

# Myomas

Myomas (fibroids) are benign swellings in the wall of the uterus. They are often harmless, but in some cases, they can cause serious symptoms. In this brochure, you will read about fibroids: what fibroids are, how they are diagnosed, and what kind of treatments are possible.

## What are fibroids?

Myomas are also called fibroids. They are benign lumps in the wall of the uterus and consist mainly of muscle tissue. Myomas can be outside the uterus, in the uterine wall, or in the uterine cavity.

Exactly how fibroids develop is not known. However, it seems that there is a genetic predisposition. Myomas can be a few millimeters in size but can even weigh a few pounds.

Myomas occur in various locations in the uterus:

1. on the outside of the uterus (subserous)
2. in the wall of the uterus (intramural)
3. under the mucous membrane of the uterine cavity (submucous)
4. Completely inside the uterine cavity (intracavitary).

## In whom do fibroids occur?

Myomas affects 1 in 4 women. They are more common in black women and in women who have not (yet) had children. They are affected by the hormones estrogen and progesterone.

Therefore, myomas do not occur before the first menstrual period and become more minor and eventually resolve after the last menstrual period. During pregnancy, myomas can sometimes grow due to hormone changes; after pregnancy, they get smaller again. Also, some hormone treatments, such as for transitional complaints, may increase the size of myomas.

## Complaints

Myomas usually produce no or few symptoms and are often found by chance. Most fibroids grow slowly and go unnoticed.

The location of the fibroid has more influence on symptoms than its size. For example, fibroids in the uterine cavity, even if small, can cause menstrual symptoms. The most common complaints are excessive loss of blood (heavy menstrual bleeding) and menstrual pain (dysmenorrhoea). In principle, menstrual periods remain regular. The extensive blood loss,

possibly with clots, can cause anemia, making you feel tired or short of breath. Other, more rare symptoms of fibroids are an oppressive feeling in the abdomen, pain in the lower back, pain during urination, and pain and/or loss of blood during intercourse. A fibroid rarely shrinks due to insufficient blood supply (myoma necrosis), possibly resulting in severe abdominal pain. Myomas usually do not cause any problems at the onset of or during pregnancy. Sometimes fibroids make the chance of pregnancy reduced. In particular, if fibroids protrude into the uterine cavity. The chance of fibroids being malignant is minimal (less than 1 in 2,000).

## Research

If fibroids are suspected, a normal gynecological examination takes place. If you are losing a lot of blood or are very tired, the doctor may check the blood iron level (Hb or hemoglobin) to see if anemia is present. The location and size of the fibroids can be assessed using ultrasound, usually internal ultrasound. This allows fibroids larger than half a centimeter to be seen. For additional evaluation of fibroids, there is gel contrast scope (GIS), in which gel is introduced into the uterine cavity. A hysteroscopy and/or laparoscopy (see hysteroscopy and laparoscopy diagnostic) or a magnetic resonance imaging (MRI) scan (an advanced radiological examination) can also determine whether there are fibroids. Usually, an ultrasound scan is sufficient.

## Treatment

If you do not have any symptoms, the fibroids do not need to be treated, and further monitoring is usually unnecessary. If you do have symptoms, the gynecologist will decide on a treatment together with you. This will consider the fibroids' number, location, and size, your age, and your desire to become pregnant. There are various treatments, ranging from medication to surgery. The choice of treatment depends on the goal: to reduce symptoms, stop the growth of fibroids, or remove them. The effect of the treatments varies. Different types of treatment are available, depending on your situation and the characteristics of the fibroids:

- Surgery with preservation of the uterus;
- Surgery in which the uterus is removed;
- Medications.

## Surgery with preservation of the uterus

There are several surgical treatments in which the uterus can be preserved:

- Hysteroscopic resection (also called "TCRM")  
Myomas in the uterine cavity (intracavitary) or under the mucosa (submucous) can often be removed by hysteroscopic surgery, where the myomas are scraped away with an electric knife.
- Myoma Enucleation  
If fibroids are on the outside of the uterus (subserous) or in the wall (intramural), they can be peeled out: myoma enucleation nucleation. Enucleation can be performed by laparoscopy for fibroids that are not too large or too numerous; sometimes, an abdominal surgery (laparotomy) is performed. Sporadically, so much blood may be lost during peeling that a blood transfusion is necessary. However, the chance that the gynecologist will have to remove your uterus due to too much blood loss is minimal. After myoma enucleation nucleation, adhesions can develop that may cause pain or possibly make it difficult to conceive. The

likelihood of this depends on the size, amount, and location of the scarring in the uterus. In the event of a subsequent pregnancy, depending on the size of the wound in the uterus (size and number of fibroids), the gynecologist will, in some cases, recommend a C-section. In some cases, pre-treatment before surgery is advised. See under: 'Medications' the heading 'GnRH agonists'. Recovery after a myoma enucleation would take about 4 weeks if it was successful with keyhole surgery (or via the vaginal route). With an abdominal incision, it is usually 2 weeks longer.

