



# Removal of uterus (womb)

- Hysterectomy  
(keyhole and vaginal surgery)

# When is it necessary to remove the uterus?

The womb may have to be removed for a variety of reasons.

- **Irregular periods:** Irregular periods include prolonged, heavy and irregular menstrual bleeding. Irregular bleeding patterns can often be treated medically, which is to be preferred. However, if medical treatment does not help, removing the womb is the best and safest way to resolve the difficulties. Once the womb has been removed, menstruation stops entirely.
- **Uterine fibroids:** Uterine fibroids can be very large. In addition to irregular periods, fibroids can cause a variety of pressure-related symptoms, depending which organs are affected. Fibroids cannot be treated medically.
- **Uterine fibroids must be surgically removed,** either by removing only the fibroids or by removing the womb in its entirety. The choice of operation depends on the size and location of the fibroids, the age of the patient and on whether she wants a future pregnancy.
- **Pain:** Abdominal pain is sometimes caused by the uterus and/or the cervix. Abdominal pain can be invalidating, in which case we recommend removal of the womb.
- **Cancer or precancerous lesions:** If cancer is detected in the cervix, uterus or ovaries, the uterus (and often also the ovaries) must be removed. Where there are precancerous

lesions, it may sometimes be necessary or advisable to remove the uterus.

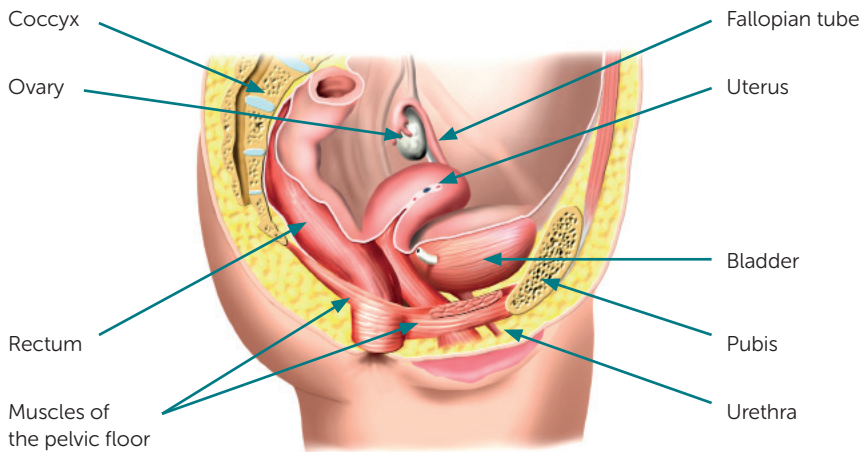
# What effects can you expect once the womb is removed?

The uterus and/or cervix can be surgically removed. Once the uterus is removed, menstruation ceases and pregnancy is impossible.

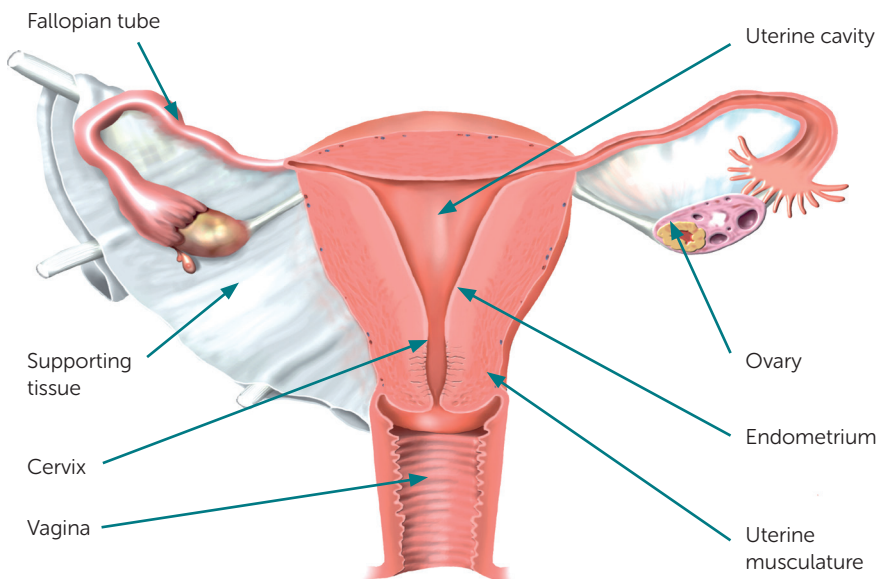
Once the operation scars have healed, the vagina is as deep and as elastic as it was before the operation. There is therefore no adverse effect on the enjoyment of sex. Often the reverse is true, if the womb was removed because it was causing abdominal pain or fibroids. The uterus produces no hormones. If the ovaries remain intact, hormone production will continue. You will therefore not enter the menopause after your womb is removed.

