Lower urinary tract symptoms in men, age-related (including symptoms of benign prostatic hyperplasia/hypertrophy) - Management

Scenario: Initial assessment of lower urinary tract symptoms (LUTS)

How should I characterize the type of lower urinary tract symptoms (LUTS)?

- To establish what type or combination of types of lower urinary tract symptoms (LUTS) the man has, ask about:
  - **Storage (irritative) symptoms:** urgency, daytime urinary frequency, nocturia, urinary incontinence, and feeling the need to urinate again just after passing urine.
  - Specifically ask about bedwetting, as this can be a sign of chronic urinary retention.
  - **Voiding (obstructive) symptoms:** hesitancy, weak or intermittent urinary stream sometimes causing splitting or spraying, straining, intermittency, incomplete emptying, and terminal dribbling.
  - **Post-micturition symptoms:** post-micturition dribble, and the sensation of incomplete emptying.
- **If the man has bothersome LUTS, storage symptoms, or nocturia ask him to complete a urinary frequency-volume chart.** This is essential to distinguish between urinary frequency, polyuria, nocturia, and nocturnal polyuria.

Urinary frequency-volume chart

- A urinary frequency–volume chart is used to help distinguish and diagnose:
  - Frequency: high frequency with normal 24-hour volume suggests that the bladder capacity is diminished (the male bladder normally holds 300–600 mL urine comfortably).
  - Polyuria: passing more urine than usual (up to 3 L of urine in 24 hours is normal).
  - Nocturia: waking at night to urinate.
  - Nocturnal polyuria: passing, at night, more than 35% of the 24-hour urine production.
- A urinary frequency–volume chart (pdf) formatted for printing or downloading is available from CKS.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010] and are based on expert opinion [Reynard et al, 2006; NICE, 2010].

- The NICE systematic review found no studies assessing whether the completion of frequency-volume charts affects outcomes.

How should I assess symptom severity, bother, and concerns in a man presenting with lower urinary tract symptoms (LUTS)?

- If it is practical, ask the man to complete the International Prostate Symptom Score (IPSS) questionnaire to assess symptom severity and degree of bother.
  - Severity of symptoms and degree of bother often do not correlate closely, and are therefore assessed separately.
- Establish the man's chief concerns. For example, is he worried that his symptoms:
  - Are bothersome?
  - Could progress to acute urinary retention?
  - Could be due to cancer?

International Prostate Symptom Score (IPSS)

- The International Prostate Symptom Score (IPSS) is a tool for classifying the severity of lower urinary tract symptoms as mild, moderate, or severe; and to assess how bothersome the symptoms are.
- The IPSS questionnaire is intended to be completed by the man. It assesses symptoms (by adding the score of seven separate questions) and degree of bother (one question):
  - **Severity of symptoms questions** — each is scored from 0 (best) to 5 (worst).
  - **Incomplete emptying.** Over the past month, how often have you had a sensation of not emptying your bladder completely after you finish urinating?
  - **Frequency.** Over the past month, how often have you had to urinate again less than 2 hours after you finished urinating?
  - **Intermittency.** Over the past month, how often have you found you stopped and started again several times when you urinated?
  - **Urgency.** Over the last month, how difficult have you found it to postpone urination?
  - **Weak stream.** Over the past month, how often have you had a weak urinary stream?
  - **Straining.** Over the past month, how often have you had to push or strain to begin urination?

- **Nocturia.** Over the past month, many times did you most typically get up to urinate from the time you went to bed until the time you got up in the morning?
- **The IPSS severity score** is the total of the seven individual symptom scores, and is interpreted as:
- Score 0–7: mildly symptomatic.
- Score 8–19: moderately symptomatic.
- Score 20–35: severely symptomatic.
- **Question about quality-of-life due to urinary symptoms** — scored from 0 (best) to 6 (worst).
- If you were to spend the rest of your life with your urinary condition the way it is now, how would you feel about that?

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010] and are based on expert opinion [Reynard et al, 2006; NICE, 2010].

- The IPSS includes the American Urological Association severity of symptoms score, which was developed and validated by the multidisciplinary measurement committee of the American Urological Association [Barry et al, 1992].
- The NICE systematic review found no study that assessed whether scoring symptoms affect clinical outcome.
- The NICE guideline development group highlighted the fact that completing the symptom score would be difficult or impossible for people who are blind, cannot read English, or have learning disabilities.

How should I examine a man presenting with lower urinary tract symptoms (LUTS)?

- Examination should be guided by urological and other symptoms.
- Examine the abdomen for signs of a distended bladder such as abdominal distention and suprapubic dullness on percussion.
- Check the external genitalia.
- Perform a digital rectal examination to assess the prostate for size, consistency, nodules, and tenderness.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010] and are based on expert opinion [Reynard et al, 2006; NICE, 2010].

- The NICE systematic review found no study that assessed the effectiveness (in terms of clinical outcomes) of examining the abdomen and external genitalia, or performing a digital rectal examination.

What investigations should I do for a man presenting with lower urinary tract symptoms (LUTS)?

- **Investigations should be guided by the symptoms, history, and examination.**
- **Dipstick test the urine** to check for blood, glucose, protein, leucocytes, and nitrites.
- **Measure serum creatinine and eGFR (estimated glomerular filtration rate) if clinically indicated,** for example when there is any of the following:
  - Chronic high pressure urinary retention — suggested by bedwetting, or enlarged bladder detected on abdominal palpation or percussion.
  - Recurrent urinary tract infection.
  - History of renal stones.
- **Test for prostate specific antigen (PSA) only after discussing the indications for the test and the interpretation of the results, and providing sufficient time for the man to decide if he wishes to have the test.**
  - PSA testing is indicated only:
  - If symptoms suggest bladder outlet obstruction due to benign prostatic enlargement — the test result can guide drug treatment.
  - If the man is concerned about prostate cancer or if the prostate feels abnormal on digital rectal examination — the test result can guide assessment of the risk of prostate cancer.
  - Delay testing if any of the following causes of a transiently increased serum PSA level are present:
  - Vigorous exercise — delay testing for 2 days.
  - Digital rectal examination — delay testing for 1 week.

