PATIENT EDUCATION

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Special Procedures • EP084

Hysteroscopy

*Hysteroscopy is a technique used to look inside the **uterus**. A hysteroscope is a thin, telescope-like device that is placed into the uterus through the **vagina** and **cervix**. It may help diagnose or treat a uterine problem.*

This pamphlet explains

- *reasons for having hysteroscopy*
- *what happens during the*
- *risks of the procedure*

What Is Hysteroscopy?

A hysteroscope is a thin, lighted telescope-like device. It is inserted through your vagina into your uterus. The hysteroscope transmits the image of your uterus onto a screen. This allows your health care professional to see the inside of the uterus during the procedure.

Hysteroscopy can be used to diagnose or treat a problem. Other instruments are used along with the hysteroscope for treatment. Some conditions can be treated right away.

Why Is It Done?

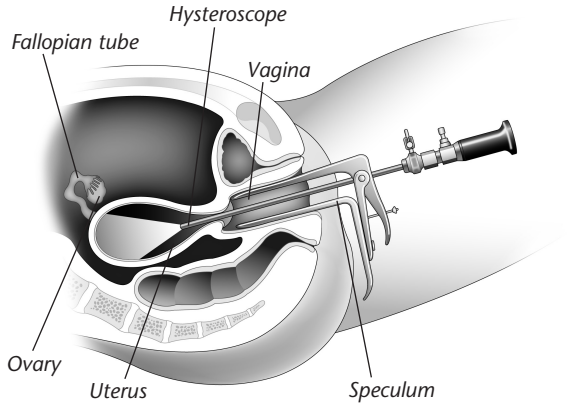
One of the most common uses for hysteroscopy is to find the cause of abnormal uterine bleeding. Abnormal bleeding can mean that a woman's periods are heavier or longer than usual or occur less or more frequently than normal. Bleeding between periods also is abnormal.

In some cases, abnormal bleeding may be caused by benign (not cancer) growths in the uterus, such as ***fibroids*** or ***polyps***. Hysteroscopy allows your health care professional to look for fibroids or polyps. If fibroids or polyps are found, a special instrument passed through the hysteroscope can be used to remove them. If no growths are found, a tissue sample can be obtained for ***biopsy***. If the sample of tissue does not reveal cancer but the bleeding persists, a hysteroscope with a heated instrument can stop the bleeding by destroying the lining of the uterus.

Hysteroscopy also is used in the following situations:

- Remove ***adhesions*** that may occur because of infection or from a past surgery
- Diagnose the cause of repeated ***miscarriage*** when a woman has more than two miscarriages in a row
- Locate an ***intrauterine device (IUD)***
- Perform ***sterilization***, in which the hysteroscope is used to place small implants into a woman's ***fallopian tubes*** as a permanent form of birth control

You should not have hysteroscopy if you are pregnant, have a vaginal or urinary tract infection, or if you have known cancer of the uterus. You and your health care professional will discuss your options and why hysteroscopy may be needed.



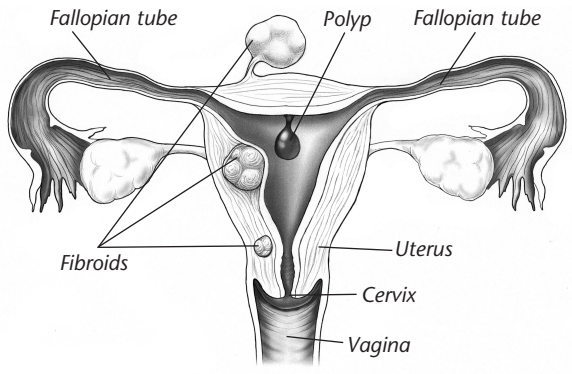
During hysteroscopy, a thin, lighted tube is inserted into the uterus to view its lining. Some conditions also can be treated with instruments passed through the hysteroscope.

What to Expect

Hysteroscopy can be done in a health care professional's office or at the hospital. It will be scheduled when you are not having your menstrual period. To make the procedure easier, your cervix may be dilated (opened) before your hysteroscopy. You may be given medication that is inserted into the cervix, or special dilators may be used.

Before the procedure begins, you may be given a medication to help you relax, or a general or local ***anesthetic*** may be used to block the pain. If you have general anesthesia, you will not be awake during the procedure.

A ***speculum*** is first inserted into the vagina. The hysteroscope then is inserted and gently moved through the cervix into your uterus. Carbon dioxide gas or a fluid, such as saline (salt water), will be put through the hysteroscope into your uterus to expand it. The gas or fluid helps your health care professional to see the lining more clearly. The amount of fluid used is carefully checked throughout the procedure. Your health care professional can see the lining of your uterus and the openings of the fallopian tubes by looking through the hysteroscope. If a biopsy or other procedure is done, your health care professional will use small tools passed through the hysteroscope, such as small scissors or a wire loop.



A fibroid is a benign growth that may form inside or sometimes outside the uterus. Polyps, which usually are benign, attach to the inner wall of the uterus.

Your Recovery

You should be able to go home shortly after the procedure. If you were given general anesthesia, you may need to wait until its effects have worn off.

It is normal to have some mild cramping or a little bloody discharge for a few days after the procedure. You may be given medication to help ease the pain. If you have a fever, chills, or heavy bleeding, call your health care professional's office right away.

Talk to your health care professional about when you can get back to your normal activities at work or home. For most women, it is the next day. You may be given instructions about when you can resume sex or use tampons.

Risks

Hysteroscopy is a very safe procedure. However, there is a small risk of problems. The uterus or cervix can be punctured by the hysteroscope, bleeding may occur, or excess fluid may build up in your system. In very rare cases, hysteroscopy can cause life-threatening problems. If a problem occurs during the procedure, it will be treated.

Make sure to talk with your health care professional if you have any questions about the risks of hysteroscopy. He or she will be able to explain how hysteroscopy is being used to find or treat your condition and what risks are involved.

Finally…

Hysteroscopy allows your health care professional to see the inside of the uterus. It can be used to diagnose some medical problems. Some of these conditions can be treated during hysteroscopy. The procedure and recovery time are brief in most cases. Talk with your health care professional if you have any questions about what will happen during a hysteroscopy.

Glossary

Adhesions: Scars that can make tissue surfaces stick together.

Anesthetic: A drug used to relieve pain.

Biopsy: A minor surgical procedure to remove a small piece of tissue. This tissue is examined under a microscope in a laboratory.

Cervix: The lower, narrow end of the uterus at the top of the vagina.

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

Fibroids: Growths that form in the muscle of the uterus. Fibroids usually are noncancerous.

Intrauterine Device (IUD): A small device that is inserted and left inside the uterus to prevent pregnancy.

Miscarriage: Loss of a pregnancy that is in the uterus.

Polyps: Abnormal tissue growths that can develop on the inside of an organ.

Speculum: An instrument used to hold open the walls of the vagina.

Sterilization: A permanent method of birth control.

Uterus: A muscular organ in the female pelvis. During pregnancy this organ holds and nourishes the fetus.

Vagina: A tube-like structure surrounded by muscles. The vagina leads from the uterus to the outside of the body.

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PATIENT EDUCATION

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WOMEN'S HEALTH CARE PHYSICIANS

Laparoscopy

Laparoscopy is a type of surgery. It is used to diagnose and treat many health problems. Over the past 20 years, laparoscopy has become fairly common. It often can be performed as an outpatient procedure.

This pamphlet explains

- *laparoscopic surgery*
- *reasons for having laparoscopy*
- *what happens during the procedure*
- *what you can expect during your recovery*
- *risks and benefits of laparoscopy*

Laparoscopic Surgery

Laparoscopy is a way of doing surgery using small incisions (cuts). It is different from "open" surgery where the incision on the skin can be several inches long. Laparoscopic surgery sometimes is called "minimally invasive surgery."

