

## Basic information on Benign Prostatic Enlargement

The underlined terms are listed in the glossary.

### What is the prostate?

The prostate is a gland located in the lower urinary tract, under the bladder and around the urethra (**Fig. 1**). Only men have a prostate. It produces the fluid which carries semen. The prostate has smooth muscles which help to push out the semen during ejaculation.

A healthy prostate is about the size of a large walnut and has a volume of 15-25 millilitres. The prostate slowly grows as men grow older.

### What are BPH, BPE and BPO?

Benign prostatic hyperplasia (BPH) is a common benign condition which happens to some extent in all men. This condition is related to hormonal changes

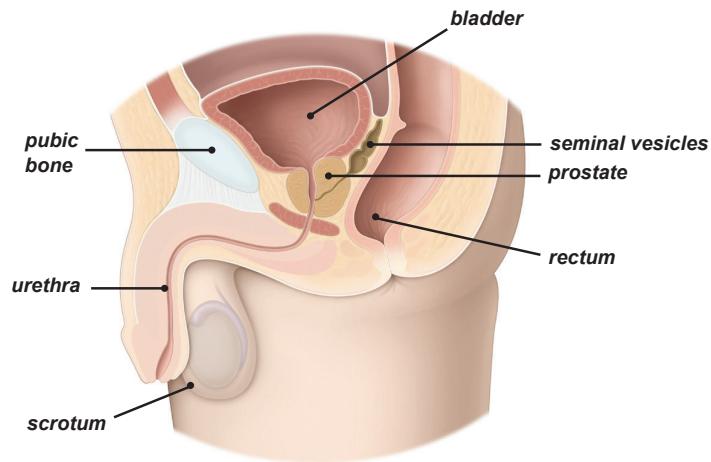
which happen as men grow older. In about half of these men, BPH may result in benign prostatic enlargement (BPE). In turn, this enlargement may obstruct the flow of urine, a condition which is called benign prostatic obstruction (BPO). BPO happens in about half of men with a benign prostatic enlargement. Your doctor may be referring to your condition by using either of the three words, because these conditions are closely related.

### Benign prostatic enlargement

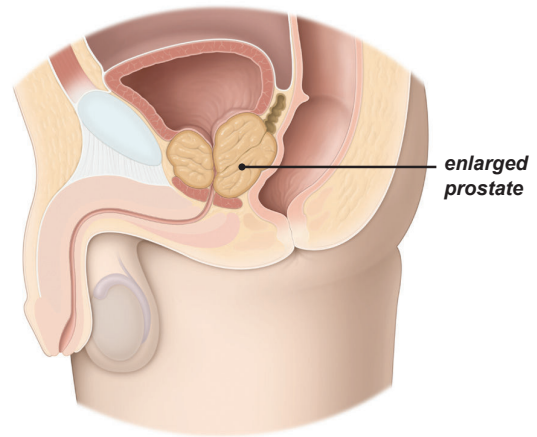
Prostate diseases are usually associated with older age. They can cause bothersome symptoms in the lower urinary tract in men over the age of 50. Very often these symptoms are associated with an enlargement of the prostate, known as benign prostatic enlargement (BPE) (**Fig. 2**).

Benign prostatic enlargement is a common condition. It is related to hormonal changes which happen as men grow older.

Prostate diseases can be very worrying but it is important to know that BPE is not prostate cancer. BPE does not become prostate cancer, even if it is left untreated. However, both benign prostatic enlargement and prostate cancer may develop with age and coexist. You should consult your urologist to discuss any of your concerns.



**Fig. 1:** A healthy prostate in the lower urinary tract.



**Fig. 2:** An enlarged prostate compressing the urethra and bladder.

## Symptoms

Benign prostatic enlargement can affect the way you normally urinate. This happens because the enlarged prostate compresses the urethra at the outlet of the bladder (**Fig. 2**).

