

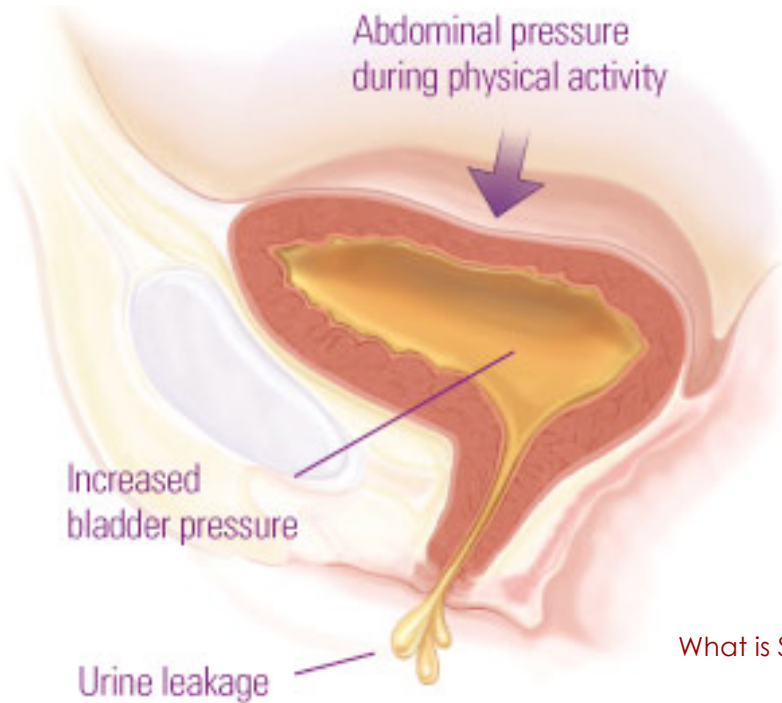
Stress urinary incontinence in women

Treatment options

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Stress urinary incontinence – get diagnosed



Stress incontinence is caused by sphincter weakness

What is SUI?

SUI is when urine leaks out with sudden pressure on the bladder and urethra causing the sphincter muscle to open briefly. With mild SUI, pressure may be from sudden forceful activities, like with exercising, sneezing, laughing or coughing. If your SUI is moderate or more severe, you may also leak with less forceful activities, like standing up, walking or bending over. These leaking “accidents” can be a few drops to enough to soak through clothes.

More people have SUI than you may think, About 1 in three women have this problem at some point in their lives.

What causes SUI?

The most common risk factors for SUI are pregnancy and childbirth, being overweight, chronic coughing, smoking and pelvic surgery.

How is SUI diagnosed?

Urologists and gynecologists are doctors who specialize in incontinence. There are a few things your doctor will want to know to make the diagnosis: at first they will ask you about your symptoms and your medical history. Your doctor will examine you and you may be referred for some tests: a urinalysis tests for a urine infections or blood in your urine. A bladder scan shows how much urine stays in your bladder after you urinate. A cystoscopy uses a narrow tube with a fine camera to see into your bladder and urodynamic studies are done to test how well your bladder, sphincters and urethra hold and release urine. These tests can show how well the bladder works and may help find the cause of leakage.

Conservative and surgical treatment options for SUI

Treating stress urinary incontinence

There are surgical and non-surgical options. Not every treatment works for everyone.

Lifestyle changes, exercise and products

Making a few **changes in your everyday life** may reduce SUI symptoms. For example, if you can lose weight, stop smoking and maintain good overall health, you can reduce leaks. **Bladder training**, or using a schedule for bathroom visits, may also help.

Pelvic floor muscle exercises: also known as Kegel exercises. These are proven to strengthen your pelvic floor, which supports the bladder and other organs. By exercising these muscles (consciously contracting and releasing pelvic floor muscles daily) you will make them stronger to prevent urine loss. It's important to do these exercises correctly and often. **Products** – as a quick fix, or long-term option, absorbent pads are available. Absorbent products come in many shapes and forms. They can be pads or pull-on-briefs. They can be used if leaks are not considered to be a major problem in your life. **Medical devices** for women: if your pelvic floor muscles are weak a device may be inserted to manage SUI symptoms. Examples are vaginal devices, urethral plugs and pessaries.

Surgical treatment options

Once all conservative treatment options have been exhausted you could consider surgery. There are many different treatment options available and you should discuss these with your surgeon

before making a decision. In addition, different operations may be better for different people.

In summary there are the following treatment options available:

Urethral bulking agents are injected around the urethra and into the sphincter to improve the way the sphincter closes.