Laparoscopic surgery uses a special instrument called the ***laparoscope***. The laparoscope is a long, slender device that is inserted into the abdomen through a small incision. It has a camera attached to it that allows the ***obstetrician–gynecologist (ob-gyn)*** to view the abdominal and pelvic organs on an electronic screen. If a problem needs to be fixed, other instruments can be used. These instruments usually are inserted through additional small incisions in the abdomen. They sometimes can be inserted through the same single incision made for the laparoscope. This type of laparoscopy is called "single-site" laparoscopy.

Reasons You May Have Laparoscopy

Laparoscopy can be used to perform some of the surgical procedures that were once possible only with open surgery. For example, ***tubal sterilization*** can be done using laparoscopy. Laparoscopy is one of the ways that ***hysterectomy*** can be performed. In a laparoscopic hysterectomy, the uterus is detached from inside the body. It can be removed in pieces through small incisions in the abdomen or removed in one piece through the vagina.

Laparoscopy also may be used to look for the cause of symptoms like ***chronic pelvic pain***, a pelvic mass, or ***infertility***. If a problem is found, it often can be treated during the same surgery. Some medical conditions that laparoscopy is used to diagnose and treat include the following:

- ***Endometriosis***—If you have signs and symptoms of endometriosis and medications have not helped, a laparoscopy may be recommended. The laparoscope is used to see inside your pelvis. If endometriosis tissue is found, it often can be removed during the same procedure.
- ***Fibroids***—Fibroids are growths that form inside the wall of the uterus or outside the uterus. Most fibroids are ***benign*** (not cancer), but a very small number are ***malignant*** (cancer). Fibroids can cause pain or heavy bleeding. Laparoscopy sometimes can be used to remove them. Factors that determine whether laparoscopy can be used include the number of fibroids you have, their size, and their location.
- Ovarian ***cyst***—Some women have cysts (fluid-filled sacs) that develop on the ovaries. Over time, ovarian cysts often go away without treatment. But if they do not, your ob-gyn may suggest that they be removed with laparoscopy.
- ***Ectopic pregnancy***—Laparoscopy may be done to remove an ectopic pregnancy.
- ***Pelvic floor*** disorders—Laparoscopic surgery can be used to treat ***urinary incontinence*** and ***pelvic organ prolapse***.
- Cancer—Some types of cancer can be removed using laparoscopy.

What Happens During Surgery

Laparoscopy often is done as outpatient surgery. You usually can go home the same day. More complex procedures, such as laparoscopic hysterectomy, may require an overnight stay in the hospital. Laparoscopy usually is performed with ***general anesthesia***. This type of anesthesia puts you to sleep.

After you are given anesthesia, a small incision is made in or below your navel (belly button) or in another area of your abdomen. The laparoscope is inserted through this small incision. During the procedure, the abdomen is filled with a gas. Filling the abdomen with gas allows the pelvic reproductive organs to be seen more clearly.

The camera attached to the laparoscope shows the pelvic organs on a screen. Other small incisions may be made in the abdomen for surgical instruments. Another instrument, called a uterine manipulator, may be inserted through the vagina and ***cervix*** and into the uterus. This instrument is used to move the pelvic organs into view.

After the procedure, the instruments and most of the gas is removed. The small incisions are closed. There will be small scars that usually fade over time.

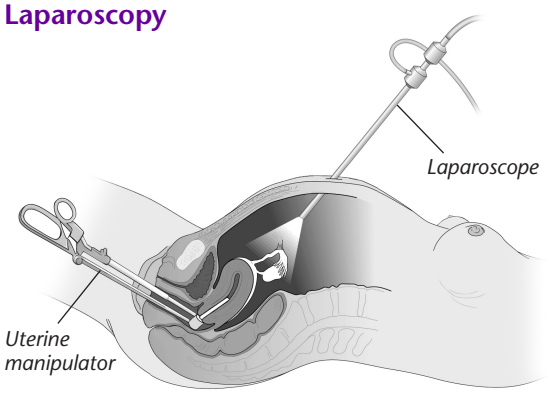
Your Recovery

After your surgery, you will be moved to the recovery room. You will feel sleepy for a few hours. You may have some nausea from the anesthesia. If you had outpatient surgery, you will need to stay in the recovery room until you can stand up without assistance and empty your bladder. You must have someone drive you home.

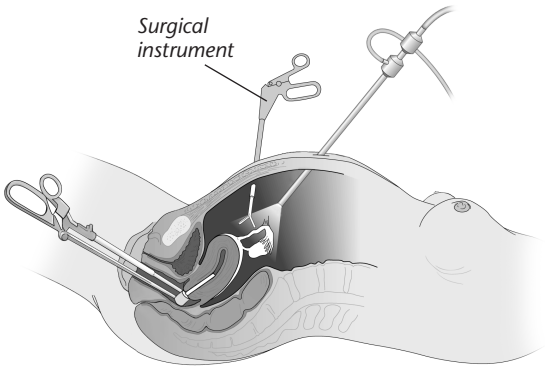
For a few days after the procedure, you may feel tired and have some discomfort. You may be sore around the incisions made in your abdomen and navel. The tube put in your throat to help you breathe during the surgery may give you a sore throat. Try throat lozenges or gargle with warm salt water. You may feel pain in your shoulder or back. This pain is from the small amount of gas used during the procedure that remains in your abdomen. It goes away on its own within a few hours or days. If pain and nausea do not go away after a few days or become worse, you should contact your ob-gyn.

Your ob-gyn will let you know when you can get back to your normal activities. For minor procedures, it is often 1–2 days after the surgery. For more complex procedures, such as hysterectomy, it can take longer. You may be told to avoid heavy activity or exercise.

Laparoscopy



The laparoscope is placed through a small incision (cut) made below or inside the navel (belly button). The laparoscope shows images of the pelvic organs on a screen. A uterine manipulator moves the organs into view.



If needed, other small incisions may be made in the abdomen for surgical instruments.

Contact your ob-gyn right away if you have any of the following signs or symptoms:

- Fever
- Pain that is severe or gets worse
- Heavy vaginal bleeding
- Redness, swelling, or discharge from the incision
- Fainting
- Inability to empty your bladder

Risks and Benefits

Laparoscopy has many benefits. There is less pain after laparoscopic surgery than after open abdominal surgery, which involves larger incisions, longer hospital stays, and longer recovery times. Recovery from laparoscopic surgery generally is faster than recovery from open abdominal surgery. The smaller incisions that are used allow you to heal faster and have smaller scars. The risk of infection also is lower than with open surgery.

As with any surgery, there also is a small risk of problems with laparoscopy. Laparoscopy can take longer to perform than open surgery. The longer time under anesthesia may increase the risk of complications. Sometimes complications do not appear right away but occur a few days to a few weeks after surgery. Problems that can occur with laparoscopy include the following:

- Bleeding or a hernia (a bulge caused by poor healing) at the incision sites
- Internal bleeding
- Infection
- Damage to a blood vessel or other organ, such as the stomach, bowel, bladder, or ***ureters***

The risk of a problem occurring is related to the type of surgery that is performed, whether you have other medical conditions, such as diabetes mellitus, and whether you have had previous surgery. Surgery also is riskier if you are obese. Obesity increases the risk of wound healing problems, infections, and blood clots (a condition called ***deep vein thrombosis [DVT]***).

In a few cases, the surgeon starts to do a laparoscopy but then decides that open surgery would be a better option. It is not completely possible to predict beforehand how the surgery will be done. It is best to be prepared for the possibility that you may not be able to have laparoscopic surgery and instead need open surgery, which has a longer recovery time.

Before deciding to have any type of surgery, make sure that you know about other ways your condition can be treated, such as medications. Discuss what will be done during your surgery and the specific risks associated with your surgery.

Finally…

Laparoscopy is a way to perform surgery without making a large incision. It has many benefits over other types of surgery but also carries some risks. Keep in mind that laparoscopy is still surgery. You will need time to rest and recover afterward.

Glossary

Benign: Not cancer.

Cervix: The lower, narrow end of the uterus at the top of the vagina.

Chronic Pelvic Pain: Pain in the pelvic region that lasts for more than 6 months.

Cyst: A sac or pouch filled with fluid.

