



Ultrasound guided steroid injection patient information leaflet

What is ultrasound?

Ultrasound is high frequency sound waves produced by a special machine. They can penetrate the skin providing very useful images of the deep tissues within the body. It is a harmless way of imaging and it is extremely useful in assessing various musculoskeletal conditions that can involve tendons, muscles, joints and the adjacent soft tissues. Unlike x-rays, ultrasound does not involve exposure to radiation or any harmful side effects.

What is a steroid/cortisone injection?

Steroids (also called cortisone) are anti-inflammatory medicines that can help relieve pain and inflammation in a specific area of the body. They can be injected into a *joint* to help relieve pain, usually in the context of **arthritis**. This is referred to as "an intra-articular steroid injection".

They are also used to treat other inflammatory conditions like **bursitis** (inflammation of sac-like fluid collections present in different parts of the body) and **tendonitis** (tendon inflammation).

Steroid injections can't treat the underlying cause of your condition, but they can treat the symptoms. They are potent anti-inflammatory medicines that should reduce the inflammation, and in turn the pain in that specific area. The commonly used types of steroid injections are hydrocortisone, triamcinolone (Kenalog) and methylprednisolone (Depo-medrone).

A steroid injection normally takes a few days to start working. The effect usually wears off after a few months. The injections usually also contain a local anaesthetic that provides immediate pain relief lasting a few hours.

What is the benefit of having an ultrasound guided injection vs. blind injection?

Ultrasound is very useful to assess the joints, tendons and ligaments for any suspected injury or inflammation. In addition, it allows for direct visualisation of the needle to ensure the steroid medication is injected into the exact targeted site.

There is significant evidence that ultrasound guided injections provide better levels of pain relief and longer effects compared with injections done without imaging guidance. This is because ultrasound guidance allows for accurate placement of the needle and thus delivery of the medicine to the exact site of pathology. Performing the injection under ultrasound guidance allows for visualisation of the adjacent structures and reduces the risk of tissue injury at the injection site.



What are the possible side effects from a steroid injection?

Most people have intra articular steroid injections without any significant side effects.

Possible side effects from an intra articular steroid injection include:

- Pain and discomfort for a few days. This is sometimes referred to as a “steroid flare”. Simple painkillers like paracetamol can help with this.
- Temporary bruising due to small blood collection under the skin at the site of injection.
- “Infection” is very rare but important to be aware of. It is reported to happen in less than 1 in 10000 of the cases. The symptoms of infection are pain, swelling and redness at the site of injection. Sometimes patients may develop a fever. Get medical advice as soon as possible if you have these symptoms.
- Injury to structures close to the injection site. This is rare with ultrasound guidance.
- Local thinning of the fat at the injection site. This can cause dimples in the skin and can be permanent.
- Local change in colour (usually lightening) of the skin at the injection site. This can be permanent.
- If you have diabetes, your blood sugar level may temporarily increase.
- If you have high blood pressure, your blood pressure may temporarily increase.
- Temporary facial flushing.
- Other side effects like mood changes, increased appetite, difficulty in sleeping and menstrual disturbance are very rare with intra articular injections and more associated when the steroids are taken as tablets, injected into the muscle (intra-muscular) or into the blood (intravenous).

What to expect on the day?

A specialist doctor (musculoskeletal radiologist) will ask you questions and perform the ultrasound examination. Then the doctor will explain the procedure to you.

You will need to expose the body part being injected to allow for it to be sterilised (cleaned). Wearing comfortable clothing that allows for the injected body part to be exposed will be useful. Then the doctor will use the ultrasound machine to guide the needle into the exact preferred site and inject a mixture of steroid and local anaesthetic (numbing medication). When the injection is done, a small plaster is usually applied to the site of injection. You can remove this later during the same day.

You can eat and drink normally before and after a steroid injection. You can shower as usual but avoid very hot showers/steam rooms. You can use simple painkillers like paracetamol, if you experience pain at the site of injection.

It's advised not to drive immediately after the injection as it usually contains a small amount of local anaesthetic (numbing medication). Rest the area for 48 hours after the injection. It is also advisable to avoid extraneous exercises for 48 hours after the injection.



How many steroid injections can I have?

You should discuss this with your doctor but repeated steroid injections can increase the risk of the side effects. There is also some concern that repeated intra articular steroid injection might cause damage to the cartilage (in case of intra articular steroid injections). Therefore, steroid injections are usually not performed more than 3-4 times a year into the same body part.

Steroids injections and COVID 19

Steroid injections may reduce a person's immunity for 2-4 weeks following. The reduction in immunity for most people is likely to be small and it is unclear if this has any impact on their risk of contracting COVID-19. The emerging data now suggests that the risks are probably very low.

The British Society of Rheumatology have published their guidelines on 20th November 2020 regarding the treatment of patients using corticosteroid injections to support clinicians and patients in the clinical decision making.

The aim of ultrasound guided intra-articular injections is to deliver a small and effective dose of the medicine accurately and directly into the site of pain, thus minimising the side effects.

However, there remains a theoretical risk that a steroid injection could:

- Increase the likelihood of contracting COVID-19 due to its immunosuppressant effect
- Reduce the body's ability to fight the COVID-19 virus
- Potentially make the patients more contagious to people around them, following a corticosteroid injection.

We screen our patients for any high-risk factors for COVID-19 (patients over the age of 70, BMI>40, BAME, diabetes, ischaemic heart disease, chronic respiratory disease or hypertension).

Because the size of risk is unknown, it is recommended that patients and clinicians should reach a shared decision weighing up the risks and benefits of proceeding with steroid injection treatment.

A specialist musculoskeletal radiologist consultant will see you on the day, discuss the procedure with you and address your questions. You can find more information about the injection you are having on our website www.mskultrasoundinjections.co.uk