

***The Centre for Reproductive Medicine***  
***PO Box 20559***  
***Nimbin NSW 2480***  
***Australia***

**Maxwell Brinsmead** MB BS PhD MRCOG FRANZCOG  
*Retired Obstetrician & Gynaecologist*

**Phone +61 409 870 346**  
E-mail [max@brinsmead.net.au](mailto:max@brinsmead.net.au)  
Website [www.brinsmead.net.au](http://www.brinsmead.net.au)

## **Uterine Fibroids**

Modified from the Internet Publication by Dr D.E. Tucker MRCOG

Fibroids are common, benign growths of womb (uterine) muscle. They can be found in almost one in every four women who are white and twice as frequently as this in women who are black. There is probably a genetic predisposition.. They are most common toward the end of the reproductive years. They exist sometimes singly, but most often are multiple and range in size from microscopic to filling the whole of the pelvis and lower abdomen! They are more common in obese women and those who have had no children, and they are less common in smokers.

Most fibroids do not cause symptoms, but overall symptomatic fibroids account for about one third of all hysterectomy operations.

### **What are the Different Types?**

Fibroids are named depending upon where they lie. Those that are wholly within the muscle layer of the womb are called intramural fibroids. They typically give the uterus a globular feeling on examination (like early pregnancy). They increase overall blood flow to the uterus. If the intramural fibroids are large they can distort and enlarge the internal cavity, even if they don't encroach onto it.

Subserosal fibroids are those that project out from the outer surface of the uterus. They can grow quite large, but do not typically affect the size of the womb cavity. They are more likely to produce pressure symptoms than heavy periods or infertility.

Submucous fibroids are the least common (5% of all fibroids). They project into the womb cavity and greatly disrupt its shape. They are the type most likely to cause fertility problems. Sometimes they grow into the uterus, filling it and even projecting out through the cervix.

### **What Symptoms can they Cause?**

*Most women with fibroids have no symptoms at all and they may only be detected when an examination is made by your doctor or an ultrasound scan is performed.*

Fibroids can cause very heavy periods, leading to iron-deficiency anaemia. They don't cause disturbance to the menstrual cycle itself - typically the bleeding is regular but much heavier than usual.



An enlarged womb may place pressure on the bladder giving increased urinary symptoms (e.g. frequency), and it can cause back ache, lower abdominal discomfort and, sometimes, pain with intercourse. In general fibroids do not cause period pain unless there is some other problem as well in the pelvis. Fibroids can occur with endometriosis and it is this condition that causes the pain with periods.

Fertility problems are one of the presenting features in about 25% women with fibroids. There is a well-established relationship between the presence of fibroids and lower fertility or childlessness. When compared to other causes of infertility, however, they are a relatively uncommon cause, being implicated in only 3% of couples. It may be that a delay in having children (whether voluntary or involuntary) predisposes to the development of fibroids and this is more often an association rather than a causative feature.

### **How are they Investigated?**

An ultrasound scan may show where the fibroids are located and give an idea of their size. It is important to recognise that a womb that has borne a few pregnancies sometimes has irregularities that look like fibroids on ultrasound but this is not subsequently confirmed. Another common cause of an enlarged womb called adenomyosis can also have the same ultrasound appearance as multiple small fibroids. During a pregnancy scan a contraction wave can sometimes be misinterpreted as a fibroid.

Sometimes fibroids require inspection by laparoscopy (looking into the abdomen with a small telescope) or hysteroscopy (looking into the uterus with a fine telescope). Hysteroscopy is particularly useful for seeing submucous fibroids and assessing how much of the uterine cavity is involved.

### **What are the Treatment Options?**

If the fibroids aren't causing any symptoms and are relatively small (less than equivalent to a 14-week pregnancy) then it is quite reasonable to just observe them in the first instance. It is important to repeat a scan or examination in 6 months time to rule out rapid growth (something which would prompt removal). Women who are near the menopause will often not need surgery as their fibroids will shrink once the level of the hormone oestrogen declines. However, one problem is that the fibroids may be sustained and can even grow if hormone replacement therapy (HRT) is started for any reason.

If fertility is desired or for other reasons hysterectomy is not wished, a myomectomy can be performed. This is still major surgery, where the fibroids are individually removed and the uterus reconstructed. It has the advantage of preserving fertility and is most useful where there are one or two large fibroids. A woman must understand that haemorrhage from the operation can sometimes be significant and occasionally a hysterectomy must be performed to control bleeding. Within 20 years of myomectomy, about 1 in 4 women will undergo hysterectomy, most often for recurrence of the fibroids.

