

# Update on Surgery for Uterine Fibroids

Fibroid, also called a **myoma** or **leiomyoma**, is a slow-growing, non-cancerous (*benign*) tumour of the uterus.

When fibroids cause major symptoms or problems, there is a wide range of **medical** and **surgical** treatment options which may be of help.

Where conservative management proves ineffective or unsuitable, surgery for treatment of fibroids may be a course of action to explore.

Fundamentally, surgical treatment options for fibroids comes down to a decision between:

- (i) removal of fibroid (myomectomy) or
- (ii) removal of the uterus (hysterectomy)

As surgery for treatment of fibroids is rarely urgent but can have major, and in the case of hysterectomy, irreversible impact on the outcome, the 'right' 'choice should follow detailed discussion of benefits, risks, complications and alternatives by the doctor with the patient. Often, the final decision on whether to undertake myomectomy or hysterectomy should depend on individual factors such as:

- childbearing intention
- personal belief and cultural value
- the nature and severity of symptoms
- the impact of symptoms on quality of life
- the number, size and location of fibroid(s)
- the natural history and likely progression if no investigation or treatment occurs
- the benefits, risks and likely outcomes of the recommended treatment
- the benefits, risks and likely outcomes of non-surgical alternatives
- the level of skills and expertise of the treating doctor

In general, there should be ample time to undergo thorough investigations followed by detailed discussion with your doctor(s). If in doubt, additional opinion(s) should be sought before making decision.

## **Myomectomy**

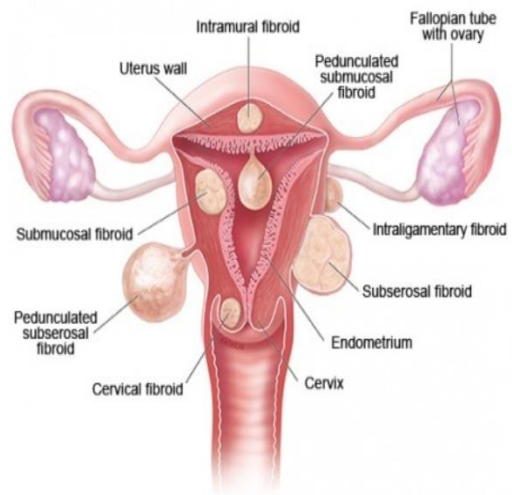
Myomectomy means removal of fibroid(s). The uterus is preserved. It is therefore the surgery of choice for women wishing to retain uterus for childbearing intention or for personal reason(s).

Depending on the location, size and number of fibroid(s), and the level of expertise and skills of the surgeon, fibroids can be removed by one or more of the following techniques:

- (i) Hysteroscopic myomectomy
- (ii) Open myomectomy (laparotomy)
- (iii) Laparoscopic or robotic myomectomy

### Hysteroscopic myomectomy

- Day surgery
- General anaesthesia
- Indication: heavy menstruation, recurrent miscarriage, infertility
- Type of fibroid: submucosal
- Instrumentation: an operative hysteroscope, cutting loop, electro-surgery
- Route: via the vagina and cervix
- Fluid: for irrigation and distension of the endometrial cavity
- Risks: bleeding 1-2/100, uterine perforation (1/100), fluid overload and electrolyte imbalance (<1/100), infection (1/100), intra-uterine adhesion (1/100)



### Open myomectomy

- Route: abdominal large incision (laparotomy)
- General anaesthesia
- Hospital stay: several days
- Types of fibroids: serosal, intramural and some deep, large submucosal fibroids
- Instrumentation: traditional open surgical instruments
- Recovery: up to 6 weeks

### Laparoscopic or robotic myomectomy

- Route: keyhole surgery
- General anaesthesia
- Hospital stay: one or two days
- Types of fibroids: serosal, intramural and some submucosal fibroids
- Instrumentation: laparoscopic instrumentation, scissors and electro-diathermy or ultrasonic scalpel,
- Benefits over open surgery: small incisions, less pain, quicker recovery, less risk of intra-abdominal adhesion.
- Recovery: one to two weeks
- Specific requirements:
  - Skills and expertise in minimally invasive surgery for fibroid removal, uterine wall repair with sutures, and tissue extraction.
  - Fibroid tissue extraction: time-consuming
  - Risk of fibroid tissue left behind (parasitic fibroid) or unexpected sarcoma.

