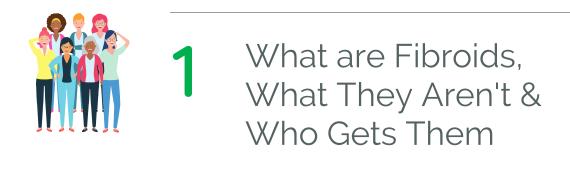


Know Your Options. Better Options. Better Outcomes.

**GET HELP** 







2 Symptoms & When You Should Seek Treatment



Benefits & Risks ofFibroid TreatmentOptiions

NVP strives to educate women about available uterine fibroid treatment options, including minimally invasive uterine artery embolization (UAE), also known as uterine fibroid embolization (UFE).

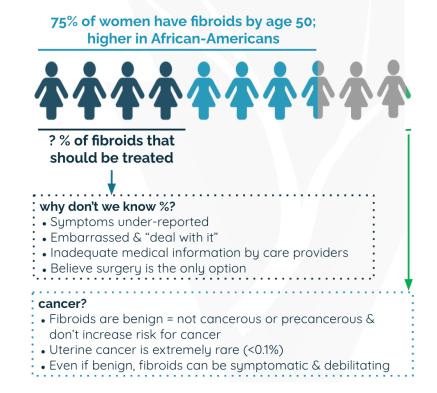
# WHAT ARE<br/>FIBROIDS, WHAT<br/>THEY AREN'T &<br/>WHO GETS THEM

Fibroids are muscular growths in the wall of the uterus that occur during a woman's childbearing years. Also called leiomyomas or just myomas, fibroids can vary in size, number and location and may cause moderate to severe symptoms.

They range in size from the size of a pea to bulky masses that can distort and enlarge the uterus. In unusual cases, they can be come very large, reaching the size of a grapefruit, or even a small watermelon.

Uterine fibroids are not a rare condition & 3 in 4 American women will develop fibroids by the age of 50.

### Condition



Fibroid symptoms are often under-reported and many women suffering from fibroids do not seek treatment even when symptoms are severe. Reasons why fibroids go untreated vary, but embarrassment, inadequate medical information provided by health care providers (including physicians) along with the belief that surgery is the only option, often contribute to women not seeking treatment and just 'dealing with it.'





The average size of a fibroid is about that of a lime. They can be small (pea-sized) or grow very large (small watermelon).



Women may have one to a few fibroids or numerous fibroids of varying shapes, sizes and locations.

#### Uterine fibroids are not associated with an increased risk of uterine cancer and do not turn into cancer.

Fibroids are NOT cancerous. There is a malignant form of a fibroid, called a leiomyosarcoma, which is fortunately rare. Leiomyosarcomas are fast growing and have MRI characteristics that are different from benign fibroids. In terms of "who gets fibroids," the answer is "most women." It has been estimated that as many as 50–70% of Caucasian women and 80% of African-American women develop fibroids by the age of 50. That said, there are factors that can increase your risk of developing fibroids:

Uterine fibroids are considered "benign" because they are not associated with increased cancer risk, but that does not mean that fibroids cannot cause severe symptoms. Age. Fibroids become more common as you age, especially during your 30s and 40s. After menopause, fibroids can slowly shrink.

Family history. If you have a family member who has fibroids, your risk is higher. For example, if your mother had fibroids, your risk of developing them yourself is about three times higher than average. Identical twins are more likely to develop fibroids than non identical twins. Ethnicity. African-American women are more likely to develop fibroids than Caucasian women, and are more likely to develop fibroids at a younger age. Obesity. If you are overweight, you have a higher fibroid risk. For obese or very heavy women, the risk is two to three times greater than average.

**Environmental factors.** Onset of menstruation at an early age, use of birth control, having a vitamin D deficiency, having a diet high in red meat and low in vegetables, and drinking alcohol all appear to increase your risk of developing fibroids.



