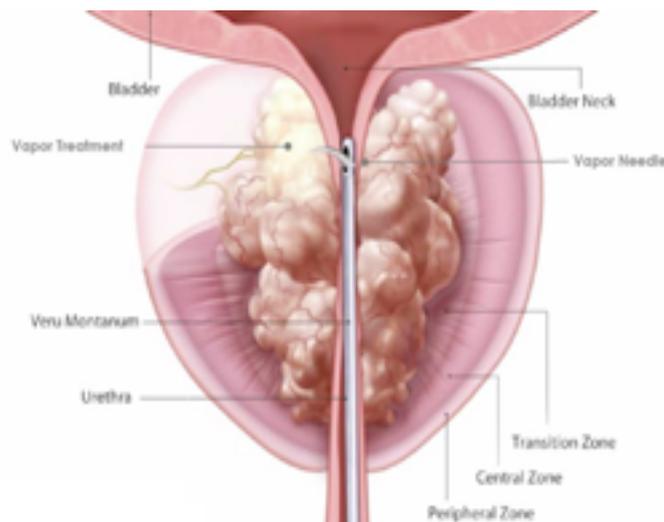


## Rezum (Steam Treatment) for the enlarged, obstructive prostate

### What does the procedure involve?

This minimally invasive procedure uses multiple injections of steam (vapour) delivered through a tiny needle into the inner obstructive core of the prostate. Maximal shrinkage of the injected parts of the prostate occurs between 2 to 3 months after Rezum treatment. (see "What happens during the procedure" below).



### What are the alternatives to this procedure?

1. Lifestyle changes such as avoiding caffeinated and alcoholic drinks and reducing fluid intake in the evenings.
2. Prostate +/- bladder medications.
3. Other minimally invasive procedures such as Prostatic Urethral Lift (Urolift) or Prostate Artery Embolisation, also known as PAE (blocking off the blood supply to the prostate using tiny beads).
4. Procedures that remove the entire obstructive component of the prostate eg. Holmium Laser Enucleation of the Prostate (HoLEP).
5. Use of a catheter to empty the bladder.

Rezum improves male urinary symptoms to a greater degree than medications.

It does not improve urinary symptoms to as great a degree as HoLEP.

For men in urinary retention it is not yet known what the exact success rate of becoming catheter free after Rezum is. It is expected to be around 80%, compared to 99% for HoLEP. The success rates of Urolift and PAE for treating men in urinary retention have not yet been clearly defined either.

Within the first 5 years after Rezum there is a 4.4% chance of needing another procedure due to treatment failure. This compares to 0.7% chance of re-operation within the first 10 years after HoLEP, 14% at 5 years for Urolift, and 20% at 2-4 years for PAE.

By 5 years after Rezum 11.1% of men have started or restarted prostate medications for recurrent urinary symptoms. This compares to 10.7% at 5 years after Urolift and virtually none after HoLEP.

Rezum has a less negative effect on sexual function than some prostate medications (eg. finasteride and dutasteride).

Rezum does not decrease erectile function but there is a 10% chance of ejaculation changes with Rezum. Urolift is the only procedure for prostate obstruction that has not had any reported adverse effects on either erectile or ejaculatory function. Erectile function is not affected by PAE, but it has a 56% chance of causing changes to ejaculation. Erectile dysfunction occurs in around 2% of men after HoLEP. Ejaculation is affected in virtually all men who have HoLEP, although it is possible to reduce this risk to around 20% with ejaculation sparing HoLEP.

## **What should I expect before the procedure?**

An appointment for the pre-assessment clinic (to assess your general fitness for anaesthesia and the procedure) will be arranged. You will usually be admitted to hospital on the same day as your procedure. During the admission process you will meet members of the medical team including your Urologist, the Anaesthetist and your nurse.

You will be asked not to eat or drink for 6 hours before surgery. If you are taking any blood thinning medication as outlined below, you will usually be asked to stop it between 5 and 2 days prior to your procedure depending on which medication you are taking

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

- an artificial heart valve
- a coronary artery stent
- a heart pacemaker or defibrillator
- a prescription for blood thinning medication eg. Warfarin, Rivaroxaban, Apixaban, Dabigatran (Pradaxa), Clopidogrel (Plavix)
- a previous or current MRSA infection

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

The procedure is usually performed under a short general anaesthetic, which means you will be asleep during procedure.

A narrow telescope is used to insert the steam injection device along the inside of the urethra and into the channel that runs along the inside of the prostate.