Deep Vein Thrombosis (DVT): A condition in which a blood clot forms in veins in the leg or other areas of the body.

Ectopic Pregnancy: A pregnancy in a place other than the uterus, usually in one of the fallopian tubes.

Endometriosis: A condition in which tissue that lines the uterus is found outside of the uterus, usually on the ovaries, fallopian tubes, and other pelvic structures.

Fibroids: Growths that form in the muscle of the uterus. Fibroids usually are noncancerous.

General Anesthesia: The use of drugs that create a sleep-like state to prevent pain during surgery.

Hysterectomy: Surgery to remove the uterus.

Infertility: The inability to get pregnant after 1 year of having regular sexual intercourse without the use of birth control.

Laparoscope: A thin, lighted telescope that is inserted through a small incision (cut) in the abdomen to view internal organs or to perform surgery.

Laparoscopic Surgery: A type of surgery that uses a thin, lighted telescope and other devices inserted through small incisions (cuts) in the abdomen.

Laparoscopy: A surgical procedure in which a thin, lighted telescope called a laparoscope is inserted through a small incision (cut) in the abdomen. The laparoscope is used to view the pelvic organs. Other instruments can be used with it to perform surgery.

Malignant: A way to describe cells or tumors that are able to spread to other parts of the body.

Obstetrician–Gynecologist (Ob-Gyn): A doctor with special training and education in women's health.

Pelvic Floor: A muscular area that supports a woman's pelvic organs.

Pelvic Organ Prolapse: A condition in which a pelvic organ drops down. This condition is caused by weakening of the muscles and tissues that support the organs in the pelvis, including the vagina, uterus, and bladder.

Tubal Sterilization: A method of sterilization for women. The fallopian tubes are tied, banded, clipped, or sealed with electric current. Tubes also can be blocked by scar tissue from insertion of small implants. The tubes also can be removed.

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

Urinary Incontinence: Uncontrolled loss of urine.

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Special Procedures • EP008

Hysterectomy

*Hysterectomy is a way of treating problems that affect the **uterus**. Because hysterectomy is major surgery, it is a good idea to think about other treatment options first. For problems that have not improved with other treatments, a hysterectomy may be the best choice. You should know all of your options before you decide.*

This pamphlet explains

- *reasons for having a hysterectomy*
- *alternatives to hysterectomy*
- *how hysterectomy is done*
- *types of hysterectomy*
- *removal of **ovaries** and **fallopian tubes***
- *risks and recovery*

Reasons for Hysterectomy

Hysterectomy is surgery to remove the uterus. It is a very common type of surgery for women in the United States. Hysterectomy is used to treat many women's health conditions. Some of these conditions include the following:

- Uterine ***fibroids*** (this is the most common reason for hysterectomy)
- ***Endometriosis***
- Pelvic support problems (such as ***uterine prolapse***)
- Abnormal uterine bleeding
- Chronic pelvic pain
- Gynecologic cancer

Other Treatment Options

A hysterectomy is major surgery. Depending on your condition, you may want to try other options first that do not involve surgery or to "watch and wait" to see if your condition improves on its own.

Removing the uterus means that you can no longer become pregnant. Some women wait to have a hysterectomy until after they have completed their families.

If you choose another option besides hysterectomy, keep in mind that you may need additional treatment later. For many conditions, hysterectomy may be your best option for treatment. Talk with your health care professional about the safety of each treatment option and how well it might work for your specific condition.

How Hysterectomy Is Done

A hysterectomy can be done in different ways: through the ***vagina***, through the abdomen, or with ***laparoscopy*** (see table "Ways Hysterectomy Is Performed"). The choice will depend on why you are having the surgery and other factors. Sometimes, the decision is made after the surgery begins and the surgeon is able to see whether other problems are present.

Vaginal Hysterectomy

In a vaginal hysterectomy, the uterus is removed through the vagina. There is no abdominal incision. Vaginal hysterectomy generally causes fewer complications than abdominal or laparoscopic surgery. Healing time may be shorter than with abdominal surgery, with a faster return to normal activities. It is recommended as the first choice for hysterectomy when possible.

Table 1. Ways Hysterectomy Is Performed

Description	*Advantages*	*Disadvantages*
Vaginal		
Uterus is removed through the vagina	• No visible scar • Compared with abdominal surgery: – Shorter operating time – Shorter hospital stay – Faster return to normal activity – Fewer infections – Less pain	Not always possible if adhesions are present or the uterus is very large
Abdominal		
Uterus is removed through an incision in the lower abdomen	• Can be done if ***adhesions*** are present • Can be done on a large uterus • Gives surgeon a good view	Compared with vaginal surgery or laparoscopic surgery: • Longer hospital stay • Larger incision scar • Longer healing time
Laparoscopic		
A ***laparoscope*** and other instruments are inserted through small incisions in the abdomen	Compared with abdominal surgery: • Scars are smaller • Shorter hospital stay • Fewer infections • Less blood loss	Compared with abdominal surgery: • Longer operating time • Greater risk of urinary tract injury
– **Laparoscopically assisted vaginal hysterectomy (LAVH)** Uterus is removed through the vagina	Same as for laparoscopic surgery	Same as for laparoscopic surgery
– **Robot-assisted laparoscopic hysterectomy** Robot attached to camera and laparoscopic instruments helps remove the uterus	Same as for laparoscopic surgery	• Longer operating time than laparoscopy without robot • Requires experienced surgeon • More information needed on risks and benefits
– **Single-incision laparoscopy** One small abdominal incision is made	• Same as for laparoscopic surgery • Single, small scar	• Same as for laparoscopic surgery • Requires an experienced surgeon • More information needed on risks and benefits

Not all women can have a vaginal hysterectomy. For example, women who have adhesions from previous surgery or who have a very large uterus may not be able to have this type of surgery.

Abdominal Hysterectomy

In an abdominal hysterectomy, the uterus is removed through an incision in the lower abdomen. The opening in the abdomen gives the surgeon a clear view of the pelvic organs.

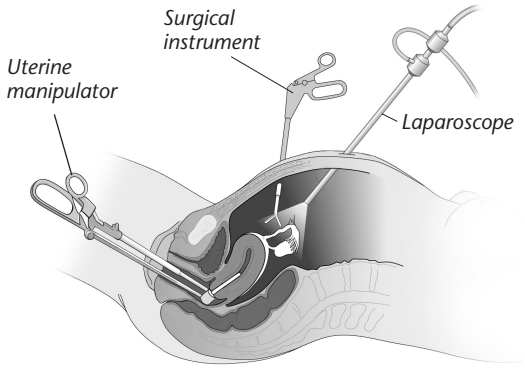
Abdominal hysterectomy is associated with an increased risk of complications, such as wound infection, bleeding, blood clots, and nerve and tissue damage, than vaginal laparoscopic hysterectomy. It generally requires a longer hospital stay and a longer recovery time than vaginal or laparoscopic hysterectomy.

Laparoscopic Hysterectomy

Laparoscopic surgery requires only a few small (about one-half inch long) incisions in the abdomen. A laparoscope inserted through one of these incisions allows the surgeon to see the pelvic organs. Other surgical instruments are used to perform the surgery through separate small incisions. The uterus can be removed in small pieces through the incisions, through a larger incision made in the abdomen, or through the vagina.

There are different kinds of laparoscopic hysterectomies. In a laparoscopic assisted vaginal hysterectomy, the uterus is removed through the vagina. A robot-assisted laparoscopic hysterectomy is performed with the help of a robotic machine controlled by the surgeon. In general, it has not been shown that robot-assisted laparoscopy results in a better outcome than laparoscopy performed without robotic assistance.

Laparoscopic Hysterectomy



The laparoscope is placed through a small incision near or inside the navel. The laparoscope shows images of the pelvic organs on a screen. A uterine manipulator moves the organs into view. Other small incisions are made in the abdomen for surgical instruments.

Compared with abdominal hysterectomy, laparoscopic surgery results in less pain, has a lower risk of infection, and requires a shorter hospital stay. You may be able to return to your normal activities sooner.

