

## Patient information

### **Prostate Gland Enlargement Benign Prostatic Hyperplasia**

#### Urology Department

The prostate gland commonly becomes larger in older men. This is called Benign Prostatic Hyperplasia. It can cause problems with passing urine.

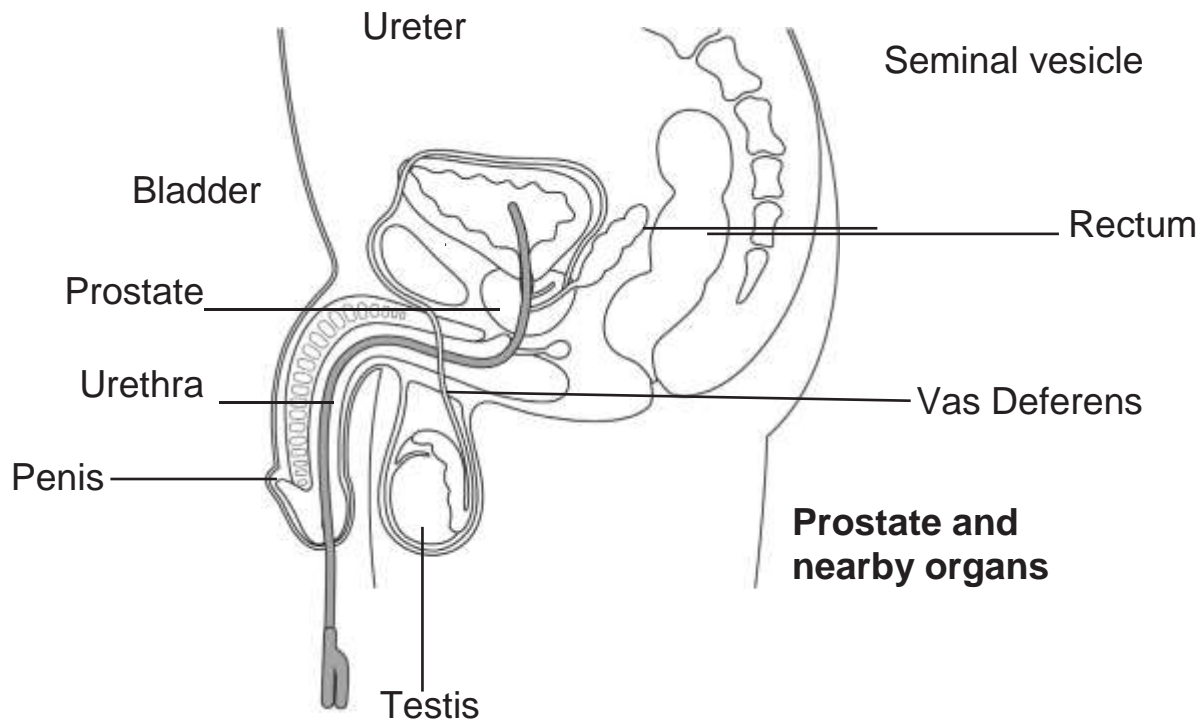
Symptoms are often mild. Without treatment, symptoms do not always get worse, and may even improve over time. If symptoms become troublesome or distressing they can often be improved by medicines or surgery.

This leaflet only deals with benign (non-cancerous) enlargement of the prostate. Cancer of the prostate is a separate condition and is dealt with in another leaflet.

#### **What is the prostate gland?**

The prostate gland (just called 'prostate' from now on) is only found in men. It lies just beneath the bladder (see diagram). It is normally about the size of a chestnut. The urethra (the tube which carries urine from the bladder) runs through the middle of the prostate. The prostate helps to make semen, but most semen is made by the seminal vesicle (another gland nearby).

The prostate gets bigger ('enlarges') gradually after the age of about 50. By the age of 70, about eight in ten men have an enlarged prostate. So, in later life it is as normal for your prostate to enlarge as it is to have grey hair.



### What are the symptoms of prostate enlargement?

About one in three men aged over 50 have some symptoms due to an enlarged prostate. As the prostate enlarges it may cause narrowing of the first part of the urethra. This may partially obstruct the flow of urine from the bladder.

### This can lead to 'obstructive' symptoms such as:

- **Poor stream.** The flow of urine is weaker, and it takes longer to empty your bladder.
- **Hesitancy.** You may have to wait at the toilet for a while before urine starts to flow.
- **Dribbling.** Some urine may trickle out and stain underpants soon after finishing at the toilet.
- **Poor emptying.** You may have a feeling of not quite emptying your bladder.

The enlarged prostate may also 'irritate' the urethra and lower bladder which may cause:

**Frequency** (passing urine more often than normal). This can be most irritating if it happens at night. Getting up several times a night is a common symptom and is called 'nocturia'.

**Urgency.** This means you have to get to the toilet quickly when you 'need to go'. Usually the symptoms are mild to begin with. Perhaps a slightly reduced urine flow, or having to wait a few seconds to start passing urine. Over months or years the symptoms may become more troublesome and severe. Complications develop in some cases.

