

Uterine Fibroid Symptoms, Diagnosis and Treatment

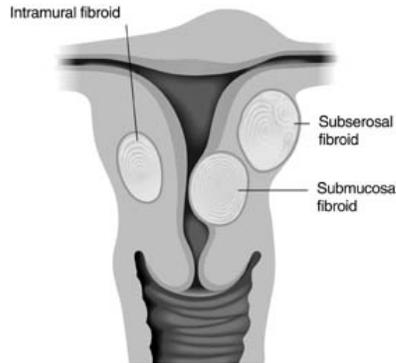
Highly Effective, Widely Available Interventional Radiology Treatment Often Replaces Need for Hysterectomy

Uterine fibroids are very common non-cancerous (benign) growths that develop in the muscular wall of the uterus. They can range in size from very tiny (a quarter of an inch) to larger than a cantaloupe. Occasionally, they can cause the uterus to grow to the size of a five-month pregnancy. In most cases, there is more than one fibroid in the uterus. While fibroids do not always cause symptoms, their size and location can lead to problems for some women, including pain and heavy bleeding.

Fibroids can dramatically increase in size during pregnancy. This is thought to occur because of the increase in estrogen levels during pregnancy. After pregnancy, the fibroids usually shrink back to their pre-pregnancy size. They typically improve after menopause when the level of estrogen, the female hormone that circulates in the blood, decreases dramatically. However, menopausal women who are taking supplemental estrogen (hormone replacement therapy) may not experience relief of symptoms.



Uterine fibroids are the most common tumors of the female genital tract. You might hear them referred to as "fibroids" or by several other names, including leiomyoma, leiomyomata, myoma and fibromyoma. Fibroid tumors of the uterus are very common, but for most women, they either do not cause symptoms or cause only minor symptoms.



Subserosal Fibroids

These develop under the outside covering of the uterus and expand outward through the wall, giving the uterus a knobby appearance. They typically do not affect a woman's menstrual flow, but can cause pelvic pain, back pain and generalized pressure. The subserosal fibroid can develop a stalk or stem-like base, making it difficult to distinguish from an ovarian mass. These are called pedunculated. The correct diagnosis can be made with either an ultrasound or magnetic resonance (MR) exam.

Intramural Fibroids

These develop within the lining of the uterus and expand inward, increasing the size of the uterus, and making it feel larger than normal in a gynecologic internal exam. These are the most common fibroids. Intramural fibroids can result in heavier menstrual bleeding and pelvic pain, back pain or the generalized pressure that many women experience.

Submucosal Fibroids

These are just under the lining of the uterus. These are the least common fibroids, but they tend to cause the most problems. Even a very small submucosal fibroid can cause heavy bleeding - gushing, very heavy and prolonged periods.

Prevalence of Uterine Fibroids

Twenty to 40 percent of women age 35 and older have uterine fibroids of a significant size. African American women are at a higher risk for fibroids: as many as 50 percent have fibroids of a significant size. Uterine fibroids are the most frequent indication for hysterectomy in premenopausal women and, therefore, are a major public health issue. Of the 600,000 hysterectomies performed annually in the United States, one-third are due to fibroids

Uterine Fibroid Symptoms

Most fibroids don't cause symptoms—only 10 to 20 percent of women who have fibroids require treatment. Depending on size, location and number of fibroids, they may cause:

- Heavy, prolonged menstrual periods and unusual monthly bleeding, sometimes with clots; this can lead to anemia
- Pelvic pain and pressure
- Pain in the back and legs
- Pain during sexual intercourse
- Bladder pressure leading to a frequent urge to urinate
- Pressure on the bowel, leading to constipation and bloating
- Abnormally enlarged abdomen

Imaging Expertise Enables Interventional Radiologists to Provide Gynecologists and Their

Patients Better Diagnosis and Nonsurgical Treatment Options

Women typically undergo an ultrasound at their gynecologist's office as part of the evaluation process to determine the presence of uterine fibroids. It is a rudimentary imaging tool for fibroids that often does not show other underlying diseases or all the existing fibroids. For this reason, MRI is the standard imaging tool used by interventional radiologists.

Magnetic resonance imaging (MRI) improves the patient selection for who should receive nonsurgical uterine fibroid embolization (UFE) to kill their tumors. Interventional radiologists can use MRIs to determine if a tumor can be embolized, detect alternate causes for the symptoms, identify pathology that could prevent a woman from having UFE and avoid ineffective treatments. Using an MRI rather than ultrasound is like listening to a digital CD rather than a record – the quality is better in every way. By working with a patient's gynecologist, interventional radiologists can use MRIs to enhance the level of patient care through better diagnosis, better education, better treatment options and better outcomes.

