Laser prostatectomy: treating your enlarged prostate gland

Urology Directorate
Please Note

Prostate vaporisation with laser was derecognised by NICE in June 2010. However, it is now being offered at UCLH outside this most recent NICE recommendation, on an individual basis. Your surgeon would be pleased to discuss this with you and address any questions you may have.
If you require a large print, audio or translated version of this leaflet, please contact us on 020 3447 9422.
We will try our best to meet your needs.

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Introduction
This leaflet is designed to answer any questions you may have about having Laser to treat your enlarged prostate. It explains why this treatment may be suitable for you, its risks and benefits and what you can expect if you decide to have this treatment. If you have any questions that are not answered in this leaflet, please ask your prostate nurse specialist who will be happy to help.

What is the prostate?
Your prostate is part of your reproductive system. It is a plum-sized gland and is only found in men. It lies at the base of your bladder and surrounds your urethra (tube that takes urine from the bladder, along the penis and out of your body). Your prostate produces protective nutrients, which makes up part of the milky fluid (semen) when you ejaculate.
Why has my prostate enlarged?
As men get older the cells of the prostate begin to swell, which increases the size of the prostate. This is called **benign prostatic hyperplasia (BPH)**, which means multiplication of normal (non-cancerous) cells. This isn’t usually serious, but sometimes the prostate grows so large that it puts pressure on your urethra (the tube through which you pass urine). This can make it difficult for you to pass urine and may cause other urinary symptoms such as:

- Not being able to empty your bladder completely, so you may need to go to the toilet more often (referred to as frequency);
- Having a weak urine flow;
- Difficulty getting started;
- Getting up at night;
- Urgency.

Because of the squeeze on your urethra, the bladder may have to use a lot of pressure to empty urine. In the long term, this can damage your bladder and kidneys.

What does laser prostatectomy involve?
A fine telescope-like instrument is inserted into your urethra. A high powered laser is then fired through this instrument. The laser vaporises (destroys) the enlarged prostate tissue. It may be possible for additional prostate tissue to be removed, using the laser to cut the enlarged tissue into small pieces.

When the surgeon has finished lasering the excess prostate tissue a catheter is inserted. This is a narrow tube passed into your bladder through either your penis or lower abdomen, and this allows urine to drain out into a drainage bag. Depending on the time of your surgery the catheter will usually be removed on the evening of surgery or early in the morning.
The operation is usually performed under a general anaesthetic, which means you will be asleep for the entire procedure. Occasionally it is performed under a spinal anaesthetic; in this case you remain awake, but your body is numb from the waist downwards.

There are different types of laser such as:

- Photoselective Vaporesection, using the Quanta Cyber TM 150W (Thulium) System
- Photoselective Vaporisation, using the AMS® Greenlight™ Laser System.

Your surgeon will discuss which type will be used during your treatment and why during your consultation.

**What are the benefits of this treatment?**

Laser seals the blood vessels of the prostate tissue as it vaporises. Therefore, there is very little blood loss, and minimal disturbance to circulating blood, in comparison to the other surgical treatments (see section “What are the alternatives?”).

The catheter that is inserted after surgery can usually be removed within 12 to 24 hours of the surgery. This allows you to leave hospital quicker than the other surgical options below and reduces your recovery time.
What are the risks?

Sensitivity when passing urine, urinary frequency and urgency
These symptoms are difficult to predict in the first two to three months after surgery while the prostate is still healing. In most cases, normal urination resumes in this period of time. But, sometimes, it can take a few more months, particularly if the bladder or sphincter (muscles surrounding the bladder neck and urethra which control continence) function was not normal before surgery. Improvement in the frequency of urination at night usually takes six months or more to settle, and men may still need to pass urine occasionally during the night. You may need to contact your GP to check that you do not have a urinary infection. If you have symptoms that are very troublesome, not settling, or getting worse, you should contact the specialist nurse.

Urine infection
This can cause symptoms such as pain or burning when passing urine, but can be treated with antibiotics. This happens to about five per cent of patients.

Retrograde ejaculation
This is where your semen travels to your bladder when you ejaculate rather than out through your penis, so orgasm will feel different. This is not harmful; the semen will leave your bladder the next time you pass urine and may make your urine appear cloudy. This occurs to about 60 per cent of men having this treatment and is a long-term side effect. Fertility may be affected because of retrograde ejaculation, but you should not rely on this as a form of contraception.

Erectile dysfunction
It is extremely rare for this laser operation to affect erections, whereas erections can be affected significantly by other types of prostate surgery.
Bleeding
There is much less bleeding with laser treatment compared to other surgical procedures for an enlarged prostate. Bleeding can however occur anytime in the first six weeks after surgery, and may be aggravated by blood thinners and physical over-exertion. It is important to check that you do not have a urinary infection. If you take aspirin or blood thinners and have bleeding, you should seek advice from your doctor. It is extremely rare for you to need a blood transfusion.

