



## Uterine Fibroid Embolization

### What are Fibroids?

Uterine fibroids are an overgrowth of muscular and fibrous tissues, typically developing in the walls of the uterus. These benign tumors are also known as uterine myomas or leiomyomas.

Most often, the problems seen are menstrual cycles (periods) that are longer than normal and heavy bleeding during your periods. Fibroids can also cause pain in the lower back and more cramping than usual.

### What is Uterine Fibroid Embolization (UFE)?

This is the the gold standard in non-surgical fibroid treatment. In a UFE procedure, physicians use an x-ray camera called a fluoroscope to guide the delivery of small particles to the uterus and fibroids. The small particles are injected through a thin, flexible tube called a catheter. These block the arteries that provide blood flow, causing the fibroids to shrink. Nearly 90 percent of women with fibroids experience relief of their symptoms.

### How should I prepare?

- Imaging of the uterus by magnetic resonance imaging (MRI) is performed prior to the procedure to determine if fibroid tumors are the cause of your symptoms and to fully assess the size, number and location of the fibroids.
- Occasionally, if you are bleeding heavily in between periods, a biopsy of the endometrium (the inner lining of the uterus) may be performed to rule out other causes.
- You should report to your doctor all medications that you are taking, including herbal supplements, and if you have any allergies, especially to contrast materials containing iodine (sometimes referred to as "dye" or "x-ray dye"). Your physician may advise you to stop taking aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs) or blood thinners for a specified period of time before your procedure.
- Also inform your doctor about recent illnesses or other medical conditions.
- Women should always inform their physician and x-ray technologist if there is any possibility that they are pregnant.
- You will be instructed not to eat or drink anything after midnight before your procedure. You can take all your medications in the morning with a sips of water.

### How is the procedure done?

- The treatment is performed as an outpatient procedure.
- You will arrive about 1 hour before your procedure and meet our clinical team. They will make sure you are comfortable.
- Before we start the procedure you will be given a light sedative to help you relax by the anesthesia team.
- Your left wrist will be cleaned and a sterile drape will be placed over this area.



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- Local anesthesia or numbing medication will be injected in this area. You will be given medicine through your IV to sedate you. This medicine is given to control your pain and anxiety. It will make you feel drowsy and comfortable and may keep you from remembering the procedure.
- The doctor will place a thin tube, called a catheter, into the radial artery in your wrist and guide it to the uterine artery. A contrast material provides a roadmap for the catheter as it is maneuvered into your uterine arteries. The embolic agent is released into both the right and left uterine arteries by repositioning the same catheter that was originally inserted. Only one small skin puncture is required for the entire procedure.
- Very small particles, about the size of grains of sand, will be injected through the catheter until blood no longer flows to the fibroid. This tissue will breakdown and leave your body on its own.
- The procedure usually takes about 30-60 minutes to complete.

### What can I expect after the procedure?

- When the procedure is done, the tube from your wrist is removed and a pressure band is placed on the wrist to stop the bleeding. The band will come off 1 hour after the procedure. It is important to keep your left wrist straight during this time
- You will be taken to the recovery area, where the nursing staff will check your wrist often for bleeding and monitor your vital signs.
- The sedation and pain medicine given during the procedure may make you drowsy after the procedure.
- You may feel abdominal cramping and pain after the procedure. You will be given medication through your IV to help control the pain.
- You may eat and drink right 30 minutes after the procedure.
- You will be able to go home 1-2 hours after the procedure.
- On the way home, it is very important you pick up your prescriptions. All of medication will be called into your pharmacy the day before the procedure except the pain medication. You will receive a prescription for the pain medication when you are getting ready to go home.
- You will be given detailed discharge instructions on the day of the procedure.
- You may experience pelvic cramps for 3-7 days after your UFE, and possibly mild nausea and low-grade fever as well. The cramps are most severe during the first 24 hours after the procedure and will improve rapidly over the next several days.

### What are the benefits vs the risks?

#### Benefits

- Uterine fibroid embolization is much less invasive than open or laparoscopic surgery to remove individual uterine fibroids (myomectomy) or the whole uterus (hysterectomy).
- No surgical incision is needed
- Patients ordinarily can resume their usual activities much earlier than if they had surgery to treat their fibroids.



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- As compared to surgery, general anesthesia is not required and the recovery time is much shorter, with virtually no blood loss.
- Follow-up studies have shown that nearly 90 percent of women who have their fibroids treated by uterine fibroid embolization experience either significant or complete resolution of their fibroid-related symptoms. This is true both for women who have heavy bleeding as well as those who have bulk-related symptoms including urinary frequency, pelvic pain or pressure. On average, fibroids will shrink to half their original volume every 6 months. More importantly, they soften after embolization and no longer exert pressure on the adjacent pelvic organs.
- Follow-up studies over several years have shown that it is rare for treated fibroids to regrow or for new fibroids to develop after uterine fibroid embolization. This is because all fibroids present in the uterus, even early-stage nodules that may be too small to see on imaging exams, are treated during the procedure. Uterine fibroid embolization is a more permanent solution than the option of hormonal therapy, because when hormonal treatment is stopped the fibroid tumors usually grow back. Regrowth also has been a problem with laser treatment of uterine fibroids.

### Risks

- Any procedure that involves placement of a catheter inside a blood vessel carries certain risks. These risks include damage to the blood vessel, bruising or bleeding at the puncture site, and infection. However precaution is taken to mitigate these risks.
- When performed by an experienced interventional radiologist, the chance of any of these events occurring during uterine fibroid embolization is less than one percent.
- Any procedure where the skin is penetrated carries a risk of infection. The chance of infection requiring antibiotic treatment appears to be less than one in 1,000.
- Approximately two to three percent of women will pass small pieces of fibroid tissue after uterine fibroid embolization. This occurs when fibroids located inside the uterine cavity detach after embolization.
- In approximately one percent to five percent of women, menopause occurs after uterine fibroid embolization. This appears to occur more commonly in women who are older than 45 years.
- Although the goal of uterine fibroid embolization is to cure fibroid-related symptoms without surgery, some women may eventually need to have a hysterectomy because of infection or persistent symptoms.
- The question of whether uterine fibroid embolization impacts fertility has not yet been answered, although a number of healthy pregnancies have been documented in women who have had the procedure.