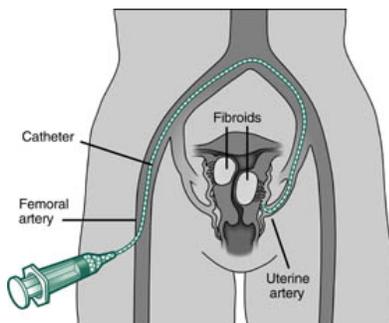
Second Opinion Prior to Hysterectomy

For true informed consent before surgery, patients should be aware of all of their treatment options.

Patients considering surgical treatment should also get a second opinion from an interventional radiologist, who is most qualified to interpret the MRI and determine if they are candidates for the interventional procedure. You can ask for a referral from your doctor, call the radiology department of any hospital and ask for interventional radiology or visit the doctor finder link at the top of this page to locate a doctor near you.

Uterine Fibroid Treatments

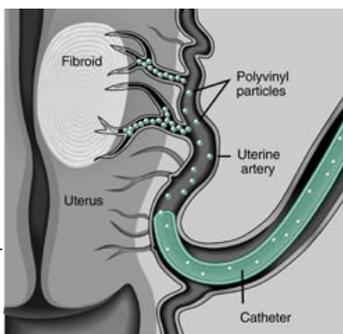
Nonsurgical Uterine Fibroid Embolization – A Major Advance in Women's Health



Uterine fibroid embolization (UFE), also known as uterine artery embolization, is performed by an interventional radiologist, a physician who is trained to perform this and other types of embolization and minimally invasive procedures. It is performed while the patient is conscious, but sedated and feeling no pain. It does not require general anesthesia.

The interventional radiologist makes a tiny nick in the skin in the groin and inserts a catheter into the femoral

artery. Using real-time imaging, the physician guides the catheter through the artery and then releases tiny particles, the size of grains of sand, into the uterine arteries that supply blood to the fibroid tumor. This blocks the blood flow to the fibroid tumor and causes it to shrink and die.



UFE Recovery Time

Fibroid embolization usually requires a hospital stay of one night. Pain-killing medications and drugs that control swelling typically are prescribed following the procedure to treat cramping and pain. Many women resume light activities in a few days and the majority of women are able to return to normal activities within seven to 10 days.

UFE Efficacy

- On average, 85-90 percent of women who have had the procedure experience significant or total relief of heavy bleeding, pain and/or bulk-related symptoms.
- The procedure is effective for multiple fibroids and large fibroids.
- Recurrence of treated fibroids is very rare. Short and mid-term data show UFE to be very effective with a very low rate of recurrence. Long-term (10-year) data are not yet available, but in one study in which patients were followed for six years, no fibroid that had been embolized regrew.

Additional UFE Facts

- In 2007, the first gorilla was treated with UFE for her fibroids.
- An estimated 13,000-14,000 UFE procedures are performed annually in the U.S. (as of 2004)
- Embolization of the uterine arteries is not new. It has been used successfully by interventional radiologists for more than 20 years to treat heavy bleeding after childbirth.
- Embolization has been used to treat tumors since 1966. Embolization to treat uterine fibroids has been performed since 1995 and the embolic particles are approved by the FDA specifically to treat uterine fibroid tumors, based on comparative trials showing similar efficacy with less serious complications compared to hysterectomy and myomectomy (the surgical removal of fibroids).
- Embolization of fibroids was first used as an adjunct to help decrease blood loss during myomectomy. To the surprise of the initial users of this method, many patients had spontaneous resolution of their symptoms after only the embolization and no longer needed the surgery.

- UFE is covered by most major insurance companies and is widely available across the country.
- Most women with symptomatic fibroids are candidates for UFE and should obtain a consult with an interventional radiologist to determine whether UFE is a treatment option for them. An ultrasound or MRI diagnostic test will help the interventional radiologist to determine if the woman is a candidate for this treatment.
- Many women wonder about the safety of leaving particles in the body. The embolic particles most commonly used in UFE have been available with FDA approval for use in people for more than 20 years. During that time, they have been used in thousands of patients without long-term complications.

Effect on Fertility

There have been numerous reports of pregnancies following uterine fibroid embolization, however prospective studies are needed to determine the effects of UFE on the ability of a woman to have children. One study comparing the fertility of women who had UFE with those who had myomectomy showed similar numbers of successful pregnancies. However, this study has not yet been confirmed by other investigators.