Difficulty passing urine
In some cases, there may be difficulty passing urine. This may occur when the catheter is removed after the operation. Sometimes it happens after you have been passing urine normally. Occasionally, it is due to bleeding from the prostate.

If you are unable to pass urine, you may need the catheter to be put back, usually as a temporary measure. In some cases, further surgery may be needed. Occasionally, if your bladder is weak as a long term result of your enlarged prostate gland, you may still need to use a catheter on a long term basis.

Prostate re-enlargement and formation of scar tissue
Your prostate continues to enlarge even after surgery and in the future. Occasionally another procedure may become necessary if your symptoms return. The surgery can usually be repeated without difficulty if it becomes necessary, and is more likely in men with larger prostates. For this reason, laser surgery is sometimes not recommended for men with a very large prostate. Scar tissue can sometimes develop in the urethra and bladder neck. This causes similar symptoms to prostate enlargement and this requires a (relatively small) operation to open the channel internally. Less than three per cent of patients need further surgery within a year of this treatment. Laser surgery does not protect against or diagnose prostate cancer.
What will happen if I choose not to have laser treatment?
Not everyone who develops an enlarged prostate will need treatment. Also, not everyone needing prostate surgery can be treated adequately with laser. However, your consultant has recommended laser because of your symptoms and investigation findings. The surgery will usually make it easier for you to pass urine and may relieve your other symptoms, without the need for medication. But, it is important to remember that surgery will not always resolve all of the symptoms.

What are the alternatives?
There are several alternative treatment options outlined below, although some may not be appropriate for you. Your consultant will discuss these with you if they are suitable for your situation:

Observation of your symptoms
Some men may want time to think about surgery, or want to wait and see if their symptoms become any worse before opting for treatment.

Medicines
There are two types of medicines available. They either shrink your prostate or relax the muscles in your prostate and bladder to improve the flow of urine. However, the effects only last as long as you take the medicines. You may have already tried this option without success.

Transurethral resection of the prostate (TURP)
This is an operation to remove the parts of your prostate that are pressing on your urethra, to make it easier for you to pass urine. It involves a surgeon inserting a special telescope-like instrument into your urethra, which has a heated wire at one end that is then used to cut away the prostate tissue.

Open surgery
This operation is done through a cut in the lower abdomen. It is considered if your prostate is too large to be removed via a TURP.
Use of a catheter
Catheterisation is an option for men who do not want, or who are not considered suitable for any of the treatments above. Either you can pass a sterile catheter yourself, in and out, to empty the bladder periodically (depending on how often it is necessary). These catheters are much more slippery than standard catheters to make them slide very easily. Alternatively, a permanent catheter can be fitted, which either goes through the penis or through the lower abdomen. A permanent catheter can be used with a permanent drainage bag (e.g. a bag which attaches to the leg during the daytime, and a larger floor standing one at night), or a valve, which works like a tap, is fitted to the end of the catheter, avoiding the need for a bag.

What are the risks of a general anaesthetic?
There are a number of factors that affect the chances of suffering complications from anaesthesia; these may include age, weight, smoking, lifestyle and the general state of your health. Your anaesthetist and/or your surgeon can provide further details. The following information on risks is provided by the Royal College of Anaesthetists.

Very common (one in 10) and common (one in 100) side effects: Feeling sick and vomiting after surgery, sore throat, dizziness, blurred vision, headache, itching, aches, pains, backache, pain during injection of drugs, bruising and soreness, confusion or memory loss.

Uncommon (one in 1000) side effects and complications: Chest infection, bladder problems, muscle pains, slow breathing (depressed respiration), damage to the mouth, an existing medical condition getting worse, awareness (becoming conscious) during operation.

Rare (one in 10,000) or very rare (one in 100,000 or less) complications: Damage to the eyes, serious allergy to drugs, nerve damage, death.

Death from anaesthesia is very rare, and is usually caused by a combination of four or five complications together. In the UK there are approximately about five deaths for every million anaesthetics.
Asking for your consent
If you decide to go ahead with treatment, by law we must ask for your consent and will ask you to sign a consent form. This confirms that you agree to have the procedure and understand what it involves. Staff will explain all the risks, benefits and alternatives before they ask you to sign a consent form. If you are unsure about any aspect of your proposed treatment, please don’t hesitate to speak with a senior member of staff again.

How should I prepare for this surgery?
You will be offered a choice of dates for your surgery.

You will need to attend a pre admission appointment where we will assess your suitability for surgery and anaesthetic. We will either arrange this appointment when we offer you a date for your surgery, or we send an appointment date by post. If you do not come to this appointment, we may have to cancel your surgery. Make sure you understand if any of your medications need to be adjusted leading up to the surgery.

