

# Retrograde urethral sphincterometry

Interventional procedures guidance

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[nice.org.uk/guidance/ipg167](https://www.nice.org.uk/guidance/ipg167)

## Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

## 1 Guidance

- 1.1 Current evidence suggests that there are no major safety concerns associated with retrograde urethral sphincterometry. However, there is a lack of evidence on the diagnostic utility of this procedure (that is, the extent to which knowledge of its results improves patients' outcomes) and it should be performed only in the context of good-quality research.

## 2 The procedure

### 2.1 *Indications*

- 2.1.1 Stress urinary incontinence is the involuntary leakage of urine during exercise or certain movements such as coughing, sneezing and laughing. It is usually caused by weak or damaged muscles and connective tissues in the pelvic floor and urethral sphincter.
- 2.1.2 Diagnosis of stress urinary incontinence is usually based on symptoms, examination and exclusion of underlying causes or comorbidity.
- 2.1.3 Retrograde urethral sphincterometry measures the pressure needed to open, and just keep open, a closed urethra by the retrograde infusion of fluid. This has been proposed as an assessment of urethral function in women with symptoms of stress urinary incontinence.
- 2.1.4 Established tests of urethral function include urethral pressure profilometry (UPP) and valsalva leak point pressure. Radiographic assessment of urethral function can be done using videocystourethrography.

### 2.2 *Outline of the procedure*

- 2.2.1 Retrograde urethral sphincterometry (RUS) involves placing a cone-shaped device a short distance (about 5 mm) into the external urethral meatus. The device then infuses fluid at a controlled rate into the urethra. The pressure required to open the urethral sphincter is displayed on the device.

### 2.3 *Efficacy*

- 2.3.1 Preliminary data on the use of this procedure in women with stress urinary incontinence found that there was a weak relationship between the results of this test and other standard tests. In a trial of 258 symptomatic women the mean retrograde urethral pressure as measured by RUS was 71 cm H<sub>2</sub>O, and the mean values were reported as decreasing with increasing symptom severity. In another study, the mean retrograde urethral pressure was found to be 112.6 cm H<sub>2</sub>O in 61 asymptomatic women.

2.3.2 The impact of this procedure on patient outcomes is currently unclear. For more details, refer to the Sources of evidence.

2.3.3 The Specialist Advisors noted that efficacy outcomes are yet to be established.

## 2.4 *Safety*

2.4.1 In a study of 258 women, pain (2%) and dysuria (2%) were the two most commonly reported complaints. A total of 12 adverse events were noted in a study of 61 asymptomatic women who had RUS; these included lower back pain (2%), discomfort (2%), urethral pain (3%), dysuria (3%), urinary urgency (3%), urinary frequency (3%) and transient incontinence (3%). For more details, refer to the Sources of evidence.

2.4.2 The Specialist Advisors noted urinary tract infection and mild discomfort as potential adverse events.

Andrew Dillon  
Chief Executive  
April 2006

## 3 Further information

### *Sources of evidence*

The evidence considered by the Interventional Procedures Advisory Committee is described in the following document.

'Interventional procedure overview of retrograde urethral sphincterometry', April 2005.

### *Information for patients*

NICE has produced [information on this procedure for patients and carers](#). It explains the nature of the procedure and the guidance issued by NICE, and has been written with patient consent in mind.

## 4 Changes since publication

The guidance was considered for reassessment in November 2010 and it was concluded that NICE will not be updating this guidance at this stage. However, if you believe there is new evidence which should warrant a review of our guidance, please [contact us](#).

20 January 2012: minor maintenance.

## 5 About this guidance

NICE interventional procedure guidance makes recommendations on the safety and efficacy of the procedure. It does not cover whether or not the NHS should fund a procedure. Funding decisions are taken by local NHS bodies after considering the clinical effectiveness of the procedure and whether it represents value for money for the NHS. It is for healthcare professionals and people using the NHS in England, Wales, Scotland and Northern Ireland, and is endorsed by Healthcare Improvement Scotland for implementation by NHSScotland.

This guidance was developed using the NICE [interventional procedure guidance](#) process.

We have produced a [summary of this guidance for patients and carers](#). Information about the evidence it is based on is also [available](#).

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Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

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## *Endorsing organisation*

This guidance has been endorsed by [Healthcare Improvement Scotland](#).