

About benign prostatic hyperplasia (BPH) or an enlarged prostate

- Benign prostatic hyperplasia (BPH) also known as an enlarged prostate, is a common urological condition affecting older men^{1, 2} that involves a non-cancerous enlargement of the prostate gland and expansion of the surrounding tissues.^{3, 4}
- While a healthy prostate resembles the size of a walnut, an enlarged prostate can grow to the size of a lemon.²
- Though the causes of an enlarged prostate are multifactorial,⁵ age-related prostate changes associated with metabolic disturbances, changes in hormone balance and chronic inflammation can cause an enlarged prostate.⁶
- Many men with an enlarged prostate and the associated side effects wait until symptoms become significantly bothersome before seeking medical attention.⁷

Signs and symptoms

- The need to urinate frequently – a common symptom of an enlarged prostate – can result from obstruction, or blockage, of the bladder, which is caused by enlargement of the prostate.⁴
- This enlargement leads to the compression of the urethra, reducing the flow of urine from the bladder and sometimes blocking it entirely.⁸
- Urinary frequency can be as often as every one to two hours, and often occurs throughout the night.⁴
- An enlarged prostate can result in lower urinary tract symptoms (LUTS), such as:⁹⁻¹¹
 - inability to completely empty the bladder when urinating;
 - poor urine flow;
 - an urgent need to pass urine;
 - difficulty starting and ending urination;
 - getting up at night to pass urine; and
 - passing urine more or less often than usual.
- Some studies estimate that 90 per cent of men between the ages of 45 and 80 suffer from some type of LUTS.⁵
- The prevalence and severity of LUTS in ageing men can be progressive and is an important diagnosis in the care of patients and the welfare of society.⁵
- LUTS associated with an enlarged prostate are often accompanied by sexual dysfunction, including ED and ejaculatory problems. Interest in sexual intercourse declines as the severity of LUTS increase.⁷
- Symptoms left untreated may also lead to urinary tract infections, kidney stones and kidney damage.¹⁰



Risk factors and causes

- The underlying mechanism of a benign enlargement of the prostate and surrounding tissues is yet to be determined and is a highly complex and debated topic. However, metabolic, hormonal and inflammatory factors are known to contribute to development of the condition.^{12, 13}
- Non-modifiable risk factors (factors not in your control) include age and genetics.¹⁴
 - Age: an enlarged prostate is present in 50 to 60 per cent of men in their 60s, and 80 to 90 per cent of those aged 70+ years.¹⁵
 - Genetics: Evidence suggests genetics plays a role in an enlarged prostate, noting some forms of the disease can be inherited.¹⁴
- Modifiable (factors you have control over) risk factors include:^{4, 14}
 - Obesity or a higher body mass index (BMI)
 - Metabolic syndromes e.g. diabetes, high blood pressure and high cholesterol levels;¹⁶
 - Cardiovascular (a group of disorders of the heart and blood vessel) disease;
 - Smoking;¹⁶
 - Sedentary lifestyle;
 - Poor diet;
 - Inflammation; and
 - Sex hormone imbalances.¹⁷
- An enlarged prostate is a result of hyperplasia (increase in the number of cells resulting in an enlargement) of both epithelial (covers all body surfaces) and stromal (gives support and structure) tissues of the prostate gland.^{12, 18}

Prevalence

- Our ageing population is fuelling the global burden of BPH. There were 94 million cases of men living with an enlarged prostate worldwide in 2019, compared with 51.1 million cases in 2000.¹
- Enlarged prostate cases have more than doubled in Australia over the past approximately 20 years, from 271,000 recorded cases in 2000 to 476,000 recorded cases in 2019.¹
- However, it is estimated an enlarged prostate affects more than 2.8 million men aged 50+ in Australia [based on a population of 26.6 million Australians].^{*19-21}
- Around half of Australian men over 50 years of age, and more than 8 in 10 men over 80 years of age have some symptoms of an enlarged prostate .¹⁰
- It is estimated that one in two men will have an enlarged prostate by the age of 50.²

*According to the Australian Bureau of Statistics, males represent 49.3% of the Australian population [26.6 million]. Estimate has been calculated on the number of men aged over 50 [approx. 4.576 million].

