



# HYDRODISTENSION

## Patient information

Hydrodistension or High Volume injections are performed under ultrasound guidance with the aim of precisely depositing anti-inflammatory steroid (corticosteroid), local anaesthetic and saline to give pain relief whilst also deliberately stretching the lining of the joint (joint capsule). This procedure is increasingly used in the treatment of 'frozen shoulder' (adhesive capsulitis) and has been shown to be effective in the majority of patients by giving pain relief and also helping them to regain movement. These injections can give rapid and effective reduction in pain and inflammation; however, improvements are usually temporary. As with all medicines, some people may experience side effects. The aim of this patient information leaflet is to provide you with the information that you need to know.

We ask all patients to provide written consent prior to booking an injection to ensure they have read and understood the information provided

### **What are steroids and how are steroid injections used?**

Some steroids occur naturally in the human body. Man-made steroids act like natural steroids to reduce inflammation. They can be taken as tablets or given as an injection. They are used in many areas of medicine to treat inflammatory conditions.

Steroids are often recommended for people with musculoskeletal pain, such as inflammatory arthritis or osteoarthritis (age-related wear and tear) and a range of other soft tissue conditions which involve pain and/or inflammation.

Steroids used for injections take up to a week to fully take effect, but the benefits can last for several months. We advise that pain relief ranges from several weeks to several months post injection.

Unfortunately no treatment will be effective for every patient and whilst most patients will experience at least partial benefit, a minority of patients may experience no relief.

### **What happens when I have a hydrodistension injection?**

A clinical assessment and an ultrasound scan are used to find out more about where the pain is coming from and also to deliver the injection more precisely.

The clinician performing your injection will choose the most appropriate combination which usually includes a mixture of saline (similar to water and used to provide the main volume of the injection) steroid and local anesthetic for your condition. They will usually inject directly into the area that is stiff and painful, such as the shoulder joint in the case of 'frozen shoulder'. Most injections are quick and easy to perform.

### **What happens after the injection?**

If you have local anaesthetic, you may feel some pain relief within minutes, but this will normally wear off after a few hours. It usually takes several days for the effect of the steroid to work. On some occasions it can take even longer, up to 2-3 weeks to achieve the full effect.

You may wish to arrange alternative transport home after your injection, especially if you are having local anaesthetic which can cause some numbness and make it difficult to drive. Sometimes patients have pain after the hydrodistension injection so this should also be considered when planning your journey. You are welcome to also bring a friend or family member along to the appointment.

If you have any injection into a joint you should try to avoid strenuous exercise immediately afterwards, usually for two days. This advice may vary according to your specific injury and circumstances. You should discuss this with your treating clinician to confirm.

If you are having an injection around a tendon, you may be asked to avoid heavy impact and loading activities for up to 2 weeks. This advice may vary according to your specific injury and circumstances. You should discuss with your treating clinician to confirm.

### **Will I need another injection?**

If you find the injection helpful and other treatments are unsuitable or haven't helped, the injection may be repeated. However, injections are most often used to provide a window of opportunity to engage in exercise and rehabilitation. Once your pain is better controlled, the need for injection should be reduced. Guidelines suggest limiting to a maximum of 3 steroid injections into the same area in 12-month period

### **Risks and side effects**

Most people have steroid injections without any significant side effects.

The risk of side effects may be greater with stronger doses and longer acting steroids, such as Triamcinolone acetonide and Methylprednisolone, as they tend to be stronger and dissolve less easily in your body. However, these steroids are often preferred in clinical practice as they offer longer treatment effects.

Whilst we do not require a doctor to refer you for an injection we will supply you with a report after the procedure which we suggest you forward to your GP for your medical records.

Prior to the injection you will complete a medical screening and consent form. For safety reasons your clinician may delay your injection if you have unstable blood pressure or unstable blood sugar levels due to diabetes whilst you obtain consent from your GP.

### **Do steroids cause immunosuppression?**

Steroid injections may cause temporary immunosuppression, which should be considered in relation to Covid-19. A two week interval should be left between receiving a COVID vaccine and having a steroid injection as the steroid may reduce the effectiveness of the vaccine. If you are known to have reduced immunity you should discuss with you GP before booking for a steroid injection.

### **Will the hydrodistension injection be painful?**

There can be some discomfort at the time of injection, but many people find that they are not as bad as feared. Usually this will be very short lived and settles soon afterwards. Hydrodistension and high volume injections take a little longer to deliver and they cause a physical stretch to the joint or tissues being injected which can lead to more discomfort than with a typical steroid injection.

### **Can a hydrodistension injection cause an increase of my pain?**

Around a quarter (1 in 4) people may notice an increase in their pain (post injection flare) within the first 24-hours after injection. This usually settles within a couple of days. Simple painkillers, such as paracetamol and applying a cold compress, may help. Occasionally, post injection flare might be more pronounced and go on for up to a week. Very rarely, the pain can be severe (otherwise known as pseudo sepsis) and on these rare occasions, the patient must seek urgent medical attention.

