



# TREATMENT OF URINARY INCONTINENCE

Patient information to assist informed consent

Urinary incontinence is the involuntary leakage of urine. About one woman in three may report urinary incontinence at some time in her life, especially as she becomes older. Fortunately, treatment can often be highly effective.

## NORMAL BLADDER ACTION

The ability to pass urine requires a complex series of actions involving the brain, bladder, urethra, pelvic floor muscles and the pelvic nerves.

As the bladder fills with urine, the muscle in the bladder wall (the detrusor) slowly stretches. The detrusor must remain relaxed to allow continued filling. When the bladder is filled to a certain level, the woman feels a need to pass urine. When she is ready to pass urine, the bladder (detrusor) contracts and the urethra relaxes, allowing urine to flow.

The upper urethra and bladder neck are cradled by muscles and connective tissue. Normally, any increase in pressure from inside the abdomen compresses the urethra against the front vaginal wall and prevents urine leakage.

## TYPES OF URINARY INCONTINENCE

### Stress urinary incontinence

Stress urinary incontinence (SUI) is the involuntary leakage of urine that occurs during an increase in abdominal pressure. SUI is most likely to happen during actions such as sneezing, coughing, laughing, jogging, rapid walking, jumping or heavy lifting.

SUI is usually a result of the urethra being too mobile and not being compressed against the vaginal wall during increases in abdominal pressure. This changes the normal anatomy of the junction between the bladder and the

urethra. It can be weak from birth or may become weak over time, often as a result of giving birth.

SUI may also be caused by weakness in the urethral sphincter, rather than supporting tissues. This causes unconscious dribbling of urine and is usually more difficult to treat.

Women can have a combination of both types of SUI.

### Urge incontinence

Urge incontinence is the involuntary loss of urine associated with a strong sensation to pass urine. It is sometimes called an "overactive bladder".

It may be due to the detrusor muscle contracting when it should be relaxed. It may also be caused by irritation of the bladder from a number of causes, such as infection.

In most cases, no cause for this condition can be found.

Other medical problems may provoke the condition. Some women may be born with a tendency for this condition.

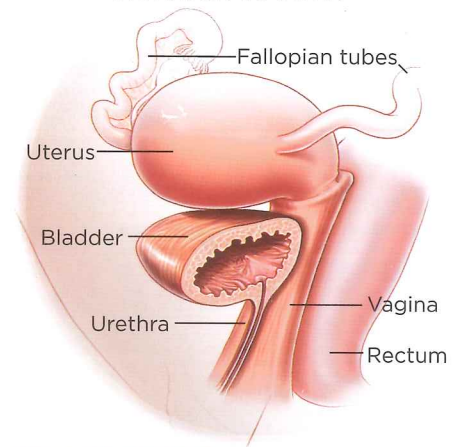
### Mixed incontinence

Mixed incontinence is a combination of both urge incontinence and SUI.

### Overflow incontinence

Overflow incontinence is the involuntary loss of urine due to an overfull bladder caused by poor emptying. The bladder does not empty normally, becomes overfull, and then leaks. Overflow incontinence is uncommon.

NORMAL ANATOMY



## RISK FACTORS

■ **Pregnancy and method of delivery:** SUI is more common in women who have had children. The more pregnancies and vaginal deliveries they have had and the bigger the baby, the higher the risk. Forceps delivery or a difficult vaginal delivery may increase the risk.

■ **Previous pelvic organ prolapse surgery:** Due to urethral scarring, this surgery is associated with an increased risk of urinary incontinence, whether or not the uterus has been removed.

■ **Menopause:** Incontinence may become worse after menopause as the bladder and urethral tissues weaken.

*Continued on page 2*

## TALK TO YOUR DOCTOR

This pamphlet provides general information. It is not a substitute for advice from your doctor and does not contain all known facts about urinary incontinence. This information may change with time. If you are not sure about terms used in this pamphlet, ask your doctor.

