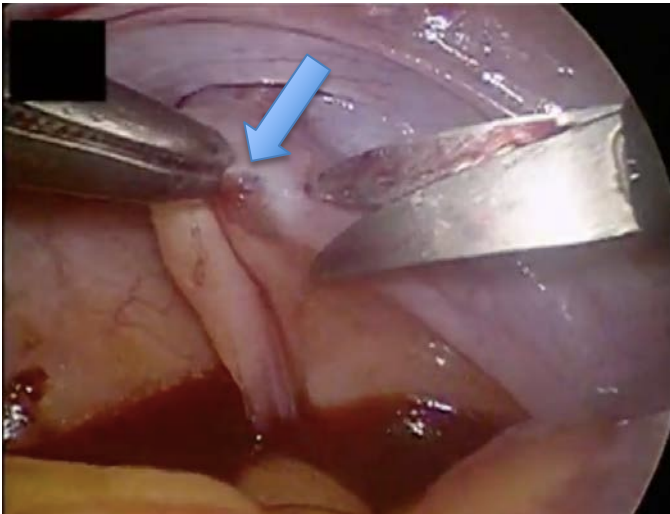
Every surgery has a small risk or possibility of having complications. Laparoscopy is generally safer than open abdominal surgery. A gynecologist who is experienced with treating endometriosis is less likely to have serious complications in patients. Some of the risks associated with endometriosis surgery include:

- Bleeding during or after the surgery
- Infection
- Injury to your bladder, intestines, or other structures near your uterus
- Blood clots in your legs or lungs
- Need to switch to a laparotomy (surgery through one large incision)
- Continued pain after surgery
- Regrowth of endometriosis
- Loss of organs damaged by endometriosis, such as fallopian tubes (which carry eggs from the ovaries to the uterus) or ovaries (where eggs are produced)

What should I expect after surgery?

With a laparoscopic or robotic approach there is less pain, a shorter hospital stay, and faster recovery when compared with open abdominal surgery. Everyone recovers at a different pace after surgery. Many patients are able to get back to most of their usual activities by 1-2 weeks after surgery. Common symptoms after a laparoscopy include:

- Irregular vaginal bleeding
- Fatigue or sleepiness from anesthesia
- Pain or cramping in your stomach and soreness from your surgical cuts
- Shoulder pain
- Constipation (difficulty emptying bowels)



Excising endometriosis lesion (at arrow tip)

When should I call my doctor?

Most women make a full recovery after endometriosis surgery. Call your doctor if you experience the following symptoms:

- Difficulty breathing or shortness of breath
- Heavy vaginal bleeding
- Pain not controlled by your pain medications
- Severe nausea and vomiting
- A temperature over 100 degrees
- Trouble urinating or having a bowel movement

Laparoscopic Radiofrequency Ablation of Fibroids



Uterine fibroids (also called myomas) are non-cancerous growths that originate from the uterus. Up to 70% of women will have fibroids by age 50, and 25% of these women will have significant symptoms. Symptoms of uterine fibroids can include heavy menstrual bleeding, prolonged periods, pelvic pain, pressure on other organs (called bulk symptoms), or planning your life around periods. Symptoms often depend on the size and location of the fibroids in the uterus.

Laparoscopic radiofrequency ablation of fibroids (known as Acessa) is a procedure that uses heat to destroy fibroid tissue. Your surgeon places a camera through two small surgical cuts: one in the belly button and one in the skin over the lower abdomen (belly). Your surgeon looks inside your abdomen and inserts small instruments to destroy the fibroids (or growths) with heat and energy.

Why is this procedure performed?