High blood pressure No history of pregnancy Vitamin D deficiency Food additive consumption





## 2 SYMPTOMS & WHEN YOU SHOULD SEEK TREATMENT



#### Symptoms fall into two categories: those related to bleeding, and those related to bulk.

The symptoms of uterine fibroids usually start with mild increased cramping and/or a slight increase in bleeding during periods. As the fibroids grow, the symptoms will progress and can be severe enough to require hospitalization.

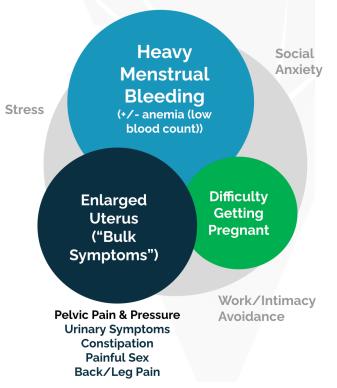
#### Bleeding

The most debilitating symptom is heavy periods. A patient with moderate symptoms may change a pad or tampon once every 3-4 hours and a patient with heavy symptoms will change a pad or tampon every 1-2 hours. Often there are clots, and flooding (a gush of blood). Anytime a woman bleeds through clothes, gets up at night to change her pad/tampon, alters her schedule to be near a bathroom or avoids activities such as plane flights, drives or vacations because of her periods, the fibroids should be treated. Fibroids should NOT cause bleeding in between cycles. Cycles become gradually heavier, which results in slowly progressing symptoms. Often a woman is not aware of how bad her situation is until she meets with a fibroid specialist and starts to talk about her cycle. Women are used to pushing through and putting up with symptoms, even when they are quite severe.

If you experience any of the following, a consultation for fibroid treatment is recommended:

- Prolonged menstrual periods that can last 7 or more days
- Bleeding through clothes
- Needing to wear tampons and superpads
- Wearing multiple layers of protection at night
- Knowing where all of the bathrooms are during your usual daily activities
- Changing plans or scheduling vacations around your cycle
- Symptoms of anemia (low red cell count) increased fatigue, dizziness or need for iron or blood replacement
- Cycles becoming heavier and heavier over 6 months to a year

#### **Common Fibroid Symptoms**





#### **Bulk Symptoms**

Bulk symptoms' relate to the actual mass of the fibroid pushing on surrounding pelvic structures. The particular size and location of the fibroid will determine which bulk symptoms each woman experiences. The most common is a general heaviness in the pelvis, which can be positional. A woman may change the side that she sleeps on, be unable to sleep on her back or stomach, or may be unable to do activities such as yoga or cycling.

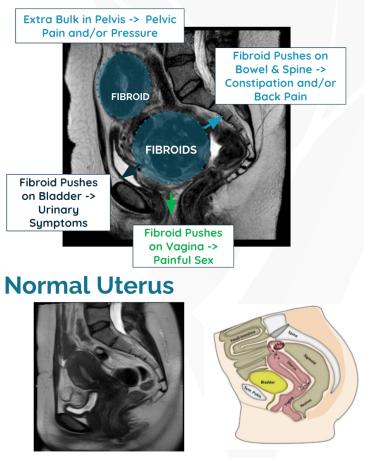
The need to urinate frequently is another common bulk related symptom. This is because the uterus sits right on top of the bladder, and the fibroids push the uterus forward, which traps the bladder between the fibroid and the pubic bone. The bladder is a stretchy organ, but it can't compete against the solid heavy fibroids. As the fibroids grow the bladder is pushed against the pubic bone, and cannot expand. Hence, the urge to urinate frequently, despite small volumes.

Fibroids may also push on the colon causing constipation, push on the spine and nerves causing back and/pr leg pain or be associated with painful sex.

#### Seek help if you are experiencing any of the common fibroid symptoms.

If your fibroids produce symptoms, they can affect your everyday activities and greatly reduce your overall quality of life.

#### **Fibroid Uterus**



If you experience any of the following, a consultation for fibroid treatment is recommended:

- Frequent urination
- Difficulty emptying the bladder
- Feeling of fullness in the lower stomach area
- · Enlargement of the lower abdomen
- Pain during sex
- Pelvic pressure and lower back pain, leg pain
- Large or numerous fibroids with infertility
- Constipation



# BENEFITS & RISKS OF FIBROID TREATMENT **OPTIONS**



#### Choosing a treatment depends on Your Condition. Your Preference.

What constitutes the "best" or "most effective" treatment option for you depends on the severity of your symptoms, as well as your personal situation, goals, and age. What works "best" to eliminate the symptoms of uterine fibroids or the fibroids themselves is very much an individual consideration.