### **Skin changes**

Injections can occasionally cause some thinning and changes in the colour of the skin at the injection site (known as depigmentation). In rare cases a steroid injection into muscles or joints can cause an indentation in the skin around the area (known as fat atrophy).

### **Infection**

Very rarely, a joint or soft tissue structure may become infected following an injection. If the joint becomes more painful, hot, red and swollen you should seek medical attention immediately. Other signs of an infection include feeling generally unwell (e.g. fever and nausea).

## **Weight gain**

People are sometimes concerned weight gain following a steroid injection. One of the advantages of injected steroids, compared with tablets, is that the dose can be kept low. This means the risks of systemic side effects such as these are extremely low.

## **Diabetes**

Patients with diabetes may experience a fluctuation in their blood sugar levels following steroid injection. If you are a type 1 or insulin dependent diabetic and/or your blood sugars are not always stable you must check with your GP if they are happy for you to have an injection (we recommend that patients with a recent HbA1c above 8.5% (70mmol/mol) should obtain approval from their GP before booking). If you are concerned at all, you should speak to your doctor or diabetic nurse specialist before booking.

## **Other possible side effects**

Other possible side effects include facial flushing, temporary changes in menstruation and mood.

## **Can I take other medicines along with the hydrodistension injection?**

You can take other medicines with hydrodistension injections. However, treatment for certain conditions such as diabetes, cancer or HIV may require you to first check with your GP or treating consultant to ensure any steroid used in the injection will be safe for you. For example, if you are taking a blood thinning drug (also known as an anticoagulant) such as warfarin, you may need a blood test to make sure that your blood is not too thin to have the injection. This is because of the risk of bleeding into the area of the injection. These medical issues are highlighted on the on-line consent form you are required to complete before booking.

## **Pregnancy and breastfeeding**

Unfortunately, we are not able to offer any form of injections to patients who are pregnant. If you are currently breastfeeding, please ask your therapist for a leaflet produced by Breast Feeding Network in 2014, which has been produced to give you guidance in this area.

## **Below is a summary of risks and side effects from having injections**

(for further information please see our page on the [potential side effects of steroid injections](#) )

### **Serious side effects are rare and include:**

- Joint and soft tissue infections (approx 1:50,000) – Very rarely, a joint or soft tissue structure may become infected following an injection – signs of infection are increased pain, heat, redness and swelling. Patients will often feel generally unwell (e.g. fever and nausea). If you are concerned about possible infection you should seek medical attention immediately.
- Anaphylaxis – it is extremely rare to have an allergic reaction to steroid or local anaesthetic (1:500,000). This would usually happen within the first few minutes of an injection and requires immediate medical attention. Very rarely the allergic reaction can be delayed. The symptoms you might experience are feeling lightheaded or faint, breathing difficulties (such as fast, shallow breathing and/or wheezing), a fast heartbeat, clammy skin, confusion and anxiety, collapsing or losing consciousness. You will be asked to remain in the clinic for 20 minutes following the injection to allow observation of possible adverse reactions.

### **Other potential side effects include:**

- Risk of tendon rupture – mostly associated with steroid injections directly adjacent to weightbearing tendons
- Temporary immunosuppression which should be considered in relation to Covid-19
- Local subcutaneous fat atrophy (usually temporary and disappears within a few months)
- Local depigmentation (usually temporary and disappears within a few months)
- Post injection flare of pain at the injection site – usually settles within a few days but can occasionally go on for longer and be more severe
- Destabilisation of blood sugar levels in diabetic patients which require vigilant monitoring by the patient or carer for up to 10 days following injection.

- Blurring of vision or sudden loss of visual acuity due to the very rare complication of central serous chorioretinopathy.
- Facial flushing
- Menstrual irregularities.
- Dizziness.
- Injury or trauma to neurovascular structures during the injection procedure.
- Very rarely significant joint destruction or damage can occur (although usually associated with overly frequent high dose injections this has been reported at normal recommended dose levels)

You will be asked to remain in the clinic for 20 minutes following the injection to allow observation of possible adverse reactions.

### **Potential side effects of local anaesthetics**

Serious side effects are rare and include:

- Infection – (see also above)
- Anaphylaxis – (see also above)

### **Other potential side effects include:**

- Light headedness
- Numbness of area injected
- Dizziness, drowsiness
- Blurred or double vision
- Vomiting
- Bradycardia
- Hypotension cardiac arrest
- Very rarely loss of consciousness, respiratory depression, respiratory or cardiac arrest.
- Allergic or anaphylactic reaction.
- Injury or trauma to neurovascular structures during the injection procedure.



Your therapist is highly trained and will take every appropriate step to avoid injecting or traumatising soft tissue structures, nerves or vessels when performing the injection. However, there is a very small risk that this can occur, particularly with injections at certain locations.

If you have any questions regarding the information contained in this leaflet, please call 02074823875 or email [injections@complete-physio.co.uk](mailto:injections@complete-physio.co.uk) and we will arrange for one of our clinical specialists to speak with you.