- Prostate biopsy — delay testing for 6 weeks.

- **Interpreting PSA results can be difficult.**

- An increased serum PSA level can be present with:

- Prostate enlargement.

- Prostate cancer.

- Infection (prostatitis, urinary tract infection).

- Physical causes, including following vigorous exercise, digital rectal examination, and prostate biopsy.

- A normal prostate.

- A normal serum PSA level can be present with:

- Prostate enlargement.

- Prostate cancer.

- Infection.

- If checking PSA levels in a man using a 5-alpha reductase inhibitor, be aware that:

- A decrease in PSA levels is seen rapidly, within the first few months of treatment.

- After 6 months of treatment with a 5-alpha reductase inhibitor, the PSA value should be doubled to make it comparable to levels in men not treated with a 5-alpha reductase inhibitor.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010] and are based on expert opinion [Reynard et al, 2006; NICE, 2010].

Usefulness of urine dipstick tests for excluding bladder cancer, urinary tract infection, and urinary calculi in men with lower urinary tract symptoms (LUTS)

- The NICE systematic review found only one study that assessed the usefulness of urine dipstick tests for excluding bladder cancer, urinary tract infection, and urinary calculi in men with LUTS suggestive of benign prostatic hyperplasia (BPH). The study had serious methodological limitations that make the data unreliable.

- NICE found no trials for urine dipstick tests to exclude diabetes and renal disease in men with LUTS suggestive of BPH.

Serum creatinine to assess renal function

- NICE recommends offering men with LUTS a serum creatinine test to assess for renal impairment only when there are clinical indications of causes of renal impairment. NICE noted that most laboratories now report eGFR (estimated glomerular filtration rate) alongside blood creatinine levels.
- NICE found no trials that assessed clinical outcomes in men who had renal function measured.

PSA test to predict progression of symptoms and clinical outcomes

- The NICE systematic review found no directly relevant studies on the effect of strategies of PSA testing on eventual clinical outcomes.
- The NICE systematic review found six studies that assessed how accurately the PSA test predicts progression of symptoms. The results were inconsistent, and no reliable conclusion could be drawn.

What causes of lower urinary tract symptoms (LUTS) in men should I check for?

- **Check for the underlying cause of the specific type of LUTS.**
  - Acute urinary retention
  - Stress urinary incontinence
  - Overactive bladder
  - Nocturnal polyuria
  - Voiding (obstructive) symptoms
- **Exclude or manage other serious causes of lower urinary tract symptoms (LUTS), including:**
  - **Urological cancer**
  - Alarm signals for urological cancer include a prostate that is hard and irregular, unexplained haematuria, lower back pain, bone pain, and weight loss.
  - Marked urinary frequency or urgency, and bladder pain may be signs of bladder cancer.

- If urological cancer is suspected, refer the man with appropriate urgency. For more information, see the CKS topic on Urological cancer - suspected, which covers suspected cancer of the prostate, bladder, kidney, and penis.
- **Urological infection**
- Alarm signals for urological infection include pain when urinating, pelvic pain, loin pain, fever, and abnormal urine dipstick test findings.
- If urological infection is suspected, confirm and manage accordingly. For more information, see the CKS topics on Prostatitis - acute, Prostatitis - chronic, Pyelonephritis - acute, Urethritis - male, and Urinary tract infection (lower) - men.
- **Drugs,** including drugs that can cause polyuria and drugs than can cause voiding (obstructive) symptoms.
- If the symptoms could be caused by a drug, consider if the dosage could be decreased, or if the drug could be stopped or replaced by another.
- **Sciatica or other neurological disease**
- Sciatica causes weakness, numbness, or tingling in a leg. It sometimes causes or aggravates LUTS.
- For information on the diagnosis and management of sciatica, see the CKS topic on Sciatica (lumbar radiculopathy).

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010] and are based on expert opinion [Reynard et al, 2006; NICE, 2010].

- The sources for the recommendations on checking for specific underlying causes are cited in the linked text.
- **Assessing for urologic cancer** is discussed in the CKS topic on Urological cancer - suspected, which is based on NICE guidelines.
- **Assessing for urological infection** is discussed in the CKS topics on Prostatitis - acute, Prostatitis - chronic, Pyelonephritis - acute, Urethritis - male, and Urinary tract infection (lower) - men.

- **Assessing for drug causes** is discussed in the sections Nocturnal polyuria and Voiding (obstructive) symptoms.
- **Assessing for sciatica** is discussed in the CKS topic on Sciatica (lumbar radiculopathy).
- **Lower urinary tract symptoms in men, age-related (including symptoms of benign prostatic hyperplasia/hypertrophy) - Management**

Scenario: Urinary retention (acute, acute on chronic, chronic)

How do I manage acute urinary retention in a man?

- **If this is the first episode of acute urinary retention:**
  - Admit the man urgently for catheterization and investigation of the cause.
  - If the expertise and facilities are available, catheterize before admission.
- **For an episode of recurrent acute retention, or acute-on-chronic urinary retention:**
  - Admit the man, or insert a urethral catheter. Discuss and decide on treatment to prevent or manage recurrent urine retention. Options include:
  - **An alpha-blocker** (alfuzosin) — start at least 24 hours before attempting to remove the catheter. After removing the catheter, confirm over several hours that the man can void freely. Continue the alpha-blocker until the man has been fully investigated to determine the cause and to assess renal function. For detailed prescribing information, see Alpha-blockers for voiding symptoms.
  - **Intermittent urethral catheterization** — refer the man or his carer to a continence nurse for training in catheterization.
  - **A long-term indwelling catheter** — only if intermittent catheterization is not appropriate or practical.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

Admission

- The recommendations to admit men with acute urinary retention (unless the expertise and facilities are available in primary care) is based on expert opinion in NICE referral guidelines [NICE, 2001].

Alpha-blockers

- The recommendation on offering an alpha-blocker before removal of the urinary catheter in an episode of acute retention reflects NICE guidelines [NICE, 2010].

