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Patient information: Uterine fibroids (Beyond the Basics)

FIBROIDS OVERVIEW

Fibroids are growths of the uterus, or womb [1] (figure 1). They are also called uterine leiomyomas or myomas. The uterus is made of muscle, and fibroids grow from the muscle. Fibroids can bulge from the inside or outside of the uterus (figure 2). Fibroids are not cancerous and are not thought to be able to become cancerous.

Fibroids are very common. Approximately 80 percent of women will have fibroids in their lifetime, although not all of these women have bothersome fibroid symptoms. Treatments are available for women who have fibroid-related problems like heavy menstrual bleeding, pain or pressure in the pelvis, or problems with pregnancy or infertility.

Fibroids are more common, more severe and occur at an earlier age for women of African descent. We do not understand why this is true.

More detailed information about fibroids is available by subscription. (See "Overview of treatment of uterine leiomyomas (fibroids)".)

FIBROID CAUSES

The cause of fibroids is unknown. Fibroids seem to respond to the female hormones estrogen and progesterone; some women have specific genes that may predispose them, and their families, to fibroids, and lifestyle and reproductive factors influence fibroids. Some fibroids grow with time and others shrink. Fibroids can also have growth spurts where they grow quickly over a short period of time. (See "Epidemiology, clinical manifestations, diagnosis, and natural history of uterine leiomyomas (fibroids)".)

FIBROID SYMPTOMS

Fibroids can range in size from microscopic to the size of a grapefruit or even larger. The majority of fibroids are small and do not cause any symptoms at all. However, some women with fibroids have very heavy or long menstrual periods or pelvic pressure or pain that interferes with their life.

Fibroids are more likely to cause symptoms if the fibroids are large, if there are many fibroids, or if the fibroid is located in certain places in the uterus. Fibroid symptoms tend to get better when a woman no longer has menstrual periods, at menopause.

Increased menstrual bleeding — Fibroids can increase the amount and number of days of menstrual bleeding. Women who have excessive menstrual bleeding are at risk for a low blood count (iron deficiency anemia).

Pelvic pressure and pain — Larger fibroids can cause a sense of pelvic pressure or fullness in the abdomen, similar to the feeling of being pregnant. Sometimes women can even look pregnant when they are not due to the fibroids.

Fibroids can also cause other symptoms, depending upon where they are located in the uterus. As an example, if a fibroid is pressing on the bladder, the woman may feel like she needs to go to the bathroom frequently. Similarly, a fibroid pressing on the rectum can cause constipation.

Problems with fertility and pregnancy — Most women with fibroids are able to become pregnant without a problem. However, certain fibroids that distort the inside of the uterus can cause trouble becoming pregnant or with miscarriage and removing these fibroids can optimize fertility. Fibroids in the outer part of the uterus may have a mild effect on decreasing fertility, but surgically removing these fibroids does not appear to decrease the risk. Women with fibroids and reproductive problems should go through a basic infertility evaluation before concluding the fibroids are responsible for the problem. (See "Reproductive issues in women with uterine leiomyomas (fibroids)".)

Most women with fibroids have a completely normal pregnancy without complications. However, women with a large fibroid (greater than 5 to 6 cm) or more fibroids might have an increased risk of specific pregnancy complications. (See "Pregnancy in women with uterine leiomyomas (fibroids)".)

FIBROID DIAGNOSIS

A doctor or other health care provider may suspect fibroids if your uterus is enlarged or has an irregular shape. A pelvic ultrasound is needed to confirm that fibroids are present. Ultrasound uses sound waves to create a picture of the uterus.

FIBROID TREATMENT

Women who have no symptoms from their fibroids do not need to have treatment. Women with significant symptoms may try medical or surgical treatment. The best treatment depends on which symptom is most bothersome. The size, number and locations of fibroids and your desire for future pregnancy also factor into most treatment decisions. (See "Overview of treatment of uterine leiomyomas (fibroids)".)

MEDICAL FIBROID TREATMENT

Medical treatments are those that use a medicine to reduce the heavy menstrual bleeding, which is common in women with fibroids. Medical treatments are often recommended before surgical treatments.