# Will it be necessary to remove the cervix?

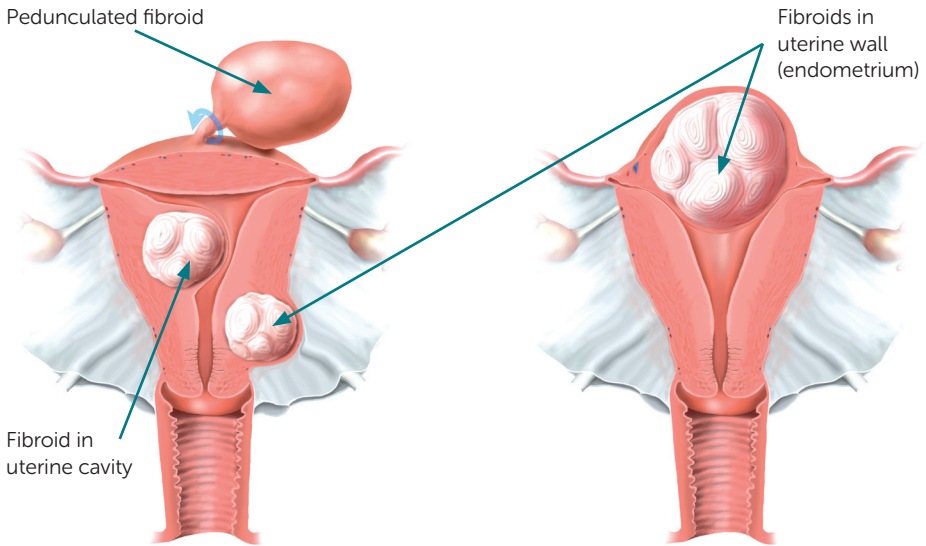
If the surgery is necessary because you have irregular periods or fibroids, the surgeon may leave the cervix intact, if you wish. This means that you should continue to have regular cervical screening tests. In rare cases, slight spotting may occur from the cervix.



### Location of the uterus



### Anatomy of the uterus



### Different types of fibroids

If you opt for surgery due to pain, the pain may be caused by the cervix, in which case it is best to remove it.

If you have surgery because you have cancer or precancerous lesions, the cervix must be removed. If you have previously had dysplasia, we also recommend that the cervix is removed.

### Will it be necessary to remove the ovaries and Fallopian tubes?

When we have removed the uterus, the Fallopian tubes serve no useful

purpose so we recommend that they are removed at the same time. However, if the ovaries are healthy, we do not normally remove them. They will only be removed with the patient's consent. If you are neither in the menopause nor approaching it, it is beneficial to leave the ovaries intact in order to maintain the hormonal balance.

About ten years after the menopause, the ovaries stop producing hormones and no more ova are formed. The ovaries then serve no useful purpose and, as there is a small risk of ovarian cancer, we recommend that the ovaries and Fallopian tubes are removed.

If there is strong hereditary disposition for ovarian cancer, we also recommend that the ovaries are removed. Removal of the ovaries and Fallopian tubes does not significantly prolong surgery and extremely seldom causes complications. Once the ovaries are removed, hormone therapy may be required. Talk about the advantages and disadvantages with your gynaecologist.

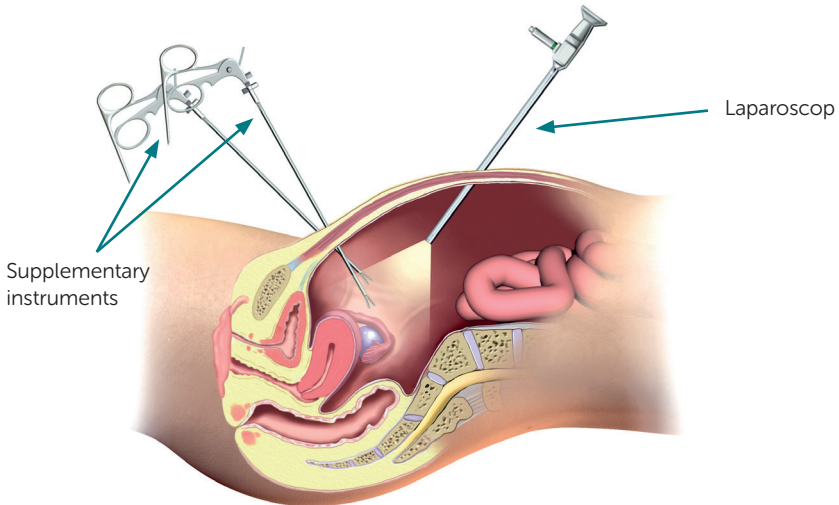
## How do we remove the uterus?

