

Fundal Subserosal Uterine Fibroids: Causes, Symptoms, Diagnosis, and Treatment

Fundal Subserosal Fibroids: A Comprehensive Overview

Uterine fibroids develop from smooth muscle cells of the uterus and are non-cancerous growths. While fibroids can grow in different locations on and inside the uterus, subserosal fibroids develop on the outer surface of the uterus and protrude outward.

The fundus is the top, dome-shaped part of the uterus, farthest away from the cervix. A fibroid located in this region and extending outward is termed a “fundal subserosal fibroid.”

This type of fibroid can cause various symptoms depending on its size and position but is less likely to interfere with menstrual bleeding or fertility than other fibroids. However, it's important to note that in some cases, fundal subserosal fibroids can still lead to significant discomfort by pressing on nearby organs like the bladder or intestines, and may affect fertility. Let's get an in-depth look at fundal subserosal fibroids.

Understanding Fundal Subserosal Fibroids

1. Location and Anatomy:

Fundal subserosal fibroids are a specific type of subserosal fibroid located on the fundus, which is the top part of the uterus. The term “subserosal” refers to fibroids that develop on the outer surface of the uterus, beneath the serosa, the

smooth outer membrane of the uterus. When these fibroids form on the fundus, they are known as fundal subserosal fibroids. These fibroids protrude outward, sometimes attaching to the uterus by a stalk (pedunculated fibroids).

2. Causes of Fundal Subserosal Fibroids:

The exact cause of fibroid development, including fundal subserosal fibroids, remains unclear.

However, several factors are believed to contribute to their growth:

- **Hormonal Imbalance:** Estrogen and progesterone, hormones responsible for regulating the menstrual cycle, are known to stimulate the growth of fibroids. Fibroids tend to grow during periods of high estrogen, such as during pregnancy or when taking certain forms of birth control pills. While birth control pills can elevate estrogen levels, potentially contributing to fibroid growth in some women, they are also used as a treatment to manage symptoms, such as heavy menstrual bleeding, by regulating hormone levels.
- **Genetics:** A family history of fibroids increases the chances of developing them. Specific genetic mutations and inherited tendencies can predispose individuals to fibroid formation.
- **Growth Factors:** Growth factors are proteins that play a role in cell proliferation, distinction, and tissue maintenance. In the case of fibroids, substances like insulin-like growth factors (IGFs) are thought to contribute to abnormal cell growth in the uterine muscle tissue, leading to fibroid development. These growth factors may interact with hormonal and genetic factors, promoting the formation and enlargement of fibroids.
- **Extracellular Matrix (ECM):** The ECM is the material that helps cells stick together. It has been found in higher concentrations in fibroids, which makes them fibrous and

contributes to their growth. The ECM not only provides structural support but also influences cell behavior, potentially enhancing fibroid formation.

- **Other Risk Factors:** Early menstruation, not having children, obesity, a diet high in red meat and low in green vegetables, and alcohol consumption, especially beer, are also associated with an increased risk of developing fibroids.

Symptoms of Fundal Subserosal Fibroids:

Fundal subserosal fibroids can vary widely regarding symptoms, depending on their size, number, and exact location. Unlike other types of fibroids, such as submucosal fibroids, which grow inside the uterine cavity and often cause heavy menstrual bleeding, fundal subserosal fibroids typically have less impact on the menstrual cycle.

However, they can still cause significant discomfort and other symptoms:

- **Pelvic Pain:** As these fibroids grow, they can exert pressure on the surrounding pelvic organs, leading to dull or sharp pain in the lower abdomen or pelvis. This pain might intensify during menstruation or sexual intercourse.
- **Lower Back Pain:** The location of the fundal subserosal fibroid can cause pressure on the lower back, leading to persistent back pain.
- **Abdominal Bloating:** Large fundal subserosal fibroids can cause the abdomen to appear distended, similar to pregnancy, due to their size and location at the top of the uterus.
- **Frequent Urination:** If the fibroid presses against the bladder, it can increase the need to urinate. This is more common with anterior fundal subserosal fibroids positioned toward the front of the uterus.
- **Constipation:** Fibroids at the back of the uterus

(posterior fundal subserosal fibroids) can press on the rectum, causing constipation or discomfort during bowel movements.

