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This leaflet is based on our website ([www.fibroids.uk.net](http://www.fibroids.uk.net)). We hope you find the web site and this leaflet helpful and easy to understand.

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## Uterine fibroids

In this leaflet you will find information about uterine fibroids (leiomyoma), how they are diagnosed, and details of different treatments. The leaflet has been specially written for patients and we have done our best to minimize the jargon.

The main purpose of the leaflet is to tell you about treatments which are available at the Royal Free Hospital, with special emphasis on various types of surgery and embolisation. These treatments include:

Hysteroscopic myomectomy  
 Laparoscopic myomectomy  
 Abdominal myomectomy  
 Vaginal hysterectomy  
 Laparoscopic hysterectomy  
 Abdominal hysterectomy  
 Uterine artery embolisation

## What are fibroids

Uterine leiomyomata, often referred to as fibroids, are tumours of the uterus (womb). They are very common and can be asymptomatic. Fibroids tend to be multiple and can be situated inside the cavity of the uterus, in the wall or outside (see diagram). In some cases, they can grow to a very large size.

No one knows why they develop, but it is well established that the female hormone oestrogen makes them enlarge; this is why fibroids are usually diagnosed when women are in their 30's and 40's, and why they shrink after the menopause.

While not all women have symptoms, typical complaints associated with fibroids include:

Heavy periods  
 Irregular vaginal bleeding  
 Pelvic pain  
 Pelvic mass  
 Pressure symptoms  
 Subfertility

Briefly, treatment is indicated if the fibroids are thought to be responsible for troublesome symptoms, or if they become large. If there are no symptoms or if the fibroids are small, there is no need for treatment. Although fibroids can become cancerous, the chance is so small that they are not routinely removed just because they are there.

## Diagnosis

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There are a number of ways that fibroids are diagnosed. First of all, you may have some of the typical symptoms we associate with fibroids. If they are large, it may be obvious when you are examined, and a "lump" is found in the lower abdomen. Smaller fibroids may be detected when you are having an internal examination, for instance at the time of a cervical smear.

When fibroids are suspected, one or more special investigations can be done to confirm the diagnosis. These include:

Pelvic ultrasound  
Hysteroscopy  
MRI scan  
CT scan  
Laparoscopy

Of these, ultrasound and hysteroscopy are the most common investigations, and the others are only done in special circumstances. Which ever test is organised for you, the diagnosis should be obvious. The tests will give your doctor an idea of how many fibroids there are, how large they are, and where they are situated.

## Treatment overview

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As mentioned already, treatment for fibroids is only indicated if they cause symptoms or if they are particularly large. Small fibroids are quite common, and often do not cause problems; in that case, there is no need for immediate treatment, and monitoring of the fibroids for growth may be all that is needed.

However, if you do have symptoms which can be linked to fibroids, or if the fibroids are large (or getting larger), the choice of treatments will depend on:

Your age  
Number of fibroids you have  
How large they are  
Where they are  
Your main symptoms  
Your wish for future fertility

For instance, if the fibroids are small and your main problem is one of heavy periods, **MEDICAL THERAPY** with drugs or **HYSTEROSCOPIC MYOMECTOMY** may be successful. If the fibroids are larger but you wish to have children in the future, **MYOMECTOMY** or **EMBOLISATION** may be the best option for you. If your family is complete, or if the fibroids are relatively large, you may prefer to have a **HYSTERECTOMY** or undergo **EMBOLISATION**. You can read about all these options by clicking on the boxes on the left.

## Medical treatment

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Treatment with tablets are indicated if your fibroids are relatively small and your main problems are heavy or painful periods. In this situation, drugs such as TRANEXAMIC ACID or MEFENAMIC ACID can be prescribed by your doctor. Unfortunately, these drugs do not cure the fibroids, so you may have to take them for many years. Similarly, they do not tend to work as well as in women with heavy periods who do not have fibroids.

As heavy periods are a common cause of anaemia, you may also be asked to take regular iron replacement to correct this.

Ultimately, many women who try medical treatment request something more definitive. Medical treatment may also not be the best choice if the fibroids are large, or are causing other problems such as pressure symptoms or subfertility.

