

---

## Holmium laser enucleation of the prostate (HoLEP): procedure-specific information

### What is the evidence base for this information?

This leaflet includes advice from consensus panels, the British Association of Urological Surgeons, the Department of Health and evidence-based sources; it is, therefore, a reflection of best practice in the UK. It is intended to supplement any advice you may already have been given by your GP or other healthcare professionals. Alternative treatments are outlined below and can be discussed in more detail with your Urologist or Specialist Nurse.

### What does the procedure involve?

This operation involves the telescopic removal of obstructing prostate tissue using a laser and temporary insertion of a catheter.

### What are the alternatives to this procedure?

Drugs, use of a catheter/stent, observation,, conventional transurethral resection or open operation.



### What should I expect before the procedure?

If you are taking Clopidogrel on a regular basis, you must stop 10 days before your admission. This drug can cause increased bleeding after prostate surgery. Treatment can be re-started safely about 10 days after you get home. If you are taking Warfarin to thin your blood, you should ensure that the Urology staff are aware of this well in advance of your admission.

---

You will usually be admitted on the day of your surgery. If not done on the day of your urology clinic appointment, you will normally receive an appointment for pre-assessment, approximately 14 days before your admission, to assess your general fitness, to screen for the carriage of MRSA and to perform some baseline investigations. After admission, you will be seen by members of the medical team which may include the Consultant, Specialist Registrar, House Officer and your named nurse.

You will be asked not to eat or drink for 6 hours before surgery and, immediately before the operation, you may be given a pre-medication by the anaesthetist which will make you dry-mouthed and pleasantly sleepy.

Please be sure to inform your Urologist in advance of your surgery if you have any of the following:

- an artificial heart valve
- a coronary artery stent
- a heart pacemaker or defibrillator
- an artificial joint
- an artificial blood vessel graft
- a neurosurgical shunt
- any other implanted foreign body
- a prescription for Warfarin, Aspirin or Clopidogrel (Plavix®)
- a previous or current MRSA infection
- high risk of variant CJD (if you have received a corneal transplant, a neurosurgical dural transplant or previous injections of human-derived growth hormone)

## **What happens during the procedure?**

Either a full general anaesthetic (where you will be asleep throughout the procedure) or a spinal anaesthetic (where you are awake but unable to feel anything from the waist down) will be used. All methods minimise pain; your anaesthetist will explain the pros and cons of each type of anaesthetic to you. The operation, on average, takes 45-90 minutes, depending on the size of your prostate.

You will usually be given an injectable antibiotic before the procedure after checking for any drug allergies.

The laser is used to separate the obstructing prostate tissue from its surrounding capsule and to push it in large chunks into the bladder. An instrument is then used through the telescope to remove the prostate tissue from the bladder. A catheter is normally left to drain the bladder at the end of the procedure.



## **What happens immediately after the procedure?**

There is always some bleeding from the prostate area after the operation. The urine is usually clear of blood within 12 hours, although some patients lose more blood for longer. It is very unusual to require a blood transfusion after laser surgery.

It is useful to drink as more fluid than normal in the first week after the operation because this helps the urine clear of any blood more quickly. Sometimes, fluid is flushed through the catheter to clear the urine of blood.

You will be able to eat and drink on the same day as the operation when you feel able to.

The catheter is generally removed around 0600hr on the morning after surgery. At first, it may be painful to pass your urine and it may come more frequently than normal. Any initial discomfort and frequency of urination usually improves steadily within a few days. Some of your symptoms, especially frequency, urgency and getting up at night to pass urine, may not improve for several months because these are often due to bladder overactivity (which takes time to resolve after prostate surgery) rather than prostate blockage. Since a large portion of prostate tissue is removing with the laser technique, there may be some temporary loss of urinary control until your pelvic floor muscles strengthen and recover. Pelvic floor exercises before and after surgery help to decrease the chance of any temporary loss of urinary control (incontinence).

It is not unusual for your urine to turn bloody again for the first 24-48 hours after catheter removal. Some blood may be visible in the urine even up to 6 weeks after surgery but this is not usually a problem. After the catheter is removed et your nurse know if you are unable to pass urine and feel as if your bladder is full. Some patients, particularly those with small prostate glands, are unable to pass urine at all after the operation due to temporary swelling of the prostate area. If this should happen, we would pass a catheter again to allow the swelling to resolve and the bladder to regain its function. Usually, patients who require re-catheterisation go home with a catheter in place and then return within a week for a second catheter removal which is successful in almost all cases.

The expected hospital stay is 1 night. It is safe for almost all patients to be discharged the afternoon after surgery.

