

Uterine fibroids (Leiomyoma)

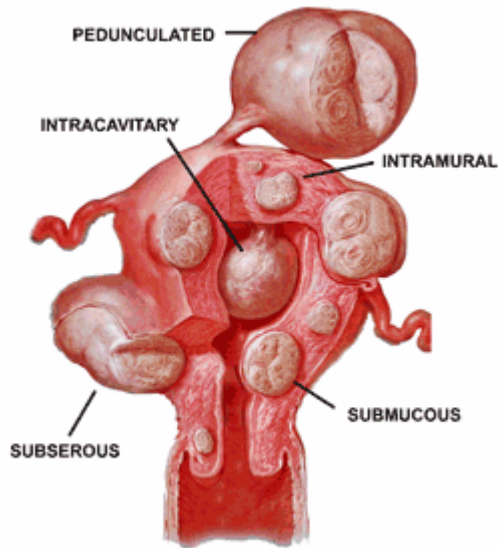
What are uterine fibroids?

Uterine fibroids are fairly common benign (not cancer) growths in the uterus. They occur in about 25–50% of all women. Many women who have fibroids are not aware of

them because the growths can remain small and not cause symptoms or problems. However, in some women, fibroids can cause problems because of their size, number, and location.

What are the different types of fibroids?

Uterine fibroids are growths that develop from the cells that make up the muscle of the uterus. They are also called leiomyomas or myomas.

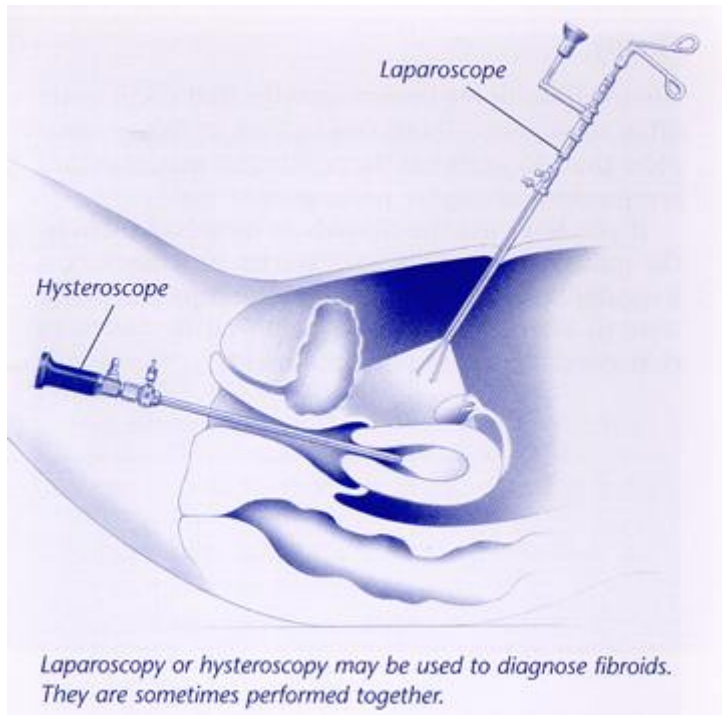


Fibroids can range in size from small, pea-sized growths to large, round ones that may be more than 5–6 inches wide. As they grow, they can distort the inside as well as the outside of the uterus. Sometimes fibroids grow large enough to completely fill the pelvis or abdomen.

A woman may have only one fibroid or many of varying sizes. Whether fibroids will occur singly or in groups is hard to predict. They may remain very small for a long time, suddenly grow rapidly, or grow slowly over a number of years.

What causes a woman to have fibroids?

We do not know what causes a woman to have fibroids. **Most likely, fibroids are the end result of many factors interacting with each other. These factors could be genetic, hormonal, environmental, or a combination of all three.** The female hormone estrogen seems to increase their growth. The levels of estrogen in the body can increase or decrease based on natural events. For instance, pregnancy causes an increase in estrogen and menopause causes a decrease. Medications also may cause a change in estrogen levels.



What are the symptoms associated with fibroids?

- Most fibroids, even large ones, produce no symptoms at all.
- Menstrual problems: these include more bleeding, longer or more frequent menstrual periods, menstrual cramps, bleeding in between periods, anemia (from blood loss)
- Pain: In the abdomen or lower back (often dull, heavy and aching, but may be sharp), painful intercourse.
- Pressure: Difficulty urinating or frequent urination, constipation, rectal pain, or difficult bowel movements, abdominal cramps.
- Enlarged uterus and abdomen.
- Miscarriages and infertility

How do fibroids cause infertility?

