

Stress Urinary Incontinence

Urinary incontinence is involuntary or accidental leakage of urine. It is very common in women. Ten percent of women in their 30s have it and up to 30% by the age of 65. Stress urinary incontinence is the most common cause of urinary incontinence.

Stress urinary Incontinence is the accidental leakage of urine on effort, exertion or a physical stress, such as coughing, sneezing, laughing, lifting heavy objects or physical exercise.

A normal bladder is made of muscle and stretches as it fills up with urine, storing it until you decide to empty it. Urine is kept in the bladder by a combination of muscle at the neck of the bladder (urethral sphincter) and the muscles and tissues of the pelvic floor which keep the urethra closed. The pelvic floor relaxes when your bladder muscle contracts to empty and the urethral sphincter muscle opens. Any increase in the pressure inside your tummy, such as in coughing and sneezing, normally causes the pelvic floor and urethral muscles to contract or tense up keeping the urine inside your bladder.

There are two main causes of stress incontinence. By far the most common is over mobility of the urethra because of reduced pelvic floor support. If the pelvic floor muscle and tissues are weak and you cough (increasing the pressure inside your tummy) the urethra moves excessively and the urethra is not kept tightly closed. Stress incontinence results (this is known as urethral hypermobility). The second, rarer cause is weakness of the urethral sphincter itself (known as intrinsic sphincter deficiency). Urethral hypermobility and intrinsic sphincter deficiency can occur together.

Risk factors for stress incontinence include:

- Age and the menopause - as women age the pelvic floor loses strength. This accelerates after the menopause
- Race – it is less common in Afro-Caribbean women than in Caucasian, Hispanic or Asian women
- Pregnancy and delivery – vaginal delivery can stretch and sometimes tear the muscles and supports of the pelvic floor. The nerves controlling these can also be damaged. Pregnancy alone, in some women, can cause such weakening
- Pelvic surgery, smoking, obesity and constipation are also associated with stress urinary incontinence.

There are some things that you can do yourself to help. You may be doing some of them already.

These include:

- Stopping smoking

- Losing weight, if your body mass index or BMI (weight in kg divided by height in metres) is greater than 30. A healthy BMI is usually between 18-25.
- Correcting constipation, using dietary changes or laxatives
- Pelvic Floor Muscle training: the first line treatment is to strengthen the pelvic floor muscles through a series of exercises. These exercises are most effective when done under the supervision of a trained health professional such as a physiotherapist or specialist nurse. Learning to do these exercises alone or from an information sheet/resource is not shown to be effective.
- Absorbent protective products. Many young women would find their lives much improved if they used properly designed pads (e.g. Poise or Tena), rather than those designed for menstruation. They are highly absorbent and discreet. Many good treatments are available for stress urinary incontinence however and using pads long term is often a last resort especially for younger patients.

There are range of treatments that can help you further which include:

Conservative:

- **Additional physiotherapy using specialist techniques:** These include using 'biofeedback' - special instruments which help show you how well you are contracting your pelvic floor and 'electrical stimulation' which helps your pelvic floor to contract, so you can better learn how to contract it effectively yourself.
- **Intravaginal support devices:** These include large sanitary tampons, e.g. super plus or ones specially designed vaginal devices to help incontinence including Uresta[®], Diveen[®] or Contiform[®]. These are positioned vaginally to provide extra pressure against the urethra and hence prevent urine loss. These are often useful for women who suffer from stress incontinence during physical exercise, but should not be left in position for too long. Some of these devices may be available on prescription.
- **Medication:** Duloxetine tablets help treat stress urinary incontinence by tightening the urethral muscle, improving the muscle tone of the pelvic floor and effectively reducing incontinence. Although Duloxetine is safe in all age groups it is not recommended as a first line treatment and it does have some side effects, it is usually offered as a second line therapy if surgical treatment is inappropriate. It may be useful in older women with both stress incontinence and urinary urgency.

Surgical treatment:

Surgery is indicated when pelvic floor training fails or produces insufficient improvement. There are a variety of different operations to suit the individual case and they provide cure rates up to 90%. Even in severe cases of stress incontinence where the problem can't be cured completely an operation can reduce the severity of the problem.

More detailed leaflets are available about the different operations for stress urinary incontinence which include:

- **Colposuspension-** sutures are placed in the tissues adjacent to the neck of the bladder and tied to a ligament which runs along the front of the pelvis, elevating and supporting the bladder neck and reducing the urethral mobility which is causing the stress urinary incontinence. The operation can be done through a horizontal cut in your tummy just below the bikini line.. The operation requires a stay in hospital of 1-3 days. This is a well-established operation with a large body of good evidence. The cure rate is between 85 and 90% in appropriate women and it is known to remain effective even 20 years after surgery.
- **Autologous rectus fascial sling-** A horizontal cut is made on the tummy just below the bikini line, a small strip of rectus sheath (the strong fibrous tissue which overlies your abdominal muscles) is removed. A small cut is made in the vagina below the water pipe (urethra). The strip of rectus sheath is made into a sling and inserted either side of the water pipe and up into the abdominal wall on each side. This sling pulls up on the water pipe and reduces leakage. This is another well-established operation for stress incontinence with a large body of evidence and has a cure rate of up to 90%.
- **Bladder neck bulking agents-** This is an injection of a permanent non-absorbable gel called Bulkamid[®]- into the neck of the bladder. This makes the bladder neck narrower and reduces stress urinary incontinence. This is done under telescope control with a camera in the water pipe. It can be done under local anaesthetic. This is a newer operation and there are less long term data. The cure rate is lower than the previous two operations at between 50-70%, and the effect might diminish with time. Sometimes repeat injections are needed at a later date. It is a relatively minor day case operation and has a short recovery time. Having this treatment doesn't prevent you from having other treatments should it not be successful.
- **Tension free vaginal tape (TVT)-** The insertion of a non-absorbable mesh tape behind the pubic bone to support the urethra. This is a short day case operation which has a cure rate between 85-90%. There is a large amount of evidence going back over 20 years for the safety and effectiveness of the procedure. It is known that up to 5% of patients may have a complication relating to the mesh. This operation is not currently available due to an investigation into the use of all pelvic mesh treatments by the UK government but is likely to be available again in the future for selected patients. It is still a treatment recommended by the national institute for health and care excellence (NICE) which reviews all the available evidence and makes recommendations for effective treatments.

Before surgery a bladder function test (urodynamics) is necessary. There is further patient information about this test. Your doctor can then discuss the best option for you, as well as giving you a decision aid to help you decide which treatment is best for you.

