

# Ultrasound

## Patient Information

### Leongatha Memorial Hospital Medical Imaging

#### What is an ultrasound?

An ultrasound examination uses high-frequency sound waves to produce an image on a screen that shows the inside of your body.

An ultrasound examination is performed using a hand-held device called a transducer (camera) that is moved across the body. The transducer emits sound waves into your body, which are reflected from the different tissues in different ways.

These sound waves are converted to electrical impulses, which are used to produce a moving image onto a screen, similar to a depth sounder on a boat.

#### Why am I having an ultrasound?

An ultrasound examination is often used during pregnancy. It is an ideal examination to look at the baby as it grows throughout the pregnancy. It is a wonderful opportunity to meet your forming baby. Ultrasound can take high quality pictures of most parts of your body, which makes it an excellent diagnostic test.

It can be used to examine abdominal and other organs, to watch blood flow in any of the arteries or veins throughout the various parts of your body, and to evaluate muscles, tendons and joints.

Ultrasound is used to evaluate many superficial structures in your body such as breast, and in children's special areas such as newborn hips, spine and brain.

#### How do I prepare for an ultrasound?

- Follow the instructions we provided to you.
- Wear clothing that will provide easy access to the area to be examined.

Bring any previous relevant ultrasound films or report with you, for comparison.

**IMPORTANT:** If you have diabetes, or you are on any medications prescribed by your doctor, or any other medication including any over the counter medicines or complementary therapies such as vitamins, etc., contact us to check special preparation instructions.

If a baby, infant or child (up to 18 years) is having an ultrasound, special instructions apply.

Again, contact us so that you get the instructions that are appropriate to your child's age. This will ensure the best test is performed at minimum discomfort to your child.

Preparation depends on the type of ultrasound examination you are having.

The following is a guide for the most common examinations; it may vary slightly depending on the clinic you attend but we will confirm details when you make your appointment.

### **Abdomen ultrasound**

You will need to fast (have nothing to eat or drink) for eight hours prior to the examination.

This ensures there is no food or fluid covering the area to be examined. It also ensures the gallbladder is not contracted so it can be imaged appropriately.

### **Renal (kidney) ultrasound**

You will need to drink a specified amount of water (normally one litre) around one hour prior to the procedure. Do not empty your bladder after drinking the water.

Drinking the water prior to the examination will enlarge the bladder, enabling it and the surrounding internal areas to be examined.

### **Vascular (blood vessel) ultrasound**

- Renal (kidney) arteries – You will need to fast (have nothing to eat or drink) for eight hours prior to the examination to ensure that the renal arteries are not covered by food or fluid.
- Aorta or Leg arteries – You will need to fast (have nothing to eat or drink) for eight hours prior to the examination to minimise bowel gas that may obscure the large arteries in your lower abdomen, which are examined as part of this test.

### **Interventional ultrasound**

Used to guide injections, biopsies (where sample tissue is removed for testing) and drainage tubes, to clear away fluid from a wound.

If you are attending for one of these examinations, we will provide instructions on what you need to do before and after the examination.

Some of the procedures are very involved and will require detailed instructions to be followed, for example getting a driver to take you home after the test or stopping some medications.

NO preparation required for:

- Breast ultrasound
- Thyroid ultrasound
- Testes ultrasound
- Musculoskeletal ultrasound (muscles, bones and joints)

### **What happens during an ultrasound?**

The sonographer, will ask you questions about why you have come for the ultrasound scan. They will then explain the procedure you are having in detail and answer any questions you have.

Normally, you will be asked to lie down on a bed and the area to be examined is exposed while the rest of the body is covered. Gel is applied to the area of your body which is being imaged. The sonographer will then place the transducer (camera) onto this area using gentle pressure and record images of relevant anatomy or findings.

You may be asked to perform some simple movements to improve the quality of the imaging. For example:

- 'Taking a big breath' to assist during an abdominal ultrasound and allow the areas underneath the rib cage to be clearly viewed
- During an obstetric examination you may be asked to roll around to encourage the unborn baby to roll into a position appropriate for imaging

In musculoskeletal ultrasound, the transducer moving over any painful areas often provides valuable insights into the true source of the pain

However, if any of these movements cause you concern or discomfort, you should let the sonographer know immediately.

### **Are there any after-effects of an ultrasound?**

It is rare to have after-effects from an ultrasound examination.

### **How long does an ultrasound take?**

About 30 minutes. However, some examinations, may take longer than this because of the detailed imaging that is required and the number and size of the organ/s being examined.

Ask us when making your appointment how long the type of ultrasound you are having normally takes.

### **What are the risks of an ultrasound?**

Ultrasound is a safe examination which provides excellent imaging without any significant risk.

### **What are the benefits of an ultrasound?**

Ultrasound provides excellent imaging of the soft tissues of the human body and is often the best and most appropriate diagnostic test.

It is a safe procedure which does not have the risks associated with imaging that uses radiation.

There are no proven harmful effects of sound waves at the levels used in ultrasound performed in our clinics.

Ultrasound can be performed with patient movement so is ideal for imaging babies and children.

Ultrasound is valuable in musculoskeletal (muscles, bones and joints related), breast, gynaecological (women's health, especially of the reproductive organs) and vascular (blood vessel related) diagnostic imaging.

Dynamic imaging (moving pictures) provided by images using ultrasound sound waves gives the opportunity for looking at the inside of the body in positions or with movements where there is pain or movement restriction.

Ultrasound usually does not require an injection of contrast medium. Rarely a specific ultrasound contrast medium may be used to detect certain types of diseases or problems. If the radiologist feels this is useful, then this will be explained to you at the time of examination.

Ultrasound is mostly non-invasive, provides accurate imaging tests of the human body, is readily available and relatively inexpensive.

### **Who does the ultrasound?**

The ultrasound examination is performed by a sonographer, a health professional

specialised in performing ultrasound examinations. They have a graduate qualification and are fully qualified to perform the examination.

The sonographer performs the examination and provides an interpretation of the images on the screen to a radiologist (medical specialist), who will review the sonographer's interpretation and discuss the images with them, before providing a report on the findings to your doctor.

Sometimes, it will be necessary for the radiologist to attend the examination, as it may be important to see the images on the screen rather than just the still photographs and discuss your symptoms.

### **How do I get my results?**

Your doctor will receive a written report on your test as soon as is practicable, normally one to two days after.

It is very important that you discuss the results with the doctor who referred you so that they can explain what the results mean for you.

Any questions please contact us:

**Phone:** (03) 5667 5579

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