



# Fact Sheet

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The Patient Education Website of the American Society for Reproductive Medicine

## What are fibroids?

### **What are fibroids?**

Uterine fibroids (also called myomas or leiomyomas) are benign (non-cancerous) tumors of muscle tissue found in the uterus. They can enlarge and/or distort the uterus (womb) and sometimes the cervix (lower part of the uterus). They grow from the smooth muscle cells in the wall of the uterus.

Fibroids can be singular or multiple and are very common. It is estimated that uterine fibroids will affect 8 in 10 African American women and 7 in 10 Caucasian women by the time they reach menopause.

Fibroids usually become noticeable during the reproductive years and become smaller after menopause. Most cause no symptoms and do not require treatment. However, depending on the size and location of the fibroids in the uterus, they may cause symptoms and require treatment.

### **What causes fibroids?**

Fibroids happen when a genetically altered muscle cell in the wall of the uterus produces excessive muscle tissue, creating a mass that enlarges. The exact cause of fibroids is unclear, but evidence suggests that both genetics and hormones play roles. For instance, fibroids are slightly more common in African American women compared with Caucasian women. Estrogen and progesterone (hormones produced primarily by the ovaries) may stimulate growth of fibroids. After menopause, when hormone levels are low, fibroids rarely grow and frequently shrink. There is little evidence that nutritional or lifestyle factors affect fibroid growth and development. Similarly, medications such as low-dose birth control pills have little or no impact on fibroid growth.

### **Where are fibroids found?**

Fibroids are usually found in or around the body of the uterus, but sometimes occur in the cervix. Fibroids within the uterus can be divided into three categories.

- Subserosal are located in the outer wall of the uterus (55%).
- Intramural are found in the muscular layers of the uterine wall (40%).
- Submucosal protrude into the uterine cavity (5%).

Fibroids can be connected to the uterus through a stalk (pedunculated) or can be attached to nearby organs such as the bladder and bowel, or to the ligaments surrounding the uterus. Fibroids are rarely found outside the pelvic cavity.

### **What kind of symptoms do fibroids cause?**

Symptoms from fibroids are related to their size and location. Most women with uterine fibroids have no symptoms. The most common symptoms are abnormal uterine bleeding, pain, and pelvic pressure.

#### **Abnormal uterine bleeding**

Abnormal uterine bleeding is the most common symptom when fibroids are located in or near the lining of the uterus and is the main reason for requesting treatment for fibroids. Because abnormal uterine bleeding can be due to other conditions, such as endometrial cancer and hormonal problems, it is important that women with fibroids who experience abnormal vaginal bleeding undergo a thorough evaluation for other causes of bleeding.

#### **Pain**

A rapidly enlarging fibroid may outgrow its blood supply and degenerate, causing pain and cramping. Fibroids that are attached to the uterus by a thin stalk may twist and cause severe pain. Large uterine fibroids may also make sexual intercourse or certain actions painful. Women with fibroids may also experience painful menstrual cramps.

### **Pressure symptoms**

Large fibroids may press on nearby pelvic organs. If the fibroid presses on the bladder, which lies in front of the uterus, urinary frequency or urgency may occur. Pressure on the ureters (the tubes that transport urine from the kidneys to the bladder) can result in kidney damage if the fibroids are not removed. Fibroids in the lower uterus may put pressure on the large bowel and rectum, which could cause painful bowel movements, constipation, hemorrhoids, or altered shape of stools.

### **Do fibroids cause infertility?**

Fibroids can be associated with infertility. Achieving pregnancy in women with infertility has been more challenging in women with fibroids than women without fibroids or women who had their fibroids removed. In addition, for women undergoing in vitro fertilization (IVF), pregnancy success rates may be lower in women with fibroids. The location of where the fibroids develop may be a factor in their role in infertility, with those protruding into the cavity (submucosal) and those in the muscular layer (intramural) causing more problems.

### **What happens to fibroids during pregnancy?**

Fibroids may grow in pregnancy and may change how the baby is positioned at the time of delivery. In addition, fibroids increase the risk for a cesarean section, miscarriage, and premature delivery. Depending on where the fibroids are located, they can also lead to problems during delivery, including bleeding and premature separation of the placenta.

### **Can fibroids be cancerous?**

The overall risk of fibroids being cancerous is approximately 1 in 1,000 (of removed fibroids) in the reproductive years and is more common in women after menopause. Cancers arising from uterine fibroids are called leiomyosarcomas. A fibroid that grows after menopause may be a leiomyosarcoma, in which case removal of the uterus (hysterectomy) is required.

### **How are fibroids diagnosed?**

#### **Pelvic exam**

Uterine fibroids are often found on pelvic exam by assessing the shape and size of the uterus. Sometimes a pelvic exam alone may not be enough to distinguish a fibroid from an ovarian mass close to the uterus. In addition, smaller fibroids may not be found on pelvic exam. Imaging studies, like ultrasound, may be used to confirm the findings.

#### **Ultrasound**

Ultrasound uses the echoes from high-frequency sound waves to create a picture of the pelvic organs. Because fibroids vary in size and location, ultrasound across the abdominal wall and using a probe placed in the vagina may be used to best see the fibroids.

#### **Sonohysterography**

Sonohysterography (SHG) is an ultrasound procedure in which the uterine cavity is outlined by a small amount of fluid which is placed in the uterus through a thin plastic tube. SHG improves the doctor's ability to identify fibroids that protrude into or distort the uterine cavity. For more information about SHG, please see the ASRM fact sheet titled *Saline infusion sonohysterography (SHG)*.

#### **Magnetic Resonance Imaging (MRI)**

Magnetic Resonance Imaging (MRI) uses magnetic fields to form images of the body. Once fibroids are diagnosed, an MRI may be helpful to identify their location in the uterus to determine best treatment options.

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