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Myomectomy
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Definition
Myomectomy is a surgical procedure to remove uterine fibroids — noncancerous growths that often appear in your uterus during your childbearing years. The surgeon's goal during myomectomy is to take out symptom-causing fibroids and reconstruct the uterus. Unlike hysterectomy, which removes your entire uterus, myomectomy surgery removes only the fibroids and leaves your uterus intact.

Women who undergo myomectomy report improvement in fibroid symptoms, including heavy menstrual bleeding and pelvic pressure.

In the hands of an experienced surgeon, myomectomy is safe and effective.

Why it's done
Your doctor might recommend myomectomy for troublesome fibroids — that is, those in which symptoms are debilitating or interfere with your normal activities — if:

- You plan to bear children
- Your doctor suspects uterine fibroids might be interfering with your fertility
- You prefer to retain your uterus
Risks

Myomectomy has a low complication rate. Still, the procedure poses a unique set of challenges for your surgeon.

Risks of myomectomy include:

- **Excessive blood loss.** The uterus has a rich network of blood vessels, and fibroids stimulate growth of new vessels to obtain their own blood supply. So during myomectomy, surgeons must take extra steps to avoid excessive bleeding. These steps include blocking flow from the uterine arteries and injecting medications around fibroids to cause blood vessels to clamp down. Your doctor may also suggest steps to take to build up your blood count before surgery.

- **Scar tissue.** Incisions into the uterus to remove fibroids can lead to adhesions — bands of scar tissue that may develop after surgery. Within the uterus, adhesions may block implantation of a fertilized egg in the uterine lining, but this rarely happens. Outside the uterus, adhesions could entangle neighboring structures and lead to a blocked fallopian tube or a trapped loop of intestine.

- **Development of new fibroids.** Myomectomy doesn’t eliminate your risk of developing more fibroids later. Tiny tumors (seedlings) that your doctor doesn’t detect during surgery could eventually grow and cause symptoms. New tumors also can develop. Women who had only one fibroid have a lower recurrence rate than do women with multiple fibroids. If fibroids return, future treatment — a repeat myomectomy, hysterectomy or other procedure — may be necessary.

- **Childbirth complications.** Having had myomectomy surgery can pose some risk factors for delivery if you become pregnant. If your surgeon had to make a deep incision in your uterine wall, the doctor who manages your subsequent pregnancy may recommend cesarean delivery to avoid rupture of the uterus during labor.

- **Inability to restore the structure of the uterus.** To remove embedded fibroids, the surgeon might cut into the muscular wall (myometrium), leaving a gap. Closing it requires stitches, usually in layers. Rarely, the surgeon must remove the uterus if bleeding is severe or if he or she can’t reconstruct the uterus.
Strategies to prevent possible surgical complications
To minimize risks of myomectomy surgery, your doctor may recommend:

• **Iron supplements and multivitamins.** If you have iron deficiency anemia from heavy menstrual periods, your doctor might recommend iron supplements and multivitamins to allow you to build up your blood count prior to surgery.

• **Hormonal treatment.** Another strategy to correct anemia is hormonal treatment before surgery. Your doctor may prescribe a gonadotropin-releasing hormone (Gn-RH) agonist, birth control pills, or other hormonal medication to stop or decrease your menstrual flow. When given as therapy, a Gn-RH agonist blocks the production of estrogen and progesterone, stopping menstruation and allowing you to rebuild hemoglobin and iron stores.

• **Therapy to shrink fibroids.** Some hormonal therapies, such as Gn-RH agonist therapy, can also shrink your fibroids and uterus enough to allow your surgeon to use a minimally invasive surgical approach — such as a smaller, horizontal incision rather than a vertical incision, or a laparoscopic procedure instead of an open procedure. In most women, Gn-RH agonist therapy causes symptoms of menopause, including hot flashes, night sweats and vaginal dryness. However, these discomforts end when you stop taking the medication. Treatment generally occurs over several months before surgery.

Evidence remains unclear regarding the benefits of Gn-RH agonist therapy before myomectomy. Therapy can lead to higher hemoglobin and iron levels, higher red blood cell counts, less blood loss during surgery, and shorter operating times. However, Gn-RH agonist therapy may soften and shrink fibroids enough to interfere with their detection and removal. Cost of the medication and the risk of side effects must be weighed against the benefits.

How you prepare
You'll need to refrain from eating or drinking anything for at least two hours before your surgery. Some anesthesiologists may prefer that you don't eat or drink anything for eight hours prior to surgery; follow the recommendations of your doctor. If you're on medications, ask your doctor if you should stop taking them before or after surgery.

When you arrive at the hospital, staff members help you prepare for surgery. You need to remove eyeglasses or contact lenses, hairpins or hair ornaments, and dentures.

Before your surgery, you change into a hospital gown and may put on special stockings to prevent blood clots in your leg veins. A nurse may clean and possibly shave your abdomen. Before going to the operating room, you may receive an
injection of pain medication or you may be given pain medication through an intravenous (IV) line.

**What you can expect**

Depending on the size and type of your fibroids, your surgeon may choose one of three surgical approaches to myomectomy:

- **Abdominal myomectomy**, in which your surgeon makes an open abdominal incision to access your uterus and remove fibroids.