One of the reasons NVP created this publication is that not all of these options are presented to women by their general-practitioners or gynecologists. At NVP, we want to make sure that all fibroid patients are very clear about the different treatment options, so they can make the best decision about how to proceed.

We feel that the best care is provided by working with the entire care team to achieve the best possible treatment outcome. Each fibroid patient is an individual, and thus deserves individual care to help guide them to the proper treatment choice.



If the fibroids are asymptomatic no treatment is necessary. In this case, watchful waiting is advised.

#### If fibroids are causing symptoms, seek a treatment option that works for you.

If the fibroids are causing symptoms - especially painful ones - there are treatments that can help. Which treatment is right for you depends on a number of factors, including:

- The severity of the symptoms
- The size and location of the fibroids
- Proximity to menopause
- Desire to become pregnant
- Medical risk factors
- Social variables, such as amount of time a woman can afford to take off from a job, or care for loved ones, for recovery

#### Options

Choosing a fibroid treatment option depends on: Your Condition. Your Preference.

#### WATCHFUL WAITING

noninvasive, frequent check-ups/scans if minimal/no symptoms MEDICATIONS

effectively treats symptoms, often short-term, does not eliminate fibroids, may have hormonal side-effects

Considered Together for Moderate to Symptoms

#### UTERINE ARTERY EMBOLIZATION (UAE) Eliminate fibroids (keep uterus)

SURGERY

- Myomectomy (surgically remove fibroids)
- Hysterectomy (surgically remove uterus)

#### ALSO USED

- Fibroid ablation (MRgFUS or HIFU) under research; low evidence
- Endometrial ablation submucosal fibroids < 1 inch

Medication - If you have mild symptoms, your doctor may suggest taking medications. For cramping, this treatment might include overthe-counter drugs such as ibuprofen or acetaminophen. If you have mild to moderate bleeding during your period, low-dose birth control pills or a Merina IUD can help normalize this bleeding. Iron supplementation is also often recommended to prevent symptoms of anemia. In the case of very heavy periods, hormone control with an IUD or OCP's may work, sometimes for up to several years. Other drugs, such as Lupron, can shrink your fibroids, and is used to urgently stop a massive hemorrhage, but this is usually not a reasonable sustainable treatment.

Myomectomy - This is a surgical procedure to remove the fibroids without taking out the healthy tissue of the uterus. It is widely considered a good option for women who want to have children after treatment. Myomectomy is always an option that should be discussed. Certain situations such as multiple or numerous fibroids or large fibroids may pose a higher surgical risk.

#### Myomectomy and UFE are the only uterinesparing definitive treatment options for symptomatic fibroids.

Hysterectomy - Hysterectomy is the traditional surgical treatment for fibroids, with >500,000 hysterectomies performed each year. While hysterectomy is a desired treatment for some, many would opt for a less invasive treatment with a shorter recovery time. Also, many women simply do not want to lose their uterus unless all other options have been excluded. One benefit of hysterectomy is that there will no longer be bleeding of any kind – whether due to the fibroids or hormones. Endometrial Ablation - In this procedure, the lining of the uterus is destroyed to control very heavy bleeding. This can be done with a laser, wire loops, electrical current, microwaves, freezing, and other methods. Pregnancy after endometrial ablation must be avoided due to a high rate of ectopic pregnancy and miscarriage. After ablation there is no healthy lining of the uterus. Ablation is a good minimally invasive outpatient procedure, usually performed for heavy bleeding due to hormones or sometimes adenomyosis. It is less commonly offered for treatment of uterine fibroids, since it does not actually treat the fibroid.

Myolysis - In this procedure, a needle is inserted into the fibroids, usually guided by laparoscopy, and an electrical current or freezing is used to destroy the fibroids. Laparotomy involves an abdominal incision to remove the fibroids, no matter the size or location of the tumors.