  - The NICE systematic review found four randomized controlled trials (RCTs) that provide consistent, but imprecise because the studies were small, evidence that alpha-blockers improve the chance of being able to void after removing the urinary catheter. Two of the RCTs found no significant difference in the need for recatheterization, but the studies lacked statistical power and had serious methodological limitations. One economic study conducted in the UK suggests that the use of an alpha-blocker may be cost-saving, but the study did not include a full cost-effectiveness analysis.

Intermittent or continuous urethral catheterization

- These recommendations are based on expert opinion, because NICE found no directly relevant controlled trials [NICE, 2010].

How do I manage chronic urinary retention in a man?

- Exclude non-obstructive causes of reduced urine flow (such as chronic heart failure).
- **Check serum creatinine** to assess renal function.
- **Refer the man for specialist assessment.**
  - Consider seeking specialist advice about arranging imaging of the upper urinary tract and kidneys while the man is waiting to be seen.
- Management options in secondary care depend on renal function and the man's wishes, and include:
  - No catheterization, but follow up with active surveillance of renal function, volume of urinary retention, and changes in imaging of upper renal tract.
  - Intermittent urethral catheterization, performed by the man or his carer.
  - A permanent indwelling catheter.
  - Surgery to divert the urine externally (urostomy).

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

Referral for specialist assessment

- The recommendations about referral for specialist assessment are based on expert opinion as NICE found no directly relevant clinical trials [NICE, 2010].

Assessing renal function with serum creatinine

- The indications for measuring serum creatinine (palpable bladder, nocturnal enuresis, recurrent urinary tract infection, history of renal stones) are based on expert opinion, because NICE found no studies that assessed how measuring renal function affects clinical outcomes in men with lower urinary tract symptoms (LUTS) [NICE, 2010].
- The NICE guideline development group considered serum creatinine to be the most reliable routine test for renal function. They highlighted that many laboratories report eGFR (estimated glomerular filtration rate) whenever serum creatinine is measured, and that (when required) renal function can be more accurately assessed by measuring creatinine clearance.
- The NICE guideline development group considered serum urea to be less reliable than serum creatinine for assessing renal function.

Assessing renal function and structure with radiological imaging

- The NICE systematic review found no studies that assessed how radiological imaging affects clinical outcomes in men with LUTS. The recommendations are therefore based on expert opinion [NICE, 2010].

Prescriptions

For information on contraindications, cautions, drug interactions, and adverse effects, see the electronic Medicines Compendium (eMC) (http://emc.medicines.org.uk), or the British National Formulary (BNF) (www.bnf.org).

Alfuzosin

Age from 40 years onwards

Alfuzosin m/r tablets: 10mg once a day

Alfuzosin 10mg modified-release tablets
Take one tablet once a day.
Supply 30 tablets.

Age: from 40 years onwards
NHS cost: £12.51
Licensed use: yes

Patient information: Some people experience side effects such as blurred vision, dizziness, drowsiness, sweating or feeling light headed. If any of these apply, sit or lie down until the symptoms have disappeared. Tell your doctor if these symptoms continue after taking the medicine for a few days.

Lower urinary tract symptoms in men, age-related (including symptoms of benign prostatic hyperplasia/hypertrophy) - Management

Scenario: Stress urinary incontinence

How do I assess the severity and impact of stress urinary incontinence?

- Assess the severity of stress incontinence and its impact on quality-of-life by asking the man:
  - How often do you need to pass urine?
  - How often do you leak urine?
  - What protection do you need to cope with the leakage?
  - When do accidents happen?
  - What drugs and herbal remedies are you taking?
  - Do you manage your diet and fluid intake to try to control the leakage?
  - Do you have pain or discomfort when passing urine?

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010] and are based on expert opinion [Whitfield, 2006; Ethicon Women's Health & Urology, 2008].

How do I manage stress urinary incontinence?

- **If necessary, offer a choice of temporary urine containment products** (such as sheath and leg bag, absorbent pads, and absorbent pants) to achieve social continence, and refer the man to the local continence service.
  - To find the local continence service, telephone the Bowel and Bladder Foundation on 01536 533 255.
- Advise the man on fluid intake and lifestyle and offer information on self-help resources.
- **When stress urinary incontinence *is not* caused by prostatectomy,** refer the man for specialist assessment to confirm the cause.

- **When stress urinary incontinence *is* caused by prostatectomy,** offer referral for supervised pelvic floor muscle training.

  - Advise that the exercises should be performed for at least 3 months before considering referral to secondary care for assessment for other invasive treatment options.

  - Supervised pelvic floor training may be available from the local continence nurse, continence physiotherapist, or urology clinic.

Secondary care options for treating stress incontinence

- Options available in secondary care for treating stress incontinence include:

  - External collecting devices such as sheath appliances and pubic pressure urinals.

  - Indwelling catheterization.

  - Surgical placement of a urethral artificial sphincter.

  - Urinary diversion as a last resort, when all other treatments have failed.

- Treatments that may be available as part of a clinical trial include intramural injectables, implanted adjustable compression devices, and suburethral synthetic sling.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

Providing information on stress urinary incontinence and self-help resources

- The recommendation to provide information is based on expert opinion [NICE, 2010].

Referral for stress urinary incontinence not caused by prostatectomy

- The recommendation to provide information is based on expert opinion [NICE, 2010].

Use of urine containment products

- The recommendations about offering urinary containment products are based on expert opinion [NICE, 2010].

Pelvic floor muscle training

- NICE found 11 relevant randomized controlled trials of pelvic floor muscle training [NICE, 2010]. The data may be unreliable because the studies had limitations in design and precision (size of study), and the results lacked consistency and directness of applicability. Nevertheless, NICE found evidence that pelvic floor muscle training for stress incontinence after prostatectomy:

o Did not reduce incontinence rates in the first 3 months after prostatectomy.

o Reduced incontinence rates between 4–12 months after prostatectomy.

