

Musculoskeletal (MSK) Ultrasound and Image Guided Steroid Injections

Introduction

You have been referred for an ultrasound of a joint, tendon or soft tissue to try to understand why you have pain or symptoms in that area (a diagnostic scan). Your referring clinician may have also asked us to consider giving you a steroid injection to try to relieve the pain or discomfort you are experiencing. This will be dependent on the ultrasound findings.

What is an Ultrasound Scan?

This is an examination that uses sound waves to build a picture of the structures within your body under the surface of the skin. A special gel will be placed on the part of your body that is to be examined. A small transducer (ultrasound 'camera') is then moved over the skin to obtain pictures.

What is an Ultrasound guided steroid injection?

It is an injection of local anaesthetic and steroid into the joints or soft tissues in your body. It is carried out using ultrasound to guide the needle into the correct location. The local anaesthetic gives rapid pain relief. The steroid acts as a strong but localised anti-inflammatory to ease pain and reduce swelling, the effects of which last much longer than the local anaesthetic.

I have had injections before. How is this different?

This procedure is performed with the aid of ultrasound. This means that the needle is constantly watched until it is in the appropriate

location. It is for this reason that the injection can be performed from any direction (front, back or side). This results in an accurate injection with as little needle manipulation as possible.

Who has made the decision?

The Consultant Team, GP or Physiotherapist looking after you will have referred you to Medical Imaging for your ultrasound scan. The Radiologist (a doctor who specialises in x-ray procedures), Advanced Practice Radiographer or a Specialist Registrar performing the scan will use the ultrasound findings along with the information provided by the referrer to make the decision as to whether to perform a steroid injection. If after discussing the findings you decide you do not want the injection you can decide against it.

What are the alternatives?

The alternatives could include physiotherapy and pain relieving medication (such as anti-inflammatories). These can be used in conjunction with each other.

Surgery is also a possibility in many conditions, but this is often reserved until other less invasive treatments have failed.

Who will be performing the Ultrasound/injection?

The procedure is carried out by an Advanced Practice Radiographer, a Consultant Radiologist or a Specialist Registrar. A Radiology Nurse, Health Care Assistant or Radiology Assistant will also be present. All members of staff will introduce themselves at the start of the procedure.

Medical Students, Apprentices and Student Radiographers may be present to observe the procedure.

Where will it take place?

In a fluoroscopy or ultrasound room. Please see your appointment letter for the hospital site and department information.

How do I prepare for a joint injection?

There is no specific preparation for the injection. You do not need to stop or avoid any blood thinning medication for most procedures but please make sure you inform the person performing your procedure that you are on these drugs when you come to your appointment. If you are attending for a spinal procedure and are on blood thinners, please contact the department for further advice. Contact the **Medical Imaging Department** on **01392 402336** selecting option 1, option 6 for Fluoroscopy

Please note we advise that you should not drive yourself for the rest of the day after having an injection. Please make alternative arrangements for your travel if you are expecting an injection, however, as already outlined, in some instances, an injection may not go ahead due to the ultrasound findings at the time of your appointment.

Consent

Your verbal consent will be gained prior to commencing the examination.

What happens during the procedure?

You may need to change into a hospital gown.

Your procedure will be explained to you before it starts and you will be able to ask any questions you may have. You will be positioned on either a chair or ultrasound couch, where an ultrasound scan of the area under investigation will be performed to provide diagnostic information and if applicable to identify the site for injection. The findings will be discussed with you and if a steroid

injection is indicated a needle will be guided into the joint/soft tissue using ultrasound. Once the needle is sited in the correct place, a mixture of local anaesthetic and steroid is injected. This may cause discomfort or a feeling of tightness in the joint. The needle is then removed and a dressing or plaster applied.

How long will the procedure take?

The procedure takes between 15 to 30 minutes.

What happens afterwards?

- The gel will be wiped off your skin and you will be able to get dressed.
- Rest the injected area for 24-48 hours.
- Remove the dressing or plaster after 24 hours.
- Antiseptic solution may discolour skin pink or orange, but can be removed with cleaning.
- If you are a diabetic, you will need to keep an eye on your blood sugar levels as these can be raised slightly after a steroid injection. This usually settles after a few days.
- We recommend that you do not drive for the rest of the day after having an injection.
- You will get the results of the scan and assess the benefits of the injection when you next see the referring clinician.
- You may be asked to complete a diary recording your pain for a period of time following the injection. When we receive this back from you this will form part of your medical record and be available to your referring clinician.

Will the injection work straight away?

No. The steroid usually starts working in around 5 days, but can sometimes take up to 10 days before it works well. The effects of the local anaesthetic should wear off in the first few hours following the injection.

The benefits of the injection may last for a few weeks or several months. The injection will often work best as part of a rehabilitation programme;

the reduction in pain and inflammation may enable improved engagement with exercise therapy.

What are the potential risks/ complications?

Steroid injections are common procedures and any adverse reaction is rare.

There are some complications or risks associated with the procedure:

- **Pain** – sometimes the steroid injection can make the pain or discomfort temporarily worse. We call this a **steroid flare** and lasts for approximately two to three days after injection. You may take your regular pain killers to provide relief during this time.
- **Infection** – this is a very rare complication which can occur from an injection of any kind. If there is redness or swelling over the injection site or you develop a fever, please see your GP or go to Emergency department (ED or A&E) immediately and explain that you have recently had an injection.
- **Discolouration** – very rarely a white dot or patch on the skin can appear after the injection, this is called '**depigmentation**'. This is rarely permanent and may last for a few months.
- **Fat atrophy** – this is thinning of the fat, which may result in a dent in the skin.
- **Skin thinning or skin dimpling** – occasionally the skin overlying the injection becomes thinned over the course of some months. This is particularly noticeable when several injections are given close to the skin surface. This side effect does not occur in most people.
- **Tendon rupture** – this is rare but steroids may weaken the tendon so it is important to avoid any strenuous activity or exercises for three to four weeks and use splints or support, if given.

Modified with acknowledgment of, and permission from, the Royal College of Radiologists.

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- **Allergic reaction** is extremely uncommon.
- In patients with **diabetes**, blood sugar levels can be affected temporarily.
- **Flushing** and redness of the face and upper chest for a few days.
- **No effect** – the injection may not have any benefit.

This list is not exhaustive and if there are further specific risks then the radiologist will inform you prior to injection.

Finally...

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. If you find reading this leaflet difficult or you don't understand what it means for you, please call **01392 402336, selecting option 1, then option 6** and we can talk it through or alternatively you can email us rduh.radiologyappointments@nhs.net.

How to get to your appointment

Please refer to the enclosed letter for your appointment details and location.

Please ensure you refer to the enclosed "Welcome to the Medical Imaging Department" leaflet and use the Trusts website for the latest information:

www.royaldevon.nhs.uk/our-sites/royal-devon-and-exeter-hospital-wonford/www.rdehospital.nhs.uk/patients/where

For more information on the Medical Imaging Department, please visit our website:

www.royaldevon.nhs.uk/services/medical-imaging-radiology-x-ray/medical-imaging-eastern-services/