

WHAT IS AN ULTRASOUND SCAN?

An ultrasound scan is a method of generating images of part of the body using high frequency sound waves which cannot be heard by the human ear.

An ultrasound image of the part of your body being examined is obtained from a small hand-held probe which is placed against your skin. A harmless gel is first placed on your skin, which allows transmission of sound waves into the body.

The ultrasound probe is moved across the skin surface and generates sound waves. It also detects any echoes reflected from tissues within the body and then produces an image, which is displayed on a TV monitor in 'real time'.

Ultrasound scans can image many parts of the human body, and it is a straightforward and safe clinical investigation. It is often the first medical imaging technique to be used, but it may be complemented by other forms of imaging, such as CT, MRI or X-ray.

WHAT CAN BE SCANNED BY ULTRASOUND?

Ultrasound can be used in many situations, and ultrasound signals can help to detect the size, shape and consistency of organs, structures and abnormalities. It is often used in the following situations:

- > To help to monitor the growth of an unborn child, and to check for abnormalities. (Ultrasound scans are routinely used throughout pregnancy).
- > To detect abnormalities of heart structures such as the heart valves. (An ultrasound scan of the heart is called an echocardiogram.)
- > To help to diagnose problems of the liver, gallbladder (such as gallstones), pancreas, thyroid gland, lymph nodes, ovaries, testes, kidneys, bladder and breast.

- > To detect abnormal widening of blood vessels (aneurysms).
- > To assess problems related to joints, muscles and tendons.

Ultrasound waves cannot pass through very dense structures or gases. They are therefore not effective for imaging bones, and the images can be of poor quality in people who are overweight or if there is a lot of gas in the bowel. **This is why you are asked to avoid carbonated drinks and not to eat before undergoing an ultrasound scan.**

ARE THERE ANY RISKS?

There are no known risks and ultrasound scans are considered to be very safe, as they use sound waves of a harmless frequency and NOT ionising radiation.

IS THERE ANY SPECIAL PREPARATION NEEDED BEFORE AN ULTRASOUND SCAN?

It is often necessary to prepare for an ultrasound scan:

- > **Upper abdominal scans:** you will be asked to **starve for 6 hours** prior to your scan. (This enables the gallbladder to become full, reduces intestinal gas, and keeps the stomach empty). You can drink a little water, black tea or coffee. **No milk is allowed.** You should **avoid drinking any carbonated drinks**, such as lemonade or cola. It is also best to **avoid smoking or chewing gum** as these can make your gall bladder contract, and it will become difficult to see and you may have to return for a further test.
- > **Gynaecological and kidney scans:** you will be asked to attend with a full bladder. It is best to **drink 1 litre of fluid one hour before the time of your appointment.** Please **attend the Radiology**

Department approximately half an hour before your appointment time, to enable us to provide you with additional water to drink if this is required.

- > **Other imaging, including testes, tendons, muscles and scans of the neck:** no preparation is required.

CAN I BRING A RELATIVE OR FRIEND?

Yes. One adult relative, friend or carer may accompany you.

WHERE DO I REPORT TO WHEN I ARRIVE AT THE TREATMENT CENTRE?

Please report to the reception desk at the main entrance. The receptionist will direct you to the Radiology Department waiting area. The Radiology Department will have been informed of your arrival by the receptionist and after a short period of time a member of staff will come and see you.

WHO WILL CARRY OUT THE ULTRASOUND SCAN?

Your scan will be carried out by a Radiologist (a doctor specialising in the interpretation of medical images) who will also provide a medical report on your scan.

WHAT WILL THE PROCEDURE INVOLVE?

You will be asked about your health and current symptoms relevant to the scan.

If you have been asked to attend with a full bladder for your scan, and your bladder is not completely full, you may be asked to drink some water while you are in the Department.

ULTRASOUND SCAN

INFORMATION FOR PATIENTS



You will be asked to lie on an adjustable examination couch. You will generally not be asked to change into a Treatment Centre gown, but will normally be asked to adjust your clothing around the area being examined. The room will be dimly lit to allow the Radiologist to view your scan on the ultrasound TV monitor.

The Radiologist will sit or stand by your side and a harmless starch-based gel will be applied to the skin overlying the area to be scanned. A probe will be gently moved across your skin. (You may be asked to roll onto your side, sit, or even stand, during the scan).

If you are having an abdominal scan, you will be asked to take deep breaths and then to hold your breath for a few moments. If you have been asked to attend the Department with a full bladder and you have become uncomfortable, inform the Radiologist and he/she will scan your pelvis first and then allow you to empty your bladder.



If you are having a scan to assess blood flow through one of your blood vessels, you will hear a whooshing sound caused by a function of the ultrasound equipment known as Doppler - this is perfectly normal and you need not be concerned.

Occasionally your bladder may not be full enough to enable an accurate scan to be performed, and you may be asked to drink some more water, and to wait for a short time until your bladder fills more fully.

After the scan, you will be given some tissues to wipe the gel from your skin before you leave.

WILL THE ULTRASOUND SCAN BE UNCOMFORTABLE?

An ultrasound scan will not cause you to feel any discomfort, the only thing you will feel is the gel being applied and the ultrasound probe being passed across your skin.

If you have been asked to attend with a full bladder, this can sometimes become uncomfortable. If you are in pain when you attend the Department for your scan, the light pressure of the probe passing across your skin may be uncomfortable.

HOW LONG WILL THE ULTRASOUND SCAN TAKE?

Most examinations take 10-15 minutes. More specialised scans can take up to an hour e.g. vascular examinations and /or blood flow analysis. You will be advised of this on your appointment letter. Unless you have had to wait (for instance if the Department has had to scan an emergency patient), your total time in the Department should be about 30 minutes.



ARE THERE ANY SIDE-EFFECTS AFTER THE ULTRASOUND SCAN?

There are no after-effects from your scan and you can carry on with everyday life as normal immediately afterwards. You may drive and return home or to work immediately afterwards and may eat and drink normally.

WHEN WILL THE RESULTS OF MY ULTRASOUND SCAN BE SENT?

The scan will be examined shortly after your visit, and a report on the findings written. This may take a few days to reach your GP and specialist at the Treatment Centre, but is normally available in less a week. You should ask the Radiographer or Radiologist for some indication of the time that this will take.

WHAT IF I HAVE ANY QUESTIONS?

If you have a queries about having your ultrasound scan, please call the Radiology Department between 9am and 5pm, Monday to Friday on 01749 333 600.

This leaflet was adapted from an original document compiled by the Royal College of Radiologists.

Shepton Mallet NHS Treatment Centre is a collaboration between Somerset and North Dorset Primary Care Trusts working with UK Specialist Hospitals Limited.

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