



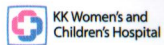
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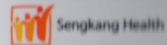
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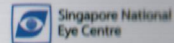
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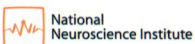
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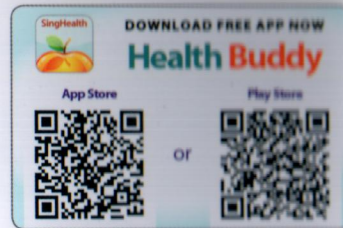
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Urinary Incontinence

Urinary incontinence is the involuntary leakage of urine. It is a common condition that can affect the physical, psychological and social well-being of those affected, as well as their families and caregivers.

Types of incontinence and their causes

Stress incontinence

There is involuntary leakage of urine on effort or exertion e.g. sneezing or coughing. It is usually caused by an incompetent sphincter and weak pelvic outlet from previous trauma, previous pregnancies, or increased abdominal pressure such as constipation, obesity and chronic cough.

Urge incontinence

There is involuntary leakage of urine accompanied by, or immediately preceded by, the urgent need to empty your bladder. This is due to the involuntary and inappropriate contractions of the muscles in the wall of the bladder. The cause is usually unknown but may also be caused by local irritation from urinary tract

infection, bladder stones or bladder tumour. Other uncommon causes include stroke, Parkinson's disease, multiple sclerosis, dementia or spinal cord injury.

Overactive bladder syndrome (OAB)

There is urgency that occurs with or without urge incontinence. It often involves daytime frequency and the need to wake up at night to urinate. It is a diagnosis of exclusion – when no identifiable cause is found.

Mixed incontinence

There is involuntary leakage of urine associated with both urgency and exertion – mixed features of stress and urge incontinence.

Overflow incontinence

This is usually due to chronic bladder outflow obstruction – when the bladder is very full but unable to empty. It may be more common in diabetic or stroke patients. It also occurs commonly after deliveries or pelvic surgeries. It can affect kidney function if left untreated. Therefore, early assessment and intervention are required.

True incontinence

There is continuous leakage of urine. This may be due to a fistulous track between the vagina and the ureter, or bladder, or urethra, which may be caused by infection, tumours or previous surgery.

Risk factors

- Pregnancy
- Previous vaginal deliveries, including forceps deliveries
- Obesity
- Menopause may play a role
- High caffeine intake may worsen the problem

Preventive tips

- Pelvic floor exercises should be taught and practised by women during pregnancy.
- Weight control in obese women may reduce the risk of developing incontinence.
- Stop smoking to prevent chronic smoker's cough.
- Reducing intake of coffee, tea and other caffeinated drinks may reduce the symptoms of urge incontinence.

Diagnosis

The diagnosis is usually made after your doctor has taken a complete history and performed a thorough physical examination. Basic and further investigations will be planned depending on the initial assessment.

History taking involves asking you questions about your symptoms, details about your previous pregnancies, medical and surgical history and medications. Your doctor may also enquire about sexual history and how your condition may have affected your daily activities and quality of life. You may also be asked to complete a bladder diary for up to three days, including both working days and days off.



Limit intake of coffee to reduce symptoms of urge incontinence.

Abdominal and pelvic examination will be performed to assess for any possible tumours, co-existing pelvic organ prolapse, strength of pelvic floor muscle contraction or signs of vaginal atrophy. An erect stress test – where the patient will be asked to stand on an incontinence sheet and cough about 10 times, to assess for any urinary leakage, is usually performed. If necessary, a neurological examination may also be performed.

Further tests will be ordered after the doctor's initial assessment.

Most commonly, a urine dipstick test to look for blood, glucose, protein, white blood cells and nitrites will be done. Urine cultures to exclude urinary tract infection may also be part of the initial assessment.

Post-void residual urine volume should be measured in women who have symptoms suggesting voiding dysfunction or recurrent urinary tract infections. This may be performed using a bladder scan or catheterisation.

For some people, urodynamics studies, a complex assessment of changes in bladder activity during filling and emptying, may be required to confirm the diagnosis and decide on treatment options, especially if surgery for urinary incontinence is considered.

Treatment

In general, lifestyle modifications such as weight control in obese patients and reduction of caffeine intake may help to reduce symptoms of stress, urge or mixed urinary incontinence.

