# Urethral Stricture

## Overview

A urethral (u-REE-thrul) stricture involves scarring that narrows the tube that carries urine out of your body (urethra). A stricture restricts the flow of urine from the bladder and can cause a variety of medical problems in the urinary tract, including inflammation or infection.

## Symptoms

Signs and symptoms of urethral stricture include:

- Decreased urine stream
- Incomplete bladder emptying
- Spraying of the urine stream
- Difficulty, straining or pain when urinating
- Increased urge to urinate or more-frequent urination
- Urinary tract infection

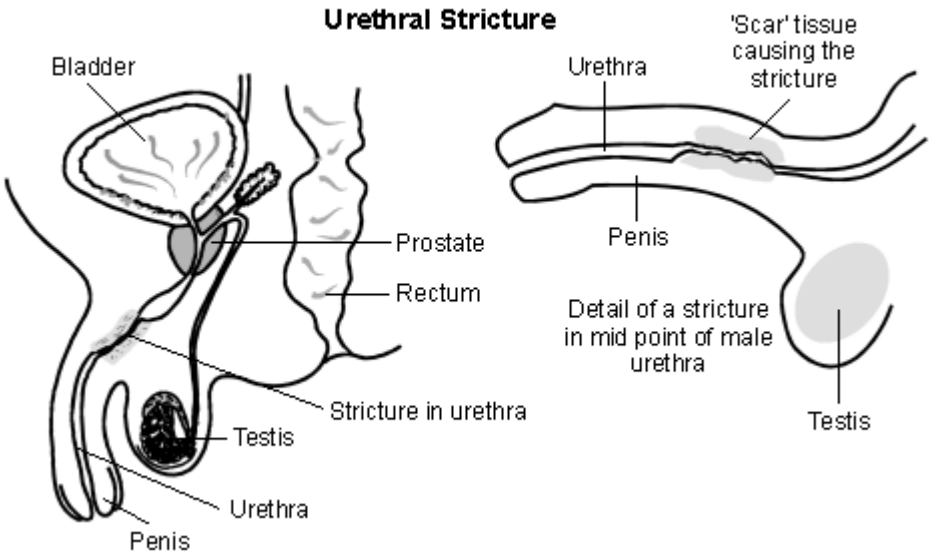
## Causes

Scar tissue, which can narrow the urethra, can be due to:

- A medical procedure that involves inserting an instrument, such as an endoscope, into the urethra
- Intermittent or long-term use of a tube inserted through the urethra to drain the bladder (catheter)
- Trauma or injury to the urethra or pelvis
- An enlarged prostate or previous surgery to remove or reduce an enlarged prostate gland
- Cancer of the urethra or prostate
- Sexually transmitted infections

- Radiation therapy

Urethral stricture is much more common in males than in females. Often the cause is unknown.




## Causes

- **Injury or damage** to the urethra can heal with scar tissue that may cause a stricture. There are various types of injury that can damage the urethra. For example: an injury may occur during medical procedures to look into your bladder via your urethra; radiotherapy treatment may damage your urethra; a fall astride on to the frame of a bike can cause damage.
- **Infection** of your urethra is another cause - for example:
    - Sexually transmitted infections such as gonorrhoea or chlamydia.
    - Infection as a complication of long-term use of a tube (catheter) to drain your bladder.
    - Infection may cause inflammation in the tissues in and around your urethra.

These infections usually clear with treatment but may leave some scar tissue at the site of the inflammation, which can cause a

stricture. Note that most urethral infections do not cause a stricture. A stricture is just one possible complication from a urethral infection.

- Some babies are born with a urethral stricture.
- Cancer - very rarely, a cancer of the urethra can be the cause of a stricture.

## What are the possible complications?

More pressure is needed from the bladder muscle to pass urine out through a stricture (it acts like a bottleneck). Not all urine in the bladder may be passed when you go to the toilet. Some urine may pool in the bladder. This residual pool of urine is more likely to become infected. This makes you more prone to bladder, prostate and kidney infections. A ball of infection (an abscess) above the stricture may also develop. This can cause further damage to the urethra and tissues below the bladder. Cancer of the urethra is an extremely rare complication of a long-standing stricture.

## Are any tests needed?

- Tests to determine the flow rate of urine are usually advised if a urethral stricture is suspected. This involves passing urine and measuring how much is passed per second. The flow rate is much reduced if you have a stricture.
- A look into the urethra by a special thin telescope called a cystoscope will be needed to assess the stricture.
- Special X-rays may be taken whilst you pass urine, which can show the site and severity of a stricture.

## Treatment

Treatment is usually advised to improve the flow rate of urine, to ease symptoms and to prevent possible complications. A specialist surgeon

called a urologist advises on treatment. (A urologist treats problems of the urinary tract - such as conditions affecting the prostate, bladder, kidney and penis.) Treatment options include the following. The one advised by your specialist will depend on factors such as the site and length of your stricture and also your age and general well-being.

## Widening (dilatation) of the stricture

This is usually done by passing a thin plastic rod (boogie) into the urethra. This procedure may be done either under a local or a general anaesthetic. Rods of increasing thickness are gently inserted to gradually dilate the narrowed stricture. The aim is to stretch and widen the stricture without causing additional scarring. However, a stricture often tends gradually to narrow again after each dilation. Therefore, a repeat dilation is commonly needed every so often when symptoms recur. (Some people are given a self-lubricating tube (catheter) which they insert themselves regularly to keep a stricture dilated.)

As a rule, the shorter the stricture, the greater the chance of a cure with dilation. It is a relatively easy procedure to do and so may be tried first.

## Urethrotomy

In this procedure, a thin telescope is passed into the urethra to see exactly where the stricture is. This is done during a general anaesthetic. A tiny knife is then passed down the telescope to cut along the stricture. This widens the narrowed stricture. You will get relief of symptoms from this procedure. About half of people are cured for good by this procedure. However, like dilation, the stricture may re-form and the procedure may have to be repeated from time to time in some cases.

Generally, the shorter the stricture, the greater the chance of a cure with this procedure.

## Surgery

A corrective operation which is called a urethroplasty is performed if the above procedures do not work. Various techniques are used. For example, a short stricture can be cut out and the two ends of the healthy urethra stitched together.

If the stricture is longer then one kind of operation is similar to skin grafting the inside lining of the urethra. A graft is usually used from the inside of your cheek to form the new section of your urethra. Techniques continue to improve and your specialist will advise if an operation is likely to be successful and which operation is best for the length and site of your stricture. As a rule, there is a high success rate in curing symptoms with these operations.

## Antibiotics

A long course of antibiotics may be advised to prevent urine infections until a stricture has been widened.