

HoLEP (Holmium laser enucleation of the prostate). Information for patients.

What does the procedure involve?

This operation involves the telescopic removal of obstructing prostate tissue using a laser and temporary insertion of a catheter which is removed the day after surgery in the majority of men



What are the alternatives to this procedure?

Observation, modifying fluid intake, medications, use of a catheter, 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. You will normally receive an appointment for pre-assessment before your admission, to assess your general fitness and to perform some baseline blood and urine tests. After admission, you will be seen by members of the medical team who will include the Consultant, your anaesthetist and your 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.

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 45-120 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 after 24 hours, although it is quite common to see some blood in the urine, often intermittently, for even up to 6 weeks after surgery. This is not a concern surgically, and although blood in the urine may seem alarming to some people it is usually only a small amount of blood that is lost. It is very unusual to require a blood transfusion after laser surgery.

It is useful to drink more fluid than normal in the first 24 hours 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.

Many men are surprised at how comfortable they are after laser prostate surgery. Apart from some minor discomfort from the catheter irritating the penis and bladder, it is usual not to have any pain as such.

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 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 can be relieved by tablets or injections and the frequency usually improves 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 (which means you will have excellent relief of prostate blockage and have a very low risk of ever needing a repeat prostate operation), there may be some temporary loss of urinary control until your pelvic floor muscles strengthen and recover. This is why pelvic floor exercises are taught prior to surgery. If you do these exercises as advised, the risk of urinary incontinence after surgery is very low and if it does occur it normally resolves completely within a few months (often within days). Any incontinence is normally managed by wearing a pad inside the underpants. The need to use pads beyond 3 months occurs in less than 2% of men.

Let your nurse know if you are unable to pass urine and feel as if your bladder is full after the catheter is removed. 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 normally 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 average hospital stay is 1-2 days.

What should I expect when I get home?

Most patients feel tired and below par for a week or two because this is major surgery. 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.

What else should I look out for?

If you experience increasing frequency, burning or difficulty in passing urine or worrying bleeding, please contact your doctor.

About 1 man in 5 experiences bleeding some 10-14 days after getting home; this is due to scabs separating from the cavity of the prostate. Increasing your fluid intake should help stop this bleeding within 24 hours but, if it does not, you should contact your urologist or your GP who may prescribe some antibiotics for you. In the unlikely 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 ability to have an erection provided you are getting normal erections before the surgery. It is very common not to be able to ejaculate any semen at the point of orgasm after prostate surgery. This is because after surgery it is much easier for the semen to travel back into the bladder than down and out through the penis. This is not an uncomfortable or harmful consequence of surgery, and most men say the experience of orgasm remains a pleasurable sensation. This is only a major issue if you intend fathering children in future. Sexual activity can be resumed as soon as you are comfortable, usually after 3-4 weeks.

It is often helpful to recommence 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 almost immediately.

The results of any tissue removed will be available after 14 – 21 days and you and your GP will usually be informed of the results by letter. If any results are best discussed with you in person, an appointment will be made for you to be seen in the clinic soon after the results become available.

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. This is usually 3 months after the surgery to allow time for your waterworks to settle into a new pattern.

Most patients require a recovery period of 1-2 weeks at home before they feel ready for work. We recommend 2 weeks' rest before resuming any job, especially if it is physically strenuous and you should avoid any heavy lifting during this time. You should not drive until you feel fully recovered; 1 week is the minimum period that most patients require before resuming driving.

Are there any side-effects of the operation?