The most common operation for SUI in women is **“sling” surgery**. In the **mid-urethral sling** a narrow strip of synthetic mesh is placed under the urethra to stop it from moving downward during activities. It acts as a hammock to support urethra and bladder neck. There are a lot of different techniques used, such as TVT (tension-free vaginal tape), TOT (transobturator tape) and single-incision minitapes. The difference lies in the way the mesh material is placed around the urethra. The **“autologous” sling** is when a strip of your own tissue is taken from the lower abdomen or thigh and used as a sling. The ends of the sling are then stitched in place through an incision in the abdomen.

The oldest technique is the **colposuspension**, an open operation which lifts the tissues around your bladder neck on to the back of your pelvis.

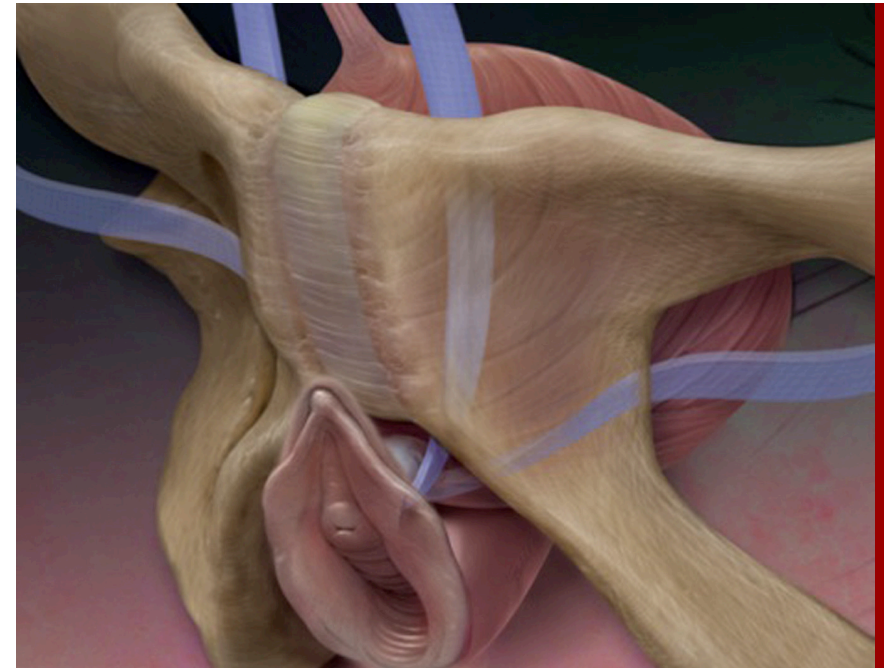
In some cases an **artificial urinary sphincter**, a sophisticated implant that squeezes urethra or bladder neck, can be inserted to improve your continence.

Mid-urethral sling surgery

- Mid-urethral synthetic tapes are the most common procedure to treat SUI
- It is a relatively minor procedure with a short recovery time
- Two-thirds of women are completely dry after the surgery
- 90% of women are happy with the results of their surgery even though some may still have minor leakage
- 10% of women develop symptoms of urgency (a need to rush to the toilet)
- Some women may have difficulty in emptying their bladder
- A very small number of women develop long-term complications from the tape that may include chronic pain and erosion
- All vaginal mesh procedures are subject to a comprehensive national audit and complications must be reported to the national medical devices watchdog.

The main intended benefit of tape procedures is to cure or improve stress urinary incontinence. The surgery is not intended to improve symptoms of an overactive bladder (frequency, urgency and urge incontinence). This is a different condition that sometimes may improve following tape procedures, - however, it may also worsen.

Following this short procedure most patients will be able to go home the same day. The procedure will be carried out under general or spinal anaesthetic. A synthetic mesh is inserted through a small cut in the front wall of the vagina to support the urethra. Then two smaller cuts are made just above the pubic area (TVT) or on the inside of both thighs



(TOT). The mesh is being passed through these incisions. All synthetic meshes are meant to remain in place permanently. A cystoscopy (camera examination of your bladder) may be performed. You may or may not receive a catheter after your surgery.

After your procedure you will return to the ward where our nursing staff will verify that you are emptying your bladder well. You will receive painkillers as required.

During the first few days after your surgery there may be slight vaginal bleeding (like the end of a period). If you need to wear protection, use a sanitary pack, not a tampon. There is no restriction on undertaking light activities after a few days, if you feel able to do so. More strenuous tasks such as heavy lifting should be avoided for six weeks. To avoid discomfort during the healing period, you should refrain from sexual intercourse and insertion of creams or devices for six weeks. Try and avoid constipation by drinking plenty and following a healthy diet. You should not drive for 24 hours after a general anaesthetic and not until you are free from the sedative effect of any pain relief.

