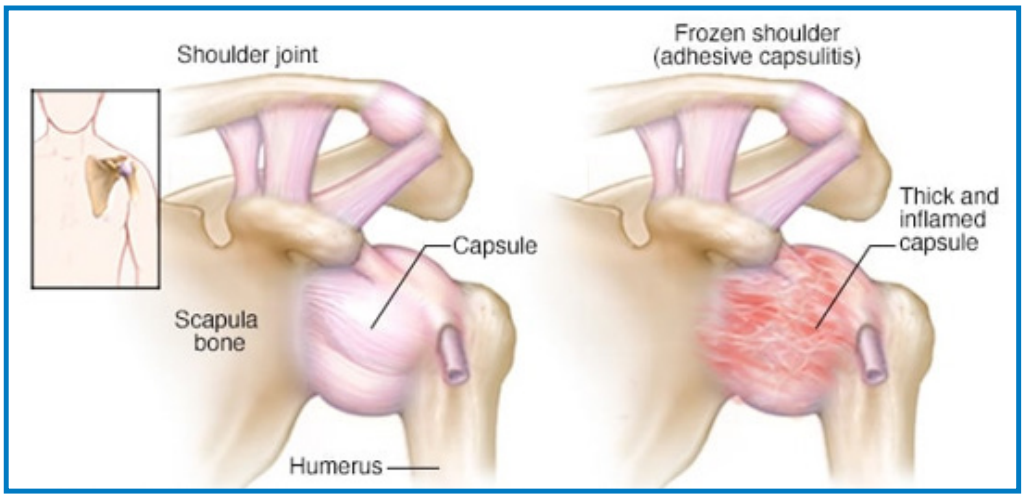
Frozen Shoulder (Adhesive Capsulitis) and Hydrodistension (Hydrodilatation) Injection

What is Frozen Shoulder?

Frozen shoulder, also known as adhesive capsulitis, is a condition that causes pain and stiffness in the shoulder joint. Symptoms typically begin slowly, then get worse. Over time, symptoms get better, typically within 1 to 3 years.

The shoulder joint is surrounded by a capsule of soft tissue. In frozen shoulder, this capsule becomes inflamed, thickened and less flexible. This restricts movement and can make everyday activities difficult.

Shoulder Anatomy and Frozen Shoulder



Symptoms

Frozen shoulder typically develops slowly in three stages:

- **Freezing stage.** Any movement of the shoulder causes pain, and your ability to move the shoulder becomes limited. This stage typically lasts 2 to 9 months.
- **Frozen stage.** Pain may lessen during this stage. However, the shoulder becomes stiffer. Using it becomes harder. This stage lasts 4 to 12 months.
- **Thawing stage.** Your ability to move the shoulder begins to improve. This stage typically lasts 5 to 24 months.

For some people, the pain worsens at night, sometimes disrupting sleep. Other common symptoms include:

- Progressive loss of movement.
- Difficulty reaching overhead or behind your back.
- Problems with dressing, washing or sleeping comfortably.

compassionate care

What is a Hydrodistension Injection?

Hydrodistension involves stretching the capsule of the joint by injecting a mixture of sterile saline, local anaesthetic and steroid. This opens up the joint and releases sticky adhesions within the joint.
The Radiologist performs the procedure in the radiology department using ultrasound guidance to ensure the injection is accurately placed. The procedure involves injecting a combination of:

- Steroid medication
- Local anaesthetic
- Sterile saline (salt water)

into the shoulder joint under imaging guidance. The additional fluid gently stretches the tight joint capsule, helping improve movement and reduce pain.

Why Have This Procedure?

Hydrodistension is commonly offered to patients with frozen shoulder, particularly when symptoms have been present for several months.

The aims are to:

- Reduce pain.
- Improve shoulder movement.
- Stretch the tight capsule around the joint.
- Support recovery alongside physiotherapy.
- Improve day-to-day function and quality of life.

Who Performs the Procedure?

Your procedure will be performed by a specialist Radiologist with support from Radiographers and Nursing staff.

The procedure is carried out in the Radiology Department as an outpatient appointment. You will not usually require sedation or admission to hospital. Your appointment will take no longer than 30 minutes.

Is it Safe? Are There Any Risks?

Hydrodistension is generally a safe procedure and serious complications are rare. As with any joint injection, there is a small risk of:

- Pain during procedure – commonest risk.
- Infection.
- Bleeding or bruising.
- Increased pain for a few days after the injection (post-injection flare).
- No improvement in symptoms. Around 30% of patients may experience limited or no benefit.

Please inform the Radiology Department if you take blood-thinning medication, such as warfarin, dabigatran, apixaban, rivaroxaban or tinzaparin. If you have diabetes, steroid medication may temporarily increase your blood glucose levels. Please monitor your blood sugars closely after the injection.

Is it painful?

Most patients experience some pain during the injection, although this varies from person to person. A very small proportion of patients can experience significant pain.

You can ask the operator to stop the procedure at any time, although stopping does not always alleviate the pain immediately.

Hydrodistension may be more uncomfortable than a standard steroid injection because the shoulder capsule is gently stretched during the procedure. Patients with a more painful or inflamed frozen shoulder may experience greater discomfort.