- **Sciatica:** In some cases, fibroids can press on the sciatic nerve, causing pain that radiates down the back of the leg.
- **Feeling of Fullness or Heaviness:** As the fibroid grows, it can create a sensation of fullness or heaviness in the lower abdomen or pelvis.

Diagnosis of Fundal Subserosal Fibroids:

Diagnosing fundal subserosal fibroids typically involves a combination of medical history, physical examination, and imaging tests:

1. Medical History and Physical Examination

The first step in diagnosing fibroids is a thorough medical history and physical examination by a healthcare provider. The doctor will ask about symptoms, menstrual history, and any family history of fibroids. A pelvic exam can help identify an enlarged or irregularly shaped uterus, which may indicate the presence of fibroids.

2. Imaging Tests

- **Ultrasound:** This is the most widely used imaging test to diagnose fibroids. Ultrasound uses sound waves to create images of the uterus and can help determine the location, size, and number of fibroids in the uterus. Transvaginal ultrasound provides a closer view of the uterus and is often more accurate than a transabdominal ultrasound.
- **Magnetic Resonance Imaging (MRI):** MRI is used when more detailed images are needed. It can help differentiate between different types of fibroids and other conditions that may mimic fibroid symptoms.
- **Hysterosonography:** Also known as saline infusion

sonography, this test involves filling the uterus with saline to create more explicit ultrasound images. It is beneficial for identifying submucosal fibroids but can also be used to visualize other fibroids.

- **Hysteroscopy:** This procedure involves inserting a small telescope with a light into the uterus through the cervix to view the inside of the uterus. It is mainly used to diagnose submucosal fibroids but can also provide information about other fibroid types.

Treatment of Fundal Subserosal Fibroids:

The treatment for fundal subserosal fibroids depends on various factors, including the size and number of fibroids, the severity of symptoms, and the patient's overall health and fertility goals.

Treatment options range from watchful waiting to surgical procedures:

1. **Watchful Waiting:** For women with small fibroids that are not causing significant symptoms, a "watch and wait" approach may be recommended. Regular ultrasound monitoring can help track fibroid growth and detect any changes that may require intervention.
2. **Medications:**
 - **Hormonal Therapy:** Medications that regulate hormone levels, such as gonadotropin-releasing hormone (GnRH) agonists, can shrink fibroids by reducing estrogen and progesterone levels. However, these medications are typically used short-term due to side effects like bone thinning.
 - **Nonsteroidal Anti-Inflammatory Drugs (NSAIDs):** NSAIDs can help relieve pain associated with fibroids but do not reduce their size.
 - **Tranexamic Acid:** This medication reduces heavy menstrual bleeding but does not shrink fibroids.

- **Oral Contraceptives:** Birth control pills can help control heavy menstrual bleeding and pain but do not shrink fibroids.

1. Minimally Invasive Procedures:

For those seeking less invasive options, several procedures offer effective treatment for fundal subserosal fibroids without the need for major surgery:

- **Uterine Fibroid Embolization (UFE):** UFE is a minimally invasive procedure that blocks the blood supply to the fibroid, causing it to shrink. A catheter is inserted through the groin and guided to the blood vessels supplying the fibroid. Tiny particles are injected to block the vessels. UFE is effective in treating fibroids and has a shorter recovery time than surgery.
- **Magnetic Resonance Imaging-Guided Focused Ultrasound (MRgFUS):** This noninvasive treatment uses high-intensity ultrasound waves to heat and destroy fibroid tissue. It is performed under MRI guidance to ensure precision. MRgFUS is effective for small to medium-sized fibroids.

Sonata Treatment:

The Sonata Treatment, also known as Transcervical Fibroid Ablation (TFA), is a minimally invasive, incision-free procedure used to treat uterine fibroids. It utilizes radiofrequency energy to ablate (destroy) fibroids from within the uterus, without the need for traditional surgery. The treatment is performed using the Sonata System, which combines ultrasound imaging and a radiofrequency ablation device to target and treat fibroids.

