

## Hydrodilatation

This is the procedure performed to improve joint stiffness and pain in frozen shoulder. It involves stretching and rupturing the lining of the joint using fluid pressure. It is done as an outpatient procedure.

There is no preparation required for this procedure. The procedure takes about 30 min and will be performed by one of the specialist shoulder radiology consultants in a fluoroscopy suite. You will be asked not to drive following the procedure and therefore you may wish to bring a friend or a relative with you or alternatively use a public transport.

Once you arrive, you will be asked to change into a gown and the radiologist will use a fluoroscopy machine (special x-ray machine), which shows your joint in real time to find the most suitable point for the injection. The skin is first anaesthetised with a thin needle and the same needle is then advanced into the joint ensuring the accurate position. This is the only needle used throughout the procedure. All the subsequent injections done into the joint are done via small tubing attached to this needle. Initially a small amount of contrast (x ray dye) is injected to verify the needle position into the joint and then a mixture of contrast, steroid (triaminosalone), anesthetic (bupivacaine) and saline (sterile salt water) is injected into the joint. The injection is performed gradually to expand the joint, during which an internal stretching sensation is usually felt. At a certain point the joint lining cannot stretch further and the mixture starts to leak, at which point you may also feel that the stretching sensation subsides.

The procedure is now over and the site of the injection will be covered with a small dressing which can come off over the next 24 hrs. Following the procedure you will be asked to rest in the department for 15- 20 minutes, till you are comfortable.

Although for the first few hours after the hydrodilatation the shoulder will feel slightly numb due to anesthetics, the steroid will generally take 3 to 7 days to work. It is therefore advisable to continue your painkiller medications for the first few days alongside the exercises. The shoulder may look or feel bruised for a few days. There are no specific restrictions after the procedure and once the discomfort from the procedure eases, usually 2-5 days, you could commence shoulder exercises.

The steroid injection is a very safe drug with approval for use in joints. It can be used safely with other conditions with no significant drug interactions. The injection is precisely injected and works on the injected area only. It has no general effects and does not put you at risk of putting on weight. Even if you are on oral steroids, there is no need to change your dose. However, if you are a diabetic and take insulin, it may affect your blood sugar levels initially.

Side effects are very rare and include-

- Skin thinning, dimpling and change in skin colour at the site of injection.
- Flushing and redness of the face for a few days. It is more of a nuisance rather than reaction and usually settles down over a few days.
- The area of injection may look or feel bruised for a few days.
- Infection is a very unusual complication which can occur from any kind of injection. If the injection area become red, hot and swollen and you feel unwell you should seek immediate medical help.
- Serious or breathing related side effects are not expected with this injection and if such symptoms are encountered, you should seek immediate medical help via a GP or emergency department.

After your study the report is forwarded directly to Mr Smith, who will arrange to see you accordingly.