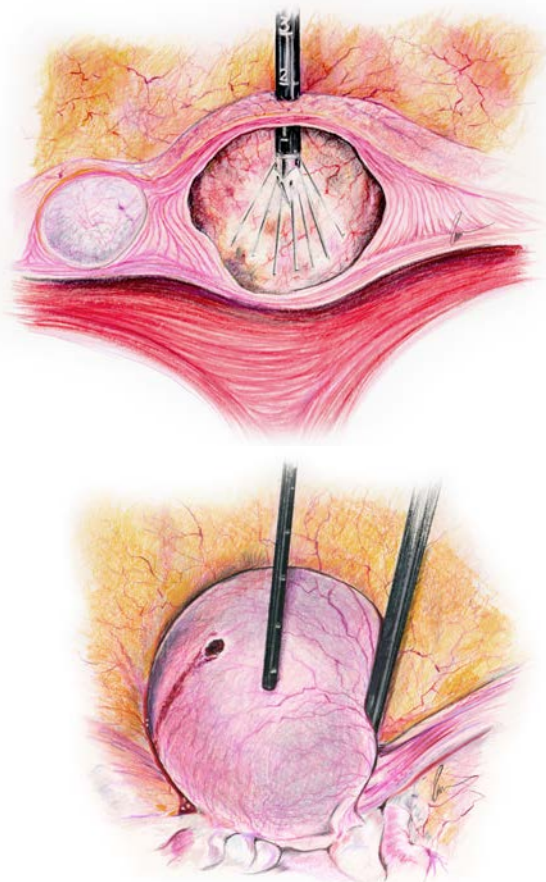
Laparoscopic radiofrequency ablation of fibroids is used for women with symptomatic fibroids who want to save their uterus.

Benefits of the surgery:

- Saves the uterus
- No surgical cuts on the uterus
- Faster recovery than traditional abdominal surgery done through a large incision

Alternatives to this procedure can include:

- Not having any treatment
- Medication to manage bleeding
- Procedure to decrease blood supply to the uterus (uterine artery embolization)
- Removal of fibroids (myomectomy)
- Removal of uterus (hysterectomy)



Top illustration: Heat and energy destroying fibroid tissue inside uterus. Bottom illustration: Laparoscopic method used to see and burn fibroids.

Laparoscopic Radiofrequency Ablation of Fibroids

What are the risks of this procedure?

There is a small chance of having a complication or problem when you have surgery. Your risk could be higher if you have had surgery before or have other medical conditions. Some risks include:

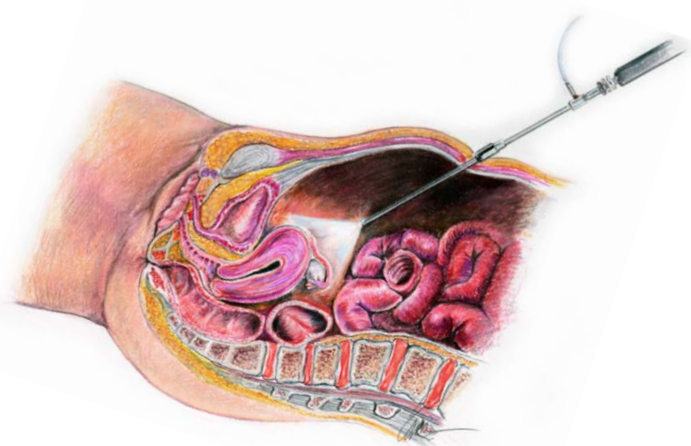
- Bleeding during or after the surgery
- Infection
- Injury to your bladder, intestines, or other structures near your uterus
- Blood clots in your legs or lungs
- Hernia (weakness and a tear in the wall of your abdomen)
- Need to switch to a laparotomy (surgery through one large surgical cut)
- Up to a 30% chance of recurrence of fibroids requiring further treatment or repeat surgery
- Complications in pregnancy including requiring a C-section for delivery and need for closer monitoring in pregnancy (please consult an obstetrician early in pregnancy)

What should I expect after surgery?

Everyone recovers at a different pace after surgery. Many patients are able to get back to most of their usual activities by one to two weeks after surgery. Common symptoms after laparoscopic treatment of fibroids include:

- Irregular vaginal bleeding
- Fatigue or sleepiness from anesthesia
- Pain or cramping in your stomach and soreness from your surgical cuts
- Shoulder pain
- Constipation (difficulty emptying bowels)

Do not put anything in your vagina for at least two weeks (no tampons or sexual intercourse).



A cross-sectional view of a laparoscope (camera) inside the abdomen

When should I call my doctor?