There are a number of medical treatments available, including some that use hormones and some that do not.

Iron and vitamins — For women who are anemic, the combination of iron supplements and a multivitamin, which will help the body effectively use the iron, is an effective option to combat anemia.

Nonsteroidal antiinflammatory drugs (NSAIDs) — Nonsteroidal antiinflammatory drugs (NSAIDs), such as ibuprofen (sold as Motrin or Advil) and naproxen (sold as Naprosyn or Alleve), can help reduce menstrual cramps and decrease menstrual flow in some women. You can buy some NSAIDs (including ibuprofen) without a prescription.

NSAIDs are not expensive, have few side effects, reduce pain, and you only need to take them during your menstrual period. You can take NSAIDs in combination with any of the medical treatments discussed here. However, NSAIDs do not reduce bleeding as well as other medical treatments do.

For women who do not get relief with non-prescription NSAIDs, there are other similar medications available by prescription that may be helpful for some women.

Hormonal birth control — Hormonal methods of birth control include the pill, skin patch, vaginal ring, shot, hormonal IUD, and implant. These treatments reduce bleeding, cramps, and pain during your menstrual period and can correct anemia. It might take three months for bleeding to improve after you start taking hormonal birth control.

More detailed information about hormonal birth control is available separately. (See "Patient information: Hormonal methods of birth control (Beyond the Basics)".)

- Pills, patch, vaginal ring — Most forms of hormonal birth control, including the pill, skin path, and vaginal ring, are designed to be used for three weeks in a row, followed by one week off. During the fourth week, you will have menstrual bleeding. It might take three months for bleeding to improve after you start taking hormonal birth control.

  More information about hormonal birth control is available separately. (See "Patient information: Hormonal methods of birth control (Beyond the Basics)".)

  Some doctors and nurses advise women with heavy menstrual periods to take hormonal birth control continuously, without a break week. This will allow you to skip your period. This strategy is called continuous dosing.

  You can also take other types of hormonal birth control continuously. This is explained in detail separately. (See "Patient information: Hormonal methods of birth control (Beyond the Basics)", section on 'Continuous dosing'.)
- Hormonal intrauterine device — There is an intrauterine device (IUD) that slowly releases a form of a progesterone-like hormone called a progestin, into the uterus. There is no estrogen in the IUD. The IUD prevents pregnancy and reduces menstrual bleeding for up to five years. A doctor or nurse places the IUD inside the uterus. This treatment is best for women who do not have plans to become pregnant within the next 6 to 12 months. (See "Patient information: Long-term methods of birth control (Beyond the Basics)", section on 'Intrauterine device (iud)'.)

- Implant — There is an implant that slowly releases a progestin into your bloodstream. It prevents pregnancy and reduces menstrual bleeding for up to three years. A doctor or nurse places the implant (which is about the size of a match stick) under the skin in the upper inner arm. It is called Implanon in the United States and elsewhere. This treatment is best for women who do not have plans to become pregnant within the next 6 to 12 months. The most common side effect of the progestin implant is irregular menstrual bleeding. For more detailed information, (see "Patient information: Hormonal methods of birth control (Beyond the Basics)", section on 'Birth control implant').
- Shot — Depot medroxyprogesterone acetate is a long-acting form of a progesterone-like hormone called a progestin. It is a shot given once every three months. This treatment prevents pregnancy and can reduce heavy menstrual bleeding. The shot is best for women who do not have plans to become pregnant in the next 6 to 12 months. In contrast to the implant and IUD, the shot has to wear off naturally and cannot be undone if you change your mind about an earlier pregnancy.

  The most common side effect of medroxyprogesterone acetate is bleeding and spotting, particularly during the first few months. Many women completely stop having menstrual periods after using this treatment for one year. More detailed information about medroxyprogesterone acetate is available separately. (See "Patient information: Hormonal methods of birth control (Beyond the Basics)", section on 'Injectable birth control'.)

Antifibrinolytic medicines — Antifibrinolytic medicines do not contain hormones and can help to slow menstrual bleeding quickly. These medicines work by helping blood to clot. Antifibrinolytic medicines do not shrink fibroids or correct anemia. Tranexamic acid (Lysteda) is approved by the United States Food and Drug Administration for the indication of heavy menstrual bleeding.