At Aleris we normally remove the uterus through the vagina or by means of keyhole surgery. We will always use the least invasive type of surgical procedure, which causes least discomfort and fewest scars.

## Preliminary examination

Before surgery, you will be invited to attend a preliminary examination by our specialist gynaecologist. You can talk to him about your symptoms and wishes. The gynaecologist will perform a gynaecological examination and an ultrasound scan of your vagina. Depending on your symptoms, the gynaecologist may need to perform supplementary tests, e.g. a keyhole examination of the cervix, or take samples of tissue or perform a keyhole examination of the uterine cavity.

The specialist will then let you know which treatment options are available to you. The specialist will discuss whether a surgical procedure is the best treatment for you. You will also



### Laparoscopy

agree on whether your ovaries, Fallopian tubes and cervix will be removed as part of the same procedure.

You will be informed of operative and post-operative procedures, and potential side-effects and complications associated with the surgery.

## Prognosis

After surgery, your irregular periods and any pressure-related symptoms will disappear.

### Your sex life

Once the operation scars have healed, the vagina is as deep and as elastic as it was before the operation. There is therefore no adverse effect on the enjoyment of sex. Often the reverse is true, if the womb was removed because it was causing abdominal pain or fibroids. After surgery, pregnancy is impossible.

### Hormone production

The uterus does not produce hormones. If the ovaries are intact, hormone production will continue unchanged. You will therefore not enter the menopause after your womb is removed.

## Preparation

Before surgery, we recommend that you read this brochure carefully, along

with the folder, "A general guide for surgical patients".

### Fasting

The surgery is performed under general anaesthetic, which means that you must fast before the surgery.

### Discontinuing medication

See about this in the booklet "General guidance regarding your surgery" or "Regular medication in connection with surgery."

### Bathing

On the day of your operation, you must shower.

Make sure that you wash your navel well. Do not apply cream or lotion after your shower.

### Bowel cleansing

The rectum must be emptied before surgery. Purchase Microlax at your local pharmacy. Take this little tube of laxative in the morning (not later than one hour before leaving home). Follow the instructions on the pack.

## Same-day surgery or hospital admission

You should expect to be admitted overnight. You will be discharged after breakfast on the following day.

If you are comfortable, you may be discharged on the same day (after about 6 hours under observation).

## Open and keyhole surgery

The operation is performed under general anaesthetic and normally takes 1 - 1½ hours. An IV drip will be inserted into the back of your hand and the anaesthetic will be administered through it.

### Keyhole surgery – option 1

Air is pumped into the abdominal cavity via a fine-gauge cannula, raising the abdominal wall to create enough space to operate in the abdominal cavity. Surgery is performed through a 1½ cm incision in the navel, into which the laparoscope is inserted, and 3 small ½ cm incisions, into which other special instruments are inserted. Using a special instrument called a morcellator, the surgeon can remove a large uterus weighing up to 3000 g.

When we use the morcellator, the tissue is morcellated in a plastic bag inside the abdominal cavity so that none of the tissue escapes into the abdominal cavity in the process.

The wounds are stitched.

A local anaesthetic will be applied to the wounds at the end of the procedure.

### Keyhole surgery – option 2 LESS surgery

At Aleris in Copenhagen we can perform a hysterectomy as LESS surgery, a method which creates no visible

scars. In LESS surgery, we operate through the navel only. The incision in the navel is slightly larger than in conventional keyhole surgery but the scar is barely visible after the operation as it is hidden in the navel.

We use specially developed instruments to perform LESS surgery. In Denmark LESS surgery is available only at Aleris and our experiences of using this method are excellent. The method has been used more than 1,000 times in other countries. The results indicate that there are benefits to be gained in addition to the purely cosmetic.

There are some operations for which LESS surgery is inappropriate. Ask the gynaecologist if you want to know more about LESS.

### Vaginal surgery

In this type of operation the uterus is removed via the vagina.

A bandage/pad is inserted into your underwear after the procedure.

### Applicable to all types of surgery

Antibiotics are administered in connection with the procedure to prevent inflammation in the wounds.

In most cases, the gynaecologist will be well-informed of tissue status before performing surgery. Even so, all tissue is sent away for tests. Despite expectations that tests will show that the cell changes are benign, in 1 or 2

cases per 1,000 surgical patients, the tests will show that cell changes may be malignant.