Sometimes the symptoms are mild. For example you may need to urinate more often or find it more difficult to empty your bladder completely. These mild symptoms are a normal part of the ageing process – just like decline in mobility, memory, or flexibility. It is possible that your doctor will not recommend treatment for mild symptoms.

Sometimes the symptoms are very bothersome and can have a negative effect on your quality of life. In this case you may benefit from treatment.

The symptoms caused by BPE are also called male **LUTS** (lower urinary tract symptoms). LUTS can point to other conditions which affect the urinary system.

BPE may cause you to urinate often during the day and may wake you up at night to empty your bladder (known as nocturia). It may also cause urgency and can sometimes lead to involuntary loss of urine (known as incontinence).

BPE can make your flow of urine very slow, it may cause your urine flow to stop and start several times while emptying your bladder, or you may need to wait and push (strain) before you can start urinating.

You may also feel that your bladder is not completely empty after urination. Your stream of urine may end with dribbling. Urine sometimes dribbles into your underwear when you leave the toilet after urinating.

The symptoms which are often called lower urinary tract symptoms (LUTS) may be caused by BPE and may be due to other conditions which affect the urinary system.

## Diagnosis

The doctor and nurses do a series of tests to understand what causes your symptoms. This is called a diagnosis.

The symptoms listed in the previous section can point to many diseases and not only BPE. This is why you may need to take several tests before the doctor can make a diagnosis. First, the doctor or nurse will take your medical history and do a physical examination. Then they will do urine and blood tests, take images of your bladder and prostate, and perform other tests if needed.

### Terms your doctor may use:

- LUTS – Lower urinary tract symptoms
- Micturition – Urination
- Nocturia – The need to wake up at night to urinate
- Post void residual urine (PVR) – The amount of urine left in the bladder after urination
- Urgency – The sudden need to urinate which is difficult to postpone
- Urinary incontinence – Involuntary loss of urine

## Watchful Waiting

If you have benign prostatic enlargement but you do not experience any bothersome lower urinary tract symptoms (LUTS), you will generally not need drugs or surgery to improve the symptoms. Instead, the urologist will explain your condition to you, how it can develop, and how you can adjust your lifestyle to reduce your symptoms and cope with them. The urologist will closely observe your condition over the following months or years and will start active treatment when needed. This is called Watchful Waiting.

Watchful Waiting is a good option if your symptoms are mild and if you feel that your quality of life has not declined. Despite of how it may feel, this is not a passive approach because it includes regular check-ups to make sure your condition does not get worse.

Most men with BPE are offered a period of Watchful Waiting before starting any treatment. It is widely recommended because severe complications during this time are very rare. In fact, some symptoms can improve on their own while others may remain stable for years.

A Watchful Waiting programme includes:

- Evaluation of your symptoms
- A physical examination
- Blood and urine tests
- Education about your condition
- Support and reassurance
- Lifestyle and self-management advice

## Bladder diary

Your doctor may ask you to keep a bladder diary. Here you will note down how much you drink, how often you urinate, and how much urine you produce. The bladder diary is important because it helps your doctor to understand your symptoms better.

## Drug treatment

Drug treatment is advised when the symptoms are bothersome and affect your quality of life. There are several groups of drugs for the treatment of BPE, which you should discuss with your doctor. Together you can decide which approach is best for you.

Factors that influence this decision include:

- Your symptoms
- The size of your prostate
- Your medical history
- Drugs available in your country
- Your personal preferences and values

The groups of drugs used for the treatment of BPE are:

- Herbal drugs
- Alpha-blockers
- 5alpha-reductase inhibitors (5ARIs)
- Muscarinic receptor antagonists (MRAs)
- Phosphodiesterase 5 inhibitors (PDE5Is)
- Combination of drugs

Each group of drugs works in a different way and can have different results and side effects.

## Surgical treatment

The main purpose of surgery is to relieve the symptoms caused by BPE and to improve the flow of urine. There are different treatment options, which you should discuss with your doctor.