<p><b><u>PROS</u></b> Avoids surgery</p>	<p><b><u>CONS</u></b> Treatment may have side effects Drugs may have to be continued for several years Drugs are not curative</p>
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## Myomectomy

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Myomectomy is a surgical procedures which involves removing the fibroids but leaving behind the uterus. It can be done a number of ways, depending on the number, size and position of the fibroids. For instance, someone with a single small fibroid which is situation in the cavity of the uterus can undergo HYSTEROSCOPIC MYOMECTOMY, which is a relatively fast and straightforward procedure that can be done as day case surgery. Women with a few small to medium fibroids situated deeper in the muscle of the uterus, and especially on the outside, may be suitable for LAPAROSCOPIC MYOMECTOMY, which should also be followed by a relatively short hospital stay and quick recovery. VAGINAL MYOMECTOMY may also be possible in this situation. However, if your fibroids are numerous and/or large, then ABDOMINAL MYOMECTOMY may well be the only option if you wish to retain your uterus.

What ever you choose or is appropriate in your case, myomectomy does involve surgery and therefore surgical risk. The most important complication specific to myomectomy is haemorrhage (bleeding), which may necessitate a blood transfusion, and in rare cases even hysterectomy. Although the chance of requiring a hysterectomy is very small, as it is only done in extreme cases of life-threatening haemorrhage, the risk is there. We may suggest prior treatment with a drug to shrink the fibroids and make them less vascular as this can make the surgery easier and reduce bleeding.

In theory, pregnancy is still possible after myomectomy (unlike after hysterectomy); you may be advised to have a Caesarean delivery after extensive surgery. Conversely, as it is sometimes difficult to remove all fibroids, particularly those which are small, there is a chance that the problem may recur and you may therefore need further treatment in years to come.

## Abdominal myomectomy

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ABDOMINAL MYOMECTOMY is the traditional operation for removing fibroids and is done through a laparotomy incision. If there are numerous, large fibroids, it is the only way to remove them as the other

techniques are not suitable in such cases. Providing the fibroids are not very large, however, a "bikini" type incision can often be used (see diagram).

Abdominal myomectomy is a major operation. As it is generally done in the more difficult cases, complications are more common than with the other routes of surgery, or indeed with hysterectomy. Hospitalisation and recovery also take longer. Nonetheless, it is a good operation when the other procedures are contra-indicated as it is the most thorough type of myomectomy and yet still allows the uterus to be conserved in most patients.

<u>PROS</u>	<u>CONS</u>
No limit to fibroid size or position Most likely procedure to remove all the fibroids	Major abdominal incision Complications relatively more frequent Hospital stay 5 to 7 days Recovery takes several weeks Adhesions (scar tissue) more likely

### Hysteroscopic myomectomy

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**HYSTEROSCOPIC MYOMECTOMY** is done using a small telescope inserted through the vagina and cervix into the uterus. The telescope can be fitted with miniature instruments (eg. scissors, cutting loop, laser) which is used to remove or destroy the fibroid(s). The procedure is monitored on a colour television via a small video camera.

This type of surgery is suitable for small fibroids which are mainly sited inside the cavity of the uterus, although deeper fibroids can sometimes also be removed. With larger fibroids, the procedure may have to be repeated, but this is unusual. Complications with this type of surgery are relatively uncommon.

<u>PROS</u>	<u>CONS</u>
Relatively minor surgery No external scars Complications uncommon Day case procedure in many cases Fast recovery No risk of scar tissue in pelvis	Only suitable for small/few fibroids Fibroids have to be mainly in the uterine cavity

### Laparoscopic myomectomy

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**LAPAROSCOPIC MYOMECTOMY** is also done using a narrow telescope and miniature instruments, but these are inserted into the body through the abdomen (stomach). Typically, for instance, the laparoscope is placed in the umbilicus (belly button) and the other instruments are put lower down (see diagram). This type of operation is used when the fibroids are on the outside of the uterus, provided there are not too many of them and they are not too large. The fibroids are excised using instruments such as scissors, grasping forceps, and diathermy or laser. The uterus is then usually repaired with sutures (stitches), and the fibroids removed either through one of the small abdominal incisions following morcellation (cutting into small pieces) or via the vagina.