- **Embolization**

In this process, small pellets close off some of the blood vessels to the fibroids. This is done through a tube in the artery of the groin. The treatment is successful in most women: they experience less blood loss, pain, or pressure. The fibroids shrink by an average of 60%. This shrinkage takes place in the first few months after the embolization. After six months, the fibroids stop shrinking. Two years after the embolization, 23.5% of women still choose to have their uterus removed. In the years that follow, this increases to 28%. Thus, 7 out of 10 women experience improvement so that no additional surgical treatments are needed. Quality of life improves greatly after embolization and by similar amounts as after uterine removal. Embolization is performed in the X-ray department by a radiologist. After the embolization, you will stay in the hospital for 2 nights, mainly for pain relief. Once at home, you can take painkillers. Recovery after an embolization usually takes 2-3 weeks. The gynecologist does not recommend this procedure for women who still want to become pregnant. Rare complications may include damage to the bladder or intestines, infection of the uterus and fallopian tubes, or the occurrence of menopause.

Two treatments are not offered at the Amsterdam UMC, but which do take place elsewhere in the country: the SONATA ablation and the HIFUS treatment. If you are suitable for these treatments and would like them, we can refer you to the hospitals where they are performed. In both cases, it concerns an experimental treatment of which the exact value is not yet known. Scientific research will determine whether the treatments are valuable and who is most suitable for them.

- The Sonata ablation

In the case of a fibroid in the wall (intramural) that does not protrude into the uterine cavity, needles can be inserted into the fibroid under ultrasound guidance and vaginally, thus heating it to such an extent that it dies. The healthy uterine tissue and surrounding organs in the abdominal cavity are not damaged in this process. The effect on complaints compared to other treatments is not yet known.

- HIFUS treatment

Myomas that are not too numerous or too large can be heated and thus reduced using sound waves. This is done using imaging with an MRI scan. You lie under the MRI scan for several hours, and the treatment takes place without scarring of the abdomen. The volume of the fibroids is reduced by approximately 30% after this treatment. The effect on complaints compared to the other treatments is not yet known.

## Treatments involving removal of the uterus

### Removal of the uterus

For a definitive solution to the symptoms, some women choose to remove the uterus. By definition, the loss of blood disappears. There is often a positive effect on pain complaints and pressure from the uterus on surrounding tissues. The uterus can sometimes be removed via the vagina, but in the case of fibroids, this is usually done by laparoscopy (keyhole surgery). When the uterus is very large, sometimes a tomie (abdominal incision) must be done. Sometimes a pre-treatment with GnRH agonists is advised prior to a uterine removal (see under "Medications" the heading "GnRH agonists"). After uterus removal, you will not enter menopause because the ovaries, in principle, remain in place. In principle, the ovaries and fallopian tubes remain intact. The recovery after uterine removal would take about 4 weeks if it were successful with keyhole surgery (or via the vaginal route). With an abdominal incision, it is usually 2 weeks longer.

### Morcellation (reduction) of fibroids at laparoscopy

The advantage of the laparoscopic technique compared to "abdominal incision" is the faster recovery after surgery, allowing for a quicker resumption of everyday activities. Complications such as excessive blood loss, thrombosis or embolism, and wound infections are also less common with laparoscopy. In addition, there is a cosmetic benefit.

Often, laparoscopy requires that the fibroids or uterus with fibroids be reduced in size before being removed from the abdominal cavity through the small openings. The instrument ("morcellator") that is widely used for this purpose around the world has some rare risks:

- There is a tiny chance - estimated at 1-4 in 2000 women (depending on age and characteristics of the fibroid) - that an undetected malignant tumor is present in the uterus with the current imaging possibilities. Reduction (morcellation) of the tissue may spread any malignant tumor into the abdominal cavity and thus could adversely affect life expectancy in some cases. However, it is not possible to predict in whom this will be the case. Therefore, when morcellating a uterus, we use a sterile bag. This prevents malignant cells from spreading into the abdominal cavity. This is not always done when removing a fibroid because fibroid cells will spread through the abdominal cavity anyway.
- It has also been sporadically described that flakes from the fibroid or other benign cells of the uterus remain in the abdominal cavity and can cause re-growth of tissue there. The chance of this happening is small. However, we do ensure that the myoma tissue is removed from the abdominal cavity as completely as possible. Whether morcellation in a bag prevents this complication is not known.