An enlarged prostate does not always cause symptoms. Also, the severity of the symptoms is not always related to the size of the prostate. It depends on how much the prostate presses on the urethra and lower bladder.

- Not all urinary symptoms in men are due to an enlarged prostate. In particular, if you pass blood or have pain, it may be due to bladder, kidney, or other prostate conditions. You should see a doctor if these symptoms occur, or if there is a change from your usual prostate symptoms.

## **What are the possible complications?**

### **Complications are not common, but include the following:**

- In some cases a sudden total blockage of urine occurs. This is called 'acute urinary retention'. It is very distressing and you need emergency treatment to drain the bladder.
- It occurs in less than 1 in 100 men with an enlarged prostate each year. It is more common if you have fairly troublesome symptoms already. However, in some cases, it can develop 'out of the blue' in a man who has not previously had any prostate-related symptoms.
- In some cases, only some of the urine in the bladder is emptied when you pass urine. Some urine remains in the bladder at all times. This is called 'chronic (ongoing) retention'. This may cause recurring urine infections or incontinence (as urine dribbles around the blockage rather than large amounts being passed each time you go to the toilet).
- The risk of prostate cancer is not increased. Men with a benign prostate enlargement are no more or less likely to develop prostate cancer than those without benign prostate enlargement.

## **What tests do I need?**

A doctor will examine your prostate to see how big it is. This is done by the doctor placing a gloved finger inside your anus (back passage) to feel the prostate from behind.

- A urine and blood test may be done to check the function of your kidneys, and to rule out other causes of passing urine frequently (such as diabetes or a urine infection).
- A urine flow test to assess how bad the obstruction has become.
- A scan to see whether much urine remains in your bladder after you pass urine.
- A PSA (Prostate Specific Antigen) blood test may be offered. This can be used as a 'marker' for the size of the prostate. Larger prostates make more PSA. (Note: a high PSA level is found in people with prostate cancer. It has to be stressed that most men with prostate symptoms do not have prostate cancer. The result of the PSA test needs to be interpreted by a doctor who takes into account various factors such as your age, size of prostate, etc.)
- You may be asked to fill in a questionnaire about your urinary symptoms.

- You may be given a Time and Amount Chart to fill in to record how frequently you pass urine and how much you pass.
- In some cases you may be recommended to have a flexible cystoscopy (a look inside your bladder with a special telescope) or an ultrasound of your kidneys.

### **Is treatment always necessary?**

No. In most cases, an enlarged prostate does not do any 'damage' or cause complications. Whether treatment is needed usually depends on how much bother the symptoms cause. For example, you may be glad of some treatment if you are woken six times a night, every night, with an urgent need to go to the toilet.

On the other hand, slight hesitancy when you go to the toilet, and getting up once a night to pass urine may cause little problem and not need treatment. In older men getting up once at night is considered normal.

### **What are the treatment options for prostate enlargement?**

#### **Not treating may be an option (often called 'watchful waiting')**

If symptoms are mild then this may be the best option.

You may be happy to just 'see how things go' if the symptoms are not too bothersome and are not affecting your life very much. The situation can be reviewed every year or so, or sooner if there is change in symptoms. Symptoms do not always become worse. They may even improve. One study of men with moderate symptoms who had no treatment, but were followed up for five years found:

- In nine out of 20 cases, the symptoms remained about the same.
- In eight out of 20 cases, the symptoms improved (without treatment).
- In three out of 20 cases, the symptoms became worse.

### **Medicines**

The decision to treat with medication usually depends on how much bother the symptoms are causing you. There are two types of medicines that may help - alpha-blockers and 5-alpha reductase inhibitors. Medicines do not cure the problem, nor do they usually make symptoms go completely. However, symptoms often ease if you take medication.

#### **Alpha-blocker medicines**

There are several different types and brands of alpha-blockers which include: indoramin, tamsulosin, alfuzosin, and doxazosin. These medicines work by relaxing the muscle tissue of the prostate and at the outlet of the bladder. In most cases, symptoms improve with taking an alpha-blocker. However, the amount of improvement varies from person to person. Some improvement usually occurs within a few days, but the full effect may take four to six weeks.

Most men can take an alpha-blocker without any problems, but side-effects occur in some cases. These include: slight drowsiness, headaches, and dizziness. (Read the leaflet in the medicine packet for a full list of possible side-effects).

Some men experience retrograde ejaculation with alpha blockers. This means that the amount of semen that is ejaculated during intercourse may be less or even disappear. (This cannot be relied on as a method of contraception). The semen will pass out the next time you urinate. Side effects are reversible when stopping the medication.

### **5-alpha reductase inhibitor medicines**

These can be used as alternatives or in addition to alpha-blockers. There are two types - finasteride and dutasteride.

These medicines work by blocking the conversion of the hormone testosterone to dihydrotestosterone in the prostate. They do this by blocking an enzyme (chemical) called 5-alpha-reductase.