Laparoscopic myomectomy is a more difficult procedure than hysteroscopic myomectomy, and takes longer. Bleeding can be more of a problem, so the chance of requiring a blood transfusion is greater. Hospital stay is typically 3 to 4 days, and recovery a few weeks.

<u>PROS</u>	<u>CONS</u>
Small external scars Complications not that common Relatively short hospital stay Recovery in a few weeks Less risk of adhesions (scar tissue) than with laparotomy	Only suitable for a few small to medium sized fibroids which are situated mostly on the outside of the uterus

## Vaginal myomectomy

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**VAGINAL MYOMECTOMY** involves removing fibroids through the vagina; as with hysteroscopic myomectomy, therefore, there are no external scars. This operation is done when the fibroids are moderate in size but too deep or numerous for hysteroscopic or laparoscopic myomectomy. It is easier in women who have children as there tends to be more space in the pelvis for this type of surgery.

The procedure is easiest when the fibroid(s) are at the back of the uterus, and most difficult when they are mainly at the top; in that situation, laparoscopic myomectomy may be preferred. Because conventional instruments are used, vaginal myomectomy generally takes less time than laparoscopic myomectomy and the repair of the uterus is stronger. Recovery in terms of hospitalisation and return to normal activities is similar, and faster than with laparotomy.

<u>PROS</u>	<u>CONS</u>
Fibroids can be sited anywhere Relatively short hospital stay Recovery in a few weeks Less risk of adhesions (scar tissue) than with laparotomy	Only suitable if fibroids are not very large Difficult for fibroids at the top of the uterus

## Hysterectomy

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Hysterectomy is the definite cure for fibroids and involves removing ALL the fibroids along with the uterus. Following surgery, you will not have any more periods, and of course you cannot become pregnant. Hysterectomy is, therefore, only suitable for women who have completed their family, but there is no chance of a recurrence of the fibroids or need for further treatment (as there is with myomectomy or embolisation).

Although your periods will stop after hysterectomy, this does not mean that you will become menopausal. Provided your ovaries are not removed at the same time, there should be little difference in your "hormones" after surgery. Sometimes, however, it is in your best interests to remove the ovaries at the same time (eg. if they are diseased), and then you can usually take hormone replacement therapy afterwards to prevent menopausal symptoms.

Hysterectomy can be done a number of ways. In many respects, **VAGINAL HYSTERECTOMY** is the best and least traumatic procedure, and may be possible as long as your fibroids are not too large. **LAPAROSCOPIC HYSTERECTOMY** is done with the help of a telescope (as with laparoscopic myomectomy), and is generally indicated when there is the feeling that you may have adhesions (scar tissue) in your pelvis which would make vaginal surgery difficult. If your fibroids are very large, the only choice is **ABDOMINAL HYSTERECTOMY**.

If you undergo hysterectomy, there is also the choice of total or subtotal hysterectomy. In **TOTAL HYSTERECTOMY**, the entire uterus is removed, including the cervix; conversely, in **SUBTOTAL HYSTERECTOMY**, the uterus is removed but the cervix is not. While subtotal hysterectomy is an easier operation and may be associated with fewer complications, a purely vaginal route of surgery becomes virtually impossible if the cervix is to be conserved.

As in the case of myomectomy, hysterectomy is a major operation. However, despite the fact that the entire uterus is removed, problems are if anything less common than with myomectomy. For instance, the risk of bleeding and needing a blood transfusion are greater with abdominal myomectomy than abdominal hysterectomy; this is because the blood supply to the uterus is first tied off when doing a hysterectomy, whereas with myomectomy, the fibroids are removed while the blood supply to the uterus is flowing normally. Other complications (eg. infection, bruising) are also less likely with hysterectomy than myomectomy.