Treatments not recommended

- Penile clamps are not recommended for men with urinary incontinence. This is based on the expert opinion of the NICE guideline development group [NICE, 2010].
- Electrical stimulation is not recommended because NICE found no reliable evidence that it is effective [NICE, 2010].

Secondary care treatments

- The information on treatments recommended as options in secondary care is from the NICE guidelines on lower urinary tract symptoms, where the evidence is reviewed [NICE, 2010].

What advice should I provide about self-help resources?

- Advise the man that:

o NHS Choices provides online information for people with urinary incontinence.

o The Bladder and Bowel Foundation has a helpline (telephone 01536 533 255), and provides a range of resources on their website www.bladderandbowelfoundation.org. Information on pelvic floor muscle training is included in their booklet on stress urinary incontinence, which can be ordered from their online shop or downloaded for printing (pdf).

o No drug is effective for stress incontinence in men. Some information leaflets cite the use of duloxetine for stress incontinence; however, this is for women only.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

- NICE's recommendation to provide information and advice was made on the basis of expert opinion, as no relevant clinical trials were found [NICE, 2010].

What self-care advice should I provide about fluid intake and lifestyle for men with lower urinary tract symptoms?

- **Fluid intake** should be within the man's usual range, and should not be limited excessively in an attempt to control symptoms — doing this could increase the risk of complications such as urinary tract infection.
- **Lifestyle** advice may include:
  - Avoiding constipation, or treating it (if it is present).
  - Maintaining a healthy lifestyle (with respect to body weight, exercise, diet, smoking, and alcohol consumption).
  - Limiting intake of tea, coffee, chocolate, artificial sweeteners, and fizzy drinks.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

- NICE based these recommendations on expert opinion as they found no relevant clinical trials [NICE, 2010].

Lower urinary tract symptoms in men, age-related (including symptoms of benign prostatic hyperplasia/hypertrophy) - Management

Scenario: Overactive bladder

How do I manage a man with overactive bladder as the predominant symptom?

- **Exclude or manage treatable causes of overactive bladder** (for example cancer of the prostate or bladder, neurological conditions, infection, and bladder stones).

- Investigations to exclude treatable causes of an overactive bladder include urinalysis, renal function tests, and (depending on the clinical features) PSA (prostate specific antigen) level.
- It is often not possible to identify a specific underlying cause.

- **If necessary, offer a choice of temporary urine containment products** (such as sheath and leg bag, absorbent pads, and absorbent pants) to achieve social continence, and refer the man to the local continence service.
- To find the local continence service, telephone the Bowel and Bladder Foundation on 01536 533 255.

- **Offer referral for supervised bladder training** — this may be available from the local continence nurse, continence physiotherapist, or urology clinic.
- Advise the man on fluid intake and lifestyle, and offer information on self-help resources.
- **If bothersome symptoms persist, offer an antimuscarinic (anticholinergic).**
- For example oxybutynin — initially 5 mg two to three times daily, increased if necessary to a maximum of 5 mg four times daily. Elderly men require lower doses.
- For full prescribing information and choice of antimuscarinic drug, see Antimuscarinics for overactive bladder.
- Review every 4–6 weeks until symptoms are stable, and then every 6–12 months. Assess symptoms, quality-of-life, adverse effects, and the need to continue treatment.

- **If treatment fails, refer the man for specialist urological assessment and management.**
- Treatment options in secondary care include injection of botulinum into the bladder wall, implanted sacral nerve stimulation, and cystoplasty.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

Supervised bladder training, advice on fluid intake, lifestyle advice, containment products

- The recommendations on supervised bladder training, advice on fluid intake, lifestyle advice, and containment products are based on expert opinion, as NICE found no relevant clinical or economic studies [NICE, 2010].

Antimuscarinics (anticholinergics)

- The recommendation to consider using an antimuscarinic for overactive bladder symptoms is based on expert opinion. The best trial-based evidence is from one small randomized controlled trial, which reported the data graphically and without statistical analysis [NICE, 2010].
  - Anticholinergics reduced the number of urinary incontinence episodes compared with placebo (but not compared with alpha-blockers). There were no other improvements noted compared with placebo. Reduction in the number of incontinence episodes is an important benefit.
  - Minor adverse effects (such as dry mouth) are common. Urinary retention is a serious possible adverse effect, but NICE found no evidence that this risk is clinically important.
  - The recommendations on follow up and monitoring are based on expert opinion, as NICE found no relevant clinical trials.

Secondary care treatments

- The information on treatments used in secondary care is from the NICE guidance [NICE, 2010].

What advice should I provide about self-help resources?

- Advise that:
  - **The Bladder and Bowel Foundation** have a helpline (telephone 01536 533 255), and provide a range of resources on their website www.bladderandbowelfoundation.org, which include:
  - **A booklet on coping with urgency** — this can be ordered from their online shop or downloaded for printing (pdf). The booklet includes detailed information on bladder retraining.
  - **A Just Can't Wait toilet card** to use when the need to urinate arises while out shopping or socializing. Most shops and facilities are willing to help when they are shown the card. A small donation is requested to cover costs.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

- NICE recommends providing men with lower urinary tract symptoms with information and advice on the basis of expert opinion, as they found no relevant clinical trials [NICE, 2010].

What self-care advice should I provide about fluid intake and lifestyle for men with lower urinary tract symptoms?

- **Fluid intake** should be within the man's usual range, and should not be limited excessively in an attempt to control symptoms — doing this could increase the risk of complications such as urinary tract infection.
- **Lifestyle** advice may include:
  - Avoiding constipation, or treating it (if it is present).
  - Maintaining a healthy lifestyle (with respect to body weight, exercise, diet, smoking, and alcohol consumption).
  - Limiting intake of tea, coffee, chocolate, artificial sweeteners, and fizzy drinks.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

- NICE based these recommendations on expert opinion as they found no relevant clinical trials [NICE, 2010].

Prescriptions

For information on contraindications, cautions, drug interactions, and adverse effects, see the electronic Medicines Compendium (eMC) (http://emc.medicines.org.uk), or the British National Formulary (BNF) (www.bnf.org).