There also are disadvantages to laparoscopic surgery. It often takes longer to perform compared with abdominal or vaginal surgery, especially if it is performed with a robot. Also, there is an increased risk of injury to the urinary tract and other organs with this type of surgery.

Types of Hysterectomy

There are different types of hysterectomy:

- Total hysterectomy—The entire uterus, including the ***cervix***, is removed.
- Supracervical (also called subtotal or partial) hysterectomy—The upper part of the uterus is removed, but the cervix is left in place. This type of hysterectomy can only be performed laparoscopically or abdominally. Some women think that having a supracervical hysterectomy will affect their sexual response less than a total hysterectomy would, but there is no difference in sexual response and orgasm in women who have had the two types of surgery.
- Radical hysterectomy—This is a total hysterectomy that also includes removal of structures around the uterus. It may be recommended if cancer is diagnosed or suspected.

Removal of Ovaries and Fallopian Tubes

If needed, the ovaries and fallopian tubes may be removed at the time of hysterectomy. This is called ***salpingo-oophorectomy*** if both tubes and ovaries are removed; ***salpingectomy*** if just the fallopian tubes are removed; and ***oophorectomy*** if just the ovaries are removed.

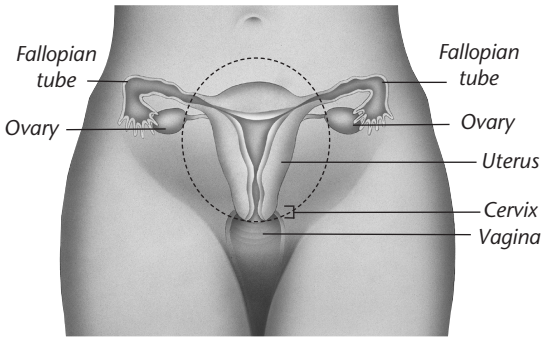
The ovaries and fallopian tubes may be removed if they are abnormal (for example, they are affected by endometriosis). Your surgeon may not know whether the ovaries and fallopian tubes will be removed until the time of surgery. Women at risk of ovarian cancer or breast cancer can choose to have both ovaries removed even if they are healthy in order to reduce their cancer risk. This is called a ***risk-reducing bilateral salpingo-oophorectomy***.

If the ovaries are removed before you have gone through ***menopause***, you will experience immediate menopause signs and symptoms. You also may be at increased risk of ***osteoporosis***.

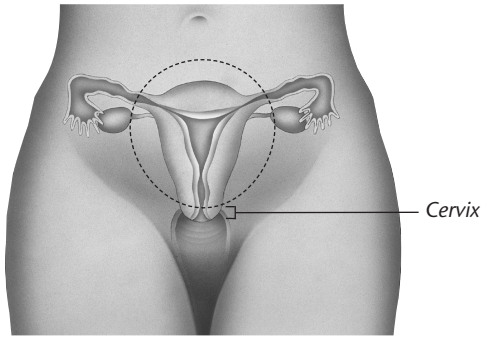
Hormone therapy can be given to relieve signs and symptoms of menopause and may help reduce the risk of osteoporosis. Hormone therapy can be started immediately after surgery. Therapy can be given in a pill, patch, spray, vaginal cream, or vaginal ring. Other medications can be given to prevent osteoporosis if you are at high risk. Talk to your health care professional before surgery to discuss whether these therapies are right for you.

Recent research suggests that ovarian cancer may start in the fallopian tubes and travel to the ovaries. Removing the tubes (but not the ovaries) at the time of hysterectomy may be an option for women who do not have cancer. This procedure is called opportunistic salpingectomy. It may help prevent ovarian cancer. Talk with your surgeon about the possible benefits of removing your fallopian tubes at the time of your surgery.

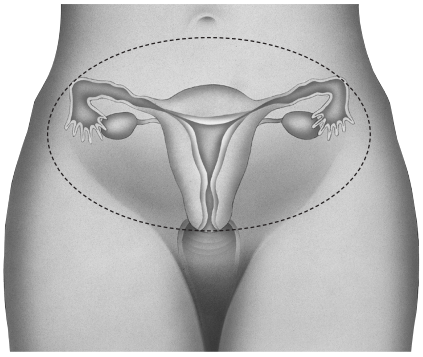
Types of Hysterectomy



Total hysterectomy. *The uterus and cervix are removed.*



Supracervical hysterectomy. *The uterus is removed but the cervix is left in place.*



Hysterectomy with removal of fallopian tubes and ovaries. *Removal of the ovaries is called an oophorectomy. Removal of the fallopian tubes is called a salpingectomy.*

Risks

Hysterectomy is one of the safest surgical procedures. As with any surgery, however, problems can occur:

- Fever and infection
- Heavy bleeding during or after surgery
- Injury to the urinary tract or nearby organs
- Blood clots in the leg that can travel to the lungs
- Breathing or heart problems related to anesthesia
- Death

Some problems related to the surgery may not show up until a few days, weeks, or even years after surgery. These problems include formation of a blood clot in the wound or bowel blockage. Complications are more common after an abdominal hysterectomy.

Some women are at greater risk of complications than others. For example, if you have an underlying medical condition, you may be at greater risk of problems related to anesthesia. Your health care professional will assess your risks of complications and may take preventive measures. You should understand all of your specific risks before you have a hysterectomy. Discuss any concerns you have with your health care professional.

Your Recovery

If you have a hysterectomy, you may need to stay in the hospital up to a few days after surgery. The length of your hospital stay will depend on the type of hysterectomy you had and how it was done.

You will be urged to walk around as soon as possible after your surgery. Walking will help prevent blood clots in your legs. You also may receive medicine or other care to help prevent blood clots.

You can expect to have some pain for the first few days after the surgery. You will be given medication to minimize pain. You will have bleeding and discharge from your vagina for several weeks. Sanitary pads can be used after the surgery.

During the recovery period, it is important to follow your health care professional's instructions. Be sure to get plenty of rest, but you also need to move around as often as you can. Taking short walks and gradually increasing the distance you walk every day is a safe way to stay active. You should not lift heavy objects until your doctor says you can. Do not put anything in your vagina during the first 6 weeks. That includes douching, having sex, and using tampons.

Constipation is common after most hysterectomies. Some women have temporary problems with emptying the bladder after a hysterectomy. Other effects may be emotional. It is not uncommon to have an emotional response to hysterectomy. How you will feel after the surgery depends on a number of factors and differs for each woman. You may feel depressed that you are no longer able to bear children, or you may be relieved that your former symptoms are gone.

After you recover, you should continue to see your health care professional for routine gynecologic exams and general health care. Depending on the reason for your hysterectomy, you still may need pelvic exams and cervical cancer screening.

Finally...

Hysterectomy is one way to treat problems of the uterus. It is major surgery and carries some risks. For some conditions, other treatment options are available. For others, hysterectomy is the best choice. Your health care professional can help you weigh the options and make a decision.

Glossary

Adhesions: Scars that can make tissue surfaces stick together.

Cervix: The lower, narrow end of the uterus at the top of the vagina.

Endometriosis: A condition in which tissue that lines the uterus is found outside of the uterus, usually on the ovaries, fallopian tubes, and other pelvic structures.

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

Fibroids: Growths that form in the muscle of the uterus. Fibroids usually are noncancerous.

Hormone Therapy: Treatment in which estrogen and often progestin are taken to help relieve symptoms that may happen around the time of menopause.

Hysterectomy: Surgery to remove the uterus.

Laparoscope: A thin, lighted telescope that is inserted through a small incision (cut) in the abdomen to view internal organs or to perform surgery.

Laparoscopy: A surgical procedure in which a thin, lighted telescope called a laparoscope is inserted through a small incision (cut) in the abdomen. The laparoscope is used to view the pelvic organs. Other instruments can be used with it to perform surgery.

Menopause: The time when a woman's menstrual periods stop permanently. Menopause is confirmed after 1 year of no periods.

Oophorectomy: Surgery to remove an ovary.

Osteoporosis: A condition of thin bones that could allow them to break more easily.