Diagnosis and management

- The evaluation and management of an enlarged prostate is complicated by several factors; namely, the normal prostate varies in size and there is not a defined relationship between the size of the prostate and the severity of the symptoms.⁷
- Blood, urine tests or an ultrasound to examine the urinary tract are commonly used to diagnose an enlarged prostate .¹⁰
- A prostate symptom score questionnaire is a simple and readily accessible method for diagnosing an enlarged prostate. It is used to determine if a man has mild, moderate or severe symptoms.⁸



- An enlarged prostate can be diagnosed through a rectal (anal) examination to determine the size and shape of the prostate.¹⁰

Simple lifestyle modifications may suffice to manage mild enlarged prostate symptoms, such as:²²

- Reducing diuretics (caffeine, alcohol);
- Minimising bladder irritants (consumption of spicy and acidic foods);
- Not drinking fluids at night;
- Addressing constipation issues; and
- Bladder training and pelvic floor exercises.

Impact on quality of life



- Most men living with an enlarged prostate experience a reduced quality of life due to bothersome symptoms. Symptoms of an enlarged prostate can compromise day-to-day life and routines.²³⁻²⁵
- Lower urinary tract symptoms associated with an enlarged prostate have also been linked to depression, anxiety and stress.²⁵
- Living with an enlarged prostate can also affect the quality of life of a partner or spouse, and take a toll on a relationship.²⁶

- Nearly half (46 per cent) of partners experience disturbed sleep due to being regularly woken by their partner's urination disorder; 37 per cent of women reported problems with sexual function as a result of their partner's disorder; and 17 per cent cited being unable to take a long trip with their affected partner without regular toilet stops.²⁶

Treatment options

- An enlarged prostate is treatable and men living with the condition should seek professional advice. Varying treatment options are available, depending on the size of the prostate and severity of symptoms.²⁷
- Some of the most common barriers to seeking treatment for an enlarged prostate include embarrassment, waiting for the condition to go away on its own, considering it to be an inevitable part of ageing and a fear of surgery.²⁸
- For some, an insufficient understanding of the severity, slow progression of symptoms and negative attitudes towards seeking treatment contribute to delayed treatment.²⁹
- Level of bother and invasiveness, recovery time, duration of treatment, sexual function preservation, risk of adverse events and out of pocket costs are key factors for patients when choosing a treatment option. Patients also have different preferences when considering the balance between effectiveness and safety.³⁰
- In 2021-22 it was estimated that roughly 24,000 men underwent treatment for an enlarged prostate in public and private hospitals.^{27, 31}
- The different treatment options available for an enlarged prostate vary in the degree of invasiveness. Symptoms may be treated by lifestyle changes, medication or surgery.³²
- Surgical procedures to treat an enlarged prostate include:³³
 - Transurethral resection of the prostate (TURP)
 - Photoselective vaporisation of the prostate (PVP)
 - Holmium laser enucleation of the prostate (HoLEP)
- Minimally invasive techniques to treat an enlarged prostate include:³³
 - Water vapor therapy
 - Prostatic urethral lift

- TURP is the most common procedure used for an enlarged prostate in Australia, but minimally invasive techniques are becoming more common.³³
- There are two main medications that can help with symptoms of an enlarged prostate symptoms: alpha blockers and 5 alpha reductase inhibitors. Alpha-blockers and 5-Alpha reductase inhibitors have different functions.
 - 5-Alpha Reductase Inhibitors: Designed to stop the growth or shrink the prostate by lowering production of the hormone DHT (a male sex hormone).³⁴
 - Alpha-Blockers: Help to relax the muscles in the bladder and prostate, allowing urine to flow more freely.³⁵
- These can be prescribed together, which is commonly known as combination therapy.^{8,36}
- For men whose quality of life is significantly affected by an enlarged prostate, minimally invasive treatments are available for consideration. Such treatments include water vapour therapy, where steam is injected directly into the prostate tissue to reduce problematic tissue overgrowth, to relieve symptoms and obstructions.^{37,38}
- Water vapour therapy is a simple and short procedure, taking less than ten minutes to complete, with most patients discharged on the same day.³⁹

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