Steam is injected into the prostate through a tiny needle at intervals of 1cm along its entire length. If the median or middle lobe of your prostate is enlarged that will be injected with steam also. Each steam injection takes only 9 seconds. The number of steam injections varies depending the size and shape of your prostate. Care will be taken to inject enough areas to create a wide channel through your prostate. The entire procedure takes around 10-15 minutes.

The steam injections will cause some temporary swelling of the prostate which can initially prevent normal urination. For this reason a catheter is left in place to drain urine from the bladder after Rezum. You will be advised on how long the catheter will need to stay in place, and how to look after it, before you are discharged from hospital. The catheter is left in place for anywhere between 3 days to 2 weeks after Rezum depending on the size of your prostate and whether or not you have catheter-dependent urinary retention. You will be advised on arrangements for your catheter removal.

Typically, you will be discharged from hospital on the same day as the procedure. You will need someone to take you home afterwards and to be with you overnight the first night.

## **What should I expect after the procedure?**

Most men do not need to take any pain relief medication after the procedure.

However, if you feel uncomfortable at any stage, simple pain relief medications such as paracetamol and ibuprofen are usually effective. A combination of the 2 is usually more effective than taking 1 or the other. Sensitivity in the penis due to the operation can last a few weeks, and usually settles after healing is complete by 4-6 weeks.

You will be prescribed antibiotics for 10 days to prevent urinary infection. You will also be prescribed an anti-inflammatory medication to take for 10 days, unless there is a reason why you shouldn't take this type of medication. It is usually helpful to take a prostate relaxing medication (eg. tamsulosin or alfuzocin) for up to 6 weeks after your catheter is removed. Your surgeon will confirm which medications you should take and for how long, and you will be given all required medications prior to discharge from hospital on the day of the procedure.

## **What should I expect after catheter removal?**

During the first week or two after your catheter is removed, it is expected that you will see some blood in your urine. This may continue intermittently for up to 6 weeks after the Rezum procedure. As long as you are not passing bright red blood clots, or struggling to pass urine due to blood clots, visible blood in the urine is of no clinical consequence.

It may sting when you pass urine. This is normal and should improve within a week or 2 of catheter removal.

It is not uncommon for urinary symptoms to worsen before they start to improve. The full benefits of Rezum are usually apparent 2 to 3 months after treatment.

## 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 vast majority of men do not suffer any long term problems after the Rezum procedure.

Potential side effects or complications include the following:

### Common side effects (greater than 1 in 10)

- Frequency of urination and a feeling of having to pass urine urgently (usually temporary with significant improvement/resolution within the first 3 months after catheter removal). This occurs in virtually everyone in the first few weeks after catheter removal.
- Blood in the urine. This occurs in virtually everyone but is temporary with resolution almost always within 1 month of catheter removal.
- Inability to become catheter-free if catheterised before the procedure (20-30%)

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

- Change in ejaculation (10%)
- Need for further prostate surgery due to regrowth of the prostate (4% chance within the first 4 years of Rezum)
- Temporary pelvic and/or urethral discomfort or pain
- Urinary tract infection requiring antibiotics (5%)
- Prolonged retention of urine requiring re-catheterisation (in men who did not have a catheter before the procedure), usually resolving within 1 month (5%)
- Failure to resolve urinary symptoms to your satisfaction (due to persistent prostate blockage and/or irritable bladder)

### Rare side effects (less than 1 in 50)

- Severe infection (sepsis) requiring readmission to hospital (<1%)
- Blood loss requiring blood transfusion (<1%)
- Refractory urinary retention (unable to become catheter-free) in men who did not have a catheter before Rezum (<1%)

## What should I expect when I get home?

You can safely undertake light exercise after the operation, but please avoid heavy lifting, straining, and sexual activity for the first 2 weeks. You should maintain a good fluid intake of 1.5 - 2 litres a day, drink steadily throughout the day, and avoid drinks that might irritate your bladder during the first month eg. caffeinated tea and coffee, fizzy drinks and alcohol. You may need to have up to two weeks off work, by which time most men return to all normal activities.

You can return to driving after 48hr as long as you feel safe to drive with your catheter in place. It is common to have less control passing urine for around 1 month after surgery. The full benefits of your Rezum procedure should be evident after 2-3 months once the areas of the prostate injected with steam have been absorbed by your body and the channel through your prostate has widened fully.

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

After prostate surgery, contact your consultant or GP (general practitioner) if you have any problems such as worsening pain or bleeding, symptoms of urinary infection (painful urination, smelly urine, urinary frequency and urgency,) or feel generally unwell.

If you are unable to pass urine after discharge from hospital, either phone the ward, contact your consultant or go to your nearest Accident and Emergency Department for further advice.