### Medications

Medications are used to try to reduce the amount of blood loss and/or menstrual pain. However, the fibroids remain, although they sometimes become slightly smaller. With many and/or large fibroids and with fibroids in the uterine cavity, the effect of medication may be disappointing. If you stop taking the medication, the symptoms usually return.

- Prostaglandin synthase inhibitors (diclofenac, ibuprofen, indomethacin, naproxen) These medications often help well with menstrual pain, and in more than half of women with profuse blood loss, it for reducing blood loss by about one-third. The medication should be

taken when your period starts, but better still a day before. After that, you use them for as long as needed. They rarely, if ever, cause side effects.

- Tranexamic acid (Cyclokapron).

This drug affects the clotting of the blood. Blood loss decreases by half on average. This drug should also be taken only during menstruation. Side effects are rare. The drug is less likely to be prescribed if there is an increased risk of thrombosis.

- The Pill

The pill often reduces blood loss in fibroids by about a quarter. If you smoke or have an increased risk of thrombosis, using the pill may be less wise, especially as you age. Side effects are highly variable and often depend on the composition and/or dosage of the pill.

- Progesterone preparations (orgametrile, primolut, Cerazette, Implanon, Mirena)

Progesterone preparations keep the endometrium from being stimulated, thus keeping menstruation away.

The tablets must be taken every day. Implanon is a rod placed under the skin in the upper arm and can stay in place for three years. The Mirena IUD is suitable if the uterine cavity has a normal shape; it can stay in place for up to five years. About one-third of women with the progesterone preparations no longer have blood loss, one-third have occasional blood loss (breakthrough bleeding), but often less than before. In the other women, these medications do not provide sufficient effect. The side effects are minor, but sometimes fluid retention, oily skin, or depressive feelings are described.

- GnRH agonists

These drugs suppress the production of hormones in the ovaries, mimicking postmenopause (the period after the last menstrual period). No more endometrium is produced, so there is no more bleeding. The fibroids also tend to become smaller. Side effects can occur in the form of menopause symptoms: hot flashes, night sweats, and a dry vagina. Given the risk of osteoporosis, you usually cannot take this drug for more than six months. Usually, GnRH agonists offer a good option if it looks like you will soon enter menopause. Another use of GnRH agonists is as a pre-treatment for surgery. We often recommend a pre-treatment for 3-6 months with hormone injections (GnRH agonists): this pre-treatment reduces the size of the fibroids (and the uterus as a whole) by up to 40%. This can make the operation less invasive (smaller incision). There are other advantages, such as less blood loss during the operation. The fact that you do not menstruate during this treatment sometimes puts you in a better condition because there is no blood loss for some time.

- Ulipristal (Esmya)

Ulipristal is a relatively new drug that can reduce both the symptoms of fibroids and the size of the fibroids. Ulipristal is used in courses of 3 months. There is usually no blood loss during the courses, and between courses, you typically usually menstruate. There are relatively few side effects compared to GnRH agonists. However, it is important that you do not have any liver abnormalities. This is because ulipristal can cause liver damage in very rare cases.

Because this is a new drug, we are investigating the effect of this treatment compared to existing treatments such as embolization, myoma enucleation, or uterine removal. If you are

interested in this drug (and you are suitable for it), your gynecologist can give you information about this study.

## **Nutrition or supplements**

Many women ask if there is a natural way to make fibroids smaller or have fewer symptoms. You might think of a different diet or taking supplements or vitamins. Although much research has been done, it seems that there is no clear improvement with dietary changes or taking supplements or vitamins. Some studies show a benefit, while others show a detriment. Because no (clear) benefit is seen, we cannot give any advice on this.

## **Another thing to note...**

Myomas can cause unpleasant symptoms, but they are rarely dangerous. Usually, you have enough time to think about the different treatments and make a decision. The gynecologist can advise you on this. In addition, not everyone is suitable for every treatment. It is, therefore, possible that there is a treatment in this leaflet for which you are not suitable. Your gynecologist can explain why.