## Abdominal hysterectomy

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**ABDOMINAL HYSTERECTOMY** is the most commonly performed type of hysterectomy in most countries. Certainly, if the fibroids are very large or if you are thought to have a lot of adhesions in your pelvis, then abdominal hysterectomy is generally the only option. Just as with myomectomy, however, there is a good chance that surgery can be done through a "bikini" type incision even in difficult cases.

Hospital stay averages 5 to 7 days and normal activities are generally deferred for 4-6 weeks. This does not mean that you are bed bound, only that you are advised to avoid heavy physical work for that time.

<u>PROS</u>	<u>CONS</u>
Fibroid size does not matter Most easy route to deal with adhesions or ovarian problems Subtotal hysterectomy relatively simple Surgery faster than laparoscopic hysterectomy	Major abdominal incision Complications more frequent than with vaginal or laparoscopic hysterectomy Longer hospital stay Recovery takes several weeks

## Vaginal hysterectomy

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**VAGINAL HYSTERECTOMY**, as the name suggests, is done through the vagina and leaves no external scars. It is a common misconception that this type of hysterectomy is done using "suction"! It is not. Vaginal hysterectomy is carried out using the same surgical principles as abdominal hysterectomy, the difference being that the surgery starts around the cervix in the vagina rather than the abdomen.

Surgery takes about the same time as abdominal hysterectomy, and the ovaries can be removed if indicated. In contrast, recovery as judged by hospital stay and return to normal activities is generally much faster. In the USA, some gynaecologists are even doing vaginal hysterectomy as a day case procedure!

<u>PROS</u>	<u>CONS</u>
No external scars Complications usually less likely than with abdominal hysterectomy Relatively fast recovery	Not suitable if the fibroids are very large or there is scar tissue in the pelvis Subtotal hysterectomy may not be possible

## Laparoscopic hysterectomy

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**LAPAROSCOPIC HYSTERECTOMY** is a recent operation which was first described in 1989. It is the equivalent of laparoscopic myomectomy in terms of approach and the instruments used; typically, surgery starts using the laparoscope and miniature instruments inserted through the abdomen, and the hysterectomy is completed through the vagina. If appropriate, ovaries are easily removed at the same time.

Laparoscopic hysterectomy is a slow procedure, just like laparoscopic myomectomy. Recovery, however, is relatively fast, and comparable to vaginal hysterectomy. The complication rate is also generally considered to be similar.

<u>PROS</u>	<u>CONS</u>
Small external scars only Can deal with scar tissue or ovarian problems Subtotal hysterectomy relatively simple Complications usually less likely than with abdominal hysterectomy Relatively fast recovery	Not suitable if the fibroids are very large Surgery can take several hours

## Uterine artery embolisation

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**UTERINE ARTERY EMBOLISATION** was first performed approximately 20 years ago to stop uncontrollable bleeding from the womb due to cancer or complications of child birth or surgery. About 10 years ago, uterine embolisation started to be used in France prior to myomectomy to reduce bleeding during surgery. Somewhat unexpectedly, it was found that some women no longer required surgery as their symptoms had subsided and their fibroids begun to shrink. The procedure began to be used as the primary treatment for fibroids.

Fibroid embolisation is performed by an interventional radiologist (cf. gynaecologist) and is done under local anaesthesia and light sedation. The procedure involves occluding blood vessels supplying the fibroids. This is done by injecting small plastic particles through a narrow catheter which is inserted into an artery in the groin, and guided to the uterus. The plastic particles block the blood supply feeding the fibroids and this results in embolisation. Without a blood supply the fibroids degenerate (waste away) and become smaller in size, thus reducing the uncomfortable symptoms associated with them.

World experience indicates a success rate for fibroid embolisation of over 85%, with an average decrease in fibroid volume of between 40 - 60%. Up to 90% of women presenting with abnormal uterine bleeding and size related symptoms (eg. pressure) have demonstrated significant improvement. You can expect improvement almost immediately with respect to heavy bleeding and pelvic pain; shrinkage of the fibroids usually starts within a few weeks.

