Steroid Joint Injection Information

What is arthritis?

Arthritis means inflammation of a joint. It can cause pain, swelling, stiffness and reduced movement. Over time, ongoing inflammation can damage the joint. In children, the most common cause of long-term arthritis is **juvenile idiopathic arthritis (JIA)**.

What is a steroid joint injection?

A steroid joint injection (also called an *intra-articular steroid injection*) is a common treatment for arthritis. Steroids are effective anti-inflammatory medicines that reduce joint inflammation, improve symptoms, and help prevent long-term joint damage.

Injecting steroid directly into a joint usually works better and causes fewer side effects than steroid tablets or liquids taken by mouth. Symptoms usually begin to improve within a few days, with the full effect seen over several weeks. The benefit often lasts for many months or longer.

Steroid joint injections can safely be used on their own or together with other arthritis medications.

What type of steroid is used?

Several steroids can be used, but **triamcinolone hexacetonide** is most used because it has a longer lasting effect compared to other types. Other steroids used for joint injections include t**riamcinolone acetonide** and **methylprednisolone**.

Although triamcinolone hexacetonide is not listed on the Australian Register of Therapeutic Goods, it is widely used in Australia and internationally for JIA. In Australia, authorised doctors prescribe it through the **Therapeutic Goods Administration (TGA) Special Access Scheme** (see information on off-label medications).

Comfort care

A combination of strategies may be used to make the procedure as comfortable as possible. Your team will discuss the most appropriate options including the following:

- Clear explanation and reassurance
- A calm and supportive environment
- **Topical anaesthetic** (numbing cream)
- **Local anaesthetic** (small numbing injection)
- **Nitrous oxide** (laughing gas) – reduces worries and discomfort, fast-acting and wears off within minutes (see video on nitrous oxide)
- **Midazolam** – reduces worries and memory of the procedure, wears off over a few hours
- **Clonidine** – reduces worries about the procedure, wears off over a few hours
- **General anaesthetic** – medications that put a child to sleep, generally used for younger children or complex injections

Preparing for the procedure

Your care team will let you know if your child needs to fast before the injection. This usually depends on whether sedation or general anaesthesia is used:

- **No sedation or anaesthetic**:
  - No fasting required
- **Nitrous oxide, midazolam and clonidine (or a combination of these)**:
  - No food or milk for 2 hours before the procedure, sips of clear fluids allowed until procedure start time
- **General anaesthetic**:
  - No food or milk for 6 hours before however clear fluids (such as water or clear juice) may be offered until arrival at hospital

Please dress your child in clothing that allows easy access to the joint being injected. It is helpful to talk honestly and calmly with your child about the procedure. Your rheumatology team can help with strategies to reduce any worries about the procedure.

What happens on the day of the procedure?

Non-general anaesthetic

The procedure is performed in a procedure room. You will meet the rheumatology nurse and doctors who will do some basic checks and explain the procedure again.

Comfort measures will be discussed and if topical anaesthetic (numbing cream) is used, it is then applied. If nitrous oxide (laughing gas) is used, your child may practice breathing through the mask or mouthpiece beforehand. Parents are welcome to stay with their child during the procedure.

See video on joint injections with sedation.

General anaesthetic

The procedure is performed in the hospital operating theatres. You will meet the rheumatology team and anaesthetist who will help put your child to sleep. You can stay with your child until they are asleep in the operating theatre room and will be called to see them again when they are waking up.

During the procedure

- The joint area is cleaned with an antiseptic solution.
- If local anaesthetic is used, a small injection is then given to numb the area.
- A needle is then placed into the joint; this may be uncomfortable but is usually well tolerated with the comfort measures provided. For deep or complicated joints such as the hip and foot, an ultrasound or x-ray machine may be used to guide the injection into the right spot.
- The doctor may remove extra joint fluid before injecting the steroid and a small amount of local anaesthetic.
- The needle is then removed and an adhesive bandage applied.
- In some cases, a physiotherapist may attend to add a cast to straighten the joint.
- Each joint usually takes about **5 minutes** to inject.
- Your child will be monitored afterwards until they are ready to go home.

Possible side effects

Most children have no significant side-effects, and serious side-effects are rare.

Possible side effects include:

- Skin hypopigmentation (lightening of the skin at the injection site)
- Subcutaneous atrophy (loss of fatty tissue under the skin at the injection site)
- Calcification (buildup of firm calcium at the injection site)
- Temporary whole-body steroid effects including increased hunger and difficulties sleeping (usually with higher doses and resolve within a few days)
- Damage to nearby structures such as cartilage, growth plates, ligaments, and tendons (very rare)
- Infection in the joint (very rare)

Aftercare

Your child can usually go home once sedation or anaesthesia has worn off and normal daily activities can be resumed straight away. High-impact activities, including running and jumping, should be avoided for **24 hours.** Splints are not usually recommended following a joint injection unless prescribed by an allied health professional.

Seek urgent medical advice if your child develops:

- Fever (38°C or higher)
- Increasing pain, swelling, redness of the injected joint(s)
- Any other concerning symptoms

If you have questions or concerns, please contact your rheumatology team.

Additional information

Linked below are videos on Joint Injections, Nitrous Oxide and Sedation for Procedures.

- https://www.rch.org.au/be-positive/A_childs_guide_to_hospital/Joint_injection/
- https://www.rch.org.au/be-positive/A_childs_guide_to_hospital/Nitrous_oxide/
- https://www.rch.org.au/kidsinfo/fact_sheets/Sedation_for_procedures/