---

## Are there any side-effects?

Most procedures have a potential for side-effects. You should be reassured that, although all these complications are well-recognised, the majority of patients do not suffer any problems after a urological procedure.

Please use the check boxes to tick off individual items when you are happy that they have been discussed to your satisfaction:

### Common (greater than 1 in 10)

- Temporary mild burning, bleeding and frequency of urination after the procedure
- No semen is produced during an orgasm in approximately 75% If the prostate is fully enucleated
- Treatment may not relieve all the urinary symptoms
- Infection of the bladder, testes or kidney requiring antibiotics
- Loss of urinary control (incontinence) which usually resolves within 6 weeks (10%); this can usually be improved with pelvic floor exercises
- Initial failure to pass urine after surgery requiring a new catheter for less than 1 week (10-20%)

### Occasional (between 1 in 10 and 1 in 50)

- Weakened erections or impotence (less than 5%)
- Injury to the urethra causing delayed scar formation (stricture) in 5%
- Finding unsuspected cancer in the removed tissue which may need further treatment (8%)

### Rare (less than 1 in 50)

- Retained tissue fragments floating in the bladder which may require a second telescopic procedure for their removal
- Very rarely, perforation of the bladder requiring a temporary urinary catheter or open surgical repair
- Persistent loss of urinary control which may require a further operation (0.5%)
- Possible need to repeat treatment later due to re-obstruction (less than 2%)
- May need self catheterisation to empty bladder fully If bladder weak (1%)
- Bleeding requiring return to theatre and/or blood transfusion (less than 1%)

### Hospital-acquired infection (overall risk for Addenbrooke's)

- Colonisation with MRSA (0.02%, 1 in 5,000)
- Clostridium difficile bowel infection (0.04%; 1 in 2,500)
- MRSA bloodstream infection (0.01%; 1 in 10,000)

---

*(These rates may be greater in high-risk patients e.g. with long-term drainage tubes, after removal of the bladder for cancer, after previous infections, after prolonged hospitalisation or after multiple admissions)*

## **What should I expect when I get home?**

When you leave hospital, you will be given a "draft" discharge summary of your admission. This holds important information about your inpatient stay and your operation. If, in the first few weeks after your discharge, you need to call your GP for any reason or to attend another hospital, please take this summary with you to allow the doctors to see details of your treatment. This is particularly important if you need to consult another doctor within a few days of your discharge.

Most patients feel pretty much back to normal within a week. Apart from some burning on urination you should not be in any pain. You may notice that you pass very small flecks of tissue in the urine at times within the first month as the prostate area heals. This does not usually interfere with the urinary stream or cause discomfort. It is normal to pass some blood in the urine (usually intermittently) for up to 6 weeks after surgery.

## **What else should I look out for?**

If you experience increasing frequency, burning or difficulty on passing urine or worrying bleeding, contact your GP.

In the event of severe bleeding, passage of clots or sudden difficulty in passing urine, you should contact your GP immediately since it may be necessary for you to be re-admitted to hospital.

## **Are there any other important points?**

Removal of your prostate should not adversely affect your sex life provided you are getting normal erections before the surgery. Sexual activity can be resumed as soon as you are comfortable, usually after 3-4 weeks.

It is often helpful to continue with pelvic floor exercises as soon as possible after the operation since this can improve your control when you get home. The symptoms of an overactive bladder may take 3 months to resolve whereas the flow is improved immediately.

If you need any specific information on these exercises, please contact the ward staff or the Specialist Nurses. The symptoms of an overactive bladder may take 3 months to resolve whereas the flow is improved immediately.

The results of any tissue removed will be available after 14 – 21 days and you and You and your GP will be informed of the results by letter.

Around 3 months after surgery you will be reviewed in the outpatient clinic and several tests repeated (including a flow rate, bladder scan & symptom score) to

---

help assess the effects of the surgery. Please come to your clinic appointment prepared to pass urine for a flow test.

Most patients require a recovery period of 1-2 weeks at home before they feel ready for work. You should avoid any heavy lifting or physical straining during this time. You should not drive until you feel fully recovered; 1-2 weeks is the minimum period that most patients require before resuming driving.

### **Driving after surgery**

It is your responsibility to ensure that you are fit to drive following your surgery. You do not normally need to notify the DVLA unless you have a medical condition that will last for longer than 3 months after your surgery and may affect your ability to drive. You should, however, check with your insurance company before returning to driving. Your doctors will be happy to provide you with advice on request.