Common side-effects (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, but if this is the case a medication can sometimes help if required
Infection of the bladder, testes or kidney requiring antibiotics (approx 10-15%)
Failure to pass urine immediately after surgery requiring placement of a new catheter which is then removed (almost always successfully) within a week (10-15%)

Occasional side-effects (between 1 in 10 and 1 in 50)

Loss of complete urinary control (incontinence) which normally resolves within 6 weeks (less than 10%); this can usually be improved with pelvic floor exercises
Weaker or no erections. 2 recent studies have shown no significant difference in ability to have an erection in men before and after HoLEP surgery but there is still a small risk (probably less than 5%) of a decreased ability to have an erection. Some men's erections improve after surgery
Injury to the urethra causing delayed scar formation requiring further minor surgery (5%)
Finding unsuspected cancer in the removed tissue which may need further treatment (5%)

Rare side-effects (less than 1 in 50)

Need to repeat treatment later due to re-obstruction from prostate regrowth (approx 1% in the first 7 years after surgery)
Self-catheterisation or permanent catheter to empty bladder if the bladder is weak (1%)
Persistent loss of urinary control which may require a further operation (less than 1%)
Retained tissue fragments floating in the bladder which may require a second telescopic procedure for their removal (less than 1%)
Very rarely, perforation of the bladder requiring a temporary urinary catheter or open surgical repair (less than 0.5%)
Bleeding requiring return to theatre and/or blood transfusion (less than 0.5%)

Here's what the experts have to say about holmium laser treatment for BPH:

"The HoLEP has replaced standard TURP completely and unreservedly in our hospital. There is nothing out there that has been shown to be better."

Peter Gilling, MD, Consulting Urologist at Tauranga Hospital, Tauranga, New Zealand and holmium laser prostatectomy pioneer:

"Use of the Ho:YAG laser for treatment of BPH is an important new technique that offers significant advantages over TURP....In a phrase, HoLEP compared with TURP provides 'maximal benefit with minimal morbidity'....I would envision that every significant urology department will have a holmium laser at their disposal. It is a basic tool for stones and BPH, two of the most common conditions urologists treat."

"HoLEP represents a paradigm shift in the surgical management of BPH and is endorsed by all the leading urological organizations world-wide. We have used this technique exclusively with over 2,000 patients since it evolved in the late 1990's. Once learned, HoLEP replaces both TURP and open prostatectomy, providing superior outcomes in prostates of all sizes!"

Here's what some of our patients say about HoLEP:

Mr DB, 70yr

Before the operation I was getting up at least 3 times during the night. I had to urinate very frequently during the day. I knew the location of all the Public Gents in Cambridge and all the pubs where you could use the Gents without buying any beer. Urination flow was poor and incomplete with dribbling. Erections poor and not long lasting. (I was) increasingly very tired and weak, unable to cycle because of soreness. Everything (was) an effort.

Four months after the operation: Urine flow excellent, with good immediate force, no interruptions and no dribbling. Much longer periods between urination. Some nights I sleep through without waking. Erections excellent. Much more energy, back to cycling and gardening. I feel as though I have been rescued from poisoning and liberated back to a normal life.

My family join me in thanking you very much indeed for the expert help you gave me during the recent operation.

Mr BG, 72yr

My recollection as a young man was being able to pee over a five bar gate onto a mushroom on the other side. However, during the years prior to my operation I found it difficult to pee on to a mushroom six inches from my feet. It gives me great pleasure to now record, following my operation, that I am now able to circumnavigate the above gate once again. Yip-pee!

Within 3 weeks I was playing golf again. Within a week I was walking quite briskly and swimming as well. And within 4 weeks I was performing again with my dear wife. I have to record that I was wrong to put off this operation for so long. When I think back at the disturbed nights peeing 3 or 4 times if I was lucky, 3 total blockages when I had to have a catheter inserted, watching out for when and what I had to drink. It really was not worth the delay.

So to Mr Aho and his team very many thanks. You did a splendid job and I shall be eternally grateful.

Mr ID, USA

Dear Mr Aho,

I can't tell you how thrilled I am with the results from my HoLEP surgery - for more than a decade I had to sit to urinate (couldn't get enough stream going to stand) and now I feel like a boy again! Having researched the HoLEP procedure on-line, I was aware of your renowned reputation in the field so your excellent skills and experience as a surgeon and urologist were to be expected but I was pleasantly surprised to find you also had such a wonderful rapport with your patient easily explaining everything so clearly and taking the time to answer any and all questions). All phases of my treatment - from when I originally contacted Janice at Cambridge Urology Partners to arrange the surgery, the admission and pre-op at Spire Cambridge Lea Hospital, the surgery and recovery, to the final post-op appointment - were superb. The efficiency and helpfulness of everyone involved were truly impressive.