Uterine Fibroid Embolization (UFE), or Uterine

Artery Embolization (UAE) - With this procedure, a thin tube is inserted into the arteries that supply blood to the fibroid. Then, tiny plastic or gel particles are injected into the blood vessels. This effectively blocks the blood supply to the fibroids, causing them to shrink. UFE is minimallyinvasive, and requires no incisions or general anesthesia. Given the minimally invasive nature of the procedure, complications are rare.

Recovery time is one week, compared to 4-6 weeks with a hysterectomy. UFE spares the uterus, and though the societal recommendations are for myomectomy in women who are actively trying to become pregnant, the data demonstrates many successful pregnancies post-UFE. Depending on the size, number and location of the fibroids, myomectomy or UFE will be the best option. This can be discussed in detail at the time of a consultation.



### **UAE Procedure**



Performed through a pinhole in the groin or wrist Real-time advanced imaging is used to guide a small catheter to the uterine arteries Tiny particles (medical beads) - the size of grains of sand - are released to block the blood flow that supplies oxygen to the fibroid tumors, causing them to shrink and die.

UFE has many advantages over other, more drastic fibroid treatment options. One of the most important of these advantages, of course, is that you don't have to lose your uterus, as you do with hysterectomy. More than 500,000 hysterectomies are performed in the U.S. every year, with uterine fibroids the most common reason. And while hysterectomy may relieve the pain of fibroids, in a patient with fibroids, a hysterectomy will be more complex than in a patient without fibroids. In addition to the more systemic effects of losing the uterus, pregnancy becomes impossible. The procedure itself risks blood loss and the need for blood transfusions. Hysterectomy can also cause damage to surrounding areas, such as the bladder, urethra, blood vessels, and nerves and in some cases may cause scarring leading to bowel obstruction. It increases the risk of infection and blood clots in the legs. Some women have such large fibroids that an open incision is necessary, and a laparoscopic approach cannot be preformed. Fibroids are very vascular; there are numerous small and large vessels within the fibroid tumors. This means that there is a chance of heavy blood loss, or even uncontrolled bleeding during the surgery. UFE blocks the blood vessels within the fibroids, rendering them avascular.

Uterine fibroid embolization is an important fibroid treatment option, a real alternative to a myomectomy or hysterectomy.

First, UFE is so minimally invasive that it does not have the risks associated with invasive surgery. It requires no "cutting" or large incisions, or even general anesthesia, which always incurs some degree of risk.

Second, recovery time after uterine fibroid embolization is much less than after the other surgical options. UFE patients are showering, standing up, eating normally, and going home much earlier than patients who have hysterectomies or other, more invasive surgeries. Most can go back to work within a week. After UFE there is significant cramping for 1–3 days, then mostly fatigue for up to 5–7 days. Most women go back to their usual activities within a week.

Many patients report a significant reduction of their symptoms within a very short time, often as quickly as the next menstrual cycle.



### **UAE Versus Surgical Options**

	UAE	Myomectomy	Hysterectomy
Desire to Keep Uterus	$\checkmark$		uterus removed
Fibroid Symptom Relief	options similarly effective		
Always Treats Numerous Fibroids	<ul> <li>✓</li> </ul>	one to a few fibroids removed	<ul> <li>✓</li> </ul>
No Impact of Fibroid Size	$\checkmark$	may require open surgery if large	
Fewer Major Complications	$\checkmark$	Increased major bleeding, bowel injury, blood clots	
Invasiveness/ Skin Incision	non-surgical pinhole in groin or wrist	surgical number/size of incision depends on surgical approach	
Post-Procedure Stay	outpatient 0-1 days	1-3 days depending on surgical technique & patient condition	
Less Pain	✓		
Recovery Time	V 1-2 weeks	2-6 weeks depending on surgical technique & patient condition	
Possibility of Pregnancy	options discussed in detail at the time of consultation		
Option for Light Sedation	$\checkmark$	full anesthesia necessary	
Recurrence or Reintervention	since keeping uterus, new fibroids may develop		

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