OVERACTIVE BLADDER SYNDROME (OAB)

BLADDER ANATOMY AND FUNCTION

The bladder is a hollow balloon-shaped muscle that acts as a storage organ, holding urine from your kidneys until a convenient time for you to empty your bladder. Two ring-shaped muscles around the bladder outlet (the internal and external urethral sphincters) automatically tighten to prevent urine leaking out, even under stressful conditions. As your bladder gets fuller, you become increasingly more aware of the desire to empty your bladder, but contracting your pelvic floor muscles help you to hold on until you eventually go to the toilet.

You normally become aware of the need to go when your bladder is about a third full, around 200mls. However, a healthy well-behaved bladder should be able to hold 300–600mls of urine before it really needs to empty. Providing you have an adequate fluid intake, it is normal to pass urine between 4–8 times per day, roughly every 3-4 hours, and wake up once at night to empty your bladder. Women over 60 years of age may wake up more than once at night. This is due to hormonal changes around the menopause that increases their urine production at night.

DEFINITION OF OVERACTIVE BLADDER SYNDROME

The term ‘overactive bladder syndrome’ is a collective term that refers to irritable bladder symptoms that may or may not cause incontinence. Overactive bladder symptoms are caused by uncontrolled contractions of your bladder muscle at inconvenient times which may be aggravated by lifestyle elements. It is therefore not caused by a bladder weakness, as is wrongly believed by many women, but instead it is caused by unwanted bladder contractions.

SYMPTOMS OF OVERACTIVE BLADDER SYNDROME

Symptoms of the overactive bladder syndrome include any one or more of the following:

- **Urgency** - a strong desire to empty your bladder with little warning that you need to go, often making your rush to the toilet
- **Urge incontinence** – when you are unable to control the urge to empty your bladder and urine leaks out before you get to the toilet or get your clothes on in time
- **Frequency** – when you need to pass urine very often
- **Nocturia** – when your bladder wakes you at night and you need to go to the toilet
- **Nocturnal enuresis** – when you wet your bed while you are asleep
WHAT CAN CAUSE MY BLADDER TO BECOME OR BEHAVE OVERACTIVE?

Very often there is no known reason why a bladder is overactive, but equally there are many possible causes that may explain, cause or exacerbate your symptoms. The most common are listed below:

1. **Medical conditions**, e.g. diabetes, multiple sclerosis, stroke, back injury or surgery.
2. **Something pressing on the bladder**, e.g. fibroids, a prolapsed uterus (womb) or filled rectum because of constipation.
3. **Not emptying the bladder properly**, i.e. because of a prolapse or diverticulum.
4. **A bladder infection**. A course of antibiotics may be necessary to clear the infection.
5. **Drinking excessive volumes of fluid** leads to over-hydrating and will increase symptoms of frequency and urgency.
6. **Restricting your fluid intake** to try avoid accidents will lead to strong, concentrated urine which irritates your bladder and you find yourself rushing to the toilet for relatively small volumes of urine.
7. **Fluid irritants**, e.g. fizzy drinks, caffeine and alcohol.
8. **Smoking and obesity** have been identified in several studies as risk factors for bladder problems.
9. **Hormonal changes**. The bladder, urethra, vagina and pelvic floor muscles are oestrogen sensitive, and when circulating oestrogen levels are low (i.e. before and during the menstrual period, whilst breastfeeding and around the peri- and post-menopausal period), these organs are affected, causing increased urinary symptoms and vaginal dryness.
10. **Emotions, such as fear, anxiety, depression or excitement**. These emotions heighten your bladder’s sensitivity to empty. You often find yourself wanting to use the toilet before exams or doctor’s appointments.
11. **Psychological triggers**. The sound of running water, seeing the toilet or being asked to accompany someone to the bathroom, can all make you want the use the toilet yourself. Many women experience “latchkey urgency”, feeling suddenly desperate as they reach their front door and often unable to get their keys out quickly enough to let themselves in.
12. **Medications for other illnesses**, such as blood pressure tablets and diuretics. It is recommended that you take a list of your medication to your doctor when you go to see him/her regarding your bladder problem.