The local anaesthetic may provide pain relief within minutes, although this usually wears off after a few hours. The steroid typically takes several days to start working and may take up to 2 to 3 weeks to achieve its full effect.

Approximately 1 in 4 patients experience a temporary increase in pain within the first 24 hours after the injection. This usually settles within a few days and can often be managed with simple pain relief and a cold compress. Very rarely, severe pain may occur, and urgent medical advice should be sought.

Before Your Appointment

Please inform us if you:

- Are pregnant or think you may be pregnant.
- Have diabetes.
- Feel unwell or have an infection.
- Have any allergies.
- Are taking blood-thinning medication.
- Have mobility or transfer difficulties.
- Require an interpreter.

Eating, Drinking and Medication

You may usually:

- Eat and drink normally.
- Continue your regular medications unless advised otherwise.

We recommend taking your usual pain relief approximately one hour before your appointment.

During the Procedure

Your identification will be checked by a nurse or radiographer, a brief history will be taken; please tell the Radiologist about any medications you take, allergies or other medical conditions, including thyroid disease and diabetes.

Before the procedure, the Radiologist will explain the procedure and ask you if you are happy to proceed with the procedure.

Please feel free to ask any questions that you may have and remember that even at this stage, you can decide against going ahead with the procedure if you wish.

You will be asked to lie on your back on a couch with your arms by your side. The injection into your shoulder joint is carried out under sterile conditions by the Radiologist.

The skin around the joint area will be cleaned with an antiseptic solution and then covered with a sterile sheet. A local anaesthetic will be injected to numb the area then ultrasound imaging will be used to guide a fine needle into the joint.

A combination of steroids, local anaesthetic and saline solution will then be injected through the needle to gently stretch the joint. The needle will then be removed and a dressing applied to cover the injection site.

During the injection you may experience pressure or a pushing sensation. Please tell the Radiologist if you experience significant discomfort and wish to stop the procedure.

A Radiology team will be with you the whole time during the procedure and will explain what is happening or what you need to do on the day. If you have any questions or concerns, it is OK to ask.

How long will this take?

The procedure may take up to 30 minutes.

After the Procedure

You will remain in the department for a short observation period before being discharged home.

It is normal to experience:

- Temporary numbness from the local anaesthetic.
- Tingling in finger of same arm
- Mild to moderate discomfort.
- A heavy feeling in the shoulder.

The numb sensation can last for several hours.

Driving

Do not drive for the remainder of the day following your procedure, as discomfort or temporary weakness from the local anaesthetic may affect your ability to drive safely.

If possible, arrange for a relative or friend to take you home.

Work and Activity

- Rest for the remainder of the day.
- Avoid strenuous activities for 24 hours.
- Gradually return to normal activities as comfort allows.

Physiotherapy and Exercises

Physiotherapy is an important part of treatment and helps maximise the benefit of the injection. The Radiology team will provide a physiotherapy leaflet following your procedure.

If You Have Diabetes

Steroid medication can temporarily increase blood glucose levels.

If you have diabetes:

- Monitor your blood sugars closely for 48 hours after the injection.
- Follow advice from your diabetes team.
- Contact your GP or diabetes specialist nurse if your blood sugars become difficult to control.

When to Seek Medical Advice

Contact your GP, NHS 111, or attend an emergency department if you develop:

- Increasing redness, swelling or heat around the shoulder.
- Fever or feeling unwell.
- Severe worsening pain.
- Difficulty breathing.

Follow-Up

Results and follow-up arrangements will be made by the clinician who referred you for the procedure.

A review appointment is often arranged approximately 6-12 weeks after treatment to assess your progress.

Sources

Information adapted from:

- North Bristol NHS Trust, *Frozen Shoulder (Adhesive Capsulitis) and Hydrodistension Injection.* **[Frozen sho...NHS Trust]**
- Princess Alexandra Hospital NHS Trust, *Shoulder Hydrodilatation Patient Information Leaflet (F25).* **[Hydro leaflet | PDF]**

If you have any comments about this leaflet or the service you have received you can contact :

Radiology Appointments Team

Telephone: **01484 356900**

Please provide a brief summary of your query. A member of the Appointments Team will ensure that the most appropriate person contacts you.

www.cht.nhs.uk

If you would like this information in another format or language contact the above.

Potřebujete-li tyto informace v jiném formátu nebo jazyce, obraťte se prosím na výše uvedené oddělení

Jeżeli są Państwo zainteresowani otrzymaniem tych informacji w innym formacie lub wersji językowej, prosimy skontaktować się z nami, korzystając z ww. danych kontaktowych

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਪਾਰੂਪ ਜਾਂ ਭਾਸ਼ਾ ਵਿੱਚ ਲੈਣਾ ਚਾਹੁੰਦੇ ਹੋ,
ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਉਪਰੋਕਤ ਵਿਭਾਗ ਵਿੱਚ ਸਾਡੇ ਨਾਲ ਸੰਪਰਕ ਕਰੋ।

اگر آپ کو یہ معلومات کسی اور فارمیٹ یا زبان میں درکار ہوں، تو
برائے مہربانی مندرجہ بالا شعبے میں ہم سے رابطہ کریں.

"إذا احتجت الحصول على هذه المعلومة بشكل مغاير أو مترجمة إلى لغة مختلفة فيرجى منك الاتصال بالقسم المذكور أعلاه"