Dihydrotestosterone is partly responsible for making the prostate enlarge. Therefore, a reduced amount of dihydrotestosterone in the prostate tends to cause it to shrink.

On average, finasteride or dutasteride can cause the prostate to shrink by about 30%. Symptoms may improve as the prostate becomes smaller. The full effect can take up to six months as the prostate gradually shrinks. As with alpha-blockers, the amount of improvement with finasteride or dutasteride varies from person to person, and no improvement occurs in some cases.

Side-effects sometimes occur with these medicines. Two examples are impotence and reduced sex drive. These occur in up to 1 in 20 men who take finasteride or dutasteride, but are reversible if the medication is stopped. (Read the leaflet in the medicine packet for a full list of possible side-effects.)

### **Which medicine is chosen?**

The severity of symptoms is not always related to the size of the prostate. A small or large amount of enlargement may cause mild or severe symptoms. An alpha-blocker may help whatever the size of the prostate, as it works by relaxing muscle fibres. Finasteride or dutasteride tend to work best if you have a particularly large prostate which has more tissue to shrink.

Your doctor will advise which medicine may be best in your circumstances. Also, if you develop a problem or side-effect with one type of medicine, then another type may be an option.

### **Combinations of medicines**

In some cases, a combination of an alpha blocker plus a 5-alpha reductase inhibitor is used. This may give quicker and better relief of symptoms than either alone.

Some studies suggest that in men who take a combination of two medicines, about four in five men can stop the alpha-blocker after 6-12 months without their symptoms getting any worse. This is likely to be because the prostate will have shrunk with the 5-alpha reductase inhibitor after this time, and the alpha-blocker is no longer then needed.

## Herbal remedies

Herbal remedies that you can buy for an enlarged prostate include: saw palmetto, beta sitosterol plant extracts, rye grass, and pygeum africanum bark extract. These are sometimes heavily advertised, but there is little scientific evidence that they **work well**. **Saw palmetto has some evidence that it helps, but it is not conclusive. If you are taking these medications it is important to inform your doctor.**

## Surgery

Removal of all, or part, of the prostate is an option if symptoms are very troublesome, or if medicines do not help.

The common operation is called 'Trans Urethral Resection of Prostate' (TURP). In this operation the prostate is chipped away by an instrument that is passed up the urethra of the penis. This operation gives good improvement in symptoms in most cases.

However, in a small number of cases, surgery does not improve the symptoms. In particular, in people with irritative symptoms (frequency and urgency - see above), approximately a third of them will continue to have some degree of symptoms after the operation. Also, complications occur in some cases. For example, after this operation about one in ten men become impotent, and about 1 in 100 men become incontinent of urine. Also, more than half of men develop 'retrograde ejaculation'. This means that during sex, the semen ejaculates ('comes') into the bladder, and is passed out later with urine. As in all operations, there is a small risk of death.

Other surgical techniques are being developed such as laser treatment of the prostate. They are available at some centres. The role of these techniques is not yet fully established, but they may become more popular in the future.

## Coping with symptoms of prostate enlargement

Treatment may not totally clear all symptoms, although they can usually be greatly improved. The following tips may help if you opt not to have treatment (for example if symptoms are mild) or if treatment does not fully work.

- Try to anticipate times when urinary frequency and urgency are likely to be most inconvenient, and reduce the amount that you drink beforehand. For example, when you go out, don't drink much for two to three hours before you go out. However, do not reduce the total amount of fluid that you would normally drink each day.
- After you have finished passing urine, go back to the toilet again after a few minutes to try and pass some more. (This is called double micturition.) This aims to make sure your bladder is emptied completely.
- Consider reducing or stopping caffeine (in tea, coffee, cola, etc) and alcohol. These can make the symptoms of frequency, urgency, and nocturia worse.
- If hesitancy is a problem - try to positively relax when starting to pass urine. For example, try deep breathing exercises.

- If urgency is a problem - try some distraction techniques such as breathing exercises and mental tricks (for example, counting) to take your mind off the bladder.
- If frequency is a problem - try retraining the bladder by 'holding on' for as long as you can each time before passing urine. The bladder muscle can be trained to expand more in this way. Eventually, the bladder may be trained to hold on for longer each time before you need to go to the toilet.

## **Feedback**

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

## **Further information**

**For general queries telephone the Urology Centre**

**Tel: 0151 282 6797 or 0151 282 6877**

**Text Phone Number: 18001 0151 282 6797 / 18001 0151 282 6877**

**Prostate Research Campaign UK**

**10 Northfields Prospect, Putney Bridge Road, London,**

**SW18 1PE Tel: 020 8877 5840**

**[www.prostate-research.org.uk](http://www.prostate-research.org.uk)**

**Prostate Help**

**Association Langworth**

**Lincoln LN3 5DF**

**[www.pha.u-net.com](http://www.pha.u-net.com)**

**(Email or postal contact only. Please send two first class stamps for initial information.)**

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