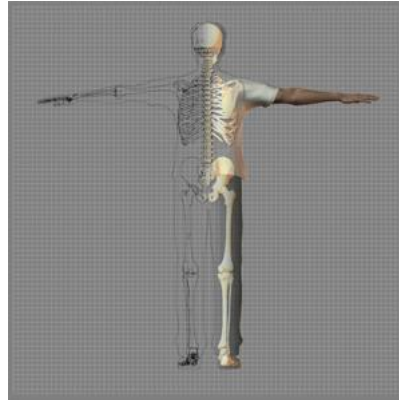


A Patient's Guide to **Pain Management: Sacroiliac Joint Injections**





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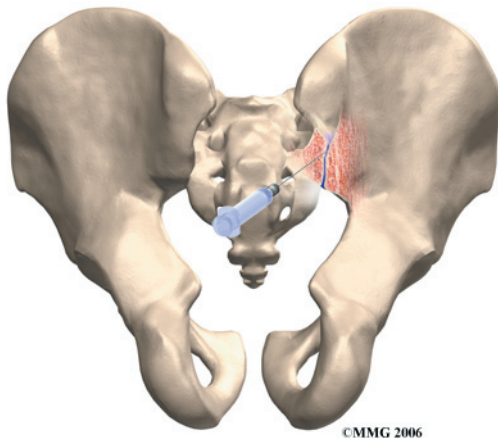
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Sacroiliac Joint Injections



Introduction

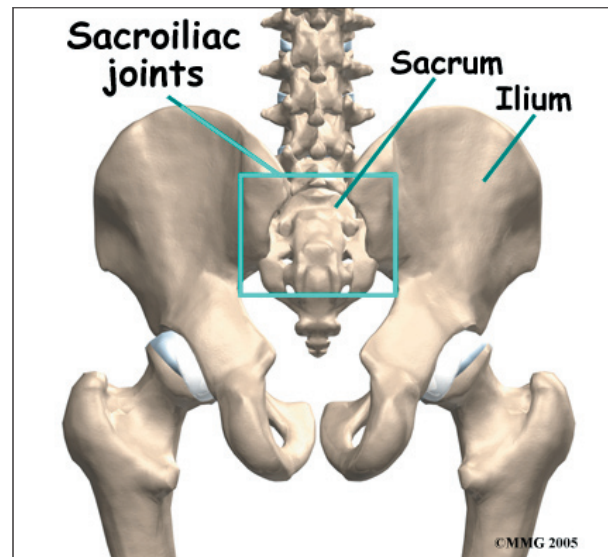
Sacroiliac (SI) joint injections are commonly used to determine what is causing back pain. SI joint injections are primarily *diagnostic injections*, meaning that they help your doctor determine the cause of your back pain but may not provide you with any long-term relief from the pain. These injections eliminate pain temporarily by filling the SI joint with an anesthetic medication that numbs the joint, the ligaments, and joint capsule around the SI joint. If the SI joint is injected and your pain goes away for several hours, then it is very likely that the joint is causing your pain. Once you and your doctor know what structure is causing your pain, you can begin to explore options for treating the condition.

This guide will help you understand

- where the injection is given
- what your doctor hopes to achieve
- what you need to do to prepare
- what you can expect from the injection
- what might go wrong

Anatomy

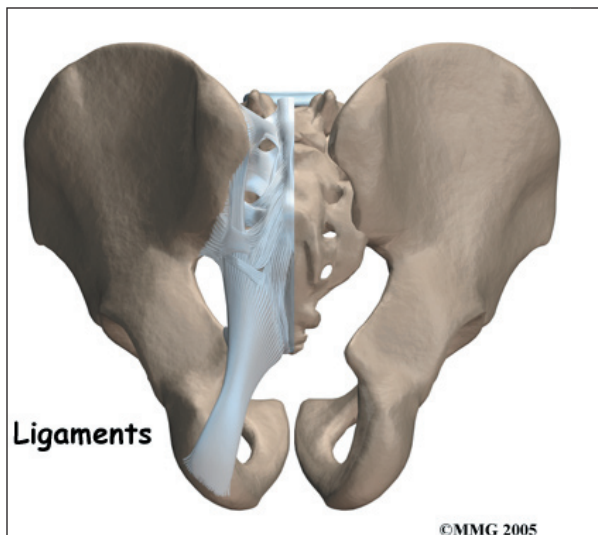
What parts of the body are involved?



At the lower end of the spine, just below the lumbar spine lies the *sacrum*. The sacrum is a triangular-shaped bone that is actually formed by the fusion of several vertebrae during development. The sacroiliac (SI) joint sits between the sacrum and the *iliac* bone (also called the *ilium*). This is why it is called the *sacroiliac* joint. You can see these joints from the outside as two small dimples on each side of the lower back at the belt line.

The SI joint is one of the larger joints in the body. The surface of the joint is wavy and fits together similar to the way two gears fit together. Very little motion occurs in the SI joint. The motion that does occur is a combination of sliding, tilting and rotation. The most the joint moves in sliding is probably only a couple of millimeters, and it may tilt and rotate two or three degrees.

The SI joint is held together by several large, very strong *ligaments*. The strongest ligaments are in the back of the joint outside of the pelvis. Because the pelvis is a ring, these ligaments work somewhat like the hoops that hold a barrel together. If these ligaments are



torn, the pelvis can become unstable. This sometimes happens when a fracture of the pelvis occurs and the ligaments are damaged. Generally, these ligaments are so strong that they are not completely torn with the usual injury to the SI joint.