The main complication of the procedure is infection, leading to hysterectomy. The incidence of this complication is approximately 1-2%. In addition a very small number of women have stopped having their periods altogether following the procedure. Other serious complications are rare. Lesser complications include pain, which can sometimes be severe, and nausea in the first few hours following the procedure. Symptoms can be controlled with appropriate medication, and most symptoms are substantially improved within days although there may be pain and cramping for several days. A "Post-Embolisation Syndrome", consisting of pain, nausea, vomiting and fever affects some women in the week following the procedure. Others experience a watery, non-offensive vaginal discharge in the weeks following the embolisation. Approximately 7% of patients may pass a degenerating fibroid in the weeks

or months following the procedure. Many women report returning to work within a week or two of having the procedure.

<b>PROS</b>	<b>CONS</b>
Suitable for large fibroids Avoids general anaesthesia, surgery and abdominal incisions Hospital stay 1 to 2 days Fast recovery and return to normal activities	Considerable post-procedure pain Small risk of hysterectomy and early menopause No specimen to check fibroids are benign Fibroids do not disappear completely

**N.B.** Before an embolisation can be carried out, you must attend the Embolisation Clinic for a detailed consultation and be willing to have pre-embolisation and follow-up MRI (Magnetic Resonance Imaging) scans at 3 months, 6 months and 12 months.

## How to contact us

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You must be referred by your General Practitioner if you wish to be seen at the Royal Free Hospital. If you want a general assessment or are interested in one of the surgical treatment options, please ask to be referred to Mr. Adam Magos, Consultant Obstetrician and Gynaecologist; if you are interested in embolisation, the referral letter should be addressed to Dr. Anthony Watkinson, Consultant Radiologist.

<b><u>Referral for general assessment or surgery</u></b>	<b><u>Referral for embolisation</u></b>
Mr. Adam Magos BSc MD FRCOG Consultant Obstetrician and Gynaecologist Royal Free Hospital Pond Street Hampstead London NW3 2QG Tel: +44 (0) 20 7830 2497 Fax: +44 (0) 20 7830 2504	Dr. Anthony Watkinson MB BS FRCR Consultant Interventional Radiologist Royal Free Hospital Pond Street Hampstead London NW3 2QG Tel: +44 (0) 20 7794 0500 (Extension 3179) or 020 7830 2170 Fax: +44 (0) 20 7794 5342

You can find out further information about the [Royal Free Hospital](#) at the hospital web site.

Although we do not offer a consultation service by telephone, post or e-mail, if you require any specific information to decide if you wish to be seen at the Royal Free Hospital, you may send an e-mail to [info@fibroids.uk.net](mailto:info@fibroids.uk.net) and we will do our best to reply.

## How to find us

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The Royal Free Hospital is situated in north London close to Hampstead Heath. The hospital can be reached most easily by public transport or taxi.

The nearest underground stations are Belsize Park and Hampstead on the Northern Line. Buses C11, 24, 46, 168 and 268 also stop close to the hospital. Trains on the North Thames Link stop at Hampstead Heath station.

As car parking is restricted on the streets surrounding the hospital, and there is only a small multi-story car park on the hospital grounds, coming by private transport is not encouraged. Taxis and mini-cabs are can be ordered from the main reception area of the hospital.

Both the Gynaecology out-patient clinic and Radiology are situated on the ground floor of the hospital. If you come via the main entrance off Pond Street, you can ask for further directions at the front reception.

### Other web sites

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You may be interested in some of the other Royal Free Hospital web sites listed below:

[www.infertility.uk.net](http://www.infertility.uk.net) This web site provides information about the ONE STOP FERTILITY CLINIC which has recently started at the Royal Free. The clinic aims to provide fast and efficient assessment of couples having difficulty achieving a pregnancy, and offers consultation, pelvic ultrasound, diagnostic hysteroscopy and culdoscopy (instead of laparoscopy) at a single out-patient visit.

[www.gynendo.com](http://www.gynendo.com) This web site gives details of WORKSHOPS for gynaecologists and nurses run by the Minimally Invasive Therapy Unit & Endoscopy Training Centre. Currently, there are 12 courses per year covering various aspects of hysteroscopic, laparoscopic and vaginal surgery. Most of the workshops have a strong emphasis on the practical aspects, with as much model and "Hands On" training as possible.