First-line antimuscarinic: oxybutynin

Age from 40 years onwards

Start oxybutynin tablets: 5mg two to three times a day

Oxybutynin 5mg tablets
Take one tablet two to three times a day.
Supply 56 tablets.

Age: from 40 years onwards
NHS cost: £7.83
Licensed use: yes

Age from 60 years onwards

Start oxybutynin tablets (elderly): 2.5mg twice a day

Oxybutynin 2.5mg tablets
Take one tablet twice a day.
Supply 56 tablets.

Age: from 60 years onwards
NHS cost: £7.93
Licensed use: yes

Start oxybutynin tablets (elderly): 3mg twice a day

Oxybutynin 3mg tablets
Take one tablet twice a day.
Supply 56 tablets.

Age: from 60 years onwards
NHS cost: £9.15
Licensed use: yes

Second-line antimuscarinics: if oxybutynin not tolerated

Age from 40 years onwards

Start oxybutynin m/r tablets: 5mg once a day

Oxybutynin 5mg modified-release tablets
Take one tablet once a day.
Supply 30 tablets.

Age: from 40 years onwards
NHS cost: £10.81
Licensed use: yes

Start oxybutynin patches: apply one patch twice a WEEK

Oxybutynin 3.9mg/24hours patches
Apply one patch twice a week.
Supply 8 patches.

Age: from 40 years onwards
NHS cost: £27.20
Licensed use: yes
Patient information: Apply to clean, dry, unbroken skin on the abdomen, hip, or buttock. Remove after 3–4 days and apply a new patch on a different area (avoid using the same area for 7 days).

Start tolterodine m/r capsules: 4mg once a day

Tolterodine 4mg modified-release capsules
Take one capsule once a day.
Supply 28 capsules.

Age: from 40 years onwards
NHS cost: £25.78
Licensed use: yes

Start tolterodine tablets: 2mg twice a day

Tolterodine 2mg tablets
Take one tablet twice a day.
Supply 56 tablets.

Age: from 40 years onwards
NHS cost: £30.56

Licensed use: yes

Start trospium tablets: 20mg twice a day

Trospium chloride 20mg tablets
Take one tablet twice a day (on an empty stomach).
Supply 60 tablets.

Age: from 40 years onwards
NHS cost: £26.00
Licensed use: yes

Start trospium m/r capsules: 60mg once a day

Trospium chloride 60mg modified-release capsules
Take one capsule once a day.
Supply 28 capsules.

Age: from 40 years onwards
NHS cost: £23.05
Licensed use: yes

Start darifenacin m/r tablets: 7.5mg once a day

Darifenacin 7.5mg modified-release tablets
Take one tablet once a day.
Supply 28 tablets.

Age: from 40 years onwards
NHS cost: £20.90
Licensed use: yes
Black triangle

Start fesoterodine m/r tablets: 4mg once a day

Fesoterodine 4mg modified-release tablets
Take one tablet once a day.
Supply 28 tablets.

Age: from 40 years onwards
NHS cost: £25.78
Licensed use: yes
Black triangle

Patient information: Do NOT eat or drink products containing grapefruit juice whilst taking this medicine.

Start solifenacin tablets: 5mg once a day

Solifenacin 5mg tablets
Take one tablet once a day.
Supply 28 tablets.

Age: from 40 years onwards
NHS cost: £27.62
Licensed use: yes

Start propiverine tablets: 15mg 2 to 3 times a day

Propiverine 15mg tablets
Take one tablet two to three times a day.
Supply 84 tablets.

Age: from 40 years onwards

NHS cost: £27.00
Licensed use: yes

Start propiverine m/r capsules: 30mg once a day

Propiverine 30mg modified-release capsules
Take one capsule once a day.
Supply 28 capsules.

Age: from 40 years onwards
NHS cost: £24.45
Licensed use: yes

Lower urinary tract symptoms in men, age-related (including symptoms of benign prostatic hyperplasia/hypertrophy) - Management

Scenario: Nocturnal polyuria

How do I manage nocturnal polyuria as the predominant symptom?

- **Exclude or manage treatable causes of nocturnal polyuria,** such as diabetes, renal disease, chronic heart failure, and drugs. However, it is often not possible to identify a specific cause.
- **Advise** the man to limit his fluid intake in the late afternoon and evening, and offer information on self-help resources.
- **If limiting fluid intake in the late afternoon and evening is ineffective, consider offering a loop diuretic** to be taken in the late afternoon. For example, furosemide 40 mg (this use is off-label).
  - For detailed prescribing information, see Loop diuretic (furosemide) for nocturnal polyuria.
- **If nocturnal polyuria remains bothersome, refer the man or seek specialist advice about switching to oral desmopressin to be taken at bedtime** — this use is off-label.
  - Start treatment with the lowest dose — 200 micrograms of oral desmopressin.
  - To prevent fluid overload and hyponatraemia, advise the man to drink only enough to satisfy his thirst, to avoid fluids in the last 1–2 hours before bed, and to avoid fluids for 8 hours after taking desmopressin.
  - Monitor for dilutional hyponatraemia by measuring serum sodium 3 days after the first dose. If serum sodium decreases below the normal range, stop the desmopressin.
  - For detailed prescribing information, see Desmopressin for nocturnal polyuria.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

Furosemide

- NICE found only one clinical trial, which reported that diuretics were more effective than placebo in reducing the frequency of night time urinating, but were not more effective in improving symptoms. These results may not be reliable, because there were only 43 participants in the study and the methods of randomization and allocation concealment were not reported [NICE, 2010].
- NICE found no trial-based evidence on potential adverse effects (such as hypovolaemia and orthostatic hypotension), but considered the risk to be small (provided that this risk informs the information that is given to the man and the plans for monitoring) [NICE, 2010].

