



Prostate Disease

BPH and Prostatitis - Diagnosis and management

1. Benign Prostatic Hyperplasia (BPH)

- BPH is the non-cancerous enlargement of the prostate gland
- Whilst not normally life threatening, BPH can impact considerably on quality of life

The GP's role

- GPs are typically the first point of contact for men with BPH
- The GP's role in the management of BPH includes clinical assessment, treatment, referral and follow-up

Diagnosis

Medical History

- Lower urinary tract symptoms (LUTS)

Urinary symptoms of BPH

- Hesitancy
- Weak and poorly directed stream
- Straining
- Post-urination dribble or irregular stream
- Urinary retention
- Overflow or paradoxical incontinence
- Urgency
- Frequency
- Nocturia

Note: Some men with BPH may not present with many or any symptoms of the disease.

Symptom Score

- Evaluation of symptoms contributes to treatment allocation and response monitoring
- The International Prostate Symptom Score (IPSS) questionnaire is recommended

Physical examination

- Digital rectal examination (DRE): can estimate prostate size and identify other prostate pathologies
- Basic neurological examination
- Perianal sensation and sphincter tone
- Bladder palpation
- Calibre of the urethral meatus

Investigations

- Urine analysis: midstream urine: microscopy, culture and sensitivity (MC&S)
- Prostate specific antigen (PSA) levels: while PSA levels are mostly used as a marker of prostate cancer, PSA levels can be elevated as a result of non cancerous prostate disease (BPH and prostatitis) - benefits & risks of PSA testing should be discussed

PSA levels for different age groups of Western men

Age range years	Serum PSA (ng/mL) median	Serum PSA (ng/mL) upper limit of normal
40-49	0.65	2.0
50-59	0.85	3.0
60-69	1.39	4.0
70-79	1.64	5.5

Other PSA Tests

- PSA velocity or doubling time: if the PSA level doubles in 12 months it may indicate prostate cancer or prostatitis. An elevated PSA and a stable velocity suggests BPH
- Free-to-total PSA ratio: high ratio (>25%) suggests BPH; low ratio (<10%) suggests prostate cancer
- Prostate Health Index (PHI): not covered by the MBS, PHI thought to be more specific for diagnosing prostate cancer than PSA level alone; good quality evidence lacking & not recommended in Australian prostate cancer testing guidelines
- Creatinine levels
- Post-void residual urine (ultrasound)

Optional investigations (usually by the urologist)

- Uroflowmetry (specialist only)
- Pressure-flow study
- Endoscopy
- Urinary tract imaging
- Voiding chart

Management

Treatment

Observation and review: for mild or low impact symptoms

- Optimise through reassurance, education, periodic monitoring and lifestyle modifications

Medical therapy: for moderate to severe symptoms

α -blockers

- Suited to patients with moderate/severe LUTS
- All α 1-blockers (Alfuzosin, Tamsulosin, Terazosin, Prazosin) have a similar clinical efficacy (side-effect profile favour Tamsulosin)

5 α -reductase-inhibitors

- Suited to patients with moderate/severe LUTS and enlarged prostates (>30-40 mL)
- Including Dutasteride and Finasteride
- Finasteride and Dutasteride both reduce prostate volume by 20-30% and seem to have similar clinical efficacy

Combination therapy

- Combination of α -blocker (tamsulosin) with 5 α -reductase-inhibitor (dutasteride), available in Australia as Duodart®
- Shown to be more beneficial and durable than monotherapy

Beta 3-adrenoceptor agonists & antimuscarinics:

- Used for overactive bladder or storage symptoms

Day procedure (Urolift® system):

- Involves placement of several retractors into the prostatic lobes to increase the urethral opening
- Not suitable for all men (urologist assessment)
- Short-term side-effects profile better than surgery but longer term outcomes unknown

Surgical therapy: for severe or high impact symptoms

- Transurethral resection of the prostate (TURP) for prostates 30–80 mL
- Transurethral incision of the prostate (TUIP) for prostates <30 mL and without middle lobe
- Open prostatectomy or TURP for those >80 mL
- Laser ablation or resection of BPH available in specific surgical centres.
- Laser surgery regarded as equivalent efficacy to TURP
- Other options also available

Specialist referral

- Indicators for referral to a urologist
- The patient's symptoms become more serious: their symptom score moves into the 'severely symptomatic' category
- The patient's symptoms significantly interfere with their quality of life – score of 5 'unhappy' or 6 'terrible' on the IPSS
- After an episode of urinary retention, urinary infection, haematuria
- No response to medical treatment
- A risk of prostate cancer exists
- Post void residual urine on ultrasound assessment >100 mL

Follow-up

- It is appropriate for the GP to monitor and follow-up a patient with respect to all the treatment modalities. However, if the patient is not responding to medical treatment, refer to the urologist.
- Clinical notes: Men who have had TURP remain at risk for prostate cancer and need routine prostate cancer checks, as per guidelines.