Read this pamphlet carefully, and save it for reference. Write down questions you want to ask. Your doctor will be pleased to answer them. You may want to get the opinion of another doctor if you feel uncertain about the advice. In difficult cases, a gynaecologist may refer a patient to a specialist in urogynaecology.

**Consent form:** If you decide to have surgery, your doctor will ask you to sign a consent form. Read it carefully. If you have questions, ask your doctor.

## IMPORTANT: FILL IN ALL DETAILS ON THE STICKER BELOW

**Dear Doctor:** When you discuss this pamphlet with your patient, remove this sticker, and put it on the patient's medical history or card. This will remind you and the patient that this pamphlet has been provided. Some doctors ask their patients to sign the sticker to confirm receipt of the pamphlet.

**TREATMENT INFORMATION PAMPHLET**

**PEEL HERE**

PROCEDURE: \_\_\_\_\_

PATIENT'S NAME: \_\_\_\_\_

DOCTOR'S NAME: \_\_\_\_\_

EDITION NUMBER: \_\_\_\_\_ DATE: DD / MM / YYYY

Your Doctor

"Treatment of Urinary Incontinence" has been reviewed by obstetricians and gynaecologists in Australia and New Zealand

- **Age:** Urge incontinence increases with age. SUI is most common in women in their 40s and 50s.
- **Medications, smoking and caffeine:** Some medications cause the urethral muscle or urethral sphincter to relax, increasing the risk of incontinence. Caffeine can increase bladder irritability.
- **Constipation, obesity, chronic cough and heavy constant lifting:** These can lead to an increase in abdominal pressure and can aggravate SUI.
- **Other conditions:** Diabetes, multiple

sclerosis, arthritis, back problems, pelvic masses, hypothyroidism and chronic lung disease can increase the risk of urinary incontinence.

- **Genetic factors:** About six women in 100 may have a genetic factor.

### Before treatment

Prior to treatment planning, your gynaecologist takes a full medical history. Tell your doctor about any health problems because some problems may interfere with the surgery, anaesthesia or recovery.

Tell your doctor if you have or have

had an allergy to any medicines, prolonged bleeding, excessive bruising when injured, any illness, and previous surgery.

Give your doctor a list of ALL medicines you are taking or have recently taken, including blood thinners, aspirin, anti-inflammatories, arthritis medication or insulin.

Your doctor may ask you to stop taking some medications for a week or more before your procedure, or you may be given an alternative dose. Discuss this carefully with your doctor.

## DIAGNOSTIC TESTING

First, the cause must be determined. Although symptoms may suggest the type of incontinence, a pelvic and vaginal examination, a urinary diary of symptoms and passing of urine, and sometimes urinary tests are needed for diagnosis, including a test for infection.

- To help diagnosis, your doctor may ask you to cough while you have a comfortably full bladder.
- A catheter may be guided up the

urethra to obtain a fresh sample of urine for examination, or to allow your doctor to measure how much urine is in the bladder after you have emptied it.

- An ultrasound scan can determine how much urine remains in the bladder after it empties and can assess bladder position and pelvic floor function.
- Urodynamic studies can be performed, depending on the type of urinary incontinence and the extent of symptoms. Urodynamic studies involve the use of a

catheter to fill the bladder with fluid and a pressure device to test the bladder, its ability to empty properly, the urethra, the capacity and sensation of the bladder, and the mechanism or cause of incontinence.

- In some cases, cystoscopy is needed. A thin telescope is guided up the urethra and into the bladder to inspect it. Cystoscopy can assist the diagnosis of infection, bladder stones, bladder tumours, urethral mobility, and inflammation of the lining of the bladder.

## EFFECTIVE TREATMENTS FOR URINARY INCONTINENCE

Treatments are available, including pelvic floor muscle exercises, medicines and surgery. Surgery is often not the first line of treatment. Less invasive treatments may improve symptoms and may avoid the need for surgery.