▪ **Surgical Procedures:**

- **Myomectomy:** This surgery involves the removal of fibroids while protecting the uterus. It is the recommended option for women who wish to maintain their

fertility. Myomectomy can be performed through different approaches, including hysteroscopy, laparoscopy, or open surgery, depending on the size and location of the fibroids.

- **Hysterectomy:** In cases where fibroids are too large, numerous, or causing severe symptoms, a hysterectomy which is a removal of the uterus may be recommended. This permanent solution eliminates fibroids and the possibility of their recurrence. However, it also means that the woman can no longer become pregnant.

Prevention of Fundal Subserosal Fibroids:

While it may not be possible to prevent fibroids entirely, specific lifestyle changes can help reduce the risk of developing them or manage their growth:

- **Healthy Diet:** A diet rich in fruits, vegetables, and whole grains and low in red meat and processed foods may help reduce the risk of fibroid development. Foods high in antioxidants, such as berries and leafy greens, can help protect against inflammation and oxidative stress linked to fibroid growth.
- **Regular Exercise:** Maintaining a healthy weight through regular physical activity can lower the risk of fibroids. Exercise helps regulate hormone levels and reduce inflammation, which may contribute to fibroid growth.
- **Managing Stress:** Chronic stress can disrupt hormone balance, potentially contributing to fibroid growth. Stress management techniques such as yoga, meditation, and deep breathing exercises can help maintain hormonal balance.
- **Limiting Alcohol and Caffeine:** Reducing alcohol and caffeine consumption may help lower the risk of fibroids. Both substances can increase estrogen levels, which can promote fibroid growth.

Natural Treatments for Fundal Subserosal Fibroids:

Some women seek natural remedies to manage fibroid symptoms or as complementary treatments alongside conventional therapies. While these treatments are not scientifically proven to shrink fundal subserosal fibroids, they may help alleviate symptoms:

- **Herbal Supplements:** Certain herbs, such as chasteberry (*Vitex agnus-castus*), milk thistle, and green tea extract, have been suggested to help balance hormones and reduce fibroid symptoms. However, it is essential to consult a healthcare provider before using herbal remedies, as they may interact with other medications.
- **Acupuncture:** Acupuncture has been used to relieve pain and improve overall well-being in women with fibroids. Some studies suggest that acupuncture may help reduce fibroid-related pain and regulate the menstrual cycle.
- **Dietary Changes:** Incorporating anti-inflammatory foods, such as turmeric, ginger, and omega-3 fatty acids (found in fish oil), may help reduce inflammation and fibroid symptoms. Avoiding foods high in estrogen-like compounds, such as soy products, may also be beneficial.



FAQs About Subserosal Fibroids:

Q1. Can You Feel a Fundal Subserosal Fibroid Through Your Belly?

1. In some cases, women with large fundal subserosal fibroids may be able to feel a mass or bulge in their lower abdomen. This is particularly true if the fibroid is located at the front of the uterus (anterior fundal subserosal fibroid) and has grown significantly. However, most fibroids are not palpable, especially if they are small or more profound within the pelvic region.

Q2. Do Fundal Subserosal Fibroids need to be removed?

1. Suppose a fundal subserosal fibroid is causing symptoms that negatively impact your quality of life, such as pelvic pain, pressure, or bowel and bladder issues. With those symptoms, it may need to be removed. Consulting a fibroid specialist is essential to assess whether

treatment is necessary based on the severity of your symptoms and overall health.

Q3. How serious is a Fundal Subserosal Fibroid?

1. Fundal Subserosal fibroids are generally not life-threatening and are often non-cancerous. While they are a common health issue among women, larger subserosal fibroids can cause discomfort or pain, affecting daily life. However, they can be managed or treated effectively.

Conclusion:

Fundal subserosal fibroids are a specific type of fibroid that grows on the top of the uterus and can cause various symptoms, including pelvic pain, abdominal bloating, and pressure on nearby organs. While these fibroids are generally benign or non-cancerous, they can significantly impact a woman's quality of life. Understanding the causes, symptoms, and treatment options is essential for managing fibroid-related health concerns.

Whether through lifestyle changes, medications, or surgical interventions, effective treatment options are available for women suffering from fundal subserosal fibroids. Working closely with a healthcare provider to determine the best course of action based on individual symptoms and reproductive goals is crucial.