PROCEDURE

Urinary incontinence - urethral sling procedures

A urethral sling is surgery that supports the urethra to reduce urine leakage during physical activity.

PURPOSE
Reduce stress urine leakage by supporting the urethra

PROCEDURE TYPE
Therapeutic surgery through small vaginal or perineal incisions

WHERE IT IS DONE
Operating theatre, usually as day surgery

ANAESTHESIA
General or local with sedation; sometimes spinal anaesthesia

HOW LONG IT TAKES
About 30 to 90 minutes

PREPARATION
Fasting, medication review, and urine testing when requested

RECOVERY
Same day or overnight; no driving until safely recovered

MAIN RISKS
Urinary retention, bladder injury, infection, mesh complications

RESULTS
Leakage improvement is often apparent after initial healing

Overview

A urethral sling is an operation for stress urinary incontinence . This means urine leaks when pressure increases in your abdomen, such as when you cough, laugh, exercise, or lift something.

The sling is placed beneath the urethra, the tube that carries urine out of the bladder. It acts like a supportive hammock, helping the urethra stay closed during physical activity.

In women, the most common operation is a mid-urethral sling made from a narrow strip of permanent synthetic mesh. It is placed through a small cut inside the vagina. Depending on the technique, its ends pass behind the pubic bone or through the groin area.

A sling can instead be made from your own strong connective tissue, called fascia, usually

taken from the abdomen or thigh. This avoids synthetic mesh but requires another incision and generally involves a longer recovery.

Slings for men are different. They are usually considered for selected cases of stress leakage, often after prostate treatment. The sling is placed through an incision between the scrotum and anus to support or reposition the urethra.

Why the procedure is performed

A sling may be offered when stress leakage affects daily life and non-surgical treatment has not helped enough. The aim is to reduce leakage, the need for pads, and limits on work, exercise, travel, or social activities.

Before recommending surgery, your healthcare team should confirm that stress incontinence is the main problem. This may involve discussing when leakage occurs, examining you, testing a urine sample, measuring urine left in the bladder after you urinate, or asking you to cough with a comfortably full bladder.

More detailed bladder testing, called urodynamics, is used in selected situations rather than for everyone.

A sling does not directly treat leakage caused mainly by a sudden, intense need to urinate. That is known as urgency incontinence and may require different treatment.

Who should and should not have it

A urethral sling may be suitable if you have confirmed stress urinary incontinence, understand the available options, and feel that the expected benefit is worth the risks.

For women considering synthetic mesh, consent should include the fact that the material is permanent. Removing all of it can be difficult if a complication develops. Mesh used for a mid-urethral sling is different from larger transvaginal mesh products previously used to treat pelvic organ prolapse.

Surgery may be delayed or avoided if you:

Previous pelvic surgery, radiation treatment, scarring, chronic pelvic pain, or plans for future pregnancy may change which procedure is safest. They do not always rule out surgery.

A male sling is generally intended for selected mild or moderate stress leakage. More severe leakage or poor bladder function may make another treatment, such as an artificial urinary sphincter, more appropriate.

- Have an untreated urinary tract or surgical-site infection
- Are pregnant or expect to become pregnant soon
- Cannot safely have anaesthesia or surgery because of an unstable illness
- Have unexplained bleeding or urinary symptoms needing assessment first
- Mainly have urgency incontinence rather than stress leakage
- Have significant difficulty emptying your bladder

How to prepare

Your treating facility's own instructions take priority because preparation differs by anaesthetic and sling technique.

Tell the surgical team about all medicines, supplements, allergies, previous pelvic operations, and any problems with anaesthesia. Do not stop a blood thinner like warfarin or apixaban unless the clinician responsible for it gives you a specific plan.

You may be asked to:

Contact the facility before surgery if you develop fever, burning when urinating, a new illness, or pregnancy may be possible.

- Stop eating and drinking for a set time before surgery
- Provide a urine sample to check for infection
- Adjust certain medicines before the operation
- Arrange for an adult to take you home and stay with you
- Shower before arriving and avoid lotions near the surgical area

What happens during the procedure

After anaesthesia is given, the surgical area is cleaned. A temporary tube called a catheter may be placed through the urethra to drain the bladder.

For a mid-urethral sling in women, the surgeon makes a small incision in the vaginal wall beneath the urethra. The sling is positioned without pulling it tightly. Its ends may pass behind the pubic bone, through the tissues near the groin, or through a smaller single-incision route.

The surgeon may look inside the bladder with a thin camera called a cystoscope. This checks for an accidental bladder or urethral injury.

For a sling made from your own fascia, tissue is taken through a separate incision. The operation is usually more extensive than placement of a synthetic mid-urethral sling.

For a male sling, the surgeon works through an incision in the perineum, the area between the scrotum and anus. The sling supports or repositions the urethra.

The incisions are closed with stitches. The catheter may be removed before you leave, or it may stay in temporarily if you cannot empty your bladder.

Recovery and what to expect afterward

Mild to moderate soreness, pelvic pressure, vaginal spotting, or discomfort around a groin, abdominal, or perineal incision can occur. Pain should gradually improve. Use pain relief as instructed by your surgical team.

