



Joint injections & sedation

>>> A guide for parents

What is a joint injection?

A joint injection is a common way to treat JIA. Joint injections reduce inflammation and pain in swollen joints. Your child's rheumatologist will insert a needle into the joint space (the space between the bones in a joint), to remove some of the excess fluid from an inflamed joint and then to inject a long-acting steroid medicine into the joint. Most children notice that the joint is a lot less sore and inflamed with a few days after the injection, and this improvement can last for months.

Why has a joint injection been recommended for my child?

Joint injections are usually used when only a few joints are inflamed. Joint injections may be done even if your child is also taking other medications. Joint injections can help improve movement in a joint, especially if your child does physiotherapy exercises after the injection. Some children also have a plaster cast put on after an injection, to stretch the joint and correct its position.

How long will the effects last for?

The amount of improvement and how long it lasts varies from child to child, and depends on the type of arthritis they have. Most children will notice improvement for weeks or months. Sometimes the arthritis in that joint goes into remission for years or even forever.

What is sedation? Why is my child being given sedation?

Sedation is the process of giving your child medication to help them relax. This reduces your child's pain and anxiety, and may also make them sleepy. Sedation is helpful because children usually feel less distressed and more able to cope with the procedure. The common drugs used for sedation are midazolam and nitrous oxide.

What is Midazolam?

Midazolam is a medicine that makes your child relaxed and sleepy and may also make them forget the procedure afterwards. Midazolam is a liquid which is swallowed about half an hour before the procedure. It can taste bitter so is sometimes mixed with cordial or chocolate sauce to make it sweeter.

What is Nitrous Oxide?

Nitrous oxide is commonly called laughing gas. It gives a light anaesthetic, which means it can reduce pain during the procedure. It may also make your child a little bit sleepy. It is given by a nurse specially trained in giving sedation. It is mixed with oxygen and breathed in during the procedure, through a plastic tube that your child holds to their mouth.

What preparations are needed for the procedure?

Your child must not eat or drink for at least two hours before the procedure (including chewing gum and lollies). Your child should wear loose clothes that they can pull up to uncover the joints that need to be injected. If your child is unwell or has a temperature you should call your rheumatology nurse or rheumatologist the day before the procedure because it may have to be postponed until they are well.



What happens on the day of the procedure?

The procedure is carried out at the hospital. You will meet with the nurse who will ask you some questions about your child's health, listen to their heart and lungs and will take your child's temperature and blood pressure. The nurse will also apply some local anaesthetic cream (magic cream) to the joints your child's rheumatologist will be injecting.

Your child's rheumatology nurse will explain the procedure to you and your child and encourage your child to practice the breathing technique required to breathe in the laughing gas (nitrous oxide).

Half an hour before the procedure your child will be given the liquid (Midazolam) to swallow to make them relaxed.

When it is time for your child to have their joint injected you can go with them and stay with your child for the entire time of the procedure. You will go into a room with a bed, the equipment that may be needed to monitor your child under sedation and the equipment needed to do the joint injection. The nurse will monitor the sedation of your child throughout the procedure.

Your child may appear very sleepy; they may also laugh, or say funny things, which is normal and is caused by the laughing gas.

When they are relaxed enough, the rheumatologist will start the joint injections.

1. They will first uncover the joint from clothes.
2. Your child's rheumatologist will clean the area around your child's joint with a cold cleaning solution to make sure the area is sterile.
3. Your child's rheumatologist will then insert a needle into the skin and inject some local anaesthetic into the area where the joint injection will be placed. Your child's rheumatologist will then wait several minutes to allow the local anaesthetic to work before moving on.
4. Next a needle will be inserted through the skin into the joint space. This bit can hurt, but with sedation your child should not feel this, or be worried by it.
5. Then your child's doctor will attempt to suck out any excess fluid from within the joint space with the needle. This fluid is yellow. Occasionally there is a bit of blood mixed in, which is normal and from the injection. Sometimes there is a lot of fluid and sometimes there is only a small amount of fluid.
6. Then, without taking the needle out, the doctor will change the syringe (the plastic bit that holds fluid) and reconnect another syringe to inject the steroid medication.
7. Finally your child's rheumatologist will inject a small amount of local anaesthetic, which makes the joint go numb. This is to prevent the joint feeling sore after the joint injection, as sometimes putting the steroid medicine into the joint can make it hurt for a little while.
8. The needle is then removed and a Band-Aid® is applied. Each joint takes about 5 minutes to inject. Your child will be kept for monitoring until your child's conscious level returns to normal to make sure they are OK after the sedation. You can go home after this.

Are there any side effects of the joint injection?

There are a few possible side effects from a joint injection, but these are usually not serious. These include:

- Skin changes at the site of the injection, called subcutaneous fat atrophy. This appears as a dimple or indentation at the point where the needle went in. It is more likely in some joints, for example the ankle joint, the wrists and the small joints of the foot. These skin changes usually recover over time. Occasionally the same area can lose its normal skin colour.
- Small calcifications within the joint space, which are small bits of solid calcium. This occurs more commonly after multiple steroid injections. The bits of calcium can only be seen on X-ray and rarely cause pain or interfere with movement of the joint.
- Infection of the joint is a potential risk but this is very unlikely and happens very rarely. Special precautions are taken to avoid this, such as cleaning the skin carefully before injecting.
- If there are many joints being injected (for example more than 10) there may be a temporary systemic effect of the steroid, meaning that it affects the whole body. This can cause a round looking face, acne, mood changes, and increased appetite. This usually lasts a couple of weeks and then goes away, and it does not cause any long term side effects. Note: If your child requires lots of joints to be injected this usually is done using a general anaesthetic rather than just sedation.
- A small proportion of children can experience pain in the joints after the injection, but this should settle down in a day or two. Using an ice pack may help.