The advantages of antifibrinolytic medicines over other medical treatments are that:

- The medicine slows bleeding quickly (within two to three hours)
- You need to take the medicine only during your period or only during the times when your period is heavy
- The medicines do not affect your chances of becoming pregnant

Side effects can include headache and muscle cramps or pain. You should not take antifibrinolytic medicines with hormonal birth control unless your doctor or nurse approves; there may be an increased risk of blood clots, stroke, and heart attack when taken together.

Gonadotropin-releasing hormone agonists — Gonadotropin-releasing hormone (GnRH) agonists are a medicine given by injection once every one to three months that can be used to temporarily shrink uterine fibroids and temporarily stop menstrual bleeding.

GnRH agonists work by "turning off" the ovaries, causing a temporary and reversible menopause. If you are scheduled to have your fibroids removed surgically, your doctor might recommend that you first use GnRH agonists for 3 to 6 months to shrink the fibroids, which can make them easier to remove. This treatment is not routinely recommended for longer than six months in a row due to the risk of thinning bones when used for long periods of time. However,

once the medication shrinks the fibroids, the medicine can be continued long-term, as long as low doses of estrogen and progestin are added to protect the bones. GnRH agonists do not work immediately. They first cause an increase in ovarian hormones that can cause an increase in symptoms for the first few weeks. This “flare” can be a problem for women with heavy bleeding who are severely anemic.

SURGICAL FIBROID TREATMENT

Your doctor might recommend a surgical treatment for fibroids if:

- You have fibroid-related heavy menstrual bleeding, pain, or pressure that does not get better with medical treatments
- You are trying to get pregnant and fibroids appear to be interfering

Myomectomy — Myomectomy is a surgery done to remove fibroids which can reduce both bleeding and size related symptoms. Most women who have myomectomy are able to have children afterwards. However, there is a risk that fibroids will come back after myomectomy; between 10 and 25 percent of women who have myomectomy will need a second fibroid surgery. For this reason, myomectomy is not the best choice for women who do not want future pregnancies.

There are several ways to perform myomectomy; the "best" way depends on where your fibroids are located and the size and number of fibroids (see "Prolapsed uterine leiomyoma (fibroid)" and "Abdominal myomectomy").

- Abdominal myomectomy — This surgery requires an incision (cut) in the lower stomach to remove the fibroids.
- Laparoscopic or robotic myomectomy — This surgery uses several small incisions in the stomach. A doctor uses thin instruments and a camera (laparoscope) to remove the fibroids. Robotic myomectomy is a variation of laparoscopic myomectomy where the surgical procedure is aided with a surgical robot.
- Hysteroscopic myomectomy — If the fibroids are inside the uterus, a doctor can insert instruments through the cervix to remove the fibroids. This procedure helps more with heavy menstrual bleeding and not with size-related complaints.

Endometrial ablation — Endometrial ablation destroys the lining of the uterus. The treatment does not shrink the fibroid(s) but can help to decrease heavy menstrual bleeding caused by fibroids. In fact, some women who have endometrial ablation stop having menstrual periods.

Ablation can be done in the office or as a day surgery. It can be done in combination with other treatments, such as hysteroscopic myomectomy. Endometrial ablation is not a form of birth control, but pregnancy is not recommended after treatment and often not possible. You will need to use some form of birth control to prevent pregnancy after ablation. Women who do get pregnant following ablation are more likely to have an abnormal pregnancy outside the uterus.

Uterine artery embolization — Uterine artery embolization (also called UAE or uterine fibroid embolization, UFE) is a treatment that blocks the blood supply to fibroids. This causes the

fibroid to shrink within weeks to several months after the treatment and decreases other fibroid symptoms including heavy menstrual bleeding. (See "Uterine leiomyoma (fibroid) embolization".)

The treatment is performed in the hospital. A doctor will insert a small tube into a large blood vessel in the inner thigh. The tube is threaded up to the uterine blood vessels (figure 3A-B). The doctor injects tiny particles into the blood vessel, which stops blood flow to the fibroid.