Desmopressin

- NICE based their recommendation on expert opinion as they found only one crossover study; this was too small to provide reliable evidence [NICE, 2010].
- NICE concluded that bioavailability and pharmacokinetic studies suggest that the nasal formulation of desmopressin may be more potent and more likely to cause hyponatraemia than the oral formulation (15 episodes per 100,000 patient-years with the nasal spray, and six episodes per 100,000 patient-years with the oral product) [NICE, 2010].

What advice should I provide about self-help resources?

- Advise the man that:
  - The Bladder and Bowel Foundation have a helpline (telephone 01536 533 255), and provide a range of resources on their website www.bladderandbowelfoundation.org.
  - A booklet on managing bladder problems can be ordered from their online shop, or downloaded for printing (pdf).

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

- NICE recommends providing men with lower urinary tract symptoms with information and advice on the basis of expert opinion, as they found no relevant clinical trials [NICE, 2010].

What self-care advice should I provide about fluid intake and lifestyle for men with lower urinary tract symptoms?

- **Fluid intake** should be within the man's usual range, and should not be limited excessively in an attempt to control symptoms — doing this could increase the risk of complications such as urinary tract infection.
- **Lifestyle** advice may include:
  - Avoiding constipation, or treating it (if it is present).
  - Maintaining a healthy lifestyle (with respect to body weight, exercise, diet, smoking, and alcohol consumption).
  - Limiting intake of tea, coffee, chocolate, artificial sweeteners, and fizzy drinks.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

- NICE based these recommendations on expert opinion as they found no relevant clinical trials [NICE, 2010].

Prescriptions

For information on contraindications, cautions, drug interactions, and adverse effects, see the electronic Medicines Compendium (eMC) (http://emc.medicines.org.uk), or the British National Formulary (BNF) (www.bnf.org).

Furosemide

Age from 40 years onwards

Furosemide tablets: 40mg each afternoon

Furosemide 40mg tablets
Take one tablet once a day, during the late afternoon.
Supply 28 tablets.

Age: from 40 years onwards
NHS cost: £1.03
Licensed use: no - off-label indication

Desmopressin

Age from 40 to 65 years

Start desmopressin tablets: 200micrograms at bedtime

Desmopressin 200microgram tablets
Take one tablet at bedtime.
Supply 30 tablets.

Age: from 40 years to 65 years
NHS cost: £33.72
Licensed use: no - off-label indication
Black triangle

Patient information: Desmopressin reduces the amount of urine produced at night-time. To avoid the body becoming overloaded with fluid, drink no more than one mug of liquid from one hour before taking the medicine to eight hours afterwards. Only drink enough to satisfy thirst. Avoid drinks that contain caffeine such as tea, coffee, hot chocolate, and cola. Stop desmopressin during any episodes of vomiting and/or diarrhoea.

Lower urinary tract symptoms in men, age-related (including symptoms of benign prostatic hyperplasia/hypertrophy) - Management

Scenario: Voiding (obstructive) symptoms

How do I manage predominantly voiding (obstructive) symptoms?

- **If it is practical, assess the baseline severity of symptoms and degree of bother with a validated symptom scoring system** such as the IPSS (International Prostate Symptom Score). Symptom scores are used to guide treatment choice and to assess future changes in symptoms.
- **Exclude or manage causes of obstructive symptoms,** for example drugs, neurological conditions, urethral stricture, and cancer (prostate, bladder, rectum).
- First-line management options include:

- **Active surveillance** — reassurance and lifestyle advice without immediate treatment and with regular follow up.
- **Conservative management** — pelvic floor muscle training, bladder training, post-void milking, prudent fluid intake, maintaining a healthy lifestyle, and containment products (such as pads, waterproof pants, external sheath, and catheters). Consider referring the man to, or obtaining advice from, a continence nurse, continence physiotherapist, or urologist.
- To find the local continence service, telephone the Bowel and Bladder Foundation on 01536 533 255.

- **If active surveillance is not appropriate and conservative management fails:**

- **If the man has moderate-to-severe voiding lower urinary tract symptoms (LUTS)** (which would correspond to an IPSS score of 8 or more), offer an alpha-blocker (such as alfuzosin, doxazosin, tamsulosin, or terazosin).
- Review at 4–6 weeks and then every 6–12 months. Assess symptoms, quality-of-life, and adverse effects.
- See Alpha-blockers for voiding symptoms for detailed prescribing information, including the choice of drug.
- **If the man has an enlarged prostate and is considered to be at high risk of progression,** offer a 5-alpha reductase inhibitor (dutasteride or finasteride).
- The prostate is considered to be enlarged if it weighs more than 30 g. Prostatic enlargement can be estimated clinically by digital rectal examination, or indirectly with the prostate specific antigen (PSA) test — PSA higher than 1.4 nanogram/mL is a sign of an enlarged prostate. (Although ultrasonography most accurately estimates prostate size, this is not recommended for guiding the decision to offer a 5-alpha reductase inhibitor.)
- The risk of progression of symptoms from benign prostatic enlargement is higher in older men, and is higher in men with poorer urine flow, higher symptoms score, evidence of bladder decompensation (such as chronic urinary retention), larger prostate, or higher PSA level.
- Review symptoms, quality-of-life, and adverse effects at 3–6 months, and then every 6–12 months.
- See 5-alpha reductase inhibitors for voiding symptoms for detailed prescribing information, including the choice of drug.
- **If the man has bothersome moderate-to-severe voiding LUTS *and* prostatic enlargement,** consider offering a combination of an alpha-blocker and a 5-alpha reductase inhibitor.

- **If the man continues to have storage (irritative) symptoms after treatment with an alpha-blocker alone,** consider adding an antimuscarinic (anticholinergic).
  - For example oxybutynin — initially 5 mg two to three times daily, increased if necessary to a maximum of 5 mg four times daily. Elderly men require lower doses.
  - Review every 4–6 weeks until symptoms are stable, and then every 6–12 months. Assess symptoms, quality-of-life, adverse effects, and the need to continue treatment.
  - For full prescribing information and choice of antimuscarinic drug, see Antimuscarinics for overactive bladder.
- **If treatment fails to adequately relieve symptoms:**
  - Discuss and decide if active surveillance or further active intervention is appropriate.
  - Consider offering referral to a urologist for assessment and further management.