TREATMENT OPTIONS FOR THE OVERACTIVE BLADDER

Treatment options for the overactive bladder include lifestyle modifications, medication and alternative therapies, all of which aim to eliminate triggers for your symptoms and calm the bladder muscle of unwanted contractions. There is no surgical solution or cure for an overactive bladder. Pelvic floor muscle exercises may help to improve your control over the overactive bladder, but does not stop your bladder being overactive.
1. Maintain a healthy fluid intake

- Make sure you drink enough fluids, but you do not need to drink more than your body needs. The recommended volume is 1.5 litres of fluids per day, which includes all your drinks for the day.
- Avoid possible irritants, e.g. fizzy drinks, alcohol, blackcurrant drinks, acidic fruit juices and fruits (orange juice, apple juice), caffeinated teas or coffee. Suitable alternatives include: milk, water, fizzy water is good, herbal teas, decaffeinated coffees and teas, squash and water. White wine is thought to be more acidic than red wine and therefore irritates the bladder more.
- If you wake up during the night to pass urine, try not to drink anything 2 hours before bedtime and avoid possible irritants in the afternoon or evening. You do not need to restrict fluids earlier than 2 hours, otherwise you may wake up thirsty or your urine may become concentrated and irritate your bladder.

2. Follow healthy bladder habits

- Do not empty your bladder “just in case”. Only go to the toilet when you feel you need to go.
- Try to hold good volumes before you empty your bladder.
- If you find you are going to the toilet very often and passing small volumes of urine, try to extend the time in between voids. Aim to gradually increase the time you can hold to 2 hours, but do not restrict your fluid intake to achieve this.
- Do not try to keep your bladder empty to avoid accidents as this may shrink the bladder muscle. A smaller bladder holds less urine and needs to empty more often.

3. Urge suppression techniques

   Holding on is easier said than done, especially if you suffer with an overactive bladder. The following strategies may help to calm your bladder and enable you to defer the urge to go.

   - **Attention tasks.** Try to think about something other than your bladder or the toilet when you need to go. This helps to distract the brain centres that responds to the signals from your bladder. For example: randomly choose a letter of the alphabet and try to think of 5 animals that start with that letter before you allow yourself to go.

   - **Breathing exercises.** Breathing out relieves intra-abdominal pressure, which relieves the pressure on your bladder. Breathe gently in through your nose, and out through your mouth, imagining how the urgency leaves your bladder whilst breathing out.

   - **Perineal pressure.** The nerve endings in the area between your legs are very sensitive to touch. Deep pressure in this area often calms down feelings of urgency and allows the bladder to hold on longer. Try to sit on your heel, sit on the arm rest of a chair or sit even on your purse when you feel like you need to go. Keep a rolled up towel in your car to sit on for when you make long journeys. Arching your pelvis forward while in any of these positions will increase the pressure around the clitoris area and may be more effective when the urgency is very strong.

   - **Curl your toes or stand on tiptoe.** It is still unclear why this works, but it works. Little girls often automatically stand on tiptoe when they feel the need to use the toilet to ‘buy themselves time’. Curling your toes in your shoes while sitting or standing can also be effective to calm urgency and this discreet technique has been very valuable for women in need.
• **Squeeze and hold your pelvic floor muscles.** The pelvic floor muscles calm the bladder via nerve pathways and reflexes, and also increase the closing pressure around the bladder outlet to prevent urine from leaking out.

4. **Keep your pelvic floor muscles fit and strong**

Pelvic floor exercises do not stop the bladder being overactive, but stronger muscles mean better control of the overactive bladder. Regular pelvic floor exercises are therefore recommended to maintain good pelvic floor muscle function.

5. **Lose weight**

Being overweight puts additional strain on the pelvic floor, and over time this may cause the pelvic floor to stretch and weaken. There is evidence that obesity may contribute to the development of incontinence (urine leakage) and several studies have shown that losing weight may help to improve bladder problems.

