

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists Excellence in Women's Health

Stress Urinary Incontinence

Stress urinary incontinence (SUI) is when you leak urine or wet yourself with activity.

Women with this condition leak urine when they laugh, cough, sneeze, exercise or do anything that puts pressure on their bladder. This is caused by a weakness in structures that support the bladder neck and urethra, which means it cannot keep fully closed during exertion, allowing urine to escape.

SUI is extremely common. Often called "light bladder leakage", it can affect up to 1 in 3 women. Some women find it burdensome and embarrassing, resulting in a negative impact on their quality of life and preventing them from seeking medical help and the range of simple, effective treatments available.



What causes SUI?

We do not always know what causes SUI. It is more likely if you:

- Are a woman. Men are much less likely to experience urinary incontinence and 10% of young women who have not had children will experience leakage especially during exercise and sport.
- Are pregnant. Many women experience urinary incontinence during pregnancy. If this happens to you, please tell your doctor or midwife. You are more likely to have ongoing urine leakage after the birth and as you get older and should see a continence physiotherapist for pelvic floor training during and after your pregnancy.
- Have had children. During pregnancy, the changes to your hormones and extra weight weaken your pelvic floor muscles (the hammock of muscles and tissue that lie across your pelvis and support your bladder).



- Have been through menopause. After menopause, your body makes less of the female hormone oestrogen that helps keep your pelvic floor strong.
- Suffer from constipation.
- Are over 65 years of age.
- Are overweight.
- Smoke or have a chronic cough.

How is SUI diagnosed?

Your doctor will ask you questions about your medical history, including childbirth and about activities, which cause leakage. You doctor would normally examine you and ask you to cough and tighten your pelvic floor muscles.

You may be asked to keep a bladder diary, which involves recording how much you drink, how many times you pass urine and when you leak. They may recommend special bladder function (urodynamic) studies or an ultrasound scan to try to find the cause of your incontinence. All of these tests will help the doctor diagnose the cause and determine the best treatment options for you.

What treatments are available?

All women should be recommended to consult a pelvic floor physiotherapist and/or continence nurse advisor as first line of treatment. Conservative treatment may include:

- **General life style changes**. This may include maintaining a healthy weight, reducing / quitting smoking, avoiding constipation and aiming to drink enough to pass urine 4-6 times and a total volume about 1.5 litres per day.
- Physiotherapy to assist with pelvic floor exercises and bladder retraining. These exercises can be a very effective way of improving the symptoms of SUI. Up to 75% of women show improvement in leakage when this practice is carried out regularly over a period of time. Many women have difficulty performing these exercises correctly. Even if you have tried to do these exercises previously, it is worthwhile seeing a physiotherapist with a special interest in women's health that will review your technique and offer advice.
- **Continence devices.** This device (vaginal pessary) fits inside your vagina to help control leakage. It may be inserted prior to exercise or worn continuously.

If these conservative treatments are not successful, surgery may be offered.

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Surgical treatments

The aim of surgery is to support the urethra

There are a number of different types of surgery for SUI.

Mid Urethral Slings (MUS)

Midurethral sling (MUS) surgery is the most common surgery performed for SUI in women. A large number of studies have shown this surgery to be highly effective and to improve women's quality of life overall.

During a sling procedure, a tape made up of woven synthetic material (mesh) is placed under the skin of the vagina across the middle section of the urethra (tube leading from the bladder). A sling is designed to support the urethra and help stop leakage of urine when pressure is placed on the bladder.



The sling procedure is a minimally invasive surgery. Your doctor will make small incisions (cuts) and use small instruments to place the sling into position. There are two directions that a sling can be placed:

1. Retropubic where the sling is passed behind the pubic bone.



2. Trans-obturator where the sling is placed through the pubic bone.



80 – 90% of women who have undergone a retropubic or trans-obturator sling procedure are cured or improved of their SUI symptoms following surgery. Success rates for obese women who undergo MUS are significantly lower compared to women of normal Body Mass Index (BMI) and weight loss strategies and management plan should be discussed before and after surgery.

In Australia and New Zealand and many other countries, the MUS has become the operation of choice for SUI. RANZCOG supports the use of traditional MUS for surgical treatment when conservative treatment has been unsuccessful.

(Burch) Colposuspension

For many years this procedure was the main operation to treat SUI. This may involve keyhole surgery with small incisions (cuts) on your abdomen, or a longer 10 – 12cm bikini-line incision. Permanent or delayed absorbable stitches are used to lift up the neck of the bladder and suspend from the pubic bone ligament to restore bladder control. Success rates are similar to MUS and Fascial sling.