- **Laparoscopic or robotic myomectomy**, in which your surgeon accesses and removes fibroids via multiple, small abdominal incisions using specialized equipment. In some cases, this approach uses a surgical robot to perform the surgery.

- **Hysteroscopic myomectomy**, in which your surgeon accesses and removes fibroids using instruments inserted through your vagina and cervix into your uterus.

**Abdominal myomectomy (laparotomy)**

Abdominal myomectomy is performed under general anesthesia, which means you're asleep during the surgery. In this operation, your surgeon enters the pelvic cavity through one of two incisions:

- **A vertical incision** that starts in the middle of your abdomen and extends from just below your navel to just above your pubic bone. The vertical incision gives your surgeon greater access to your uterus and reduces bleeding. Some surgeons recommend a vertical incision if your uterus has reached or exceeded the size it would be if it were carrying a 16-week pregnancy. This incision might also be used if a fibroid is in a ligament between your uterus and pelvic wall.

- **A horizontal bikini-line incision** that runs about an inch (about 2.5 centimeters) above your pubic bone. This incision follows your natural skin lines, so it usually results in a thinner scar and causes less pain than does a
vertical incision. Because it limits the surgeon’s access to your pelvic cavity, a bikini-line incision may not be appropriate if you have a large fibroid.

During the procedure, your surgeon inspects your uterus visually and by touch for fibroids. He or she makes an incision in your uterus down to the level of the fibroid, grasps the tumor with instruments, and peels it away from normal uterine tissue. He or she then repairs the uterus.

After your surgery, members of your medical team monitor your condition in the recovery room. When the effects of the anesthesia fade, staff members bring you to your hospital room for continued observation.

To control pain, your doctor may give you an opioid (morphine and related drugs) or nonsteroidal anti-inflammatory drugs (NSAIDs) or both. Many hospitals offer patient controlled analgesia (PCA), a system that delivers a dose of pain medication to your bloodstream through a vein when you press a button.

Usually by the next day, oral medications replace IV medications. You may receive IV fluids until you’re able to drink, and you may not be able to eat solid foods right away. Medical staff members urge you to walk around as soon as you’re able, because walking reduces the risk of many postoperative complications.

At discharge from the hospital, your doctor prescribes oral pain medication, tells you how to care for your incision, and discusses restrictions on your diet and activities. You may have to avoid certain activities, such as driving, lifting heavy objects, climbing stairs or exercising vigorously until you recover. Also, your doctor may advise that you not use tampons or have sexual intercourse for up to six weeks. You can expect some vaginal drainage for up to six weeks as well.

Abdominal myomectomy usually requires a hospital stay of two to three days. Recovery takes four to six weeks.

**Laparoscopic or robotic myomectomy**

In this minimally invasive procedure, your surgeon makes a small incision in or near your bellybutton and inflates your abdomen with carbon dioxide gas. He or she then places a laparoscope inside your pelvic cavity to provide images of the outside of your uterus, ovaries and neighboring pelvic organs. Your surgeon then performs the operation with specially crafted instruments inserted through other small incisions in your abdominal wall. The doctor removes the fibroid through additional small incisions in the wall of your uterus or through an incision in your vagina (colpotomy).

This surgical approach uses smaller incisions than a laparotomy does, which lessens postoperative healing time needed. Some surgeons have strict guidelines on uterine size and fibroid number to determine when laparoscopic surgery is appropriate. However, no consensus exists. A surgeon might, for example, use this technique only for fibroids that are on the outside of the uterus and easier to reach (subserosal fibroids). This approach is somewhat controversial for women who desire a future pregnancy because repair of the uterine wall may not be as sound with the laparoscope.
A surgical robot is used when there are more or bigger fibroids or repairing of the uterus becomes more difficult. Robotic myomectomy allows many women who previously would have had a laparotomy to have a minimally invasive surgery instead.

Laparoscopic myomectomy is often done with no hospital stay and recovery typically takes a few days to two weeks.

**Hysteroscopic myomectomy**
To treat fibroids that bulge significantly into your uterine cavity (submucosal fibroids), your surgeon may suggest a hysteroscopic myomectomy.

Hysteroscopic myomectomy requires general or spinal anesthesia. Your doctor inserts a small, lighted instrument — called a resectoscope because it cuts (resects) tissue — through your vagina and cervix and into your uterus. Attached is a tube that releases a clear liquid to expand your uterine cavity and allow examination of the uterine walls.

Your surgeon then shaves pieces from the fibroid, using the resectoscope, until it aligns with the surface of your uterine cavity. The removed tissue washes out with the clear liquid that's used to expand your uterus during the procedure.

Rarely, surgeons also use a laparoscope — a narrow tube fitted with a camera that's inserted into your abdomen — to view the pelvic organs and monitor the outside of the uterus during fibroid removal.

Hysteroscopic myomectomy is usually done with no hospital stay, and recovery typically takes less than a week.

**Results**
After myomectomy surgery, the majority of women — as many as 80 percent — experience relief of bothersome signs and symptoms, including excessive menstrual bleeding and pelvic pain and pressure. However, myomectomy surgery isn't a permanent fix for uterine fibroids. New fibroids could develop that may or may not require treatment.

Often, women who plan a pregnancy after myomectomy conceive within one year of having the surgery. Although studies are limited, the effect of surgery on your fertility appears to be about the same whether you have abdominal, laparoscopic or hysteroscopic myomectomy.

**References**

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