

## Radiology

# Vertebroplasty

You have been advised by your hospital doctor that you need to have a vertebroplasty. This information leaflet tells you about this procedure

Please read this leaflet carefully to make sure you are successfully prepared for the procedure. This leaflet may not answer all your questions, so if you have any concerns, **you can call the Radiology Department on 024 7696 7161.**

If you feel unhappy with any part of your care within the X-ray Department, please ask to speak to a senior member of staff.

To prepare you for this procedure you will need to be admitted onto a ward. The ward will contact you with instructions for attending before your procedure. You will be asked to attend either on the evening before or the morning of the procedure depending on the availability of a bed. If you have any further questions, please contact the Radiology Department on the above number.

Please contact the X-ray Department if your weight is equal to or more than 205kg (32 stone) as you may require an alternative examination.

### Points to remember

- Please bring any sprays or inhalers that you are taking with you to the X-ray Department.
- Please leave any valuable possessions on the ward.
- If you are diabetic, you are still required to starve before the



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examination. You may be given an early morning appointment, or alternative medication will be given to you on the ward.

- If you are taking aspirin or warfarin, please inform the ward staff. This medication will need to be stopped 5 days before your procedure.

## What is a vertebroplasty?

A vertebroplasty is a minimally invasive procedure performed under X-ray guidance. Cement is injected into the damaged bone. A tiny cut is made on your back, and a small amount of cement is injected into the affected bone. The cement is liquid and sets after a few minutes. This creates a supportive structure that strengthens the bone and helps with the pain. More than one bone can be injected during the same procedure.

The procedure is done to help reduce back pain caused by collapsed or fractured bones in the spine by helping to strengthen the bone. It will also help aid a return to previous levels of activity and help prevent further vertebral collapse.

The procedure will be performed by a radiologist (a consultant doctor who specialises in X-ray procedures) who will be assisted by a radiographer and a radiology nurse. It is not easy to predict how long the procedure will take. As a guide, expect to be in the Radiology Department for at least 1 hour.

## Why do I need a vertebroplasty?

The spine is made up of 33 separate bones, each called a vertebra. These bones are stacked one on top of another with discs in between. If a fracture (break) occurs in one of the bones, it tends to flatten. This is called a compression fracture or a collapse. It can happen for several different reasons and in more than one bone.

Although these fractures can happen with major spinal injury, they are more common in people with weakened bone. If the bone has become too thin or has been destroyed, it can collapse quite easily.

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Fractures of the spine are common in patients with osteoporosis and sometimes in patients who have cancer in the spine. Up to 3 in 10 people with osteoporosis will have at least one fractured vertebra at some point in their life. In two thirds of these people, the pain is relatively minor. They may not even know it has happened. In the other third, collapse of the bone causes sudden pain in the upper or lower back.

The first treatment is rest and painkillers, which usually provides good relief. For many people, the pain gradually improves and goes away in a few months. For some people, the pain is not relieved by medication. Either they cannot take the medication because of side effects, or they go on to have severe, lasting chronic pain. Vertebroplasty is a procedure that may help relieve the pain in these people.

## Referral and consent

You should have had plenty of time to discuss the procedure with your consultant and the radiologist who will be performing the procedure.

You will have a consultation with the radiologist performing the procedure, either before your procedure date or on the day of your procedure. They will confirm that you understand why the procedure is being done and will explain to you its potential risks, benefits and what the success rates are. You will have an opportunity to ask any questions you may have at this point.

Before the procedure you will need to sign a pink consent form. This form confirms that you know what risks are involved with the procedure. When you sign the form, it means you have agreed to have the vertebroplasty performed and understand why it is needed.

If the radiologist feels that your condition has changed, or that your symptoms do not indicate the procedure is necessary, then they will explain this to you.

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### Before the procedure

Please bring all your usual medication into hospital with you, including any sprays or inhalers. Take all medication as normal, but if you are taking water tablets or diuretics you may stop this on the day of the procedure.

Please tell the doctor if:

- You have had any allergies or bad reactions to drugs or other tests
- You have asthma, hay fever, diabetes, or any heart or kidney problems.

Please continue to eat and drink normally unless your surgery is planned for the same day.

### Preparation

You will have had some blood tests to check your blood clotting ability - these should be done within 7 days of the procedure:

- The procedure will be performed under conscious sedation. **Please do not eat for the 6 hours** before your procedure time. You can drink water only during this time but **must stop 2 hours** before your vertebroplasty. This will help reduce the risk of nausea and vomiting following sedation.
- **If you are on any blood thinning medications including warfarin, ticlopidine, clopidogrel and dipyridamole you will need to mention this at your consultation, and you will need to stop taking these to allow your blood clotting to return to normal**
- You will need a cannula (small plastic tube) inserted into a vein in your arm after you have arrived on the ward or while you are in X-ray Department, to facilitate administration of intravenous medications, and fluid if needed.
- To reduce the risk of infection, you will be given intravenous antibiotics by a nurse or doctor on the ward prior to going down to the X-ray Department.
- You will need to wear a hospital gown. The porters will collect you from the ward and bring you to the X-ray department on your bed for the procedure

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### During your procedure

- You will be taken into the X-ray room where you will be asked to lie down on your front on the X-ray table - you will be in this position for about an hour.
- You will be attached to monitoring equipment. Your vital signs will be monitored regularly by a radiology nurse during the procedure.