Hysterectomy is the definitive treatment for symptomatic fibroids. Most often this will need to be carried out via an abdominal incision, though a skilled vaginal surgeon may be able to perform a vaginal hysterectomy following medical treatment to shrink the fibroids before the operation.

Submucous fibroids that project into the uterine cavity may be removed by passing a telescope into the womb from down below and chipping away at the surface with a hot wire loop (hysteroscopic resection). This is a day-case procedure avoiding major surgery and completion may require more than one operation.



Another option that is being developed in some areas is uterine artery embolisation. This involves a radiologist passing a very thin catheter into a blood vessel in the groin and guiding it toward one of the arteries that lead to the fibroid. The small artery is blocked off leading to shrinkage of the fibroid. At present, this option it is not widely available and it is recommended only for women who cannot undergo an operation.

### **Non-Surgical Treatments?**

Medical or tablet treatment has a limited role in managing fibroids. There are drugs that can be used to reduce the amount of blood loss each cycle. Blood loss may sometimes be reduced by the use of the contraceptive pill. Previous reports of growth of fibroids in response to the pill probably relate to older, high dosage formulations, and use of the pill may be protective against their development.

There are some treatments that can shrink fibroids, but they have the side effect of making a woman effectively menopausal, by switching off the ovary's production of hormones. If this is continued for more than 6 months, there are risks of bone-thinning (osteoporosis) as well as the other uncomfortable symptoms of hot flushes, vaginal dryness and psychological symptoms. This treatment is most useful prior to surgery in order to reduce the size and or vascularity of fibroids. Alternatively, it may be considered in a woman near to the menopause who is keen to avoid an operation.

### **What is the Success Rate after Surgery?**

In women undergoing myomectomy for infertility, a large review of the published data found a pregnancy rate of 40-60%, the majority conceiving in the first year after treatment. Where myomectomy is performed for heavy periods, an 80% success rate is reported. Fibroid recurrence rate at 10 years was 27% in a 1991 review of 622 patients.

Hysteroscopic resection is a more recently developed procedure and long-term follow-up of large numbers of women is not available yet. Studies published so far demonstrate an 80-90% success rate for surgery performed for heavy periods, with around 17% requiring a second operation in the following 10 years (i.e. similar to myomectomy). Pregnancy rates following resection of submucous fibroids where this is the only cause of infertility are high, at 60-70%.

### **Fibroids and Pregnancy**

One study published in 1993 looked at 12,500 pregnancies where just under 500 women had fibroids detected during pregnancy. For 88% of these women there was only a single fibroid. There was a statistically increased risk of bleeding, pain during pregnancy and threatened premature delivery. These problems were more common when the size of the fibroid measured 200 cm<sup>3</sup> in volume or greater or when the location of the fibroid was under the placenta. There was no increased risk of early delivery or caesarean section. For many women with fibroids their pregnancy runs a completely normal course.

It was always thought that fibroids increase in size during pregnancy and then shrink again afterwards, but a 1988 study followed women with serial scans during pregnancy and, for 80% of women, they remained the same size.

If an attempt is made to remove the fibroids at the time of caesarean section, then the bleeding can be profuse and in the series above hysterectomy was needed in 1/3 of cases where this was attempted.



If the fibroid is located low in the uterus, it may obstruct labour increasing the risk of caesarean section, but one at the top is less likely to do so. Most don't need removal afterwards, and since it wasn't causing you any problems before, there is little reason to suspect it will do after pregnancy. If it remained large (increasing the womb size to greater than that of a 12-week pregnancy) then you may be offered treatment (usually surgery - myomectomy, or fibroid removal), though increasingly we are not operating on the ones that aren't causing any problems.

Very rarely in pregnancy there can be severe pain from a fibroid because it has outgrown its blood supply and infarcts ie the tissue dies. This is called 'red degeneration'. Somewhat surprisingly the outcome from this process is spontaneous resolution and all that is required is strong pain-killers for a few days.

### **Cancerous Change in Fibroids**

This is something that can happen, but it is extremely rare. It is thought to happen in no more than 1:1000 women with fibroids. It is 10 times more common for a woman in her 60's than one in her 40's. It has been concluded that the risk of death from hysterectomy is greater than the risk of a benign fibroid becoming malignant. A risk of cancerous change in a fibroid should therefore not be cited as an indication for surgery.

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