Ovaries: The organs in women that contain the eggs necessary to get pregnant and make important hormones, such as estrogen, progesterone, and testosterone.

Risk-Reducing Bilateral Salpingo-oophorectomy: Surgery to remove both healthy fallopian tubes and both healthy ovaries. The surgery is done to reduce the risk of cancer.

Salpingectomy: Surgery to remove one or both of the fallopian tubes.

Salpingo-oophorectomy: Surgery to remove an ovary and fallopian tube.

Uterine Prolapse: A condition in which the uterus drops into or out of the vagina.

Uterus: A muscular organ in the female pelvis. During pregnancy this organ holds and nourishes the fetus.

Vagina: A tube-like structure surrounded by muscles. The vagina leads from the uterus to the outside of the body.

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PATIENT EDUCATION

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Special Procedures • EP110

Loop Electrosurgical Excision Procedure

If you have an abnormal cervical cancer screening test result, your health care professional may suggest that you have a loop electrosurgical excision procedure (LEEP) as part of the evaluation or for treatment. LEEP is used to remove the area containing abnormal cells from your ***cervix****.*

This pamphlet explains

- *why LEEP is performed*
- *how LEEP is performed*
- *risks of the procedure*
- *what to expect during your recovery*
- *how to stay healthy*

Why LEEP Is Performed

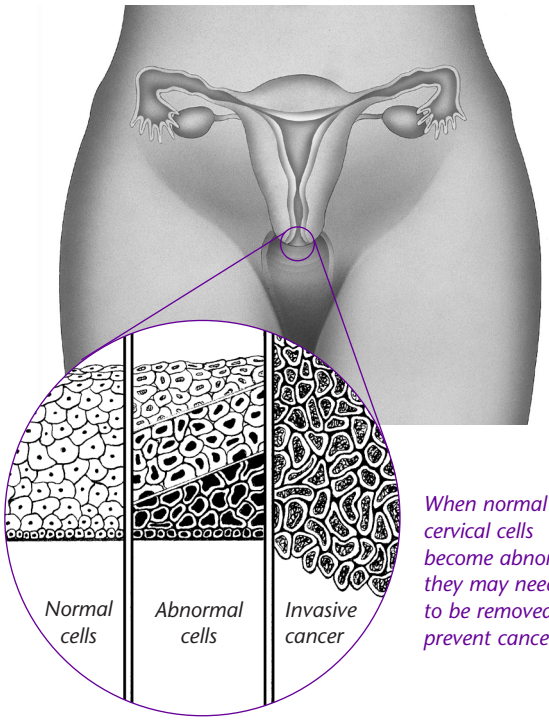
The cervix is the opening of the uterus at the top of the vagina. It is covered by a thin layer of tissue. This tissue is made up of cells. As these cells develop, the cells at the bottom layer slowly move to the surface of the cervix. During this process, some cells may become abnormal or damaged. Damaged cells grow differently. In some cases, these cells need to be removed to prevent cancer.

The ***Pap test*** checks for abnormal changes in the cervical cells and allows early treatment so that they do not become cancer. If a Pap test shows these changes, the result is called abnormal. An abnormal Pap test result may mean that further testing and follow-up are needed.

The follow-up that you receive after an abnormal Pap test result depends on your age and the type of result. Results of the follow-up tests are used to decide whether further testing or treatment is needed. Your health care professional will discuss all of the follow-up and treatment options with you.

How LEEP Is Performed

LEEP is one way to remove abnormal cells from the cervix. Other procedures are ***cryosurgery***, ***laser*** treatment, and ***cone biopsy***. The decision of which method to use depends on how much cervical tissue needs to be removed and where on the cervix the abnormal cells are located.



When normal cervical cells become abnormal, they may need to be removed to prevent cancer.

LEEP uses a thin wire loop that acts like a scalpel (surgical knife). An electric current is passed through the loop, which cuts away a thin layer of the cervix.

The procedure should be done when you are not having your menstrual period to give a better view of the cervix. In most cases, LEEP is done in a health care professional's office. The procedure only takes a few minutes.

During the procedure you will lie on your back and place your legs in stirrups. The health care professional then will insert a ***speculum*** into your vagina in the same way as for a pelvic exam. Local ***anesthesia*** will be used to prevent pain. It is given through a needle attached to a syringe. You may feel a slight sting, then a dull ache or cramp. The loop is inserted into the vagina to the cervix. There are different sizes and shapes of loops that can be used. You may feel faint during the procedure. If you feel faint, tell your health care professional immediately.

After the procedure, a special paste may be applied to your cervix to stop any bleeding. ***Electrocautery*** also may be used to control bleeding. The tissue that is removed will be studied in a lab to confirm the diagnosis.

Risks

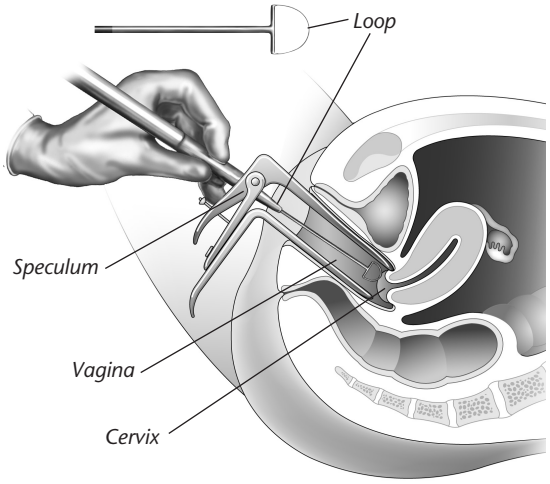
The most common risk in the first 3 weeks after a LEEP is heavy bleeding. If you have heavy bleeding, contact your health care professional. You may need to have more of the paste applied to the cervix to stop it.

LEEP may be associated with an increased risk of future pregnancy problems. Although most women have no problems, there is a small increase in the risk of premature births and having a low birth weight baby. In rare cases, the cervix is narrowed after the procedure. This narrowing may cause problems with menstruation.

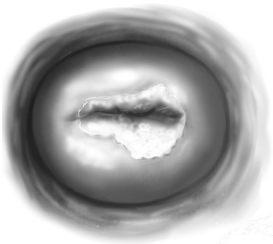
Your Recovery

After the procedure, you may have

- a watery, pinkish discharge
- mild cramping
- a brownish-black discharge (from the paste used)

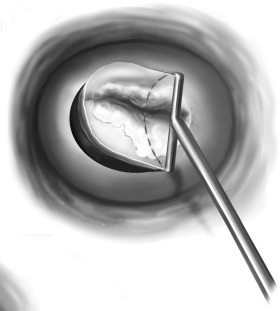


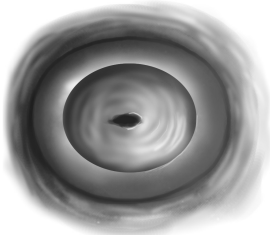
A speculum is inserted into your vagina in the same way as for a pelvic exam. The loop is inserted into the vagina to the cervix. Different sizes and shapes of loops can be used.



A close-up view of the surface of the cervix shows areas of abnormal cells.

The loop is used to cut away a thin layer of the cervix.





The loop removes the abnormal tissue from the cervix.

It will take a few weeks for your cervix to heal. While your cervix heals, you should not place anything in the vagina, such as tampons or douches. You should not have intercourse. Your health care professional will tell you when it is safe to do so.

You should contact your health care professional if you have any of the following problems:

- Heavy bleeding (more than your normal period)
- Bleeding with clots
- Severe abdominal pain

Staying Healthy

After the procedure, you will need to see your health care professional for follow-up visits. You will have tests to be sure that the abnormal cells are gone and that they have not returned. If you have another abnormal test result, you may need more treatment.

You can help protect the health of your cervix by following these guidelines:

- Have regular pelvic exams and screening tests for cervical cancer.
- Stop smoking—smoking increases your risk of cancer of the cervix.
- Limit your number of sexual partners and use condoms to reduce your risk of ***sexually transmitted infections (STIs)***.

