

Porterbrook Clinic

Sheffield Care Trust

**Andrology Service
(Urology)**

Sheffield Teaching Hospitals

Investigations

GSA

Information for Users of our service

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Introduction

Porterbrook clinic is able to offer a number of investigations to try and help both you and us understand the cause of your problems. Two of these tests involve you wearing a device which is attached by either straps or adhesive patches to the penis. The exact nature and choice of the investigation will be discussed with you by your clinician. The Gold standard test, the Rigiscan, has been in use for many years and the clinic has a decade of experience in using and interpreting the results of the Rigiscan. The Rigiscan measures radial rigidity and helps us to assess how hard and firm an erection can become. The NEVA on the other hand measures changes of volume of blood into the penis during states of arousal and provides us with information on the capacity for inflow to the penis. Ultrasound can help identify and quantify the blood flow velocities into the penis (MIDUS). A fourth test, the DIR, measures rigidity of the tip of penis. A test measures nerve conduction associated with sensations (GSA). All of the information collected by the clinic for patients with any investigations are held in a coded format.

The GSA

The GSA measures the conduction of nerve impulses from sensations received by the skin surface and transmitted to the brain.

Nerve conduction studies have been used for many years as an investigation into physiological processes within the nervous system. The GSA machine is a development from the TSA machine. The TSA has been used by Neurophysiologists for many years to assess neurological function in both the arms and legs. Specific software and technology have allowed the development of a specific set of tests to assess genital nerve conduction. The following provides an outline of the procedures involved to enable you to make a decision whether to proceed. If you decide to undergo this investigation, you will be taken into a private room and the clinic nurse will explain how the equipment is to be used. If requested, a chaperone can be present throughout your test. Two measures will be taken, the first to measure your response to temperature changes and the second to measure your response to vibration.

Patient Instructions for GSA

1. For Method of Limits / Cold Sensation

The device touching the chosen site on your body will gradually cool down.

In order to determine if you can detect these temperature changes at levels appropriate for your age. The test involves lowering the temperature in this probe (thermode) from a neutral or baseline temperature. Keep your finger over the response button so you can respond quickly. At the moment you feel a change towards coolness, immediately press the button. It is important that you press at the absolute first moment you detect the temperature change.

Please stay alert and concentrate throughout the test. Do not press the button until you are confident that you have felt a cold/cool stimulus. Pressing the button will turn the thermal device off. We will repeat the procedure several times to obtain consistent readings.

2. For Method of Limits / Warm Sensation

The device touching the chosen site on your body will gradually heat up.

We wish to determine if you can detect

these temperature changes at levels appropriate for your age. The test involves increasing the temperature in this probe (thermode) from a neutral or baseline temperature. Keep your finger over the response button so you can respond quickly. At the moment you feel warmth, immediately press either button. It is important that you press the button at the absolute first moment you detect the temperature change to warmth.

Please stay alert and concentrate throughout the test. Do not press the button until you are confident that you have felt a warm stimulus. Pressing the button will turn the thermal device off. We will repeat the procedure several times to obtain consistent readings.

3. For Method of Limits / Vibration Sensation

The device touching the chosen site on your body will vibrate.

We wish to determine if you can detect vibration at levels appropriate for your age. The test involves increasing the vibration amplitude (or "vibration rate") in this probe beginning at zero/no vibration. Keep your finger over the response button so you can respond quickly. At the moment you feel vibration, immediately press the button. It is important that you press the button at the absolute first moment you detect the vibration.

Please stay alert and concentrate throughout the test. Do not press the button until you are confident that you have felt a vibration stimulus. Pressing the button will turn the vibration off. We will repeat the procedure several times to obtain consistent readings.

Please do read this in conjunction with your letter of appointment which give specific details of what you need to take into account before attending for a GSA investigation.

Important notes

Do bring with you any reading, TV glasses and medication you may require. Would you please avoid sexual activity for 24 hours prior to the investigations and take no drug treatment for erection difficulties for three days. Also, do not drink, smoke (or use nicotine patches or gum) within two hours of the tests. Otherwise, do eat and drink as normal and take any normal medication.