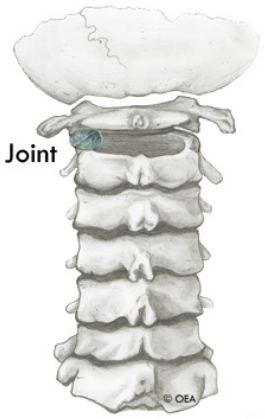
ATLANTO-AXIAL JOINT INJECTION

For Chronic Neck Pain & Headache



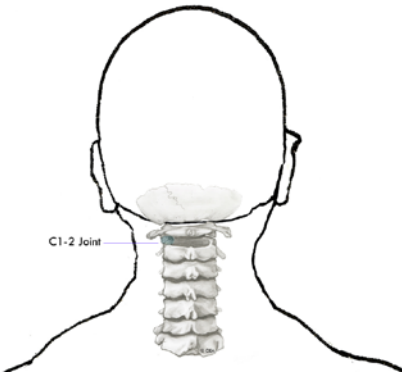
An atlanto-axial (AA) joint injection is an outpatient procedure for diagnosing and treating chronic upper neck pain and headache. This information sheet will explain what it is. Your doctor can explain if it is for you.

What is the atlanto-axial joint?

Joints connect the vertebrae, the bones of your spine. These joints help guide your spine when you move.

The neck area of the spine is called the cervical region. It contains seven vertebrae and the joints that connect them.

The joint connecting the first cervical vertebra (atlas or C1) with the second cervical vertebra is called the atlanto-axial joint. It is also sometimes called the AA or the C1-2 joint. Half of the total rotation in the neck comes from this joint.



What is AA joint pain?

You may feel pain if your atlanto-axial joint is injured. Sometimes it feels like muscle tension. But at other times the pain may be severe.

Sometimes cartilage inside the joint is injured. Other times it is the connecting ligaments surrounding the joint that are injured.

AA pain can occur in your upper neck or it can cause headaches. The diagram shows areas of pain usually associated with injury to this joint.

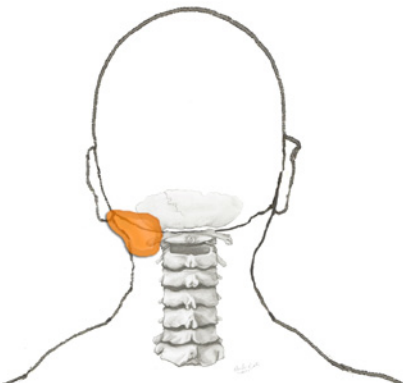
How do I know if I have AA pain?

If you have chronic upper neck pain or headaches you may have AA pain. Common tests such as x-rays or MRIs may not always show if this joint is causing pain. An atlanto-axial injection may be needed to determine this.

What is an AA injection?

In an AA injection, a local anesthetic (numbing medicine) and a corticosteroid (anti-inflammatory medicine) are injected into the joint. The anesthetic helps to temporarily numb pain, and the steroid helps reduce inflammation.

This injection can be used to diagnose or treat your pain. If it temporarily lessons your pain, and if it helps you move better, it may tell the doctor which joint is causing the pain.

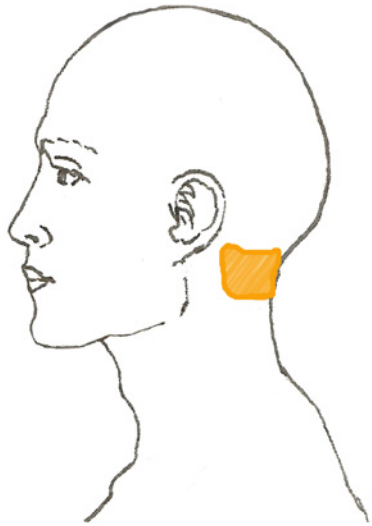


Dreyfuss P, Michaelsen M, Fletcher D. Atlanto-Occipital and Lateral Atlanto-Axial Joint Pain patterns. *Spine*. 1994. 19;1125-1131

What happens during an AA injection?

The doctor will then insert a thin needle directly into the atlanto-axial joint. Fluoroscopy, a type of x-ray, must be used to ensure the safe and proper position of the needle. A dye may also be injected to make sure the needle is at the correct spot.

When the doctor is sure the needle is at the correct place, the medicine will be injected.



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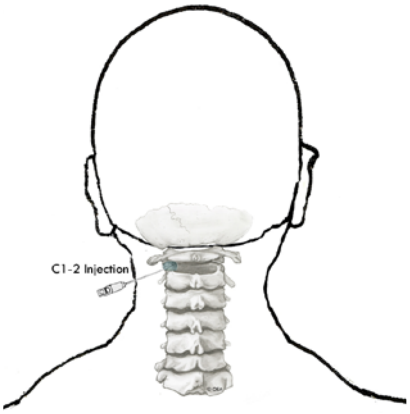

What happens after an AA injection?

You will be monitored for at least 30 minutes after the injection. When you are ready to leave, the staff will give you discharge instructions and a pain diary. It is important to fill out the pain diary because it helps your doctor know how the injection is working.

It may help to move your neck in ways that hurt before the injection, to see if the pain is still there, but do not overdo it. Take it easy for the rest of the day.

You may feel immediate pain relief and numbness in your upper neck for a period of time after the injection. This may indicate the medication has reached the right spot.

Your pain may return after this short pain-free period, or may even be a little worse for a day or two. It may be caused by needle irritation or by the corticosteroid itself. Corticosteroids usually take two or three days to start working, but can take as long as a week.

You can usually return to work the day after the injection, but always check with your doctor.

How long can I expect pain relief?

The extent and duration of pain relief may depend on the amount of inflammation and how many areas are involved. Other coexisting factors may be responsible for your pain.

Sometimes an injection can bring several weeks to months of pain relief, and then more treatment is needed. Other times, particularly if there is no underlying bone or joint problem, one injection brings long-term pain relief. If your pain is caused by injury to more than one area, only some of your symptoms may be helped by one injection.

This pamphlet is for general education only. Specific questions or concerns should always be directed to your doctor. Your doctor can explain possible risks or side effects.

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