It is a longer operation and has longer post-operative stay and recovery than MUS (especially with the larger incision open colposuspension). Complications are more common when compared to MUS and relate to difficulty emptying the bladder, wound complications and needing later surgery for vaginal prolapse.

Fascial (autologous) sling:

This technique uses your own tissues (fascia) which is taken from an abdominal incision or outer thigh (approximately 10cm long) to form a sling under the bladder. Success rates are similar to MUS and possibly higher than the Burch Colposuspension.

It is a longer operation and has a longer post-operative stay and recovery than MUS. Complications due to difficulty passing urine are the highest after this surgery (compared to MUS and Burch). Sometimes further surgery may be required to correct this problem. It is very common for a temporary catheter to be needed after a fascial sling.

Urethral bulking agents

Synthetic substances such as silicone or polyacrylamide gel can be injected into the urethra (tube from the bladder to the outside) which closes this tube to lessen urine leakage. These injections are performed under spinal or general anaesthetic, but local anaesthesia is possible. These injections may need to be repeated. Complications will depend on the bulking agents that are used, so you should discuss these with your doctor.

These injections have a lower success rate than other surgeries but are useful in certain circumstances and can be discussed with your doctor.

What are the risks of surgery?

Remember that while surgical procedures are generally safe and effective, every operation is different and no two patients are alike. It is important that you are satisfied that the potential benefit from your procedure outweighs the small but real potential risks. Make sure that you discuss your own individual risks, and how they might affect your surgery, with your gynaecologist.

Anaesthetic risks: surgical procedures are carried out under an anaesthetic. Your anaesthetist will discuss the type of anaesthetic and associated risks with you prior to the procedure. Information about the risks of anaesthesia during surgery can be found at http://www.anzca.edu.au/Patients

Surgical risks: All surgical procedures carry a small amount of risk. The potential risks of any continence surgery include:

Injury to the bladder or urethra: Sometimes when a sling is placed, an injury can occur to the surrounding organs. Your gynaecologist will check for such an injury at the time of the operation by using a camera that is passed into your bladder (known as a cystoscopy). In most cases, placing a catheter into the bladder for a day or two will allow any small injuries to heal without any further need for treatment. However, in a very small number of cases (less than 1 in 100), further treatment may be required.

Urinary Urge: Urge is a sudden sensation that a woman must empty her bladder. Sometimes, this can lead to women leaking urine, which is known as urge incontinence. Many women who have stress incontinence will also have a sensation of urge, characterised by a strong urge to go to the toilet but not making it in time. When a sling procedure is performed, about half of women will notice that their urge improves. However, about 1 in 20 finds that their urge worsens.

Infection: Infection may occur after any surgical procedure, and this may be noticed after you leave hospital. Infection is usually managed with antibiotics and should resolve quickly.

Bleeding: Sling procedures cause a small amount of bleeding. This may occur near the sling. Rarely, bleeding can be heavier than expected and, in rare cases, a transfusion with blood (or blood products) may be necessary. The risk of major bleeding is less than 1 in 100.

Problems passing urine: Because these procedures are designed to control loss of urine there is a chance that women will have some difficulty in passing urine with a sling in place. This is commonly because of swelling that occurs following placement of the sling. For most women this will settle quickly. Sometimes your gynaecologist will pass a catheter into your bladder to allow the urine to flow until things settle. Rarely the problem may persist and, in some cases, a further procedure will be required to cut or stretch the sling. For every 100 women who have this procedure, between 1 and 10 of them will have problems passing urine after surgery.

Pain: Short-term pain is common after any surgery. About 1 in 10 women have significant pain that can last a week or two. Longer-term pain is uncommon affecting about 1 in 100 women. If there is permanent implant or suture present and it is thought that this is the cause of pain, this may need to be removed.

Mesh related complications

Erosion or exposure: If you have had a MUS procedure, the synthetic tape or mesh that is used is a permanent, non-dissolving material that can result in the sling being exposed through the skin of the vagina. This can happen soon after the sling is placed or may occur years later. In some cases, the erosion occurs with no symptoms, but it may cause bleeding, discomfort or awareness by either or both partners during sexual activity. A tender or exposed area can be managed with the use of oestrogen cream, or may require a minor procedure to excise or remove the exposed mesh. For every 100 women who have this procedure, 1 or 2 will have this complication.

Remember that even though your procedure will be carried out with care and skill, sometimes the expected result may not be achieved.

Your individual needs and preferences should be taken into account and you should be given adequate opportunity to make informed decisions in partnership with your health care professionals about the range of treatment options that best suit your needs.

Further information on care pathways, surgical procedures and credentialing of medical practitioners can be found at the Australian Commission on Safety and Quality in Health Care website at:

www.safetyandquality.gov.au/our-work/transvaginal-mesh/resources/



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