Finally...

LEEP is an effective and simple way to remove abnormal cells from the cervix. The procedure can be done comfortably in your health care professional's office. Recovery time is brief in most cases. Like all procedures, LEEP carries some risks. It is important to understand all of the risks, as well as the benefits, before having the procedure.

Glossary

Anesthesia: Relief of pain by loss of sensation.

Cervix: The lower, narrow end of the uterus at the top of the vagina.

Cone Biopsy: Surgical removal of a cone-shaped wedge of cervical tissue.

Cryosurgery: A freezing technique used to destroy diseased tissue; also known as "cold cautery."

Electrocautery: A procedure in which an instrument works with electric current to destroy tissue.

Laser: A small, intense beam of light used as a surgical tool.

Pap Test: A test in which cells are taken from the cervix and vagina and examined under a microscope.

Sexually Transmitted Infections (STIs): Infections that are spread by sexual contact, including chlamydia, gonorrhea, human papillomavirus (HPV), herpes, syphilis, and human immunodeficiency virus (HIV, the cause of acquired immunodeficiency syndrome [AIDS]).

Speculum: An instrument used to hold open the walls of the vagina.

This Patient Education Pamphlet was developed by the American College of Obstetricians and Gynecologists. Designed as an aid to patients, it sets forth current information and opinions on subjects related to women's health. The average readability level of the series, based on the Fry formula, is grade 6–8. The Suitability Assessment of Materials (SAM) instrument rates the pamphlets as "superior." To ensure the information is current and accurate, the pamphlets are reviewed every 18 months. The information in this pamphlet does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to the institution or type of practice, may be appropriate.

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PATIENT EDUCATION

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Special Procedures • EP175

Sonohysterography

*Sonohysterography is a special kind of **ultrasound exam**. Fluid is put into the **uterus** through the **cervix** using a thin plastic tube. Sound waves are then used to create images of the lining of the uterus. The fluid helps show more detail than when ultrasound is used alone. This test can be done in your **obstetrician–gynecologist's (ob-gyn)** office, a hospital, or a clinic. It usually takes less than 30 minutes.*

This pamphlet explains

- *why sonohysterography is done*
- *what to expect before and after the test*
- *risks and alternatives*

Reasons for Sonohysterography

Sonohysterography can find the underlying cause of many problems, including ***abnormal uterine bleeding***, infertility, and repeated miscarriage. It is able to detect the following:

- Abnormal growths inside the uterus, such as ***fibroids*** or ***polyps***, and information about their size and depth
- Scar tissue inside the uterus
- Abnormal uterine shape
- Problems with the lining of the uterus
- Whether the ***fallopian tubes*** are open or blocked

Before the Procedure

Sonohysterography is not done if you are or could be pregnant or if you have a pelvic infection. You may be given a urine test to rule out pregnancy before the procedure. You will be asked if you are allergic to latex.

The test usually is scheduled at a time in your ***menstrual cycle*** after your period has stopped but before ***ovulation***. If you are bleeding at the time of the test, the results may not be as clear. If you have off-and-on abnormal bleeding or bleeding that will not go away, you may be given a medication to stop the bleeding before the test.

Sonohysterography is done when your bladder is empty. You will be asked to undress from the waist down and lie on an exam table. Your ob-gyn may do a ***pelvic exam*** to see if you have any tenderness or pain. If your ob-gyn thinks you have an infection, you may need to take ***antibiotics*** to clear up the infection before you have the procedure.

The procedure can cause some cramping. You may want to take an over-the-counter pain reliever, such as ibuprofen or acetaminophen, beforehand. Ask your ob-gyn what he or she recommends.

During the Test

Sonohysterography has three main parts: 1) a ***transvaginal ultrasound*** exam is done, 2) fluid is put inside the uterus, and 3) an ultrasound exam is repeated.

The following explains the steps in more detail:

- For a transvaginal ultrasound exam, an ultrasound ***transducer***—a slender, handheld device—is placed in the vagina. It is covered by a disposable sheath (like a condom). It sends out sound waves that are used to make images of the internal organs. These images are shown on a screen.
- After the first transvaginal ultrasound exam, the transducer is removed. A ***speculum*** is placed in the vagina. It holds the vagina open. A swab is passed through the speculum to clean the cervix.
- Next, a thin tube is inserted through the vagina. It is placed in the opening of the cervix or inside the uterus. The speculum then is removed.
- The transducer is placed in the vagina again. A sterile fluid is slowly passed through the tube. Cramping may occur as the fluid goes into the uterus.
- When the uterus is filled with fluid, ultrasound images are made of the inside of the uterus and the uterine lining. If the test is being done to assess your fallopian tubes, fluid with bubbles in it is placed inside the uterus through the tube. The bubbles make the fluid easier to see. The pathway of the fluid through the fallopian tubes is noted on ultrasound.

After the Test

Most women are able to go home right away and are back to their normal activities that day. Some of the following symptoms may occur after the test:

- Cramping
- Spotting or light bleeding
- Watery discharge

Risks

This test is very safe, but there is a rare risk of pelvic infection. Call your ob-gyn if you have any of the following symptoms:

- Pain or fever in the day or two after you go home
- A change in the type or amount of discharge

Alternatives

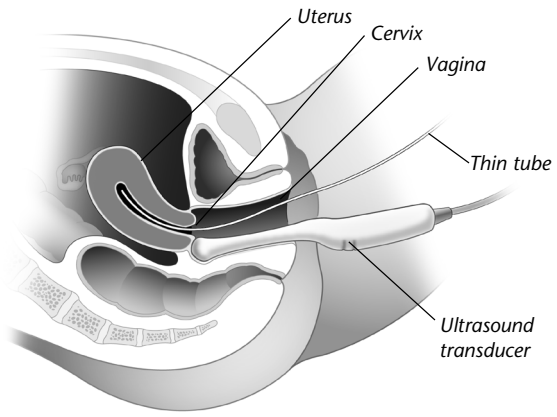
There are tests other than sonohysterography that can be used to diagnose problems of the uterus:

- ***Hysterosalpingography***—This X-ray test is used to view the inside of the uterus and fallopian tubes and can show whether the tubes are blocked. It uses ***radiation*** and a fluid that contains a dye.
- ***Hysteroscopy***—A slender, light-transmitting device with a small camera attached—the hysteroscope—is inserted into the vagina and through the cervix to look inside the uterus. It is used to diagnose and treat certain problems inside the uterus.
- ***Magnetic resonance imaging (MRI)***—This imaging test is used to view the internal organs, but it does not show the inside of the uterus as clearly as sonohysterography does.

Finally...

Sonohysterography is a safe way to find the cause of problems related to the uterus. Results can help your ob-gyn recommend the best treatment for you.

Sonohysterography



In this procedure, a transvaginal ultrasound exam is done as fluid is put into the uterus through a thin tube.

Glossary

Abnormal Uterine Bleeding: Bleeding from the uterus that differs in frequency, regularity, duration, or amount from normal uterine bleeding, in the absence of pregnancy.

Antibiotics: Drugs that treat certain types of infections.

Cervix: The lower, narrow end of the uterus at the top of the vagina.

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

Fibroids: Growths, usually benign, that form in the muscle of the uterus.

Hysterosalpingography: A special X-ray procedure in which a small amount of fluid is placed into the uterus and fallopian tubes to detect abnormal changes in their size and shape or to determine whether the tubes are blocked.

Hysteroscopy: A procedure in which a device called a hysteroscope is inserted into the uterus through the cervix to view the inside of the uterus or perform surgery.

Magnetic Resonance Imaging (MRI): A method of viewing internal organs and structures by using a strong magnetic field and sound waves.

Menstrual Cycle: The monthly process of changes that occur to prepare a woman's body for possible pregnancy. A menstrual cycle is defined from the first day of menstrual bleeding of one cycle to the first day of menstrual bleeding of the next cycle.

Obstetrician–Gynecologist (Ob-Gyn): A physician with special skills, training, and education in women's health.

Ovulation: The release of an egg from one of the ovaries.

