

# Penile Doppler ultrasound

## Introduction

This leaflet explains what will happen during your penile Doppler ultrasound. If you have any other queries please call the Radiology Department on 0118 322 8368.

## What is a penile Doppler ultrasound and why do I need one?

A penile Doppler ultrasound is an investigation to find why there is a problem getting or maintaining an erection (erectile dysfunction - ED) and predicts how likely your ED will successfully respond to medication. ED has many causes, including not enough blood flowing into the penis (inflow ED) or faulty mechanism for trapping the blood in the penis (outflow ED). Penile Doppler ultrasound will allow us to determine if you have inflow or outflow ED. Penile Doppler ultrasound can also predict your response to the vasodilator drugs that can be used to treat ED. Some diseases such as arteriosclerosis (hardening of the arteries), high blood pressure, and diabetes exert their effects on blood vessels throughout the body, the penis included and result in inflow ED. The cause of outflow ED is less well understood but often affects younger men.

If you have inflow ED, vasodilator drugs may or may not be able to dilate the arteries enough to allow an erection. It would be wasteful and an inconvenience to you to try these therapies if this study predicts their failure up front.

If you have outflow ED, then depending on its severity vasodilator drugs may be able to increase the blood flow enough to give an erection hard enough for long enough for satisfactory intercourse. If the outflow ED is more severe these drugs may not be adequate and other treatments (including penile prosthetics) may be considered.

## What can I expect?

The procedure will take place in the ultrasound room in the main X-ray department which is on Level 1 Centre Block at the Royal Berkshire Hospital.

You will have the procedure explained to you by the consultant radiologist (doctor specialising in use of imaging to diagnose) performing the test. It is useful for the radiologist to know if you have previously taken medication for ED, what drug was used, its dose and your response.

In the privacy of the ultrasound room (the only other people in the room will be the consultant radiologist and possibly an assisting trainee radiologist) you will lie on back on the examination couch with your trousers and underwear pulled down a short way. A tiny

needle will be used to inject a vasodilator drug into the side of your penis to increase blood inflow to the penis. You will experience a short, mild discomfort during the injection.

After five minutes you will usually develop an erection (of varying degree). The radiologists will ultrasound the arteries of the penis for approximately 20 minutes. To do this we simply squirt warm jelly on the side of the penis and place the ultrasound probe on the jelly to see inside the penis. There is no pain involved during this part of the procedure.

### Result

The information obtained during the ultrasound will help the radiologist determine if you have an inflow or outflow ED and the radiologist will explain the result to you.

### After the procedure

You will be able to leave the department immediately after the procedure. You may still have an erection but this usually subsides fairly quickly. However there is a 1-2% risk of persistent erection (“priapism”). This is potentially serious, as the penis will not be getting enough oxygen or getting rid of waste products during this time. Often the erection will subside if you run up several flights of stairs vigorously (if your health allows). If you still have an erection three hours after the injection you should return to the main x-ray department level 1 in the Royal Berkshire Hospital and ask at the reception desk to see the radiologist who performed the procedure (there is no need to explain the problem). In the unlikely event that the consultant radiologist is unavailable then the “on call urology registrar” should be contacted via the Royal Berkshire switchboard (the x-ray reception staff can do this for you) and they will deal with the problem.

### Follow-up

The findings of the penile Doppler will be discussed at your follow-up appointment, usually a few weeks after the ultrasound. You will be sent an appointment by post.

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Dr Matthew Gibson, September 2017

Review due: September 2019