### Pelvic floor muscle training

Pelvic floor muscles are the ones you normally squeeze when you try to stop wind from escaping.

To learn these exercises, a number of devices have been developed. However, their use is not essential to the success of pelvic floor exercises.

The benefits of pelvic floor exercises continue for as long as they are performed. Exercises directed by a therapist have been shown to be the most effective.

### Bladder training

Bladder training improves urge incontinence. It involves learning to increase the time interval between passing urine so the bladder does what you want. Training helps break the cycle of frequently going to the toilet (frequency), or feeling the strong urge to pass urine (urgency), which can lead to urge incontinence. Urine is passed at slowly increasing intervals over a period of weeks and months. This time is increased each week. Keeping a urinary diary is important.

### Electrical stimulation

This can treat SUI and urge incontinence. It involves gentle electrical stimulation of the pelvic floor muscles. It is usually supervised by physiotherapists. There are many types of electrical stimulators. Do not buy one without the advice of a continence health professional.

### Medical treatments

Urge incontinence can be treated with medicines called anticholinergic or antispasmodic drugs. A group of antidepressant drugs improves urge incontinence as a side effect and can be used in a much lower dose than that needed to treat depression. These drugs reduce the overactivity of the detrusor muscle.

### Devices

A number of devices on the market can help SUI. Some are pessaries that support the urethra.

### Surgical treatment

Surgery may cure SUI but is usually not effective for urge incontinence. The operation best suited to your case depends on:

- whether additional problems in the pelvic region require surgical repair, such as bladder prolapse or vaginal prolapse
- your general health and well-being
- your personal preference, following discussion with your gynaecologist

- your gynaecologist's preference.

**Anaesthesia:** Depending on the surgery, a local, regional or general anaesthetic may be used. Your anaesthetist can provide more information.

### Transvaginal mesh implants

Transvaginal mesh implants have been used in SUI surgery to provide support for tissues that are weak and slow to heal. Synthetic meshes are not absorbed by the body and remain as permanent implants. Mesh sling, or tape, procedures have been reported in the medical literature as effective treatments for SUI. However, as with all surgical procedures, they do have risks and limitations. As many cases of complications due to mesh implants have been reported, ask your surgeon whether mesh is an option in your case. An absorbable mesh may be an option.

This is a rapidly developing area of debate and review, with ongoing research and clinical trials on new materials. Your surgeon will know about recent developments and recommendations concerning surgical meshes.

Further information on transvaginal meshes is available from the Therapeutic Goods Administration: [www.tga.gov.au](http://www.tga.gov.au)

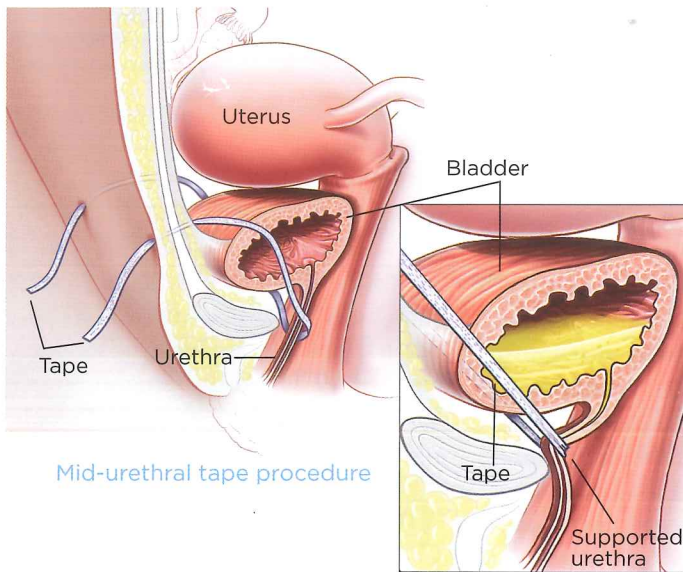
Using the search tool, enter key words: transvaginal surgical mesh hub.