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

Polyps: Benign (noncancerous) growths that develop from tissue lining an organ, such as that lining the inside of the uterus.

Radiation: A type of energy that is transmitted in the form of rays, waves, or particles.

Sonohysterography: A procedure in which sterile fluid is injected into the uterus through the cervix while ultrasound images are taken of the inside of the uterus.

Speculum: An instrument used to hold open the walls of the vagina.

Transducer: A device that emits sound waves and translates the echoes into electrical signals.

Transvaginal Ultrasound: A type of ultrasound in which a device specially designed to be placed in the vagina is used.

Ultrasound Exam: A test in which sound waves are used to examine internal structures.

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

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Considering Hysterectomy?

Learn about minimally invasive *da Vinci*® **Surgery**

da Vinci® Surgery

The Surgery:
Hysterectomy

If you have a benign (non-cancerous) condition that affects your health and quality of life, your doctor may suggest surgery. Surgery to take out your uterus is called a hysterectomy. It can be done with open surgery or minimally invasive surgery.

Open Surgery (Abdominal Hysterectomy)

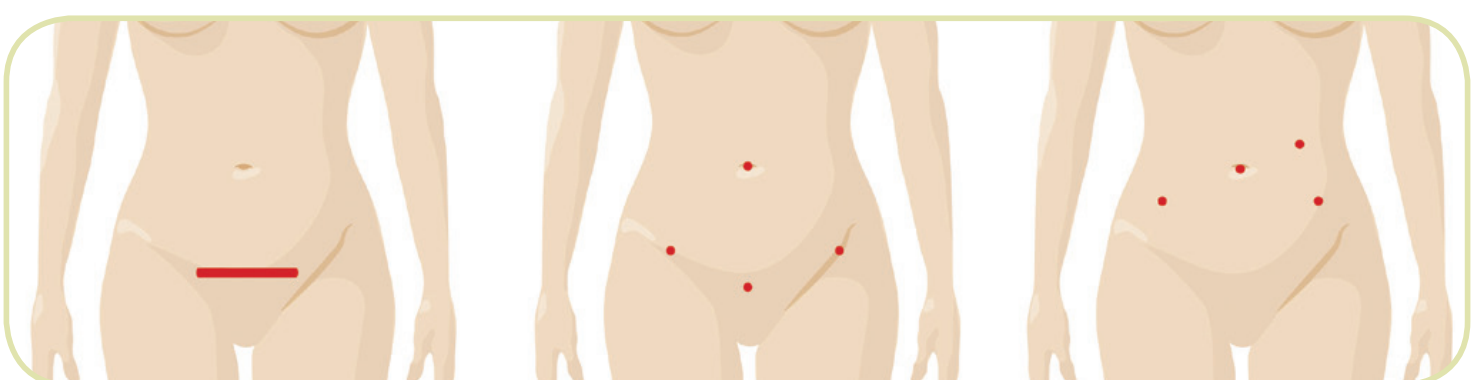
Your surgeon takes out your uterus through one large incision (cut) in your abdomen. The incision must be large enough for your surgeon's hands to fit inside your body and reach your organs.

Minimally Invasive Surgery Approaches

Vaginal Hysterectomy: Surgery is done through a cut in your vagina. The surgeon takes your uterus out through this incision and closes it with stitches.

Laparoscopy and da Vinci Hysterectomy: Surgery can be done using traditional laparoscopy or robotic-assisted *da Vinci* Surgery. This means your surgeon operates using long instruments inserted through a few small incisions in the abdomen. One of the instruments is a tiny camera that sends images to a video screen in the operating room to guide doctors as they operate.

With minimally invasive surgery, there are various options for taking out the uterus. Your surgeon will suggest the option he/she thinks is best for you.



Open Surgery Incision | Laparoscopy Incisions | *da Vinci* Incisions

da Vinci Surgery:

A Minimally Invasive Surgery Option

With *da Vinci* Hysterectomy, surgeons operate through a few small incisions—similar to traditional laparoscopy. The *da Vinci* Surgical System has a magnified 3D HD vision system and wristed instruments that bend and rotate far greater than the human hand. These features enable surgeons to operate with enhanced vision, precision, and control.

da Vinci Hysterectomy offers the following potential benefits compared to open surgery:

- Lower complication rate[1, 2, 3, 4]
- Shorter hospital stay[1, 2, 3, 4, 5]
- Less blood loss & likelihood for transfusion[1, 3, 4, 5]
- Lower hospital admission rate[4, 5]

As compared to traditional laparoscopy:

- Lower complication rate[1, 4, 6]
- Shorter hospital stay[1, 2, 4, 5, 6, 7, 8]
- Less blood loss[1, 2, 5, 8] & chance of transfusion[4, 9]
- Less chance surgeon switches to open surgery[2, 6]

As compared to vaginal surgery:

- Shorter hospital stay[2, 4, 5]
- Less blood loss[2, 5]

The *da Vinci* System has brought minimally invasive surgery to more than 3 million patients worldwide. *da Vinci* technology—changing the experience of surgery for people around the world.

da Vinci Hysterectomy is the #1 minimally invasive hysterectomy performed in the U.S.[10]

**da Vinci Single-Site* is available for benign (non-cancerous) hysterectomy.

Risks & Considerations Related to Hysterectomy, Benign (removal of the uterus and possibly nearby organs): injury to the ureters (ureters drain urine from the kidney into the bladder), vaginal cuff problems (scar tissue in vaginal incision, infection,

bacterial skin infection, pooling/clotting of blood, incision opens or separates), injury to bladder (organ that holds urine), bowel injury, vaginal shortening, problems urinating (cannot empty bladder, urgent or frequent need to urinate, leaking urine, slow or weak stream), abnormal hole from the vagina into the urinary tract or rectum, vaginal tear or deep cut. Uterine tissue may contain unsuspected cancer. The cutting or morcellation of uterine tissue during surgery may spread cancer, and decrease the long-term survival of patients.

*WHEN IS *SINGLE-SITE* TECHNOLOGY USED AND WHAT ARE THE RISKS?

da Vinci Surgery with *Single-Site*® Instruments is cleared for use in gallbladder removal, and for hysterectomy and ovary removal for benign conditions. Patients who are not candidates for non-robotic minimally invasive surgery are also not candidates for *da Vinci* Surgery, including *da Vinci* Surgery with *Single-Site* Instruments. There may be an increased risk of incision-site hernia with single-incision surgery, including *Single-Site* surgery with the *da Vinci* System.

Important Information for Patients

Serious complications may occur in any surgery, including *da Vinci*® Surgery, up to and including death. Risks include, but are not limited to, injury to tissues and organs and conversion to other surgical techniques. If your doctor needs to convert the surgery to another surgical technique, this could result in a longer operative time, additional time under anesthesia, additional or larger incisions and/or increased complications. Individual surgical results may vary. Patients who are not candidates for non-robotic minimally invasive surgery are also not candidates for *da Vinci* Surgery. Patients should talk to their doctor to decide if *da Vinci* Surgery is right for them. Patients and doctors should review all available information on non-surgical and surgical options in order to make an informed decision. Please also refer to www.daVinciSurgery.com/Safety for Important Safety Information.

Your doctor is one of a growing number of surgeons worldwide offering *da Vinci*® Surgery.