Serious problems after laparoscopy are uncommon, but notify your surgeon if you develop:

- Difficulty breathing or shortness of breath
- Heavy vaginal bleeding
- Pain not controlled by your pain medications
- Severe nausea and vomiting
- A temperature over 100 degrees
- Trouble urinating or having a bowel movement

Laparoscopic Supracervical Hysterectomy



Hysterectomy is the second most common surgery performed in the United States. Laparoscopic supracervical hysterectomy is a minimally invasive method of removing the uterus. This means that the surgeon makes only small cuts in the belly to "minimize" or lessen injury to the body. Your surgeon places a camera (laparoscope) through one small cut to see inside of your abdomen and uses little instruments through the other surgical cuts to do your surgery. The uterus then is removed through one of the small cuts in your belly. Women who have a laparoscopic (minimally invasive) hysterectomy recover more quickly, have less pain, and have fewer injections than women who have one large surgical cut in the abdomen called an abdominal hysterectomy.

In a laparoscopic supracervical hysterectomy, a surgeon removes the top portion of your uterus (womb). Sometimes other reproductive organs are removed, including the fallopian tubes (tubes sending the eggs to the uterus), or ovaries (the egg producers). Your surgeon will decide which organs may need removal depending on your age, family history, and reason for surgery.

Why do surgeons perform this procedure?

This procedure may be useful for:

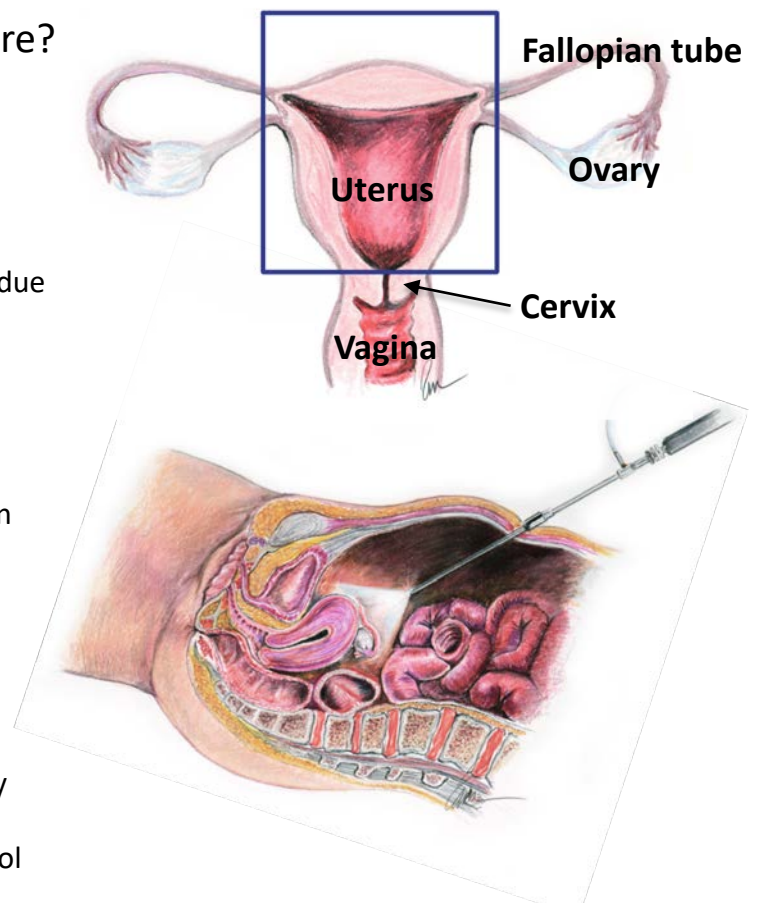
- Heavy bleeding
- Fibroids (non-cancerous muscular tumors)
- Prolapse (uterus dropping into the vagina)
- Patients whose surgery could not be completed due to a lot of scar tissue

This procedure is not good for patients with:

- Abnormal pap smears
- Cervical or uterine precancer or cancer
- Tissue from the uterus growing outside the organ (endometriosis)
- Chronic pelvic pain
- Patients at high risk for uterine cancer (family history, obesity)

Benefits of the surgery:

- Most women stop having periods (approximately 10% will still bleed monthly)
- No more pregnancies, so no need for birth control
- Improvement in symptoms related to periods



Top illustration: A supracervical hysterectomy removes the top part of the uterus. Bottom illustration: A cross-sectional view of a laparoscope (camera) inside the abdomen.

Laparoscopic Supracervical Hysterectomy

What are the risks of this procedure?

