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# Prostate Artery Embolization– Patient Information Leaflet

## Introduction:

This booklet tells you what you need to know before having prostate artery embolization. It explains what is involved and the possible risks. It is meant to act as a starting point for an informed discussion between you and your doctor.

**Key Facts:**

1. A non-surgical (minimally invasive) technique to treat urinary symptoms.
2. It works by restricting blood flow to prostate gland causing it to shrink.
3. Alternative to surgery such as Trans Urethral Resection of the Prostate (TURP).
4. PAE is particularly indicated for large prostates over 150ml

## What is a PAE?

The prostate gland sits at the base of the bladder in the pelvis and wraps around the urethra (water pipe). It can enlarge as men grow older and obstruct the flow of urine, causing symptoms of needing to pass water more regularly and incompletely.
Embolization means restricting the blood flow to the prostate by injecting particles into the blood stream to the prostate.
Prostate Artery Embolization is a relatively new technique and has been in use since early 2000s.
A tiny tube (2mm in diameter) is placed under x-ray guidance into the small arteries supply the prostate gland via the main artery in the groin or wrist.
The procedure is carried out by an Interventional Radiologist normally with you awake (but with some sedative).
Some men are not able to have TURP surgery due to the prostate being too large. In these cases Prostate Artery Embolization is an alternative treatment.

## How does a PAE help in my treatment?

PAE has been shown to reduce urinary symptoms in 8 out of 10 patients who have had the procedure. It can help reduce the pressure on the bladder, by causing the prostate to shrink.
PAE can help stop bleeding from the prostate which is a problem in men with long-term bladder catheters. In 6 out of 10 of men PAE will allow the prostate to shrink enough for you to have the catheter removed.

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## What happens if I choose not to have the PAE?

In men who are unable to have surgery on the prostate (TURP or HOLEP surgery), PAE may be the only available option. The alternative would be having a bladder catheter in place long-term. PAE is one available option however to treat an enlarged prostate so you should speak to your urologist about other suitable options (surgical and minimally invasive).

## What alternatives are available?

Other minimally invasive options include REZUM (steam treatment), Aquablation (water treatment) and Urolift (prostate clips) which are used in prostates up to 80ml.
For larger glands TURP, HOLEP and Green light laser vaporization are surgical options and for glands over 150ml, HOLEP, Green light laser vaporization are the treatments offered in addition to PAE.

## How do I prepare for the procedure?

You will need a scan with CT and or MRI of the prostate to map the arteries and an ultrasound to measure you bladder function before we can offer PAE.
On the days leading up to PAE procedure you will need some blood tests and a urine test.
On the day of the procedure you will need to avoid eating and drinking after midnight the night before the PAE.

## Asking for consent

Consent will be taken by the Interventional Radiologist on the day of the procedure but the details of the consent process will be discussed with you in clinic before the procedure in the preceding weeks.

## What happens during a PAE and how long will it take?

If you choose to have PAE then you will be seen by an Interventional Radiologist (a doctor who specialises in minimally-invasive procedures under x-ray guidance). The doctor will discuss the procedure in more detail. You will have a preliminary planning scan to look at the prostate and the arteries in the pelvis.

On the day of admission, monitoring equipment will be attached to your finger and chest. We routinely give all patients antibiotics before the procedure. A general anaesthetic is not required; some gentlemen find light sedation helps them to relax. The procedure takes up to 2 hours.

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The Interventional Radiologist will wear a sterile gown and his/her assistant will keep all equipment sterile. The skin over the groin or wrist will be cleaned with a sterilising solution and anaesthetised with local anaesthetic (like an injection from the dentist). The procedure takes place through a small needle-hole in the wrist or groin artery, through which special tubes and guidewires can be inserted and manipulated into the prostate arteries, using x-ray guidance. Once the Interventional Radiologist is sure that the tubes are correctly placed in the prostate arteries, the arteries are blocked (embolised) with fine particles. The prostate is gradually starved of blood and shrinks. Both the left and right prostate arteries need to be embolised usually for this procedure to be most successful.

The choice of wrist or groin artery is dependent on the operating Interventional Radiologist. One of the benefits of the wrist access is you can stand up and walk around sooner after the procedure.

A special type of x-ray dye is used during the procedure and this can produce a warming sensation. Once the embolisation is complete all tubes and catheters are removed and the Interventional Radiologist presses firmly on the groin to prevent any bleeding.

## What are the risks?

The main risk during the procedure is damage to the blood vessel at the site of puncture. The risk of needing further treatment for this is 1 person in 1000. Complications directly related to the PAE include pain, passing water more frequently, burning sensation and blood in the urine which lasts for 1-2 weeks after the procedure. Occasionally men might notice small pieces of the prostate passing in the urine after a PAE. In less than 1% of cases the particles used to treat the prostate can affect the skin of the penis and the lining of the bladder or rectum which can result in an ulcer. This is known as ‘non-target embolization’.

## What should I expect after a PAE?

You will need to stay in the X-ray recovery area for 4 hours after the treatment, where we will monitor your blood pressure and heart rate and the groin/wrist.
Most patients will be able to go home the same day.
If you have an indwelling bladder catheter, we will see you in a special clinic 2 weeks after the PAE treatment, where we will remove the catheter and test your bladder function.

All patients are followed up by a telephone call in the days following the treatment, and then again in a clinic appointment after 3 months alongside some follow up scans (MRI and Ultrasound).

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