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## **URINARY INCONTINENCE - a patient's guide**

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### **What is it?**

Urinary incontinence is the involuntary loss of urine from the bladder that occurs at inconvenient times. It causes distress, and can cause social and hygienic problems.

It affects women more frequently than men, and is more common with age. It is very common. It is estimated to affect approximately 15% of individuals older than 65 years. It is under-reported to doctors, because of the associated social stigma. Many people feel that they simply have to put up with it and that nothing can be done about it. In reality, frequently it can be improved or cured.

Urinary incontinence can be transient or established. Both types require assessment, but this should be done promptly in the former situation, as transient incontinence is frequently a sign of an acute health event.

### **Causes of transient incontinence:**

Drugs - e.g. diuretics, antidepressants, some blood pressure drugs.

Urinary infection

Acute confusion or delirium

Atrophic vaginitis (changes in the vagina due to lack of hormones)

Restricted mobility

Excessive urine production

Severe constipation

### **Causes of established incontinence:**

#### 1. Overactive bladder:

This is known as detrusor overactivity. The detrusor is the bladder muscle. In these cases it is oversensitive, and with low bladder volumes, start to contract (usually it only contracts at higher volumes, and only when appropriate). These contractions result in a strong desire to pass urine immediately (urgency), and frequently the person is unable to get to the toilet in time. It can be caused by damage to the nerves to the bladder, such as with a stroke, with bladder irritations (e.g. bladder stones), or can arise because of changes in the muscle itself.

#### 2. Stress incontinence:

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This occurs when urine is lost with straining, laughing or coughing. It is due to weakness of the pelvic floor muscles. It most commonly arises in older women who have had vaginal deliveries. Post-menopausal genital changes also contribute to the symptoms.

### 3. Outlet obstruction:

This occurs when the outflow tract of the bladder is blocked or narrowed. This results in the bladder not emptying itself properly. The bladder overfills, and small amounts of urine can be lost ("overflow incontinence"). This is the one type of incontinence that is more common in men. The major cause is enlargement of the prostate gland.

### 4. Detrusor underactivity:

This is a rare type of urinary incontinence similar to outlet obstruction, but is due to under contraction of the bladder detrusor muscle. Damage to nerves that feed the bladder can cause this type of incontinence.

### 5. Mixed incontinence:

In many cases, the person suffers from more than one type of urinary incontinence, termed mixed incontinence.

## **What can be done about it?**

It is important to realise that in many cases, urinary incontinence can be helped. However a proper assessment is needed. This can be initiated by your family doctor, who may refer you to a continence clinic.

The following steps are important in the assessment:

A careful history of the incontinence, and a record of urinary voiding volume and frequency.

A physical examination, including a neurological examination, and, in some cases, a rectal and vaginal examination.

A urinary laboratory test to exclude infection, as well as blood tests to check on kidney function.

A measure of the bladder post-void urinary volume - this is the amount of urine left in the bladder after voiding, and is normally less than 100 mls. It can be measured by an "in-out" catheter in the bladder, but is better tested these days using an ultrasound.

In certain cases, sophisticated urodynamic testing can be undertaken, particularly in cases of complicated mixed incontinence. These machines measure a number of parameters, including urinary volumes, pressure and flow rates.

## **Specific treatment depends on the type of urinary incontinence:**

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### 1. Overactive bladder

Treatment includes bladder retraining (the progressive increase in time between voiding, thereby allowing the bladder to learn to cope with greater volumes), and the use of drugs to relax the bladder, such as oxybutynin. Biofeedback techniques, using monitors in the rectum and bladder have also been useful, although these techniques are not freely available.

### 2. Stress incontinence

Pelvic floor exercises, to increase the muscle strength of the muscles around the bladder outlet, can improve stress incontinence considerably. About half of patients improve with this treatment alone.

Drugs that can help include alpha agonists, which enhance sphincter contraction, and oestrogen, which through hormonal actions has a similar effect.

Gynaecological surgical procedures are available to attempt to reconstruct the original anatomy. Newer surgical procedures, which are less invasive and allow rapid recovery time, such as tension tape placement, are now available.

The use of collagen injections to strengthen the sphincter has a place in certain cases, but requires special expertise.

### 3. Outlet obstruction:

In most cases this occurs in men and is related to an enlarged prostate. Therefore the treatment usually involves operating on the prostate gland to remove the obstruction, usually through the urethra.

In some cases where surgery is not possible, catheterisation, either permanent or intermittent, is required.

In cases where the bladder neck (where the bladder joins the urethra) is obstructed, alpha adrenoreceptor blocker drugs, such as terazosin, can help. Finasteride, a drug that blocks hormonal effects on the prostate, can slowly reduce the size of the prostate in cases where surgery is not possible.

### 4. Detrusor underactivity

In this type of incontinence bladder retraining and surgery are usually unhelpful. Drugs that stimulate the bladder (cholinergic agents) have been used, but are often unsuccessful. Treatment of this type of incontinence often requires catheterisation. This is best done intermittently (usually three to four times a day) by the patient themselves. In some cases a long-term indwelling catheter can be used, although this carries a risk of infection.

### 5. Mixed incontinence

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Treatment depends on what is the major contributing type of incontinence.

**Other measures:**

In cases where cure is not possible, much can still be done. There are now a variety of continence aids available, including pads and adult nappies. In some cases a catheter may be needed, but this is best avoided unless there is no alternative.