You can usually drink and eat once you are awake and not feeling sick. Start with lighter food if the anaesthetic has upset your stomach.

Walking is encouraged, but strenuous exercise, heavy lifting, tampons, and vaginal sex are usually restricted during healing. Your surgeon will tell you how long these limits apply. Avoid straining from constipation.

Do not drive on the day of surgery. You should also avoid driving while taking medicine that makes you drowsy, while movement is painful, or until you can brake suddenly and control the vehicle safely. Follow your facility's specific restriction.

People with desk-based work may return sooner than those whose work involves lifting or strenuous activity. Recovery may take longer after a fascial or male sling than after an uncomplicated mid-urethral sling.

Before discharge, the team usually checks whether you can urinate and empty your bladder adequately. If not, you may need a catheter for a short period and another bladder-emptying test later.

Risks and possible complications

No sling guarantees complete or permanent control of leakage. Stress incontinence can continue or return over time.

Possible complications include:

With a synthetic sling, mesh can become exposed through the vaginal wall or erode into the urinary tract. Mesh may also tighten, move, or contribute to pain or urinary problems.

Treatment can require another operation, and removing mesh may not completely resolve symptoms.

A sling may occasionally be too tight, requiring catheter use, sling adjustment, or surgical release. Releasing it can improve bladder emptying but may allow stress leakage to return.

- Difficulty urinating or incomplete bladder emptying
- Urinary tract or wound infection
- Bleeding or bruising
- Injury to the bladder, urethra, bowel, blood vessels, or nearby nerves
- New or worse urgency, frequent urination, or urge leakage
- Persistent pelvic, groin, vaginal, or sexual pain
- Pain during sex
- Problems related to anaesthesia

Results and follow up

You may notice less leakage soon after surgery, although swelling and temporary bladder changes can make the early result unclear. Healing over the following weeks gives a better indication of the outcome.

Routine follow-up usually checks your incisions, bladder emptying, pain, and leakage. Tell the team about a weak urine stream, urgency, repeated infections, painful sex, or continuing leakage rather than waiting for the next visit.

Long-term review may be needed if symptoms return or if a mesh-related problem is suspected.

Alternatives

You do not have to choose sling surgery. Alternatives offer different balances of convenience, effectiveness, recovery, and risk.

Pelvic floor muscle training strengthens the muscles supporting the urethra. It avoids surgery but requires regular, correctly performed exercises, and improvement may be incomplete.

Lifestyle changes may include changing fluid or caffeine habits, treating constipation, stopping smoking, or addressing excess weight where relevant. These can reduce pressure or bladder

irritation but may not control established stress leakage alone.

A vaginal continence pessary or support device can reduce leakage during daily activity or exercise. It avoids surgery but must fit correctly and may require removal, cleaning, and follow-up.

Urethral bulking injections add material around the urethra to help it close. Recovery is usually quicker than after sling surgery, but the effect is often less durable and repeat injections may be needed.

Colposuspension uses stitches to support tissues near the bladder neck. It avoids synthetic sling mesh but is a larger abdominal or keyhole operation with a longer recovery.

An autologous fascial sling uses your own tissue. It avoids permanent synthetic mesh but involves a tissue-harvesting incision and may carry a greater chance of temporary difficulty emptying the bladder.

For men, an artificial urinary sphincter can provide stronger control for more severe leakage. It requires an implanted mechanical device that must be operated by hand and may eventually need revision or replacement.

Choosing no procedure and continuing pads or absorbent underwear is also reasonable if symptoms are manageable.

When to call your healthcare team

Contact your surgical team promptly for increasing pain, worsening redness or swelling, pus from an incision, fever, burning during urination, repeated vomiting, heavy bleeding, or urine leakage that suddenly becomes much worse.

Seek urgent assessment if you cannot urinate, particularly with increasing lower abdominal pain or swelling.

Call emergency services for trouble breathing, chest pain, fainting, or sudden severe weakness. These are emergency symptoms rather than routine recovery concerns.

Questions about mild soreness, activity limits, work forms, or scheduled catheter removal can usually wait for normal office hours.

Common questions

Will I be asleep?

Many sling procedures use general anaesthesia, so you are asleep. Some use spinal

anaesthesia or local anaesthesia with sedation. Your anaesthesia team will explain the plan.

Can I drive myself home?

No. Arrange for someone to take you home. Do not drive until the effects of anaesthesia have passed and you can move and brake safely.

How painful is sling surgery?

Soreness and pressure are common, but severe or steadily worsening pain is not expected. Fascial and male slings may involve more incision discomfort than a mid-urethral sling.

When will I know whether it worked?

Some people notice improvement immediately. A clearer result usually appears after swelling settles and normal activity gradually resumes.

Will I have a catheter?

A catheter is commonly used during surgery. It is often removed before discharge, but it may remain temporarily if you cannot empty your bladder.

Is the sling permanent?

Synthetic mesh slings are intended to remain permanently. A sling made from your own tissue also provides long-term support, although continence can change over time.

Sources

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