The mechanism with which fibroids cause infertility can vary based on the size and location of the fibroid. Small fibroids that are on the outer (serosal) surface of the uterus or in the uterine muscle (intramural) but not in the uterine cavity usually do not interfere with fertility.

- Fibroids that are in the uterine cavity interfere with sperm transport, as well as implantation of the embryo.
- Fibroids that block or kink the fallopian tubes can cause infertility by preventing egg pick up by the fimbrial end of the tube, or prevent fertilization as the egg and sperm are prevented from meeting
- Fibroids can cause miscarriage by interfering with the blood supply to the embryo or by increasing uterine contractions.

How are fibroids diagnosed?

The first signs of fibroids may be detected during a routine pelvic exam. There are a number of tests that may show more information about fibroids:

- **Ultrasonography** uses sound waves to create a picture of the uterus or of the pelvic organs.
- **Hysteroscopy** uses a slender device (the hysteroscope) to help the doctor see the inside of the uterus. It is inserted through the vagina and cervix (opening of the uterus). This permits the doctor to see some fibroids inside the uterine cavity.
- **Hysterosalpingography (HSG)** is a special X-ray test. It may detect abnormal changes in the size and shape of the uterus and fallopian tubes.
- **Laparoscopy** uses a slender device (the laparoscope) to help the doctor see the inside of the abdomen. It is inserted through a small cut just below or through the navel. The doctor can see fibroids on the outside of the uterus with the laparoscope.
- **Hysterosonography** uses water to inflate the uterine cavity, allowing for the detection of submucosal fibroids that can cause infertility, miscarriage, or abnormal bleeding patterns.

Imaging tests, such as magnetic resonance imaging (MRI) and computed tomography (CT) scans, may be used but are rarely needed. Sometimes fibroids are found when these or other procedures are used to check some other medical problem or symptoms. Some of these tests may be helpful to check on the growth of the fibroid over time.

What are the complications that can be caused by fibroids?

Although most fibroids do not cause problems, there can be complications.

- Fibroids that are attached to the uterus by a stem may twist. This can cause pain, nausea, or fever.
- Fibroids may become infected. In most cases, this happens only when there is an infection already in the area.
- In very rare cases, rapid growth of the fibroid and other symptoms may signal cancer.
- A very large fibroid may cause swelling of the abdomen.
- Fibroids also may cause infertility. This is rare, and other factors should be explored before fibroids are considered the cause of a couple's infertility. When fibroids are thought to be a cause, many women are able to become pregnant after they are treated.

How are fibroids treated?

Fibroids that do not cause symptoms, are small, or occur in a woman nearing menopause often do not require treatment. Certain signs and symptoms, though, may signal the need for treatment:

- Heavy or painful menstrual periods
- Bleeding between periods
- Uncertainty whether the growth is a fibroid or another type of tumor, such as an ovarian tumor
- Rapid increase in growth of the fibroid
- Infertility
- Pelvic pain

If you have fibroids or have had them in the past, make sure to have regular checkups. If you have symptoms of fibroids, see your doctor right away. There is no need to limit your sexual activity unless the fibroids cause pain during sex.

Fibroids may be treated with surgery. Drugs, such as gonadotropin-releasing hormone (GnRH) agonists, may be used to shrink fibroids temporarily and to control bleeding to prepare for surgery. The choice of treatment depends on factors such as your own wishes and your doctor's medical advice about the size and location of the fibroids.

Myomectomy

Myomectomy is the surgical removal of fibroids while leaving the uterus in place. Because a woman keeps her uterus, she may still be able to have children. If a woman does become pregnant after a myomectomy, she may need to have a cesarean delivery (the baby is born through a surgical cut made in the mother's abdomen and uterus). Sometimes, though, a myomectomy causes internal scarring that can lead to infertility.

Fibroids may develop again, even after the procedure. If they do, more surgery is needed in 20–40% of cases.

Myomectomy may be done in a number of ways:

- **Laparotomy** (an incision made through the abdomen)
- **Laparoscopy** (small keyhole incisions made in the navel and the abdomen; surgery is performed using small instruments inside the pelvis, and a camera is placed within the pelvis in order to guide the instruments)
- **Hysteroscopy** (an instrument is placed via the vagina and through the cervix to arrive in the uterus; no incisions are made; a tiny camera is also inserted into the uterus, guiding the surgeons instruments)

The method used depends on the location and size of the fibroids. For a laparotomy, an incision (cut) is made in the abdomen. The fibroids then are removed through the incision. Fibroids also can be removed through the laparoscope that is used to view the inside of the abdomen.