## **Is there any research being carried out in this field at Addenbrooke's Hospital?**

Yes. We are currently assessing the effectiveness and safety of HoLEP. This involves a number of detailed tests performed before surgery which are then repeated several weeks after the procedure.

This is part of the ongoing audit process for developing technologies recommended by the National Institute of Health & Clinical Excellence (NICE).

## **Who can I contact for more help or information?**

### **Oncology Nurses**

- Uro-Oncology Nurse Specialist  
01223 586748
- Bladder cancer Nurse Practitioner (haematuria, chemotherapy & BCG)  
01223 274608
- Prostate cancer Nurse Practitioner  
01223 247608 or 216897 or bleep 154-548
- Surgical Care Practitioner  
01223 348590 or 256157 or bleep 154-134

### **Non-Oncology Nurses**

- Urology Nurse Practitioner (incontinence, urodynamics, catheter patients)  
01223 274608 or 586748
- Urology Nurse Practitioner (stoma care)  
01223 349800

---

## **Patient Advice & Liaison Centre (PALS)**

- Telephone  
+44 (0)1223 216756 or 257257  
+44 (0)1223 274432 or 274431
- PatientLine  
\*801 (*from patient bedside telephones only*)
- E mail  
pals@addenbrookes.nhs.uk
- Mail  
PALS, Box No 53  
Addenbrooke's Hospital  
Hills Road, Cambridge, CB2 2QQ

## **Chaplaincy and Multi-Faith Community**

- Telephone  
+44 (0)1223 217769
- E mail  
derek.fraser@addenbrookes.nhs.uk
- Mail  
The Chaplaincy, Box No 105  
Addenbrooke's Hospital  
Hills Road, Cambridge, CB2 2QQ

## **MINICOM System ("type" system for the hard of hearing)**

- Telephone  
+44 (0)1223 274604

## **Access Office (travel, parking & security information)**

- Telephone  
+44 (0)1223 586969

## **What should I do with this form?**

Thank you for taking the trouble to read this information sheet. If you wish to sign it and retain a copy for your own records, please do so below.

If you would like a copy of this form to be filed in your hospital records for future reference, please let your Urologist or Specialist Nurse know. If you do, however, decide to proceed with the scheduled procedure, you will be asked to sign a separate consent form which will be filed in your hospital notes and you will, in addition, be provided with a copy of the form if you wish.

I have read this information sheet and I accept the information it provides.

Signature.....Date.....

---

## How can I get information in alternative formats?

Please ask if you require this information in other languages, large print or audio format: 01223 216032 or [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

- Polish** Informacje te można otrzymać w innych językach, w wersji dużym drukiem lub audio. Zamówienia prosimy składać pod numerem: 01223 216032 lub wysyłając e-mail: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)
- Portuguese** Se precisar desta informação num outro idioma, em impressão de letras grandes ou formato áudio por favor telefone para o 01223 216032 ou envie uma mensagem para: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)
- Russian** Если вам требуется эта информация на другом языке, крупным шрифтом или в аудиоформате, пожалуйста, обращайтесь по телефону 01223 216032 или на вебсайт [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)
- Cantonese** 若你需要此信息的其他語言版本、大字體版或音頻格式，請致電 01223 216032 或發郵件到: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)
- Turkish** Bu bilgiyi diğer dillerde veya büyük baskılı ya da sesli formatta isterseniz lütfen su numaradan kontak kurun: 01223 216032 veya aşağıdaki adrese e-posta gönderin: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)
- Bengali** এই তথ্য বাংলায়, বড় অক্ষরে বা অডিও টেপে পেতে চাইলে দয়া করে 01223 216032 নম্বরে ফোন করুন বা [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk) ঠিকানায় ই-মেইল করুন।



Addenbrooke's is smoke-free. You cannot smoke anywhere on the site. Smoking increases the severity of some urological diseases and increases the risk of post-operative complications. For advice on quitting, contact your GP or the NHS smoking helpline free on 0800 169 0 169

## Document history

Author(s)	Nikesh Thiruchelvam (on behalf of the Consultant Urologists)
Department	Department of Urology, Box No 43 Addenbrooke's Hospital Cambridge University Hospitals NHS Foundation Trust Hills Road Cambridge, CB2 2QQ <a href="http://www.addenbrookes.org.uk">www.addenbrookes.org.uk</a>
Contact number	01223 216575
Fax number	01223 216069
Dept website	<a href="http://www.camurology.org.uk">www.camurology.org.uk</a>
First published	May 2005
Review date	April 2014
File name	Holmium laser enucleation of the prostate (HoLEP)
Version number	5.0
Ref	96/Urol_04_11 Holmium laser enucleation of the prostate (HoLEP)