Specific risks and complications of synthetic mesh surgery

Mesh erosion/exposure in the vagina

If the vaginal skin does not heal properly or becomes infected the tape can become exposed. This could also be due to inflammation, foreign body reaction or unusual immune response. Further surgery may be required to remove the tape.

Recognized damage to bladder or urethra during procedure

When discovered during the procedure the trocar or tape will be removed and replaced correctly. Recognized inadvertent bladder perforation will not lead to long-term damage, - however, urethral damage may have long-term consequences.

Failure to stop urinary leakage

Persistence or recurrence of urinary leakage may occur. This can even happen years after the tape has been inserted and even if it has cured the symptoms initially. You may need further surgery for incontinence and success rates may be lower.

Temporary problems in emptying the bladder fully

This is not uncommon and may require a short period of intermittent or indwelling catheterisation for a couple of days or weeks. If necessary you will be offered training on how to self-catheterize.

Temporary pain in the pelvic area or at the site of tape insertion or during sexual intercourse

Pain in these areas usually resolves spontaneously or with painkillers. Referral to physiotherapy or specialist pain teams are rare but may be helpful if pain persists

Long-term pain

This can occur due to nerve damage/irritation or muscle spasm following surgery. Referral to physiotherapy or pain specialist may be helpful. More common with TOT rather than TVT. Nerve and musculoskeletal damage & pain could be permanent and severe enough to be debilitating affecting leg movement. Where pain occurs during intercourse physiotherapy can help in stretching of scar tissue and using "trigger-point-techniques" to relieve the pain.

Mesh erosion into urethra or bladder

This is rare and can occur shortly or years after surgery. It could be due to spontaneous tape displacement or unrecognized damage to the bladder or urethra. Further surgery to remove the tape will be necessary.

Injury to other organs such as urethra, bowel and major blood vessels

Very rare. An abdominal operation may be necessary to resolve the problem.

Long-term problems in emptying the bladder and/or recurrent UTI

Rare. May require temporary self-catheterisation.

Risks if mesh has to be removed

Repeat procedures may be necessary and, as the mesh tape is meant to be a permanent implant, complete removal may not be possible. Even after complete removal symptoms may persist or worsen. Partial or complete removal of the tape may result in recurrent urinary leakage.

Pregnancy and childbirth

You should only consider tape surgery once your family is complete

While it will not affect your ability to become pregnant, there is an anticipated increased risk of failure of the tape procedure following pregnancy and childbirth. A caesarian section may be recommended to reduce such risk. Such recommendations apply to women following all types of surgery for stress urinary incontinence.

Useful resources:

British Association of Urological Surgeons

https://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Synthetic_sling_female.pdf

https://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/SUI_Mesh_Tapes_Leaflet_Version_24_160517.pdf

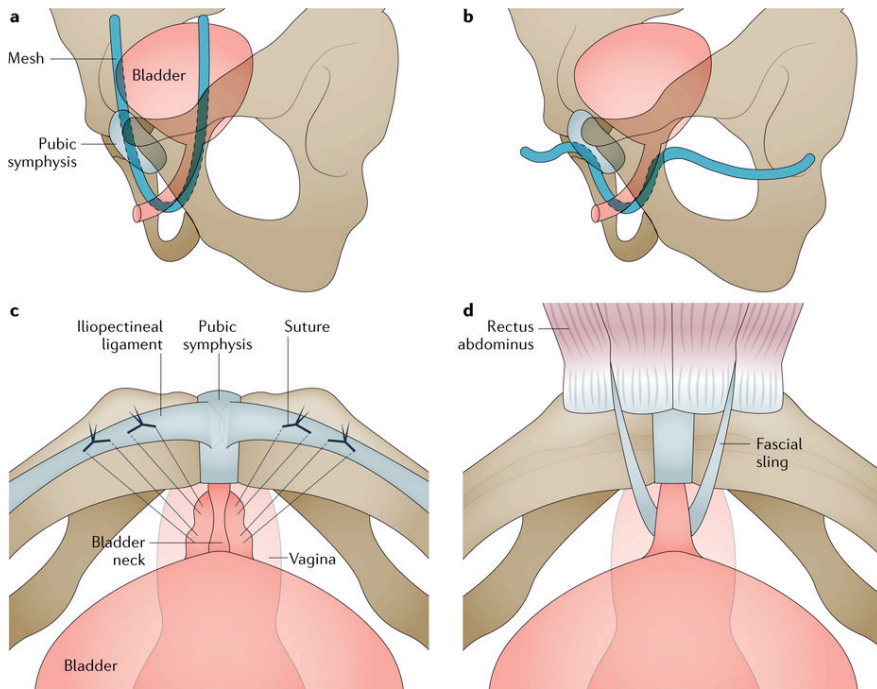
European Association of Urology & European Urogynaecological Association Consensus statement

https://www.baus.org.uk/_userfiles/pages/files/Patients/EAU_Mesh_Report_May_2017.pdf