There is a small chance of having a complication or problem when you have surgery. Your risk could be higher if you have had surgery before or have other medical conditions. Some risks of laparoscopic supracervical hysterectomy include:

- Bleeding during or after the surgery
- Infection
- Injury to your bladder, intestines, or other structures near your uterus
- Blood clots in your legs or lungs
- Hernia (tear or weakness in the wall of your abdomen)
- Need to switch to a laparotomy (surgery through one large incision)
- Accidental spill of undetected cancerous tissue from uterus into abdomen
- Later need to remove cervix (opening to the uterus) due to precancerous changes, benign growths, bleeding, or persistent pain (approximately 25% of women)

What should I expect after surgery?

Everyone recovers at a different pace after surgery. Many patients are able to get back to most of their usual activities by two weeks after surgery, but full recovery can take six-to-eight weeks. Common symptoms after laparoscopic supracervical hysterectomy include:

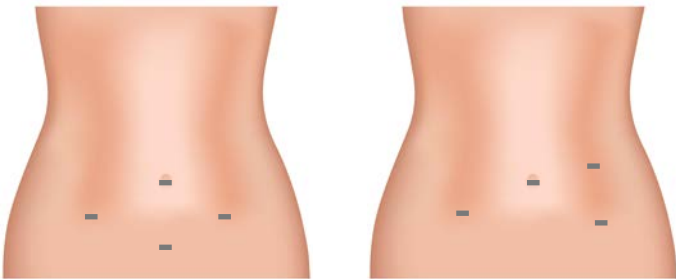
- Light vaginal bleeding
- Fatigue or sleepiness from anesthesia
- Pain or cramping in your stomach and soreness from your surgical cuts
- Shoulder pain
- Constipation (difficulty emptying bowels)

Do not put anything in your vagina for at least six weeks (no tampons or sexual intercourse). You will no longer be able to become pregnant. Most women do not experience any change in sexual function after hysterectomy.

When should I call my doctor?

Serious problems after total laparoscopic hysterectomy are uncommon, but notify your surgeon if you develop:

- Difficulty breathing or shortness of breath
- Heavy vaginal bleeding
- Pain not controlled by your pain medications
- Severe nausea and vomiting
- A temperature over 100 degrees
- Trouble urinating or having a bowel movement



Examples of laparoscopic hysterectomy surgical cuts

Total Laparoscopic Hysterectomy



Hysterectomy is the second most common surgery performed in the United States. Total laparoscopic hysterectomy is a minimally invasive method of removing the uterus. This means that the surgeon makes only small cuts in the belly to "minimize" or lessen injury to the body. Your surgeon places a camera (laparoscope) through one small cut to see inside of your abdomen and uses little instruments through the other surgical cuts to do your surgery. The uterus then is removed through the vagina or one of the small cuts in your belly. Women who have a laparoscopic (minimally invasive) hysterectomy recover more quickly, have less pain, and have fewer infections than women who have one large surgical cut in the abdomen called an abdominal hysterectomy.

In a total laparoscopic hysterectomy, a surgeon removes your whole uterus (womb) and the opening to the uterus (cervix). Sometimes other reproductive organs are removed, including the fallopian tubes (tubes sending the eggs to the uterus), or ovaries (the egg producers). Your surgeon will decide which organs may need removal depending on your age, family history, and reason for surgery.

Why do surgeons perform this procedure?

This procedure may be useful for:

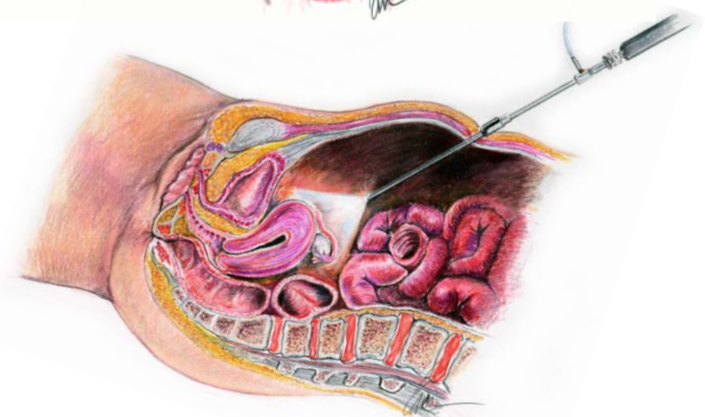
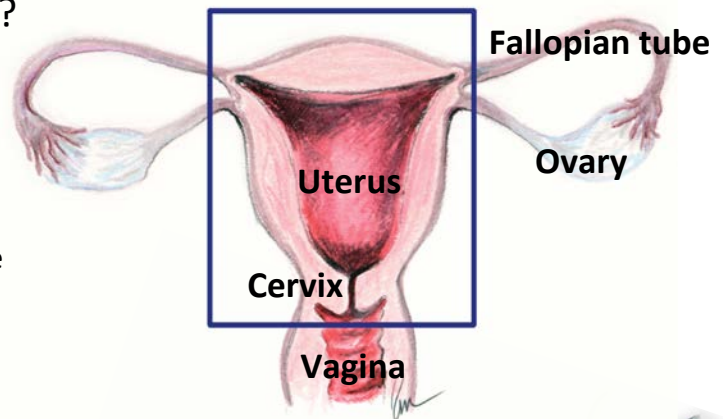
- Heavy bleeding
- Fibroids (non-cancerous muscular tumors)
- Pre-cancer or cancer in the uterus
- Endometriosis or adenomyosis (when uterine tissue grows outside your uterus or within the muscular walls of the uterus)
- Prolapse (uterus dropping into the vagina)

Benefits of the surgery:

- No more periods
- No more pap smears (for most women)
- No more pregnancies, so no need for birth control
- Improvement in pain related to periods

Alternatives to total laparoscopic hysterectomy depend on the reason for having surgery, but can include:

- Not having any treatment
- Medication to manage bleeding
- Procedure to decrease blood supply to the uterus
- Surgery to remove or burn part of the uterus
- Removing the uterus through the vagina or through one large cut in the abdomen



Top illustration: A total hysterectomy removes the whole uterus and cervix. Bottom illustration: A cross-sectional view of a laparoscope (camera) inside the abdomen.

Total Laparoscopic Hysterectomy

What are the risks of this procedure?

There is a small chance of having a complication or problem when you have surgery. Your risk could be higher if you have had surgery before or have other medical conditions. Some risks of total laparoscopic hysterectomy include:

- Bleeding during or after the surgery
- Infection
- Injury to your bladder, intestines, or other structures near your uterus
- Blood clots in your legs or lungs
- Tear in the stitches at the top of your vagina (called vaginal cuff separation)
- Hernia (tear or weakness in the wall of your abdomen)
- Need to switch to a laparotomy (surgery through one large incision)

What should I expect after surgery?

Everyone recovers at a different pace after surgery. Many patients are able to get back to most of their usual activities by two weeks after surgery, but full recovery can take six-to-eight weeks.

Common symptoms after total laparoscopic hysterectomy include:

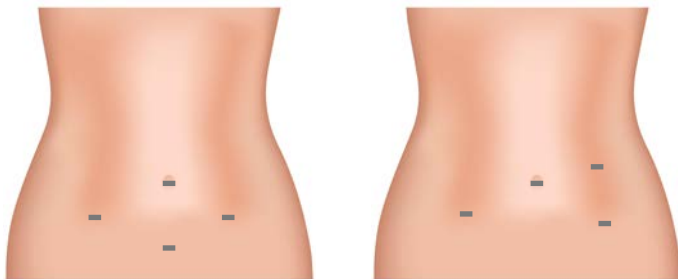
- Light vaginal bleeding
- Fatigue or sleepiness from anesthesia
- Pain or cramping in your stomach and soreness from your surgical cuts
- Shoulder pain
- Constipation (difficulty emptying bowels)

Do not put anything in your vagina for at least six weeks (no tampons or sexual intercourse). You will no longer have periods and will not be able to become pregnant. Most women do not experience any change in sexual function after hysterectomy.

When should I call my doctor?

Serious problems after total laparoscopic hysterectomy are uncommon, but notify your surgeon if you develop:

- Difficulty breathing or shortness of breath
- Heavy vaginal bleeding
- Pain not controlled by your pain medications
- Severe nausea and vomiting
- A temperature over 100 degrees
- Trouble urinating or having a bowel movement



Examples of laparoscopic hysterectomy surgical cuts