# SURGICAL OPTIONS FOR STRESS URINARY INCONTINENCE (SUI)

## Mid-urethral tape procedures (minimally invasive mesh slings)

Mid-urethral tape procedures (or mesh slings) are generally performed through the vagina via a small cut made in the vaginal wall. Strips of synthetic tape are threaded around the middle section of the urethra, and the gynaecologist uses an instrument (trochar) to tunnel behind the pubic bone to just under the abdominal wall or labial skin. Sometimes the tunnel is made from the inside of the leg into the pelvis (the transobturator technique).

Long-term success rates of mid-urethral tape procedures are still being monitored. They appear to be as successful as the more established operations.

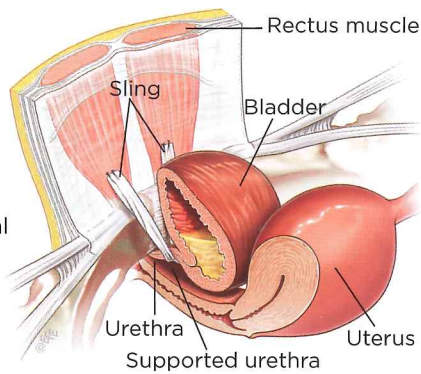


Mid-urethral tape procedure

## Pubovaginal sling

This operation may be performed by two gynaecologists working together, using both a vaginal approach and an abdominal approach.

Tissue obtained from the deep abdominal wall (called the rectus sheath) or a surgical synthetic mesh is fashioned into a sling and placed under the bladder neck (upper urethra) to elevate it. The sling is then



Sling procedure

stitched to the rectus muscle of the abdomen or other supporting structure. This method is as successful in treating SUI as the open Burch colposuspension.

## Periurethral injections

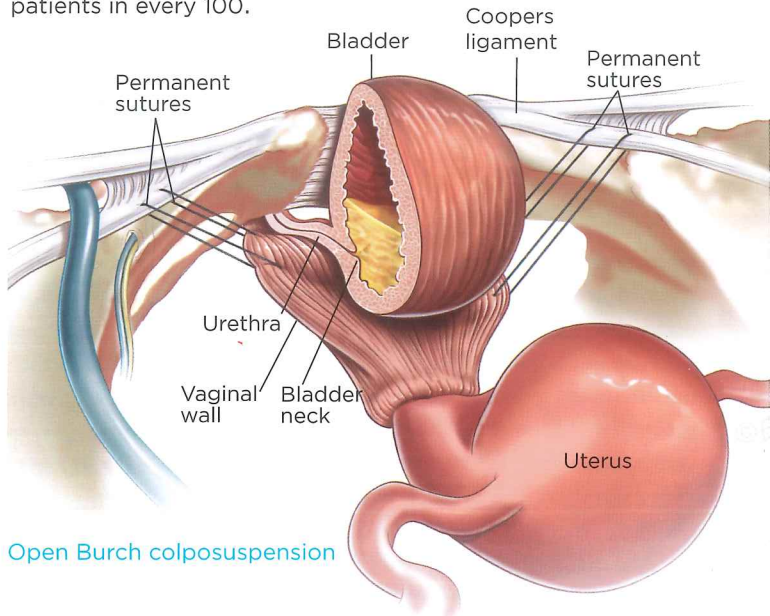
A bulking agent is injected into the tissues of the urethra to create a cushioning effect. This bulking agent may be collagen or silicon. The procedure does not have as good a success rate as the Burch colposuspension or tape operations but avoids open surgery.

It may be effective when the patient has had previous surgery, the urethra is unsuitable for other types of surgery, or the cause of the SUI is intrinsic sphincter deficiency.