### What are the risks of open or laparoscopic / robotic myomectomy?

- Risk of general anaesthesia < 1/100-1/1000
- Risks of bleeding, blood transfusion 1/100
- Risk of infection 1/100
- Risk of deep vein thrombosis, pulmonary embolism 1/100 – 1/1000
- Injury risk to adjacent organs (bladder, ureter, bowel) < 1/100
- Risk of conversion from keyhole to open surgery 1 to 2/100

- Risk of intra-abdominal adhesions 1/10 to 1/100
- Risk of hysterectomy < 1/100
- Risk of uterine wall weakness and rupture in late pregnancy or during labour < 1/100
- Risk of fibroid recurrence – unpredictable, most often related to age.

### **How does minimally invasive techniques for myomectomy (laparoscopic and hysteroscopic) compare to open myomectomy for fibroids?**

In a Cochrane Review published in 2014, the authors concluded that laparoscopic myomectomy is a procedure associated with:

- less subjectively reported postoperative pain,
- lower postoperative fever
- shorter hospital stay compared with all types of open myomectomy.
- No evidence suggested a difference in recurrence risk between laparoscopic and open myomectomy.
- More studies are needed to assess rates of uterine rupture, occurrence of thromboembolism, need for repeat myomectomy and hysterectomy at a later stage.

A summary of this article “**Minimally invasive surgical techniques versus open myomectomy for uterine fibroids**” is available at <https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0068984/>.

### **Hysterectomy for treatment of fibroids**

This means removal of the uterus and is therefore clearly not for women wishing to preserve the uterus.

Hysterectomy is a suitable option for women who have:

- completed childbearing
- large or numerous fibroids
- fibroids of atypical appearance on imaging tests (suggestive of adenomyoma or sarcoma)
- fibroids which grow after menopause (increased risk of sarcoma)
- life-threatening bleeding emergency during myomectomy
- experienced fibroid recurrence following prior myomectomy

For more information, refer to an article on “**Uterine fibroids: Surgery**” at **Pubmed Health** <https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0072715/>.

### **Special attention regarding uterine tissue extraction**

On April 17, 2014, the US Food & Drug Administration (FDA) produced a **Safety Communication on Laparoscopic Uterine Power Morcellation in Hysterectomy and Myomectomy**. In it, the Communication stated that, “based on an FDA analysis of currently available data, **it is estimated that 1 in 350 women undergoing hysterectomy or myomectomy for the treatment of fibroids is found to have an unsuspected uterine sarcoma**, a type of uterine cancer that includes leiomyosarcoma. If laparoscopic power morcellation is performed in women with unsuspected uterine sarcoma, **there is a risk that the procedure will spread the cancerous tissue within the abdomen and pelvis, significantly worsening the patient’s likelihood of long-term survival**. For this reason, and because there is no reliable method for predicting whether a woman with fibroids may have a uterine sarcoma, **the FDA discourages the use of laparoscopic power morcellation** during hysterectomy or myomectomy for uterine fibroids”.

On **December 14, 2017, the FDA** releases new findings on the risks of spreading hidden uterine cancer through the use of laparoscopic power morcellators. In it, it stated that “after looking at all the relevant data, we believe our estimates remain accurate, and our recommendation against the

use of this device to remove fibroids in the vast majority of women is appropriate and critical to better protecting these women”.

For more details, go to <https://www.fda.gov/NewsEvents/Newsroom/FDAInBrief/ucm589137.htm>

At **CARE**, we have implemented a method of using a specimen containment bag to ensure that all tissues, including fibroids, are extracted within the bag to avoid the risk of spreading undiagnosed uterine sarcoma or malignancy.

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**A/Professor Alan Lam** at **CARE (Centre for Advanced Reproductive Endosurgery)** specialises in the assessment and management of fibroids, particularly in laparoscopic and hysteroscopic surgical management options.

For **an appointment at CARE, please ring 9966 9121.**