For more information and to find a *da Vinci* Surgeon nearest you, visit:
www.daVinciSurgery.com

[1] Ho C, Tsakonas E, et al. "Robot-Assisted Surgery Compared with Open Surgery and Laparoscopic Surgery: Clinical Effectiveness and Economic Analyses." Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2011 Sep. [2] Landeen, Laurie B. MD, et al. "Clinical and Cost Comparisons for Hysterectomy via Abdominal, Standard Laparoscopic, Vaginal and Robot-assisted Approaches." South Dakota Medicine 64.6 (2011): 197-209. Print. [3] Geppert B, Lönnerfors C, Persson J. "Robot-assisted laparoscopic hysterectomy in obese and morbidly obese women: surgical technique and comparison with open surgery." Acta Obstet Gynecol Scand. 90.11 (2011): 1210-1217. doi: 10.1111/j.1600-0412.2011.01253.x. Epub. [4] Lim, Peter C., et al. "Multicenter analysis comparing robotic, open, laparoscopic, and vaginal hysterectomies performed by high-volume surgeons for benign indications." International Journal of Gynecology & Obstetrics 133.3 (2016): 359–364. Print. [5] Martino, Martin A., MD, et al. "A Comparison of Quality Outcome Measures in Patients Having a Hysterectomy for Benign Disease: Robotic vs. Non-robotic Approaches." Journal of Minimally Invasive Gynecology 21.3 (2014): 389-93. Web. [6] Scandola, Michele, et al. "Robot-Assisted Laparoscopic Hysterectomy vs Traditional Laparoscopic Hysterectomy: Five Metaanalyses." Journal of Minimally Invasive Gynecology 18.6 (2011): 705-15. Print. [7] Wright, Jason D., et al. "Robotically Assisted vs Laparoscopic Hysterectomy Among Women With Benign Gynecologic Disease." Jama 309.7 (2013): 689-98. Print. [8] Orady, Mona, et al. "Comparison of Robotic-Assisted Hysterectomy to Other Minimally Invasive Approaches." JSLS, Journal of the Society of Laparoendoscopic Surgeons 16.4 (2012): 542-48. Print. [9] Rosero, Eric B., et al. "Comparison of Robotic and Laparoscopic Hysterectomy for Benign Gynecologic Disease." Obstetrics & Gynecology 122.4 (2013): 778-86. Print. [10] Inpatient data: Agency for Healthcare, Research and Quality (AHRQ). Outpatient data: Solucient® Database - Truven Health Analytics. *da Vinci* data: Intuitive Surgical internal estimates. 2014

PN 871969 Rev I 10/2016

Considering Surgery for Fibroids?

Learn about minimally invasive *da Vinci*® **Surgery**

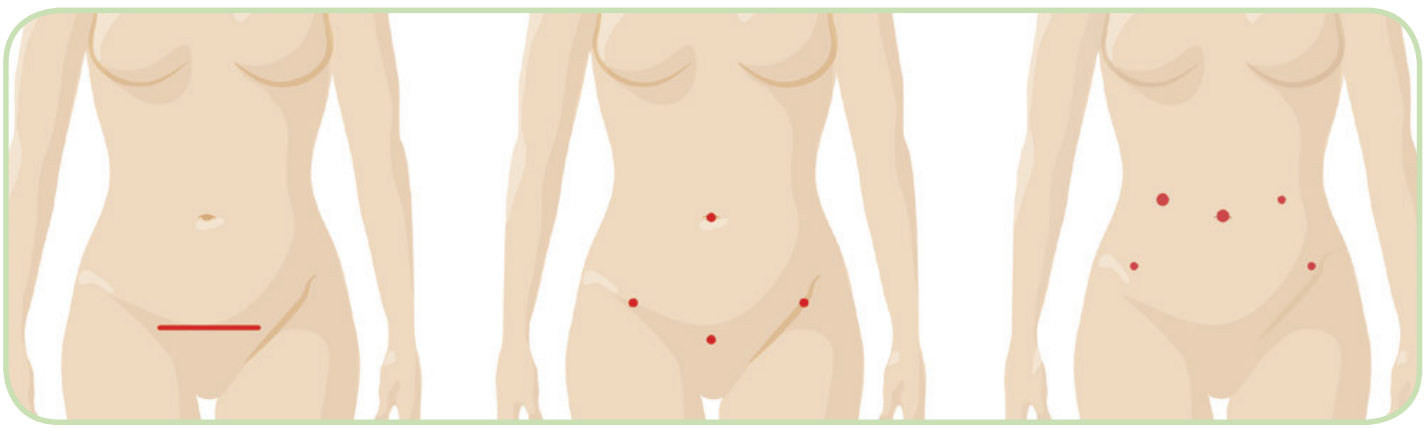
da Vinci® Surgery

Fibroid Surgery:
Myomectomy

If you have fibroid tumors and medicine, lifestyle changes or other options do not ease your symptoms, your doctor may suggest surgery. Myomectomy is the surgical removal of the fibroid(s) while leaving your uterus in place. Myomectomy can be done using open surgery or minimally invasive surgery.

Open Surgery: With open surgery, an incision (cut) is made in your abdomen. It must be large enough for your surgeon to fit his or her hands and instruments inside your body to reach your organs.

Minimally Invasive Surgery: A myomectomy can also be done using minimally invasive surgery. With traditional laparoscopy, your surgeon operates through a few small incisions in your abdomen using long instruments and a tiny camera. The camera sends images to a video screen to guide doctors during surgery. There is another minimally invasive surgery option for women planning to have a myomectomy: robotically-assisted ***da Vinci* Surgery**.



Open Surgery Incision | Laparoscopy Incisions | *da Vinci* Incisions

da Vinci Surgery:

A Minimally Invasive Surgery Option

Using the ***da Vinci*** Surgical System, surgeons operate through a few small incisions. The *da Vinci* System has a 3D HD vision system that gives doctors a magnified view inside the body. It also has tiny instruments that bend and rotate far greater than the human hand. These features enable surgeons to operate with enhanced vision, precision and control.

da Vinci Myomectomy offers the following potential benefits **compared to open surgery**:

- Similar rate of complications[1]
- Shorter hospital stay[1,2,3]
- Lower rate of blood transfusions[1,3]
- Less estimated blood loss[1,2,3]
- Less chance of post-operative fever[1]

da Vinci Myomectomy offers the following potential benefits c**ompared to traditional laparoscopy**:

- Similar rate of complications[1,3,4]
- Similar hospital stay[1,3,4]
- Similar conversion rate (switch to open surgery)[1,2,4]
- Similar or less estimated blood loss[1,2,4]

Your doctor controls the *da Vinci* System, which translates his or her hand movements into smaller, precise movements of tiny instruments inside your body.

The *da Vinci* System has brought minimally invasive surgery to more than 3 million patients worldwide.

Risks and Considerations Related to Myomectomy (removal of fibroid tumors): tear or hole in uterus, split or bursting of the uterus, pre-term (early) birth, spontaneous abortion. Uterine tissue may contain unsuspected cancer. The cutting or morcellation of uterine or fibroid tissue during surgery may spread cancer, and decrease the long-term survival of patients.

Find a *da Vinci* surgeon near you at:
www.daVinciSurgery.com

Important Information for Patients:
Serious complications may occur in any surgery, including *da Vinci*® Surgery, up to and including death. Risks include, but are not limited to, injury to tissues and organs and conversion to other surgical techniques. If your doctor needs to convert the surgery to another surgical technique, this could result in a longer operative time, additional time under anesthesia, additional or larger incisions and/or increased complications. Individual surgical results may vary. Patients who are not candidates for non-robotic minimally invasive surgery are also not candidates for *da Vinci* Surgery. Patients should talk to their doctor to decide if *da Vinci* Surgery is right for them. Patients and doctors should review all available information on non-surgical and surgical options in order to make an informed decision. Please also refer to www.daVinciSurgery.com/Safety for Important Safety Information.

[1] Pundir J., et al. Robotic-Assisted Laparoscopic vs Abdominal and Laparoscopic Myomectomy: Systematic Review and Meta-Analysis. Journal of Minimally Invasive Gynecology 20.3 (2013): 335-45. Print. [2] Reza M., et al. Meta-analysis of Observational Studies on the Safety and Effectiveness of Robotic Gynaecological Surgery. British Journal of Surgery 97.12 (2010): 1772-783. Print. [3] Gobern J., et al. Comparison of Robotic, Laparoscopic, and Abdominal Myomectomy in a Community Hospital. JSLS, Journal of the Society of Laparoendoscopic Surgeons 17.1 (2013): 116-20. Print. [4] Pluchino N., et al. Comparison of the Initial Surgical Experience with Robotic and Laparoscopic Myomectomy. The International Journal of Medical Robotics and Computer Assisted Surgery (2013): n/a. Web.