Pregnancy is not usually recommended after uterine artery embolization, although it is possible to become pregnant. Some form of birth control is recommended if you do not want to become pregnant.

Magnetic resonance guided focused ultrasound — Magnetic resonance guided focused ultrasound surgery (MRgFUS or FUS) (eg, ExAblate 2000) is a more recent fibroid treatment option. This noninvasive treatment takes place in a MRI machine which guides the treatment. Multiple waves of ultrasound energy go through the abdominal wall and converge on a small volume of tissue, which leads to thermal destruction of the fibroid. Women do receive sedation during the procedure and it can be performed as an outpatient procedure. Fibroids shrink over the weeks and months following treatment and heavy menstrual bleeding is also decreased. Pregnancy is not usually recommended following FUS, although it is possible to become pregnant following treatment.

Hysterectomy — Hysterectomy is a surgery that removes the uterus. The ovaries and cervix are often left in place when the hysterectomy is for uterine fibroids.

Hysterectomy is a permanent treatment that cures heavy menstrual bleeding and the bulk related symptoms of fibroids. However, it is major surgery, and you will need up to six weeks to fully recover. More detailed information about hysterectomy is available separately. (See "Patient information: Abdominal hysterectomy (Beyond the Basics)" and "Patient information: Vaginal hysterectomy (Beyond the Basics)".)

WHICH TREATMENT IS RIGHT FOR ME?

There are many treatments for fibroids, and it can be hard to decide which one is right. You should choose a treatment based upon your fibroid-related symptoms.

- If you are bothered by heavy menstrual bleeding, you can first try the medical treatments. Hormonal birth control, nonsteroidal antiinflammatory drugs (NSAIDs), or antifibrinolytic medicines work better than other medical treatments.

Some women who no longer want future pregnancies can also be treated with endometrial ablation to reduce bleeding (see 'Endometrial ablation' above).

If medical treatment or endometrial ablation are not good options for you, or you also have symptoms related to the size of the fibroids, you can consider uterine fibroid embolization, myomectomy, hysterectomy or focused ultrasound surgery.

- If you are having trouble getting pregnant and fibroids could be the cause, myomectomy is the standard surgical option. Talk to your doctor to be sure that other possible causes of infertility have been addressed before you have fibroid surgery.

WHERE TO GET MORE INFORMATION

Your healthcare provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our web site (www.uptodate.com/patients). Related topics for patients, as well as selected articles written for healthcare professionals, are also available. Some of the most relevant are listed below.

Patient level information — UpToDate offers two types of patient education materials.

The Basics — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

Patient information: Uterine fibroids (The Basics)
Patient information: Heavy periods (The Basics)
Patient information: Painful periods (The Basics)
Patient information: Repeated miscarriage (The Basics)
Patient information: Uterine artery embolization (The Basics)
Patient information: Endometrial ablation (The Basics)
Patient information: Uterine adenomyosis (The Basics)

Beyond the Basics — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

Patient information: Hormonal methods of birth control (Beyond the Basics)
Patient information: Long-term methods of birth control (Beyond the Basics)
Patient information: Abdominal hysterectomy (Beyond the Basics)
Patient information: Vaginal hysterectomy (Beyond the Basics)

Professional level information — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

An overview of endometrial ablation
Epidemiology, clinical manifestations, diagnosis, and natural history of uterine leiomyomas (fibroids)
Hysteroscopic myomectomy

Pregnancy in women with uterine leiomyomas (fibroids)
Prolapsed uterine leiomyoma (fibroid)
Overview of treatment of uterine leiomyomas (fibroids)
Reproductive issues in women with uterine leiomyomas (fibroids)
Uterine leiomyoma (fibroid) embolization
Abdominal myomectomy

The following organizations also provide reliable health information.

- National Library of Medicine

(www.nlm.nih.gov/medlineplus/uterinefibroids.html)

- United States Department of Health and Human Services

(www.womenshealth.gov/FAQ/uterine-fibroids.cfm)

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Literature review current through: Oct 2013. | This topic last updated: Oct 11, 2013.