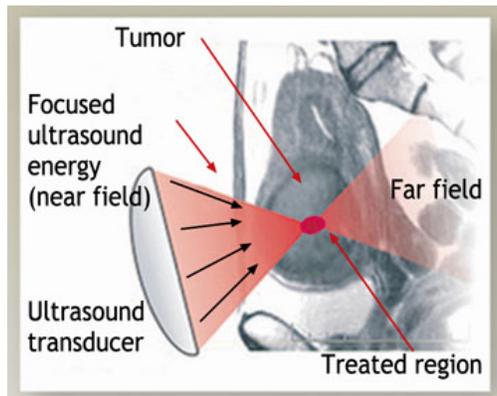
Less than two percent of patients have entered menopause as a result of UFE. This is more likely to occur if the woman is in her mid-forties or older and is already nearing menopause.

Risks

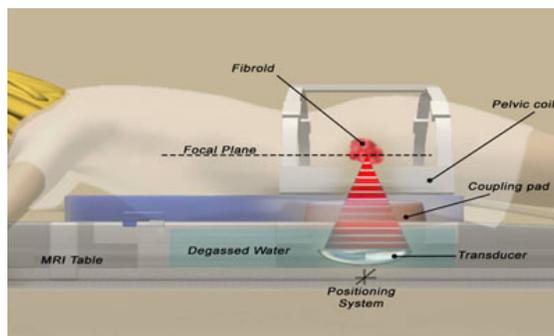
UFE is a very safe method and, like other minimally invasive procedures, has significant advantages over conventional open surgery. However, there are some associated risks, as there are with any medical procedure. A small number of patients have experienced infection, which usually can be controlled by antibiotics. There also is a less than one percent chance of injury to the uterus, potentially leading to a hysterectomy. These complication rates are lower than those of hysterectomy and myomectomy.

Magnetic Resonance Guided Focused Ultrasound

Magnetic resonance guided focused ultrasound (MRGFU) is a non-invasive outpatient, procedure that uses high intensity focused ultrasound waves to ablate (destroy) the fibroid tissue. During the procedure, an interventional radiologist uses magnetic resonance imaging (MRI) to see inside the body to deliver the treatment directly to the fibroid. The procedure is FDA approved for treating uterine fibroids, but is under investigation for the treatment of breast, prostate, brain and bone cancer.



MRI scans identify the tissue in the body to treat and are used to plan each patient's procedure. MRI's provide a three-dimensional view of the targeted tissue, allowing for precise focusing and delivery of the ultrasound energy. MRI also enables the physician to monitor tissue temperature in real-time to ensure adequate but safe heating of the target. Immediate imaging of the treated area following MRGFU helps the physician determine if the treatment was successful.



The ultrasound energy used in MRGFU can pass through skin, muscle, fat and other soft tissues. High-intensity ultrasound energy that is directed to the fibroid heats up the tissue and destroys it. This method of tissue destruction is called thermal ablation.

This procedure is new and not widely available. Information on research findings can be found in SIR's [MRGFU bibliography](#).

Surgical Treatments for Fibroids

Gynecologists perform hysterectomy and myomectomy surgery. Hysterectomy is the removal of the uterus and is considered major abdominal surgery. It requires three to four days of hospitalization and the average recovery period is six weeks.

Depending on the size and placement of the fibroids, myomectomy can be an outpatient surgery or require two to three days in the hospital. However, myomectomy is usually major surgery that involves cutting out the biggest fibroid or collection of fibroids and then stitching the uterus back together. Most women have multiple fibroids and it is not physically possible to remove all of them because it would remove too much of the uterus. While myomectomy is frequently successful in controlling symptoms, the more fibroids the patient has, generally, the less successful the surgery. In addition, fibroids may grow back several years later.

Myomectomy, like UFE, leaves the uterus in place and may, therefore, preserve the woman's ability to have children.

August 2008 Practice Recommendations From American College of Obstetricians and Gynecologists Say Uterine Fibroid Embolization Is "Safe and Effective," Based on Good, Consistent Level A Scientific Evidence

Based on long- and short-term outcomes, uterine fibroid embolization, a minimally invasive interventional radiology treatment for uterine fibroids, is a safe and effective option for women to consider. Women can and should be confident about their decision to consider UFE as a treatment option. Level A treatment choices are considered proven treatments that should be offered to patients for their conditions when discussing treatment options. ACOG's Practice Bulletin is used to aid doctors in making decisions about appropriate patient care. Most women with symptomatic fibroids are candidates for UFE and should obtain a consult with an interventional radiologist to determine whether UFE is a treatment option for them.

Interventional Radiologists Can Provide Gynecologists and Their Patients Better Diagnosis and Minimally Invasive Treatment Options

Interventional radiologists use MRIs to determine if fibroids can be embolized, detect alternate causes for the symptoms and rule out misdiagnosis, identify which treatments are best suited for each patient and avoid ineffective treatments. Women typically undergo an ultrasound at their gynecologist's office as part of the evaluation process to determine the presence of uterine fibroids. An MRI is a much better imaging tool for uterine fibroids than ultrasound because it can show underlying diseases and image all of the fibroids.