MHRA – Regulating Medicines and Medical Devices

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/402162/Summary_of_the_evidence_on_the_benefits_and_risks_of_vaginal_mesh_implants.pdf

Alternative treatment options for SUI



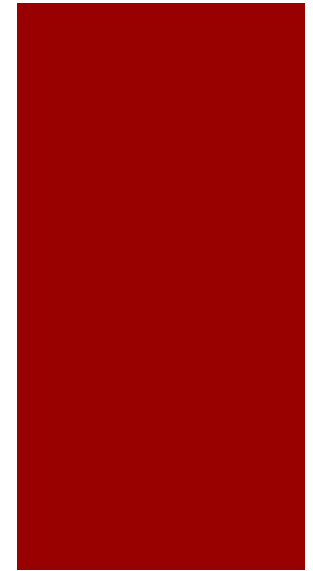
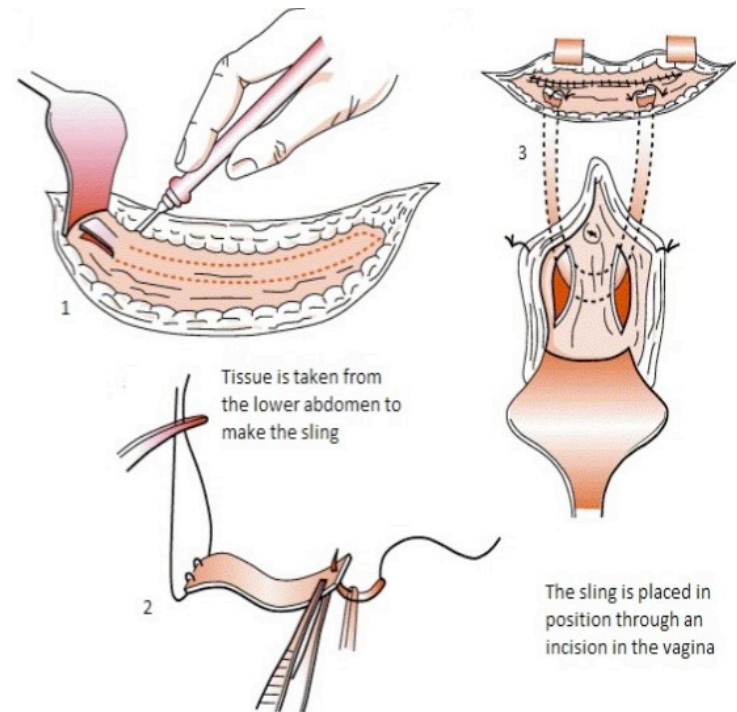
Autologous slings are made from your own body tissues –hence there is no mesh. Similar toTVT/TOT the sling is positioned under the urethra and supports tissues when there is downward pressure on the bladder. A strong piece of muscle lining is being harvested from lower abdomen or thigh. This will be trimmed into a ribbon-like sling and placed underneath the urethra.

Recovery time tends to be a little longer than for synthetic mesh (around 6 weeks). Two thirds of women are completely dry after the surgery. 90% are happy with the results although some women may still have minor leakage. 10% of women develop urgency and some women may have temporary difficulties in emptying their bladder requiring a short period clean intermittent self-catheterization.

A **colposuspension** is an open operation done through an incision in your tummy. Stitches are put inside the pelvis to pull up the vagina around the area of the bladder opening to support your bladder. The stitches are being attached to the back of your pelvic bone.

You will have a catheter for about 24-48hours and it is common to stay in hospital for about 2-3 nights after the surgery. Recovery time is longer than after tape surgery (around six weeks).

