

# Synthetic sling or artificial urinary sphincter for men with urodynamic stress incontinence after prostate surgery: the MASTER non-inferiority RCT

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**Disclaimer:** This report contains transcripts of interviews conducted in the course of the research and contains language that may offend some readers.

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## Plain English summary

### MASTER non-inferiority RCT

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## Plain English summary

Leakage of urine associated with physical exertion (e.g. sporting activities, sneezing or coughing) is common in men who have undergone prostate surgery, but it is difficult to improve. Many men still leak urine 12 months after their prostate surgery and may continue to wear protective pads or sheaths. The most common operation to improve incontinence is implantation of an artificial urinary sphincter. An artificial urinary sphincter is an inflatable cuff that is placed around the urethra, the tube that drains urine from the bladder. The cuff is inflated and compresses the urethra to prevent leaking. When the man needs to pass urine, he must deflate the cuff by squeezing a pump placed in his scrotum, which releases the compression on the urethra and allows the bladder to empty. Recently, a new device, the male sling (made from non-absorbable plastic mesh), has been developed. The sling, which is surgically inserted under the urethra, supports the bladder, but, in contrast to the artificial sphincter, it does not need to be deactivated by a pump and, therefore, the patient does not need to do anything to operate it. A sling is also easier for the surgeon to insert than a sphincter. However, in some men, the sling does not provide enough improvement in incontinence symptoms and another operation, to place an artificial urinary sphincter, is needed.

The aim of this study was to determine if the male sling was as effective as the artificial urinary sphincter in treating men with bothersome incontinence after prostate surgery. The study took the form of a randomised controlled trial (the gold standard and most reliable way to compare treatments) in which men were randomised (allocated at random to one of two groups using a computer) to either a male sling or an artificial urinary sphincter operation. We asked men how they got on in the first 2 years after their operation.

Regardless of which operation they had, incontinence and quality of life significantly improved and complications were rare. A small number of men did require another operation to improve their incontinence, and it was more likely that an artificial urinary sphincter was needed, rather than another sling operation, if a male sling was not successful. Satisfaction was high in both groups, but it was significantly higher in the artificial urinary sphincter group than in the male sling group. Those who received a male sling were less likely than those who received an artificial urinary sphincter to say that they would recommend their surgery to a friend.



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