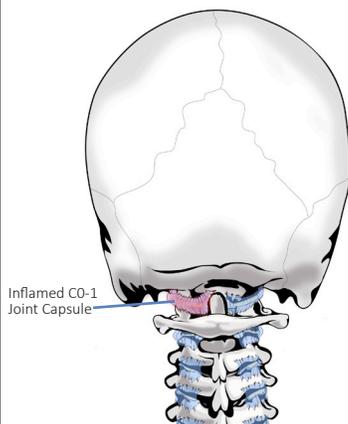
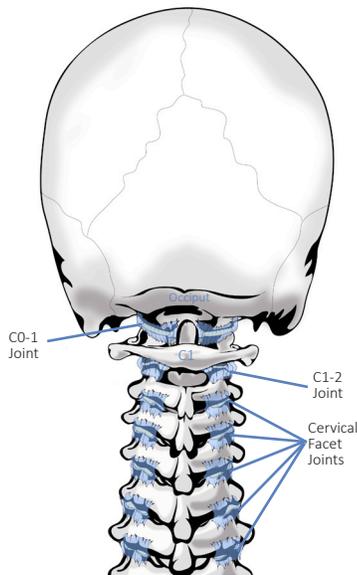
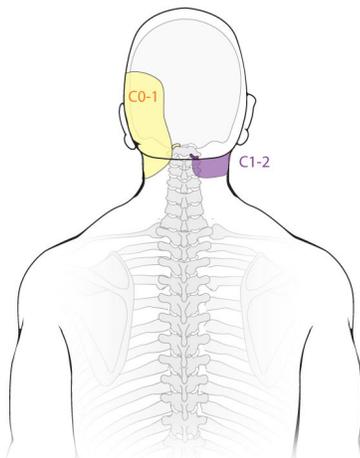


ATLANTO-OCCIPITAL JOINT INJECTION

Normal Anatomy of the Cervical Spine



CO-1 and C1-2 Joint Pain Patterns



For Chronic Neck Pain & Headache

An atlanto-occipital (AO) joint injection is an outpatient procedure for diagnosing and treating chronic upper neck pain and headache.

What is the atlanto-occipital 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 uppermost of these joints connects the skull (also called the occiput) to the first cervical vertebra (also called the atlas). This joint is called the atlanto-occipital joint. It is also sometimes called the AO or the CO-1 joint. Half of the total neck forward bending (flexion) and backward bending (extension) comes from the AO joint.

What is AO joint pain?

You may feel pain if your atlanto-occipital 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.

AO 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 AO pain?

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

What is an AO injection?

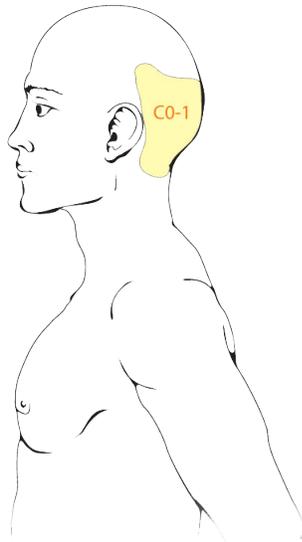
In an AO injection, a local anesthetic (numbing medicine) and a corticosteroid (anti-inflammatory medicine) are injected into the joint. The local anesthetic helps to temporarily numb pain, and the steroid helps reduce inflammation.

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

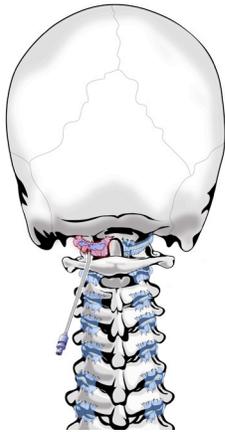
What happens during an injection?

A local anesthetic will be used to numb your skin. The doctor will then insert a small needle directly into the atlanto-occipital joint. Fluoroscopy, a type of x-ray, must be used to ensure the safe and proper position of the needle. 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 anesthetic and steroid will be injected.



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



What happens after an AO injection?

You will be monitored for up to 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 steroid itself. Steroids 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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