Recommended follow-up timeline after BPH treatment

Treatment modality	First year after treatment			Annually thereafter
	6 weeks	12 weeks	6 months	
Observation & review	X	X	✓	✓
5 α -reductase inhibitors	X	✓	✓	✓
α -blockers	✓	X	✓	✓
Surgery or minimal invasive treatment	✓	✓	✓	✓

2. Prostatitis

- Prostatitis is an inflammation of the prostate gland
- It can be a result of bacterial or non-bacterial infection
- Acute bacterial prostatitis, the least common form, can be life threatening if the infection is left untreated
- Whilst not normally life threatening, prostatitis can impact considerably on a man's quality of life

The GP's role

- GPs are typically the first point of contact for men with prostatitis
- The GP's role in the management of prostatitis includes clinical assessment, treatment, referral and follow-up

Diagnosis

Medical History

- Urinary symptoms
- Pain

Symptoms of prostatitis

- Dysuria – painful urination
- Urgent need to urinate
- Frequent urination
- Painful ejaculation
- Lower back pain
- Perineal pain
- Chills and/or fever
- Muscular pain
- General lack of energy

Investigations

- Digital rectal examination (DRE): prostate tenderness or swelling
- Prostate specific antigen (PSA) levels: elevated PSA levels
- PSA velocity: if the PSA level doubles in 12 months it may indicate prostate cancer or prostatitis
- Urine analysis:
 - First pass urine: Chlamydia urine PCR test
 - Midstream urine: MC&S
 - Urine PCR for STIs should be done if Chlamydia or other STI a likely cause

Management

Treatment

- There are several therapeutic options available. Evidence for benefits of these treatment options is limited; however, they may be trialled with the patient
- With respect to management by the specialist, use of the following forms of treatment will vary according to the individual, their condition and the stage of their treatment
- Most patients at some stage in their treatment however will have antibiotic therapy

Bacterial prostatitis (acute and chronic) can be treated using antibiotics. Once diagnosed, rapid treatment is essential to avoid further complications.

Chronic nonbacterial prostatitis (chronic prostate pain syndrome); causal treatment is difficult and cure is often not an option. Treatment focus is on symptom management, to improve quality of life.

Medication options

- α -blockers
 - Suited to patients with moderate/severe LUTS
 - All α 1-blockers (Alfuzosin, Tamsulosin, Terazosin, Prazosin, Silodosin) have similar clinical efficacy and side-effects
- Antibiotics (not all antibiotics penetrate the prostate gland)
 - Recommend: Norfloxacin, Ciprofloxacin, Trimethoprim, Sulphamethoxazole/Trimethoprim, Erythromycin, Gentamicin
 - Young men with confirmed Chlamydia prostatitis: Doxycycline (Vibramycin®)
- Muscle relaxants: Diazepam, Baclofen
- Analgesics
- Non-steroidal anti-inflammatory drugs
- 5 α -reductase-inhibitors: Finasteride

Surgical options*

- Transurethral incision of the bladder neck
- Transurethral resection of the prostate

*Surgery has a very limited role and requires an additional, specific indication e.g. prostate obstruction, prostate calcification

Other options

- Lifestyle changes: avoid activity that involves vibration or trauma to the perineum e.g. bike riding, tractor driving, long-distance driving, cut out caffeine, spicy foods, alcohol, avoid constipation
- Pelvic floor relaxation techniques
- Prostate massage
- Supportive therapy: biofeedback, relaxation exercises, acupuncture, massage therapy, chiropractic therapy and meditation
- Heat therapy

Specialist referral

Indicators for referral to a urologist:

- When the GP is not confident in managing the condition
- If the GP is concerned there are other potential diagnoses, particularly prostate or bladder cancer
- Those who do not respond to initial first-line therapy such as antibiotics and/or α -blockers. For these patients, more invasive investigations, such as cystoscopy and transrectal prostate ultrasound scan, are commonly done

Follow-up

- The need for specialist follow-up depends on the patient's progress
- Most specialists will refer back to the GP to monitor the progress of the patient
- The specialist will seek re-referral if the patient's progress is not satisfactory
- A GP can re-refer if they do not feel comfortable in managing a relapse