Factors that influence this decision include:

- Your symptoms and quality of life
- The size of your prostate
- Your medical history
- The kind of treatment available at your hospital and the expertise of your doctor. Ask your urologist about his or her experience with the recommended treatment option. You have the right to know the complication rate of the surgeon who will do the operation
- Your personal preferences and values. There is no single treatment which is ideal for all patients

### When should I consider surgery?

- When your symptoms get worse, even if you already receive drug treatment
- When you have complications of BPE or if you are at risk of getting them. Complications include:
  - Kidney failure
  - Dilatation of your kidneys
  - Inability to urinate (urinary retention)
  - Recurring urinary tract infection
  - Recurring blood in the urine
- If you do not tolerate drug treatment very well
- If you prefer surgery over drug treatment

During surgical treatment the doctor will remove the enlarged part of your prostate (also known as adenoma). The main surgical procedures are:

- Transurethral resection of the prostate (TURP)
- Transurethral incision of the prostate (TUIP)
- Open prostatectomy
- Laser treatment
- Prostate stents
- Transurethral needle ablation (TUNA)
- Transurethral microwave therapy (TUMT)

Each procedure has its own advantages and disadvantages. The choice of treatment depends on your individual situation and preference.

## Living with BPE

Many men with BPE have to deal with lower urinary tract symptoms (LUTS) as they grow older. For some, this causes a lot of unhappiness and bother, while others experience only mild discomfort.

What's more, different people can experience the same symptoms differently. For example, one man can suffer greatly from waking up at night to urinate while another may hardly be affected by it. That is why your personal experience and your quality of life should not be underestimated. They are as important as diagnostic tests and treatment results.

Quality of life involves both physical and psychological health. It is important not only to feel healthy but also to feel free of the psychological pressure of living with BPE. There are many ways to keep the symptoms under control. They should not stop you from being happy in your relationships and participating in the social, cultural, and economic life of your community.

Seek help if your symptoms bother you: consult your family doctor, general practitioner, or a urologist.



### Go Online

This information leaflet contains basic information on benign prostatic enlargement. If you want to read more in-depth information, visit our website: <http://patients.uroweb.org/>

# Glossary

<b>Adenoma</b>	The enlarged part of the prostate (see <i>also</i> Prostate).
<b>Benign enlargement</b>	Cell growth in the body which is not cancerous.
<b>Bladder</b>	Organ which collects urine from the kidneys.
<b>LUTS</b>	Lower urinary tract symptoms. A term used for the symptoms caused by BPE which can also point to other diseases affecting the urinary tract (see <i>also</i> urinary tract).
<b>Physical</b>	Having to do with or affecting the body.
<b>Prostate</b>	The gland which produces the fluid which carries semen. It is located in the male lower urinary tract, under the bladder and around the urethra (see <i>also</i> bladder, urinary tract, urethra).
<b>Psychological</b>	Having to do with or affecting the mind.
<b>Ultrasonography</b>	Imaging technique which uses high-frequency sounds to make an image of the inside of the body.
<b>Urethra</b>	The tube which carries urine from the bladder and out of the body.
<b>Urinary tract</b>	The organ system which produces and transports urine through and out of the body. It includes two kidneys, two ureters, the bladder and the urethra. The urinary tract is similar in men and women, only men have a longer urethra.
<b>Urologist</b>	A doctor specialized in health and diseases of the urinary tract and the genitals.

## This information was updated in September 2013.

This leaflet is part of EAU Patient Information on BPE. It contains general information about benign prostatic enlargement. If you have any specific questions about your individual medical situation you should consult your doctor or other professional healthcare provider.

This information was produced by the European Association of Urology (EAU) in collaboration with the EAU Section of Uro-Technology (ESUT), Europa Uomo, and the European Association of Urology Nurses (EAUN).

The content of this leaflet is in line with the EAU Guidelines.

You can find this and other information on urological diseases at our website: <http://patients.uroweb.org>

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