## Open colposuspension (known as Burch colposuspension or bladder neck elevation)

This operation elevates the bladder neck outlet to its normal position. During surgery, a cut of about 10 to 12 centimetres is made horizontally in the abdomen below the pubic hairline. The tissues on either side of the bladder neck are lifted and permanent sutures are inserted to elevate the anterior vagina by suspending it from the side walls of the pelvis. This improves support to the bladder neck outlet.

Open Burch colposuspension is considered one of the best operations for SUI and has a success rate of about 70 to 80 patients in every 100.



Open Burch colposuspension

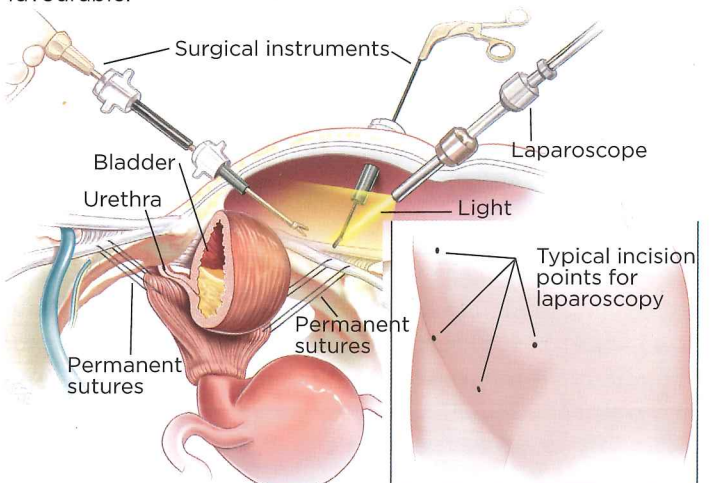
## Laparoscopic Burch colposuspension

Gynaecologists trained in laparoscopic (keyhole) surgery may perform the Burch colposuspension using a laparoscope. A laparoscope is a narrow telescope with a miniature camera that allows the gynaecologist to see into the pelvis.

The procedure is similar to an open Burch colposuspension. Rather than one longer horizontal incision above the pubic bone, three or four smaller incisions are made. After the procedure, these incisions are closed with absorbable sutures that generally do not have to be removed.

Laparoscopy may result in a faster recovery time due to the smaller incisions. Pain may be less, and a quicker return to normal activities may be possible.

Doctors do not yet know if the long-term success rate of the laparoscopic operation is as good as that of the open Burch colposuspension, but preliminary results appear favourable.



Laparoscopic Burch colposuspension

## RECOVERY AFTER SURGERY

Recovery depends on age, health and the type of operation. A laparoscopy or tape procedures may result in shorter hospital stays and a faster recovery at home. Most women have a bladder catheter to drain urine, which is removed as soon as possible.

Pain medication may be needed. After laparoscopy, discomfort or pain may occur in the right shoulder. After a general anaesthetic, cough and breathe deeply to keep the lungs clear.

With the assistance of a nurse, walk

soon after surgery. Exercise helps to avoid a blood clot forming in a deep vein in a leg. You may have some gas pains, nausea or other discomfort as the digestive system returns to normal. Constipation can be a problem, particularly with some types of pain medication.

- No heavy lifting for at least six weeks. Following healing, alternative methods of lifting may need to be learned.
- No vigorous exercise for at least six weeks.
- Follow your doctor's advice on show-

ering, driving and returning to work.

Your doctor will check on your progress, answer questions and arrange follow-up to remove sutures or staples.

It is possible to return to your normal sexual activity between four and eight weeks after surgery, if no complications occur. Some couples prefer to wait until after the check-up that follows surgery.

The bladder training and pelvic floor exercises you learned before surgery should continue after the operation, but only when your gynaecologist approves.

## POSSIBLE COMPLICATIONS OF URINARY INCONTINENCE SURGERY

All surgeries have risks, despite the highest standards of practice. While your gynaecologist makes every attempt to minimise risks, complications may occur that have permanent effects.

