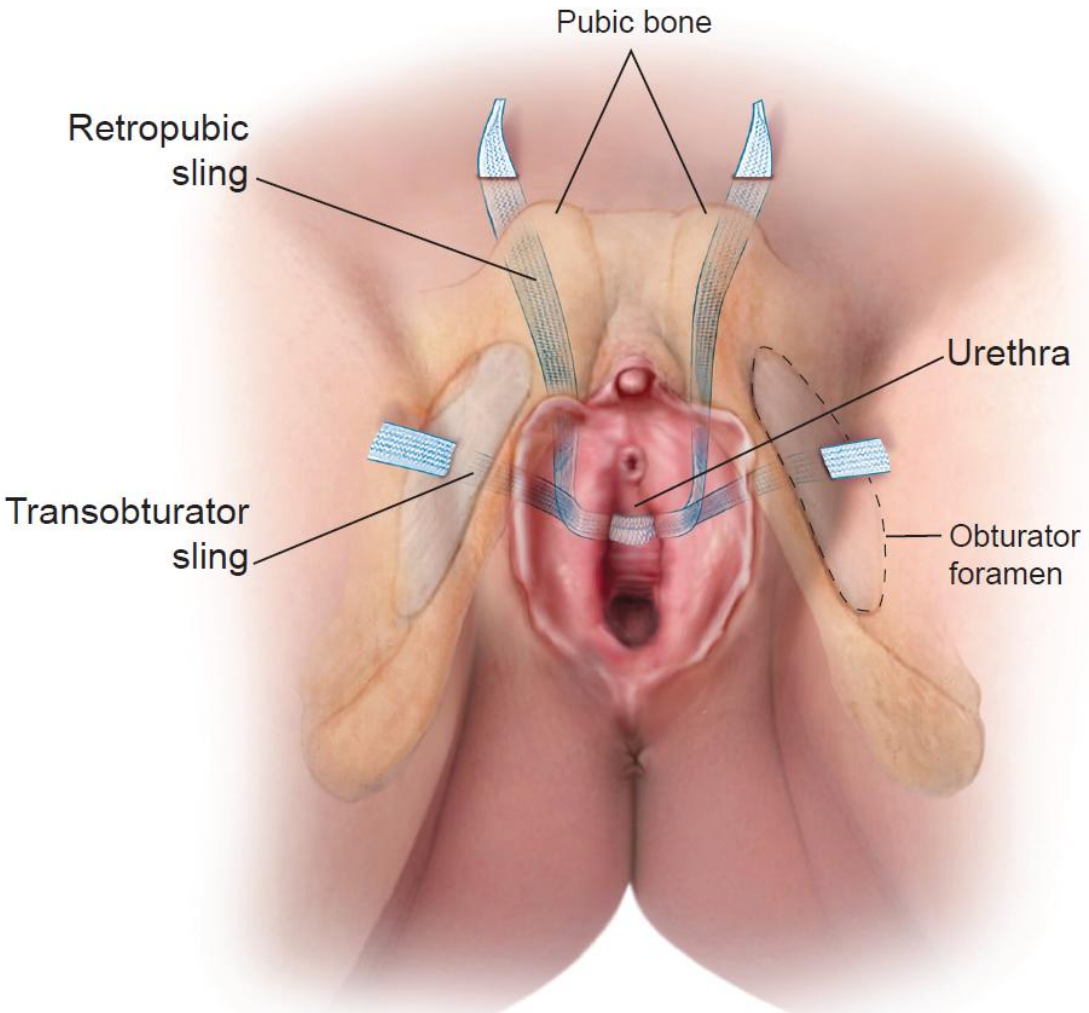
Mid-urethral Slings

What are mid-urethral slings?

Mid-urethral slings (MUS) are narrow tapes made from synthetic polypropylene. These tapes are inserted underneath the middle part of the urethra. Scar tissue forms around the tape, holding it in place, which acts like a hammock to support the urethra during moments when the abdominal pressure is increased, reducing any urine leakage.

MUS placement is a minimally invasive procedure, usually performed under general anaesthesia and may be performed as a day procedure. Women normally return to work after 2 weeks, depending upon the duties performed. This treatment is the most extensively studied continence surgery in history and MUS are widely regarded as the treatment of choice for stress urinary incontinence.



While 90–95% of women are highly satisfied with the surgery, no surgery is without risk. MUS complications include the following.

- *Failure:* Not achieving the desired effect (5–10%).
- *Voiding difficulty:* Not emptying the bladder completely occurs in about 2% of women. Initially, you may need to learn how to empty your bladder with a small catheter or have the tape loosened in theatre. In a very small number of women, the tape may need to be cut to resolve urinary retention with a 50% chance of the stress leakage returning following this.
- *Overactive bladder:* There is a 5% risk of the bladder becoming overactive, resulting in symptoms of having to void more frequently or needing to rush to the toilet when you have the urge to go. Overactive bladder can be treated (see separate leaflet).
- *Mesh erosion:* The vaginal skin may not always heal over the mesh properly (2%), requiring additional surgery to re-cover the tape. Symptoms of mesh exposure can be bleeding, vaginal discharge and pain during sexual intercourse.
- Rarely, the tape may cause pain or pain during intercourse due to scar tissue.
- Bleeding requiring transfusion or reoperation occurs in less than 1% of cases.

There are three different types of MUS and your gynaecologist will discuss the advantages and disadvantages of each approach based on your individual case.

Retropubic tapes were first introduced in the 1990s, and they are very effective with 80% of women cured and 95% significantly improved. Follow-up studies have demonstrated their effectiveness for at least 17 years, explaining why this approach remains the most used.
The tape is inserted with special needles through a cut in the vagina and is pushed up through 2 small cuts in the wall of the abdomen (tummy) securing the tape. Your surgeon will look inside the bladder with a small cystoscope (telescope) to make sure the bladder and urethra have not been punctured. If this is the case, the tape is removed and reinserted. A catheter will be left in the bladder for approximately 24 hours to allow for the small hole to heal.

Trans-obturator tapes were first used in 2003. As seen in the diagram, the special needles that insert the mesh under the urethra in the vagina come through small cuts made in the groin rather than through the abdomen.
Trans-obturator tapes have a 8 to 9 times higher rate of reoperation for urinary incontinence in the medium term, then retropubic tapes and are associated with low rates of groin pain (4%) that can be difficult to treat. However, trans-obturator tapes have lower rates of bladder injury and voiding dysfunction.

Single-incision mini slings are inserted through an incision in the vagina towards the groin. However, these slings are shorter and include a small anchor that is fixed to the tissue surrounding the urethra without cuts in the groin groin. Although the initial results of the different mini-slings are encouraging, there is currently a lack of long-term data.

Advice regarding postoperative care after a MUS procedure is available at www.ugsa.org.au

This statement has been developed by the Urogynaecological Society of Australasia (UGSA).