6. **Stop smoking**

Smoking causes repetitive strong coughing which may weaken the pelvic floor and the muscles around the bladder outlet. Nicotine is also believed to make the bladder contract at inappropriate times which may exacerbate your bladder symptoms. If you want to give up smoking but need some support, you can contact your local “Stop Smoking Clinic” (available on the NHS) for help.

7. **Local oestrogen supplements**

The bladder is sensitive to oestrogen and low circulating oestrogen levels (such as with long-term breastfeeding and post menopause) may cause it to be more ‘irritable’. A vaginal oestrogen cream (Ovestin) or vaginal pessaries (Vagifem) may be prescribed to improve or maintain the quality of the tissues in the pelvic area, including the bladder, and have been shown to have a positive effect on bladder symptoms. Local oestrogen cream (Ovestin) may also be prescribed for breastfeeding mothers to use until their periods have returned to normal.

8. **Medications**

There is a range of medications (called anticholinergics) available to treat your overactive bladder symptoms, but these need to be prescribed by your doctor. These medications can be prescribed in the form of tablets or patches, and it is often a case of “trial and error” to find the most effective medication and preparation (tablets or patches) for you. Most of the preparations have a slow release action, kind of working on a top-up effect, which means you need to allow long enough time for the medications to work. It may take anything between 1 – 3 months to notice improvement of your symptoms.

The medication can help by giving you more “warning time” when you need to go. It will allow you to hold on longer and therefore you will spend less time in the toilet. It will also prevent your bladder from waking you at night. By improving your bladder control, the medication will reduce the number of leakage episodes you have.

Unfortunately, these medications can give you a dry mouth and dry eyes and some may find that they become constipated. You should be reviewed by your doctor to assess the effect of the medication, discuss and treat possible side-effects and to renew your prescription before you run out of tablets.
You need to continue taking the medication to maintain the benefit, and many patients find their symptoms reoccur as soon as they stop taking their medication. Some patients are unable to tolerate the side-effects and therefore stop taking the medication. Others find the medications help them whilst they retrain their bladder habits, alter their fluid intake and strengthen their pelvic floor muscles. Once these measures have taken effect, some women then wean themselves off the medication but maintain the benefits gained with bladder retraining and the exercises.

Make sure to tell your doctor if you are taking medication for other reasons as many tablets affect your bladder function, i.e. blood pressure medications. Sometimes recommending a different type of tablet to treat other problems may also improve your bladder function, or changing the time of day you take your blood pressure tablets or diuretics may decrease the number of times you need to get up at night.

*Intravesical preparations.* A small number of patients learn how to insert the medication to treat their bladder symptoms straight into the bladder using a catheter (a hollow tube). This technique is only considered when other options have failed to improve their symptoms and the patients are able, and prepared, to learn clean intermittent self-catheterisation.

9. **What about Botulinum toxin (Botox)?**

Botox is not currently licensed to be used for bladder related problems in normal women. It is still experimental, but there is some early evidence to suggest that it may be effective for treating certain bladder problems. There is a high risk of not being able to empty your bladder after Botox injections and patients need to learn, and should be prepared to do, self-catheterisation beforehand to facilitate bladder emptying after the procedure. The effect of Botox however wears off over time and the procedure needs to be repeated, under general anaesthetic, every 9 months to a year.

10. **Acupuncture and hypnotherapy**

There is evidence to show that acupuncture and hypnotherapy can improve overactive bladder symptoms. For both these therapies to be effective, it is however important that the therapist is trained in the skill of treating continence related problems and knows how to monitor improvement of symptoms appropriately.

11. **Sacral nerve stimulation (SNS) and Percutaneous tibial nerve stimulation (PTNS)**

Different forms of electrical stimulation have been used to treat the overactive bladder, but these modalities are not available at all hospitals and should only be considered when more traditional treatments have failed to resolve or improve your symptoms.