It is not usual for a gynaecologist to outline every possible complication of a procedure. However, it is important that you have enough information about possible complications to fully weigh up the benefits, risks and limitations of surgery.

Any discussion of frequency of risks or benefits (for example, one patient in 100, or "rare", and so on) can only be estimates as the outcomes of clinical research can vary widely. Such outcomes can depend on many factors, such as surgical methods, equipment, surgeons' experience and data collection, among others. The following possible complications are listed to inform and not to alarm you. There may be others not listed. Smoking, diabetes and other significant problems can cause greater risks of complications.

### General risks of surgery

- Cardiovascular risks such as heart attack, blood clots or stroke.
- Blood clot in a deep leg vein (deep vein thrombosis, DVT) or lung.
- Uncommonly, infection of wounds, which is usually treated with antibiotics.
- Bleeding that may require a return to theatre or a transfusion (about one patient in 100).
- Risks of anaesthesia.

### Specific risks of urinary incontinence surgery

- Bladder spasms may occur in about six to 15 women in 100. This may cause urge incontinence that often settles with time and treatment. However, urge incontinence may be permanent, even though the operation has cured the SUI.
- In the days after surgery, about two

women in 100 have temporary difficulty with passing urine due to swelling and inflammation. A urinary catheter is needed.

- Difficulty with passing urine for a few weeks occurs in about two to five women in 100 due to the elevated urethral outlet. This usually improves over time. In the meantime, it is treated with either a urinary catheter in the urethra or abdomen, or with intermittent self-catheterisation.
- Up to five women in 100 have permanent difficulty in passing urine. In these cases, there is often a pre-existing weakness in bladder emptying.
- Further surgery to release a urethral obstruction (caused by surgery) may be necessary in a few women.
- A urinary tract infection may develop in about five to 25 women in 100. This is usually treated with antibiotics.
- Injury to the bowel, urethra, bladder or a ureter during surgery occurs in about one patient in 100. It is usually repaired during the procedure.
- In about two in 1,000 patients, a fistula (connecting channel) may form between the bladder and the vagina. It can be repaired only with more surgery.
- Intercourse may be painful for about one to five in 100 women. This may improve over time. Rarely, it may require further surgery.
- During laparoscopy, a bubble of carbon dioxide may rarely get into the blood stream. It can usually be quickly treated by the anaesthetist and surgeon. This complication can be life threatening.
- Tape procedures have been linked to chronic pain in the pelvic area for some patients. In recent years, new procedures have had fewer reports of chronic pain.
- Some synthetic surgical meshes and tapes may cause pain, inflammation, infection, recurrent incontinence, bleed-

ing, vaginal scarring or tissue erosion many months after surgery. Erosion of tape through the vaginal wall is the most reported mesh-specific complication. At one year after surgery, the occurrence of erosion is about two patients in 100. Some cases of erosion are treated easily but in others, the tape has to be surgically removed. This is usually straight-forward, but some cases can be difficult. Complications due to surgical mesh are not linked to one brand or type. See page 2, "Transvaginal mesh implants".

### REPORT TO YOUR GYNAECOLOGIST

Notify your gynaecologist at once if you have any of the following:

- nausea or vomiting that worsens
- persisting or increasing pain, and pain not reduced by painkillers
- persistent bleeding from the vagina that is smelly or heavier than a normal period and is bright red
- persistent redness, pain, pus or swelling around an incision, or fever more than 38°C or chills
- pain or burning on passing urine or the need to pass it frequently
- a sudden collapse for no apparent reason in the day or two after surgery
- dizzy, faint or short of breath
- persistent leakage of urine
- any concern you have about your surgery.

If you cannot contact your gynaecologist, go to your family doctor or Accident and Emergency at your nearest hospital.

### Costs of Treatment

Request advice about fees, preferably before you have the surgery, so that you are aware of any rebates and out-of-pocket expenses. It is best to discuss fees before the surgery rather than afterwards.