## After surgery

After surgery the specialist and nurse will talk to you about what happens next and any precautions you need to observe after the operation.

### Catheter

A catheter will be inserted into your bladder during and just after surgery. It will be removed as soon as you have sufficiently recovered.

### Pain

You should expect to have light to moderate pain in your lower abdomen for a couple of days after surgery. You will need to take non-prescription painkillers, possibly supplemented by stronger analgesics.

After keyhole surgery, you should expect to feel pain in your right shoulder for a day or two. This is due to air having been pumped into the abdominal cavity.

### Activity

To prevent thrombosis, it is important that you get out of bed and are mobile. Mobility may even help to alleviate pain. If you need assistance, we can help you to get back on your feet. About 6 hours after surgery, you will be administered an injection of an anticoagulant drug to reduce the risk of thrombosis.

## After discharge

### Pain

You should expect to have to take non-prescription painkillers for a day or two and up to a week after surgery.

Your abdomen may feel a bit distended during the first week.

### Temperature

You may run a slight temperature for a day or two. This is not significant.

### Food and drink

We recommend that you eat a high protein diet and drinks to promote healing.

### Bathing

You may shower the day after surgery. Swimming pool and bathtub: Wait until the wounds have healed.

### Bandages

Depending on the type of operation, the bandages must remain intact for at least 24 hours and up to 5 days. After surgery, the nurse or specialist will tell you how to remove or change the bandages. If the bandages are soaked in blood or fluid, they must be replaced. When the wounds are dry after a couple of days, the bandages may be removed.

There are no bandages after vaginal surgery.



## **Bowel movement**

We recommend that you take a laxative to keep your bowels moving. Laxatives are available as non-prescription drugs from your local pharmacy.

You should also drink plenty of fluids (about 1½ litres of water per day). A short walk also helps to keep your bowels moving so that you do not have to strain too much when you have your bowels open.

## **Bleeding**

You can expect to bleed slightly from your lower abdomen for up to 4 weeks after surgery. Bleeding should gradually fade to nothing. The scab at the top of the cervix will normally fall off after 8-14 days. This can cause slight fresh bleeding.

## **Fatigue**

You should expect to feel more tired than usual for some time after the operation. We recommend that you rest during the day and eat a high-protein diet for as long as you continue to feel tired. You may also take iron tablets, Kräuterblut (liquid iron formula) or eat plenty of green vegetables.

## **Daily activities and physical activity**

You can do anything you feel you can do. You may resume daily activities to the extent you feel able to do so. It is important that you listen to your body's signals to determine for yourself how much you can do.

You may resume regular exercise, e.g. running, cycling and walking, when you feel up to it.

Take it easy. You should never exert yourself beyond your pain barrier.

You may train the muscles in the pelvic floor.

During the first 2-3 weeks after surgery, you may not engage in strenuous sports activities, such as badminton, tennis, speed bike, etc., as this may prevent proper healing of internal and external wounds.

## **Your sex life**

You can resume sexual activity after 6 weeks. If the cervix has not been removed, you can resume sexual activity after 3 weeks.

## **Work and absence due to sickness**

How long you remain absent from work due to sickness depends on the type of work you do. You agree on a date for returning to work with the specialist. We usually recommend returning to work 7-14 days after surgery.

## **Stitches**

The stitches dissolve in 2-3 weeks. However, for cosmetic reasons, we recommend that they are removed after 10-12 days. Your GP will often be able to remove your stitches.

## **Out-patient care and test results**

Before discharge, you agree with the specialist how you wish to receive the results of the tissue tests. You should allow 10 days for test results to arrive.

No further out-patient care is required.

## **Potential side-effects and complications**

There is always a risk that complications may occur. The anaesthetic itself represents a very small risk.

### **Cystitis**

The catheter inserted in your bladder during surgery can cause cystitis, which can be treated with antibiotics.

### **Bleeding**

In rare cases, a patient may require a blood transfusion during or after surgery, due to blood loss.

**Infection and haemorrhaging** There is a small risk of haemorrhaging or infection in the wound after surgery. If there is an infection, it can be treated with antibiotics. Symptoms include pain, redness, heat, swelling and seepage from the wound.

Smoking, diabetes and obesity increase the risk of infection.

## **Lesions**

In rare cases, the intestines, bladder or urethra may be damaged during surgery, in which case the damage will be repaired immediately.

### **Spread of malignant cells during morcellation of the uterus.**

In the small number of cases, where, contrary to expectations, cell changes are not benign but malignant, the cells may be spread to the abdominal cavity during morcellation of the uterus. At Aleris, we perform morcellation inside a plastic bag to minimise the risk.



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