The position of the bones in your spine requiring treatment will be determined using X-rays. If the doctor thinks that it is not safe to treat the collapsed vertebra after these pictures, then the procedure may not be performed.

- You will be given conscious sedation and enough painkillers to help you relax and make you feel sleepy throughout. It is routine for you to be given continuous oxygen through a face mask or nasal cannula during sedation.
- Everything will be kept sterile. Your skin will be cleaned with antiseptic, and your body will be covered with a sterile sheet.
- The radiologist will inject a local anaesthetic into the skin of your back to freeze the area.
- You may still feel some pressure sensation, but if you feel any pain during the procedure, inform the radiologist. You will be asked to lie as still as you can.
- The radiologist will look at the X-ray images whilst carrying out the procedure to make sure that the needle and cement is placed as accurately as possible.

### Risks of the procedure

As with any procedure or operation, complications are possible. We have included the most common risks and complications in this leaflet. The probability of these complications occurring will vary for each patient, and the possibility of these happening to you will be discussed with you before you sign the consent form.

**Sedation** - on rare occasions, this can cause problems with breathing. If you wish to, this can be discussed with the radiologist at the time of your consultation or before the procedure.

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**Bleeding** - there may be small risk of bleeding after the examination. The ward nurses will monitor you closely for 4 – 6 hours after the procedure.

**Infection.** It is possible to introduce infection into the body any time a needle is used. Keeping everything sterile will help minimise this risk. You will also be given antibiotics before the procedure.

**Temporary increased pain.** Other side effects that have occurred with vertebroplasty include a high temperature or a temporary worsening of pain for a few days.

**Leakage of cement.** The broken bone may allow leakage of cement into the spinal canal. If this happens, the cement can interfere with the spinal cord or a nerve. Pressure on a nerve (nerve root compression) may cause pain.

Pressure on the spinal cord can cause numbness or muscle weakness. In more severe cases, it can lead to paralysis of an arm or leg (paraplegia). Less than 5 in 100 of patients with cancer in the spine may need an operation to remove the cement if it is causing severe problems.

The reported rate of nerve root compression and paraplegia, according to NICE (National Institute of Clinical Excellence), is 5%. The cement can leak into the blood stream and travel to the lungs as a small clot of cement. Cement emboli is very rare and usually has no symptoms but can potentially compromise breathing in some patients. This can be managed, usually with no long-term consequence.

**Allergic reaction.** It is possible to be allergic to any drug. This is uncommon with the drugs used for vertebroplasty (less than 1%). The most common allergic symptoms are itching or a mild skin rash. Severe side effects are rare (less than 1 in 10,000), but could include a severe rash, trouble breathing and swelling. Drugs used for vertebroplasty include:

- Sedative: Midazolam
- Painkiller: Pethidine
- Skin anaesthetic: Lidocaine, Marcaine

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- Cement: Methylmethacrylate

At all times during and after the procedure the staff will be monitoring your responses to this treatment to minimise the effects of any complications.

## Safety

X-rays are a type of radiation. We are all exposed to natural background radiation every day of our lives. This comes from the sun, food we eat, and the ground. Exposure to X-rays carries a small risk, but your doctor feels that this risk is outweighed by the benefits of having the procedure. We will take all precautions to minimise the number of X-rays you receive.

**All patients aged 12 – 55 years, could you be pregnant?** The risks of radiation are slightly higher for the unborn child so you will be asked to confirm that you are not pregnant before the examination can proceed.

## After your examination

If you have any problems after the procedure, please speak to the staff on the ward

- You will be taken back to the ward and asked to remain lying flat for two hours.
- You should eat and drink normally and can sit up gradually after two hours.
- You will be on bed rest overnight
- You may have a CT scan the next day if the radiologist requests this.

## Other sources of information

For information about the effects of X-rays and information about radiology departments visit the NHS website : <https://www.nhs.uk/conditions/x-ray/>

Please note that the views expressed in these websites do not necessarily reflect the views of UHCW NHS Trust.

## Patient Information

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact the number on your appointment letter and we will do our best to meet your needs.

The Trust operates a smoke free policy.

### Did we get it right?

We would like you to tell us what you think about Interventional Radiology services. This helps us make improvements.

Have your say. Scan the QR code or visit:

<http://ratenhs.uk/TyVIDN>

[www.uhcnhs.uk/contact-us](http://www.uhcnhs.uk/contact-us)



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