Treatments available in secondary care

- In secondary care, treatment options for storage (obstructive) symptoms include urethral catheterization and prostate surgery.
- **Catheterization**
  - Urethral catheterization may be intermittent, indwelling urethral, or indwelling suprapubic.
  - More invasive options are used only when less invasive options are impractical or have failed.
- **Surgery**
  - Surgical options include:
  - Transurethral resection of the prostate (TURP).
  - Transurethral vaporization of the prostate (TUVP).
  - Holmium laser enucleation of the prostate (HoLEP).
  - Transurethral incision of the prostate (TUIP).
  - Open prostatectomy.
  - The choice of surgery depends on the size of the prostate, the availability of specialized equipment and skills, the man's health, and how he balances the expected benefits against the risks.

- Most operations are performed through the urethra, but open surgery is used for larger prostates (weighing more than 80 g).

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

Assessment of symptoms and excluding treatable causes

- These recommendations are pragmatic and based on expert opinion as NICE found no relevant clinical trials of assessment and exclusion strategies.

Active surveillance

- The recommendations on active surveillance are based on expert opinion as NICE found no relevant clinical or economic studies [NICE, 2010].

Conservative treatments

- The recommendations on conservative treatments (bladder training, post-void milking, maintaining a healthy lifestyle, containment products, and obtaining advice) are based on expert opinion, as NICE found no relevant clinical or economic studies [NICE, 2010].

Alpha-blockers

- NICE concluded that alpha-blockers are cost-effective for men with moderate-to-severe LUTS, are more cost-effective than 5-alpha reductase inhibitors in men with a normally sized prostate, and their benefits outweigh the adverse effects [NICE, 2010].
  - Meta-analysis by NICE of 12 randomized controlled trials (RCTs) found that, compared with placebo, alpha-blockers reduced the symptom score, with a mean difference of –2.55 (95% CI –3.17 to –1.92). Although this difference is statistically significant, the 95% confidence interval includes the minimum clinically important difference.
  - Economic studies found that alpha-blockers were cost-effective compared with placebo or no treatment in men with moderate or severe LUTS. NICE assessed the results as having minor limitations and being only partially applicable.
  - RCTs found that alpha-blockers are more effective than 5-alpha reductase inhibitors.

- The quality of evidence from studies comparing alpha-blockers with antimuscarinics (anticholinergics) and phosphodiesterase-5 (PDE-5) inhibitors ranged from very low to low.
- RCTs found that more men treated with alpha-blockers than placebo experience dizziness, fatigue (asthenia), postural hypotension, rhinitis, erectile dysfunction, and abnormal ejaculation.

- The recommendations on follow up and monitoring are based on expert opinion as NICE found no relevant clinical trials.

5-alpha reductase inhibitors

- NICE concluded that 5-alpha reductase inhibitors may be cost-effective for men with large prostates, and that their benefits outweigh the adverse effects [NICE, 2010].
- RCTs found that 5-alpha reductase inhibitors were less effective than alpha-blockers in improving symptom scores and maximum urine flow in men with prostates estimated to be less than 30 mL, but were more effective in men with larger prostates (at least 30 mL, and 55 mL on average).
- RCTs found that, compared with alpha-blockers, 5-alpha reductase inhibitors are less likely to cause orthostatic hypotension, dizziness, fatigue or asthenia, and rhinitis, but are more likely to cause decreased libido, impotence, and breast enlargement.

- The recommendations on follow up and monitoring are based on expert opinion as NICE found no relevant clinical trials.

Combination of an alpha-blocker and a 5-alpha reductase inhibitor

- NICE concluded that combined treatment with an alpha-blocker and a 5-alpha reductase inhibitor may be more cost-effective than treatment with an alpha-blocker alone in selected people who are at higher risk of progression because of older age, more severe/bothersome symptoms, or greater prostate size. The recommendation was made on the basis of expert opinion weighing up the evidence on benefits, adverse effects, acceptability, and cost-effectiveness [NICE, 2010].
- RCTs found that alpha-blockers plus 5-alpha reductase inhibitor combinations are more effective than alpha-blockers alone in improving symptom scores at 2–4 years' follow up. The combination was not more effective at 6 months or 1 year.
- Men treated with alpha-blockers plus 5-alpha reductase inhibitor combinations were more likely than men treated with alpha-blockers alone to experience adverse effects (such as decreased libido, ejaculatory abnormalities, and impotence).

Antimuscarinics (anticholinergics)

- The recommendation to consider adding an antimuscarinic for persistent overactive bladder symptoms in men being treated with an alpha-blocker is based on one RCT included in the NICE systematic review [Kaplan et al, 2006; Kaplan et al, 2008], and a more recent RCT [Chapple et al, 2009].
  - The first RCT had methodological weaknesses.
  - The second RCT, which was placebo-controlled, found that men with bothersome overactive bladder symptoms while taking an alpha-blocker had statistically significantly greater improvements in diary variables, International Prostate Symptom Score (IPSS) storage scores, and symptom bother when an antimuscarinic (tolterodine ER) was added. However, there was no difference in the proportions of men whose Patient Perception of Bladder Condition (PPBC) score improved.
  - Minor adverse effects (such as dry mouth) are common with antimuscarinics. Urinary retention is a serious possible adverse effect, but NICE found no evidence that this risk is clinically important.
- The recommendations on follow up and monitoring are based on expert opinion as NICE found no relevant clinical trials.

Referral

- The recommendations on referral are based on expert opinion as NICE found no relevant clinical trials.

Information on specialist treatments

- The information on specialist treatments is from the NICE guideline [NICE, 2010].

What advice should I provide about self-help resources?