Please continue to take all your medicines unless you are told otherwise, and remember to bring all of them into hospital with you.

What should I expect when I come to hospital?
You will have to have some tests done for your surgeon can assess you properly and to help him or her to decide on the correct treatment. These tests may be repeated after the operation to make sure your progress is monitored and help anticipate any complications that may arise. How and why these tests are done will be explained to you beforehand to ensure you know what is expected.

Prior to admission you will need to attend a Pre Assessment clinic where the following investigations may be undertaken:
• Urine test;
• Blood tests;
• ECG (Electrocardiogram). This is a simple painless procedure which provides a paper printout of your heart rate and rhythm.
• MRSA screening.

What happens when I arrive in hospital?
When you arrive, we will ask you to change into a hospital gown and show you where to leave your belongings. Please do not bring valuable items into the hospital, as we cannot accept responsibility for them. You might like to bring something with you to read whilst you are waiting for your surgery. You will be asked not to eat for six hours, and not to drink any fluid for four hours prior to the procedure. You should continue to take your regular medication unless told specifically not to do so. A small sip of water with your usual medication is permitted.

What should I expect after the procedure?
During the three to five days after your procedure, you may have some blood in your urine and it may sting when you pass water. This is normal and should clear after a few days. Sensitivity in the penis due to the operation can lasts few weeks, and usually settles after healing is complete.

If you have some discomfort following the operation or from the catheter, over-the-counter pain killers like paracetamol are generally quite sufficient. You may be prescribed antibiotics to prevent urinary infection.

You can safely undertake light exercise after the operation, but you must avoid heavy lifting, straining, long journeys and sexual activity in the first month. You should maintain a good fluid intake of one and a half to two litres a day, drink steadily throughout the day, and avoid taking too much tea, coffee, fizzy drinks and alcohol as these may irritate your bladder. You should pass urine according to how you feel the need to do so.
You may need to have two weeks off work. It is sensible to avoid driving in this period. You must absolutely not drive within 24 hours of an anesthetic.

It is common to have less control passing urine for a short time after surgery. If you experience this, please tell your nurse, who will explain how to perform pelvic floor exercises to improve your control.

You will be seen in clinic by either a doctor or nurse specialist two to three months after your surgery.

After you have had laser prostatectomy, contact your GP if:

- **Pain or bleeding is severe.**
- **Any severe pain or bleeding lasts longer than two days.** If you notice heavy bleeding, fresh blood or blood clots, or if your abdomen (belly) is swollen and painful, please go to your nearest Accident and Emergency department or see your GP urgently.
- **You develop symptoms of infection.** If you develop a fever, smelly urine and/or pain when you pass urine you may have a urine infection. Drink plenty of fluids (at least eight to ten glasses per day) and contact your GP who may wish to test a specimen of urine and may prescribe you some antibiotics if your symptoms do not improve.
- **You have any other problems that concern you.**

If you need to contact the hospital during working hours (09:00 to 17:00) contact your medical team’s secretary on:

Telephone: ________________________________

(please ask for the contact number before you are discharged).

If you need to see someone urgently out of hours and cannot contact your GP you will need to go to your nearest Accident and Emergency department.
Important! For 24 hours after your operation:

**Do not:**
- Drive or ride a vehicle.
- Drink alcohol.
- Operate machinery.
- Sign documents or make important decisions.
- Return to work.

**Do:**
- Rest quietly at home.
- Eat normal, healthy meals, but drink plenty of fluids (at least eight to ten glasses or mugs of fluids such as water, squash, fruit juice, tea or coffee).
- Take extra care with electrical appliances, as your co-ordination may be affected if you have had an anaesthetic.
Contact details

University College Hospital at Westmoreland Street
Switchboard: 0845 155 5000
020 3456 7890

Website: www.uclh.nhs.uk

Mr. Feneley's PA
Telephone: 020 3447 9422

Richard Weston, Nurse Practitioner
Switchboard: 0845 155 5000
020 3456 7890
ext 74932

Mobile: 07711 113416

Email: Richard.Weston@uclh.nhs.uk
Where can I get more information?

**NHS Direct**
Telephone: 0845 46 47
Website: www.nhsdirect.nhs.uk

**Patient UK**
Website: www.patient.co.uk

Please also see our UCLH Surgery video information by going to: www.uclh.nhs.uk/PandV/Pages/HavingsurgeryatUCLH-vids.aspx

**UCLH cannot accept responsibility for information provided by other organisations.**

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Some text from Guy’s and St. Thomas’s NHS Foundation Trust’s leaflet—with thanks.
Space for notes and questions