1. Stress urinary incontinence

Non-surgical options

- Pelvic floor exercises
 - Commonly known as Kegel exercises, these help to strengthen the pelvic floor muscles and if done correctly and consistently, it can improve the quality of life of 60 percent of women with stress incontinence.
 - A trial of supervised pelvic floor exercises for a minimum of three months remains the first-line treatment for women with stress or mixed urinary incontinence (NICE guideline).



Pelvic floor exercises can help with stress incontinence.

Surgical options

Surgery is the mainstay of treatment for stress incontinence when conservative management has failed. Your childbearing wishes also have to be considered before surgery. The following surgical procedures have high success rates of up to 80 to 90 percent but also have risks including but not limited to bladder, vaginal wall and bowel injuries, urinary retention and infection. They should only be undertaken by a trained and accredited surgeon.

- Synthetic mid-urethral tape
 - Slings of man-made mesh are used to support the urethra. The most common type in use is tension-free vaginal tape (TVT). Other versions of slings used include TVT-O, TVT-exact and TVT-abbrevo.
- Open colposuspension
 - Most commonly known as Burch colposuspension, where surgical sutures are used to support the bladder neck.
- Autologous rectus fascial sling
 - Newly added recommendation by NICE guideline 171, 2013.

Other options such as vaginal devices, collagen injections and artificial urinary sphincter are not recommended as first-or second-line treatment strategies.

2. Urge incontinence and overactive bladder

Lifestyle modifications

- Reduction of coffee and tea intake may help to reduce symptoms.

Medications

- First-line treatment drugs are anticholinergics. They act to block the nerve signals which cause frequent urination and urgency, and bladder spasms. Your doctor will initially start with the lowest recommended dose and review you after a month. The main side effect is mouth and throat dryness. They are contraindicated in women with glaucoma.
- Second-line medications may be recommended if you are unable to tolerate the side effects of anticholinergics.
- Intravaginal oestrogens may be prescribed for postmenopausal women with vaginal atrophy.

Other options

These treatment modalities may only be considered for those who have failed the above medical treatments.

- Injections of botulinum toxin A into bladder wall

- Neuromodulation – percutaneous sacral nerve stimulation
- Augmentation cystoplasty
- Urinary diversion

3. Mixed incontinence

Treatment should be directed towards the predominant symptom, but may involve a combination of approaches.

- Pelvic floor exercises and bladder training, as above, are first-line treatments.
- Anticholinergics such as oxybutynin can be started if the above are not effective.
- Regular review and follow up should be undertaken.

4. Overflow incontinence

- Relieve or treat the cause of bladder outlet obstruction
- Intermittent self-catheterisation or long-term indwelling catheterisation (either urethral or suprapubic) may be required

Ladies, do not suffer in silence. Please seek medical help early to improve your quality of life.

Urinary Tract Infections

Urinary tract infections occur when bacteria is present within the urinary tract in significant numbers. UTIs are common in women, with 1 in 5 adult women aged 20-65 experiencing a UTI at least once a year. Approximately 50% of women will experience UTIs at least once in their life.

Cystitis (bladder infection) makes up the majority of these infections. Involvement of the upper urinary

tract (pyelonephritis) is less common compared to that of cystitis but can be associated with more serious complications.

Causes

In most cases of uncomplicated cystitis the *Escherichia coli* is involved. This bacteria is present in 70-95 percent of both upper and lower UTIs. Other common pathogens are *Enterococcus faecalis*, *Klebsiella species*, *Proteus species* and yeast.



About 50 percent of women will experience UTIs at least once.

as well as pelvic floor dysfunction, including urogenital prolapse and post-hysterectomy vaginal vault prolapse. Our multidisciplinary clinic is a special service that looks after women with complex pelvic floor problems and is jointly run by our urogynaecologists, urologists and colorectal surgeons.

Therapeutic options include non-surgical management with the use of support devices such as pessaries for prolapse, pelvic floor training and medical therapy for bladder disorders. Surgical management may be considered in some women with severe symptoms or when conservative treatment is ineffective.

Ultrasound Services

Our team of experienced sonographers provides a comprehensive service and perform more than 25,000 scans per year. Established in 1987, the team has expanded their service of performing 'routine' gynaecological scans to performing specialised scans in the Centre for Assisted Reproduction (CARE), Prenatal Diagnostic Centre (PDC) and the Early Pregnancy Unit (EPU).

The EPU facilitates prompt access for patients with first trimester complications and aims to centralise and streamline assessment, diagnosis, management and counselling of patients with conditions such as miscarriages and ectopic pregnancies.

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