- Advise that:
  - NHS Choices provides online information for people with prostate enlargement, including information on the management of voiding problems and other lower urinary tract symptoms (LUTS).
  - The Bladder and Bowel Foundation has a helpline (telephone 01536 533 255), and provides a range of resources on their website www.bladderandbowelfoundation.org. Information on voiding symptoms is included in their booklet on bladder problems, which can be ordered from their online shop or downloaded for printing (pdf).
  - Homeopathy, phytotherapy (such as saw palmetto), and acupuncture are not recommended for treating LUTS in men, because clinical trials have not provided evidence of effectiveness and safety.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

- NICE recommends providing men with LUTS with information and advice on the basis of expert opinion, as they found no relevant clinical trials [NICE, 2010].

What self-care advice should I provide about fluid intake and lifestyle for men with lower urinary tract symptoms?

- **Fluid intake** should be within the man's usual range, and should not be limited excessively in an attempt to control symptoms — doing this could increase the risk of complications such as urinary tract infection.
- **Lifestyle** advice may include:
  - Avoiding constipation, or treating it (if it is present).
  - Maintaining a healthy lifestyle (with respect to body weight, exercise, diet, smoking, and alcohol consumption).
  - Limiting intake of tea, coffee, chocolate, artificial sweeteners, and fizzy drinks.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

- NICE based these recommendations on expert opinion as they found no relevant clinical trials [NICE, 2010].

Prescriptions

For information on contraindications, cautions, drug interactions, and adverse effects, see the electronic Medicines Compendium (eMC) (http://emc.medicines.org.uk), or the British National Formulary (BNF) (www.bnf.org).

Start immediate-release alpha blocker

Age from 40 years onwards

Start doxazosin tablets: 1mg once a day

Doxazosin 1mg tablets
Take one tablet once a day.
Supply 14 tablets.

Age: from 40 years onwards
NHS cost: £0.60
Licensed use: yes

Patient information: Take the first dose before you go to bed at night. Some people experience side effects such as blurred vision, dizziness, drowsiness, sweating or feeling light headed. If any of these apply, sit or lie down until the symptoms have disappeared. Tell your doctor if these symptoms continue after taking the medicine for a few days. Usually, your doctor will increase the dose of this medicine every week or two during the first month or so of treatment, provided that side effects are not troublesome.

Start terazosin: BPH starter pack

Terazosin 5mg tablets and Terazosin 2mg tablets and Terazosin 1mg tablets
Take one tablet once a day. See package insert for full instructions.
Supply 28 tablets.

Age: from 40 years onwards
NHS cost: £10.97
Licensed use: yes

Patient information: Take the first dose before you go to bed at night. Some people experience side effects such as blurred vision, dizziness, drowsiness, sweating or feeling light headed. If any of these apply, sit or lie down until the symptoms have disappeared. Tell your doctor if these symptoms continue after taking the medicine for a few days.

Start modified-release alpha-blocker

Age from 40 years onwards

Alfuzosin m/r tablets: 10mg once a day

Alfuzosin 10mg modified-release tablets
Take one tablet once a day.
Supply 30 tablets.

Age: from 40 years onwards
NHS cost: £12.51
Licensed use: yes

Patient information: Some people experience side effects such as blurred vision, dizziness, drowsiness, sweating or feeling light headed. If any of these apply, sit or lie down until the symptoms have disappeared. Tell your doctor if these symptoms continue after taking the medicine for a few days.

Tamsulosin m/r capsules: 400micrograms once a day

Tamsulosin 400microgram modified-release capsules
Take one capsule once a day.
Supply 30 capsules.

Age: from 40 years onwards
NHS cost: £4.92
Licensed use: yes

Patient information: Some people experience side effects such as blurred vision, dizziness, drowsiness, sweating or feeling light headed. If any of these apply, sit or lie down until the symptoms have disappeared. Tell your doctor if these symptoms continue after taking the medicine for a few days.

Start doxazosin m/r tablets: 4mg once a day

Doxazosin 4mg modified-release tablets
Take one tablet once a day.
Supply 28 tablets.

Age: from 40 years onwards
NHS cost: £5.70
Licensed use: yes

Patient information: Some people experience side effects such as blurred vision, dizziness, drowsiness, sweating or feeling light headed. If any of these apply, sit or lie down until the symptoms have disappeared. Tell your doctor if these symptoms continue after taking the medicine for a few days.

5-alpha reductase inhibitors

Age from 40 years onwards

Finasteride tablets: 5mg once a day

Finasteride 5mg tablets
Take one tablet once a day.
Supply 28 tablets.

Age: from 40 years onwards
NHS cost: £2.71
Licensed use: yes

Dutasteride capsules: 500micrograms once a day

Dutasteride 500microgram capsules
Take one capsule once a day.
Supply 30 capsules.

Age: from 40 years onwards
NHS cost: £19.80
Licensed use: yes

Lower urinary tract symptoms in men, age-related (including symptoms of benign prostatic hyperplasia/hypertrophy) - Management

Scenario: Post-micturition dribble

How do I manage a man with post micturition dribble not due to urinary obstruction?

- **Assess the severity** of the symptoms by asking 'What protection do you need to cope with the leakage?'
- **Advise the man that he can reduce the dribble by milking his urethra after urinating.**
  - The man should press his fingers behind the scrotum and gently massage the bulbar urethra, in a forwards and upwards motion. This technique is explained on the website of the Bowel and Bladder

Foundation (see www.bladderandbowelfoundation.org), which also has other information and resources for people with bladder problems.

- Urethral milking eliminates post-micturition dribble when the muscles surrounding the urethra do not completely drain it of urine. Urethral milking is unlikely to help if the post-micturition dribble is caused by urinary obstruction.

Basis for recommendation

These recommendations are in line with the guideline *The management of lower urinary tract symptoms in men* from the National Institute for Health and Clinical Excellence (NICE) [NICE, 2010].

Post-void urethral milking

- When dribbling is not caused by obstruction, NICE recommends post-void urethral milking on the basis that it is a simple technique with an established safety profile, and it is a quick and easy technique to teach and learn. Clinical evidence of benefit is from one small trial with methodological weaknesses [NICE, 2010].

Providing information and advice

- NICE recommends providing men with lower urinary tract symptoms with information and advice on the basis of expert opinion, as they found no relevant clinical trials [NICE, 2010].