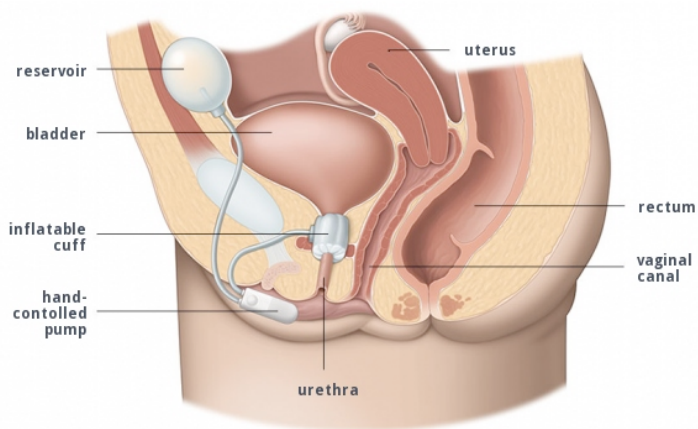
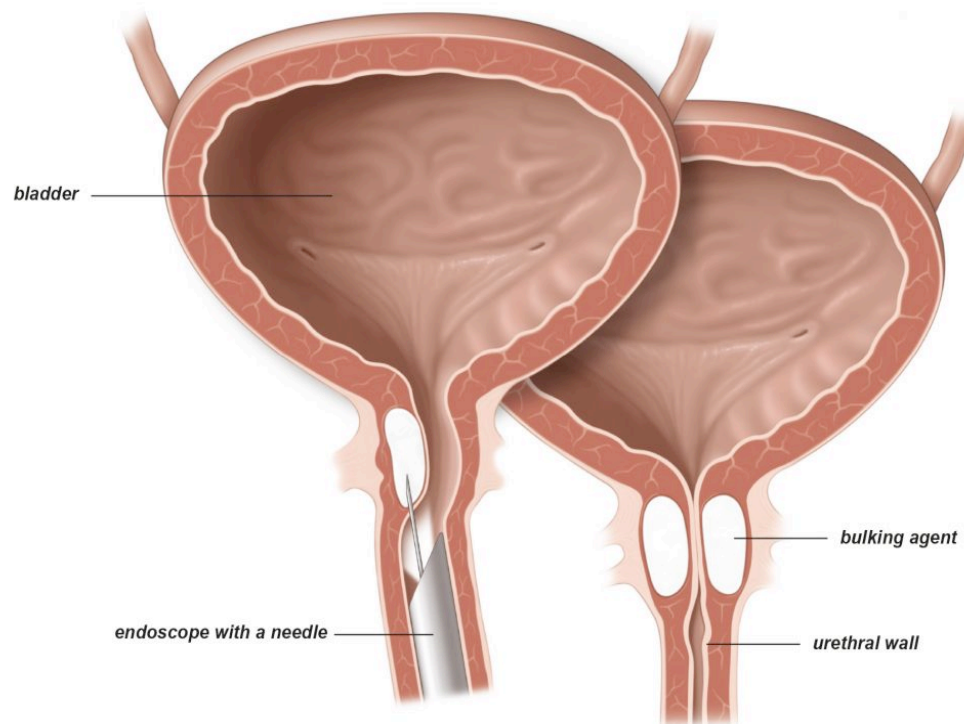
Two thirds of women are completely dry after the surgery. 90% are happy with the result of the operation – even though some still have minor leakage. 10-20% develop urgency and 10-20% may develop a vaginal prolapse after the operation. A small number of women has temporary difficulties in emptying their bladder and may temporarily need to pass disposable catheters to empty the bladder completely (clean intermittent self-catheterisation). Wound infections with delayed wound healing can occur in up to 5% of patients.



Urethral bulking involves an injection into the wall of your urethra. The bulking agent forms a cushion around the urethra and improves the watertight seal. It is a minor procedure, which is normally done as day case surgery.

Recovery time is quick and the risk of complications is low. The success rate is probably not as good as with the other procedures for stress urinary incontinence. Incontinence is not always better after the surgery and repeat injections may be necessary.

Complications include a short time of mild burning and bleeding after the procedure. In some patients the flow can become a little slower (10%), Other risks are urinary tract infections (10%), recurrence of incontinence within 12 months (10%), failure to improve stress incontinence requiring further surgery at a later stage (20-50%), short-lived inability to empty your bladder with need for temporary self-catheterisation (5-10%)



An **artificial sphincter** may be suitable for some women. It consists of three parts: a cuff around the urethra, a pump and a fluid-filled reservoir. The cuff squeezes the urethra so that urine does not leak out. The pump is placed under the skin next to the vagina (in the labia). You will need to squeeze the pump each time you want to pass urine.

The commonest complications are infection, mechanical failure and migration of the sphincter components.

The surgery is only offered in centers that have expertise in complicated and recurrent stress urinary incontinence. It may be suitable in some women with underlying neurological conditions that result in incontinence. Although the treatment is well-established in men, it is only used very rarely in women and we have less evidence on how well it works in women in the long-term



INCONTINENCE OPTION

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