Hysteroscopy can be used to remove fibroids that protrude into the cavity of the uterus. The fibroids may be removed with a **resectoscope**, a tiny wire loop that uses electric power, or with a laser. Either of these instruments can be inserted through the hysteroscope. Although it cannot remove fibroids deep in the walls of the uterus, it often can control the bleeding these fibroids cause. In most cases, an overnight stay in the hospital is not necessary.

Uterine Artery Embolization

Another way to treat fibroids is called uterine artery embolization (UAE). With this procedure, the blood vessels to the uterus are blocked. This helps stop the blood flow that allows fibroids to grow.

This procedure usually is performed in a hospital by a specially trained radiologist. In some cases, it is done as an outpatient procedure. In other cases, you may need to spend a night in the hospital.

You will be given medicine to make you feel relaxed. A small incision (cut) is made in your groin area. A small tube called a catheter is then passed through each of the two arteries to the uterus. The catheter allows the doctor to inject tiny particles (about the size of grains of sand) into the arteries that send blood to the fibroid. This cuts off the blood flow to the fibroid and causes it to shrink. The procedure works even if you have more than one fibroid.

Many women have cramping for a few hours after the procedure. Some women have nausea or fever. Medicine often can help treat these symptoms.

Although rare, there can be some complications with UAE. Complications may include infection and uterine injury. In most women, regular menstrual periods return shortly after the procedure. In rare cases, however, menstrual periods do not resume and menopause begins. This occurs more often in women who are age 45 years or older at the time of the procedure. The effects of UAE on a woman's fertility are not known. Women who may want to have children may want to consider other forms of treatment. Talk to your doctor about whether UAE is an option for you.

Hysterectomy

Hysterectomy is the removal of the uterus. The ovaries may or may not be removed. It depends on other factors.

For this procedure, the uterus may be removed through an incision (cut) in the abdomen or through the vagina. The method used depends on the size of the fibroids. For pain relief, you may

be given a general anesthesia, which puts you to sleep, or a regional one, which blocks out feeling in the lower part of your body. You may need to stay in the hospital for a few days after this procedure.

Hysterectomy may be needed if:

- Pain or abnormal bleeding persists
- Fibroids are very large
- Other treatments are not possible

If your doctor thinks you need a hysterectomy, he or she will first rule out other problems with the uterus, such as diseases of the endometrium (the lining of the uterus). A woman is no longer able to have children after having a hysterectomy.

What problems are associated with fibroids and pregnancy?

A small number of pregnant women have uterine fibroids. If you are pregnant and have fibroids, they likely won't cause problems for you or your baby.

During pregnancy, fibroids may increase in size. Most of this growth occurs from blood flowing to the uterus. Coupled with the extra demands placed on the body by pregnancy, growth of fibroids may cause discomfort, feelings of pressure, or pain. Fibroids decrease in size after pregnancy in most cases.

Fibroids can increase the risk of:

- Miscarriage (in which the pregnancy ends before 20 weeks)
- Preterm birth
- Breech birth (in which the baby is in a position other than head down)

Rarely, a large fibroid can block the opening of the uterus or keep the baby from passing into the birth canal. In this case, a cesarean delivery is done. In most cases, even a large fibroid will move out of the fetus's way as the uterus expands during pregnancy. Women with large fibroids may have more blood loss after delivery.

Often, fibroids do not need to be treated during pregnancy. If you are having symptoms such as pain or discomfort, your doctor may prescribe rest. Sometimes a pregnant woman with fibroids will need to stay in the hospital for a time because of pain, bleeding, or threatened preterm labor. Very rarely, myomectomy may be performed in a pregnant woman. Cesarean birth may be needed after myomectomy.

Glossary

Hysterosalpingography (HSG): A special X-ray procedure in which a small amount of fluid is injected 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 surgical procedure in which a slender, light-transmitting telescope, the hysteroscope, is used to view the inside of the uterus or perform surgery.

Laparoscopy: A surgical procedure in which a slender, light-transmitting telescope, the laparoscope, is used to view the pelvic organs or perform surgery.

Laparotomy: A surgical procedure in which an incision is made in the abdomen.

Resectoscope: A slender telescope with an electrical wire loop or rollerball tip used to remove or destroy tissue inside the uterus.

Ultrasonography: A test in which sound waves are used to examine internal structures. During pregnancy, it can be used to examine the fetus.

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