Following the successful surgery, I was able to be released earlier than expected the next day since I was "voiding successfully" within 7 hours of the catheter being removed and I did not have to use any pain medication at all after the surgery. Since you were able to remove the uric acid kidney stone lingering in my bladder during the procedure, that was a huge added benefit! It was also so considerate of you to schedule the post-op appointment back at Spire Cambridge Lea Hospital since that was more convenient for me (how often do you find specialists doing that? - definitely would never find that happening where I live).

The surgery was August 18 and I was back home in South Carolina by the night of August 27 still amazed at how great my waterworks are functioning.

Again, many thanks to you and your team for everything - I am so grateful that I chose to come to Cambridge for treatment (it was a fraction of what it would have cost here in the U.S. and was light years better treatment).

For your peace of mind

Mr RT, 2013

Dear Mr Armitage,

I have just received a letter from you informing me that the tissue analysis from my prostate was clear of cancer. That has been good news for me but it also provides an opportunity to thank you formally for your, and for your team's professional skills.

I was not clear which type of operation I was going to get on my enlarged prostate but I'd looked you up beforehand on line and was hopeful for laser surgery and relieved when you offered it. In the event the results were quite remarkable. From the very beginning, my urine flow was incredibly strong. It must have been like that when I was young but I can't remember! Frequency reverted quickly to normal. (I had been going every hour prior to my prostate giving out.) My urine cleared of blood within 2-3 weeks and of scabs from the remodelled prostate in about 4. Even my sex life has been completely normal.

None of this could have happened without what you did. My father had the same condition as me and was operated on in 1963. It changed his life, albeit he made the absolute best of it. In my case it seems to have returned my life to normal.

Once more, many thanks,

Mr RL,2013

Dear Mr Armitage,

Thank you for your letter, received this morning, with the good news it contains. I am indeed recovering well from the surgery, and would say I am already better than I have been for quite some time.

My wife wishes to join me in expressing gratitude for all the treatment I have received at Addenbrooke's, culminating in the operation itself, and the skill with which it was conducted. Much care has been taken to put me at ease, alleviate and prevent pain where possible, and explain to us the course of action now proposed. I look forward to meeting you again when attending the clinic when the time comes.

Dear Mr Kastner,

[...] you performed HoLEP on my prostate, and the general purpose of this letter is to thank you for making such a total change to my quality of life.

But a simple "Thank you" does not cover the way you first of all agreed to see me despite the fact that yours is not my local hospital, the care you took during the first interview to see that that particular treatment was right for me, and the very professional way in which you insured I was kept fully informed before, during, and after the procedure. [...]

But I am delighted, and much relieved, to report that now, three months later, I am a transformed man. Urinal flow is excellent and earlier this week I experienced a proper ejaculation for the first time since the operation, previous orgasms being sensation only.

I can only wish you all the recognition you deserve for the wonderful things you are able to achieve and thank you once again for your kindness to me, and of course my thanks naturally go to all your team too.
Kindest regards.

For your peace of mind

Dear Mr Kastner

I just have to write and tell you how grateful I am to you and to Dr Mahroof for what I perceive as an excellent outcome for not the easiest of HoLEP procedures that you must have carried out in your time.

I have made – and continue to make – a much quicker and better recovery than I could reasonably have hoped for. This is surely due – in some part at least – to the decision not to carry out a laparotomy and cystotomy.

That decision meant that you all had to spend at least two extra hours in theatre when you must surely have been wanting to get away and start your truncated weekends.

But no, the patient – me – came first, and today I am benefitting from your willingness to go the extra mile, particularly when morcellation must be both tedious and boring as well as time-consuming and tiring.

It was a lucky day when I found myself in the care of yourself and Dr Mahroof, and I am hugely appreciative of your labours and attentiveness on my behalf.

For more information about HoLEP including an update of clinical research of this cutting edge technology, please see our website.

Procedure Code for insured patients: M6532



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For your peace of mind

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