Nick Brook Urology

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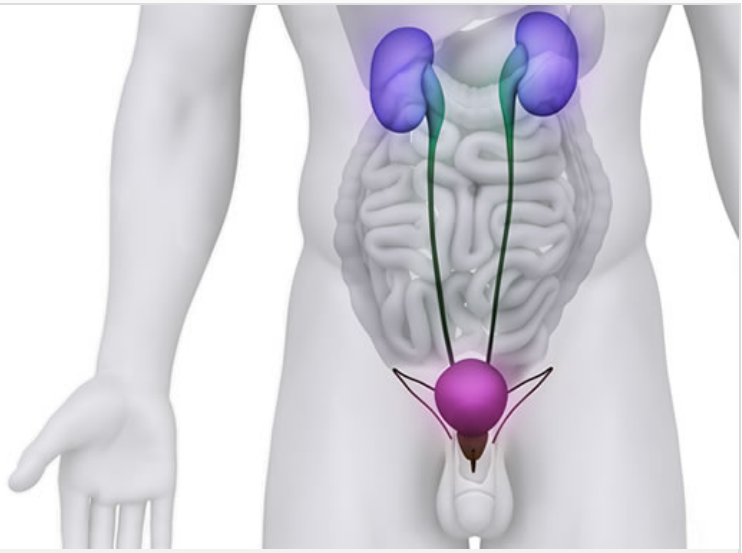

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Artificial Urinary Sphincter (AUS) in Men

What is the Artificial Urinary Sphincter?

The artificial urinary sphincter is an implanted device that controls urinary continence in people who are otherwise incontinent of urine. Its use is reserved for severe incontinence, which has failed to respond to other treatments, or in those who are not suitable for insertion of a sling to control continence Atoms Sling or Advance Sling.

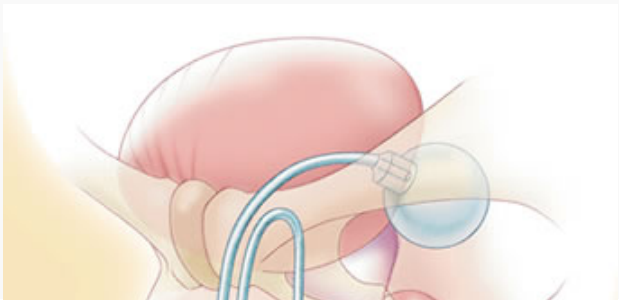
A typical indication in men is severe incontinence after prostate procedures such as radical prostatectomy or TURP.

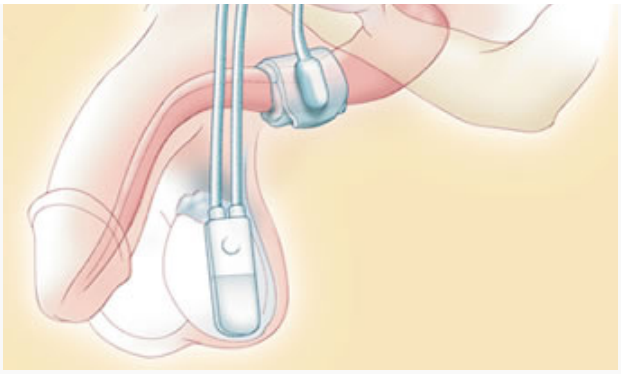
The sphincter can also be used for incontinence associated with certain neurological conditions, but the way it is implanted is very different, and this particular indication is not discussed here

How does it work?

The AUS is a complex device that can work well, and has been in clinical use for many years. It has three components:

1. The cuff, which fills with fluid and compresses the urethra to reduce or prevent flow of urine
2. A pump, which controls the flow of fluid to and from the cuff. The pump is pressed to push fluid from the cuff to allow the patient to pass urine.
3. A reservoir, implanted nest to the bladder, which stores the fluid for the cuff.





How is the procedure performed?

An AUS is inserted under general anaesthetic, in an operation that lasts about 90 minutes. You will normally have two separate incisions; one in the perineal skin (the skin between the scrotum and back passage) for insertion of the cuff, and one in the lower abdomen for insertion of the reservoir. Also, the pump is placed in the scrotum through this second incision.

The tubes that allow fluid to move between the components are run under the skin (if you are thin you may be able to feel this after the operation), and the incisions are closed with sutures.

A urinary catheter is left in place until the following day.

After the procedure

The catheter is removed the day after surgery, and you will usually be able to go home then. There is usually some soreness and a small amount of bruising after the operation, and you would be wise to not drive for a few weeks, and to resume normal activities slowly.

The cuff is left in a 'deactivated' position for 6 weeks, which means it is open and not working. This allows time for the tissues to heal, but does mean that you will remain incontinent for those 6 weeks. After this time, you will be seen in clinic, and the device will be activated.

How successful is the AUS and what are the complications?

To give you an idea of the type and rates of complications over a long (13 year) period, these figures are taken from a paper published by a group in Texas, USA:

- infection on the device in 6% of cases

- erosion of the cuff in 6%
- urethral atrophy in 10%
- mechanical failure of the device in 6%
- surgical removal or revision needed in 27%

The time at which these complications occurred was a median of:

- 4 months for infection
- 20 months for erosion
- 30 months for atrophy
- 68 months for failure
- and 14 months for revision surgery

At 5 years after surgery, 25% of patients needed either removal of the AUS, or another operation to fix a problem with the device.

In terms of success, this paper reported an average reduction in pad use from 5/day to 1/day.

Reference:
Lai et al. 13 Years of Experience With Artificial Urinary Sphincter Implantation at Baylor College of Medicine. Journal of Urology Vol. 177, 1021-1025, March 2007

In summary, he majority of men find that there is a vast reduction in incontinence episodes with the AUS. Occasionally men are rendered completely dry, but more often there is a minor leak that is easily managed with 1 pad/day. However, not all men are helped by an AUS, and there are potential complications with the procedure and with the device. If an AUS is suitable for you, these will be discussed with you in detail in clinic before you decide if you want to go ahead.

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