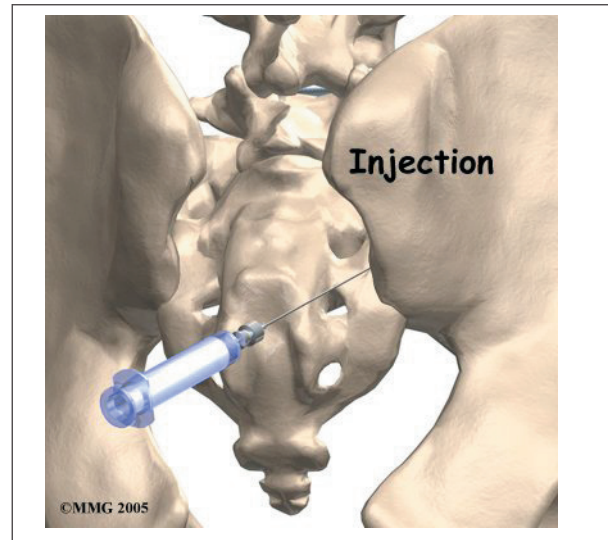
The SI joint hardly moves in adults. During the end of pregnancy as delivery nears, the hormones that are produced cause the joint to relax. This allows the pelvis to be more flexible so that birth can occur more easily. Multiple pregnancies seem to increase the amount of arthritis that forms in the joint later in life. Other than the role the joint plays in pregnancy, it does not appear that motion is important to the function of the joint. The older one gets, the more likely that the joint is completely *ankylosed*, a term that means the joint has become completely stiffened with no movement at all. It appears that the primary function of the joint is to be a shock absorber and to provide just enough motion and flexibility to lessen the stress on the pelvis and spine.

Rationale

What does my physician hope to achieve?

Your doctor is recommending a SI joint injection to try and determine if one or both SI joints are the cause of your back pain. This type of injection is primarily a diagnostic

injection. The injection may only help your pain temporarily, sometimes just for a few hours. Once your doctor is sure that it is the SI joint causing your pain, other procedures may be recommended to reduce your pain for a longer period of time.



During a SI joint injection, the medications that are normally injected include an anesthetic and cortisone. The anesthetic medication (such as novocaine, lidocaine or bupivacaine) is the same medication used to numb an area when you are having dental work or having a laceration sutured. The medication causes temporary numbness lasting one hour to six hours, depending on which type of anesthetic is used.

Cortisone is an extremely powerful anti-inflammatory medication. When this medication is injected into a painful, inflamed joint, it can reduce the inflammation and swelling. Reducing the inflammation reduces pain. If cortisone is also injected into the joint at the same time, you may get several weeks' worth of relief from your pain. This can allow you to get started in a physical therapy program, strengthen the muscles, and begin normal movement again. When the cortisone wears off, the pain may not return.

Preparations

How will I prepare for the procedure?

Your doctor may tell you to be **NPO** for a certain amount of time before the procedure. This means that you should not eat or drink **anything** for the amount of time before your procedure. This means no water, no coffee, no tea - not anything. You may receive special instructions to take your usual medications with a small amount of water. Check with your doctor if you are unsure what to do.

You should tell your doctor if you are taking any medications that *thin* your blood or interfere with blood clotting. The most common blood thinner is coumadin. Other medications also slow down blood clotting. Aspirin, ibuprofen, and nearly all of the anti-inflammatory medications affect blood clotting. Medications used to prevent strokes, such as Plavix, can also affect blood clotting. These medications usually need to be stopped seven days prior to the injection. Be sure to let your doctor know if you are on any of these medications.

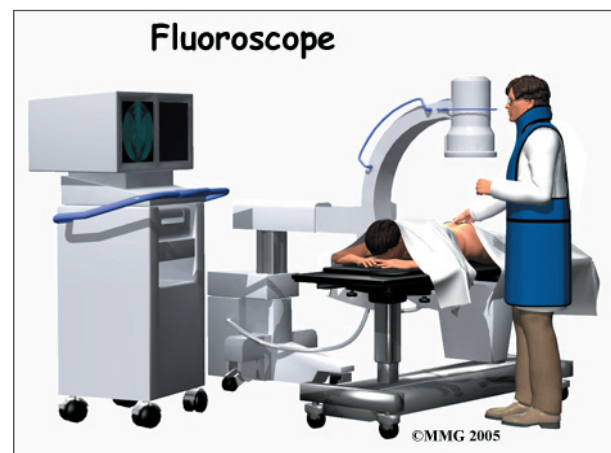
Procedure

What happens during the procedure?

When you are ready to have the injection, you will be taken into the procedure area and an IV will be started. The IV allows the nurse or doctor to give you any medications that may be needed during the procedure. The IV is for your safety because it allows a very rapid response if you have a problem during the procedure, such as an allergic reaction to any of the medications injected. If you are in pain or anxious, you may also be given medications through the IV for sedation during the procedure.

SI joint injections are done with the help of *fluoroscopic guidance*. The *fluoroscope* is an x-ray machine that allows the doctor to actually see an x-ray image while doing the procedure. This allows the doctor to watch

where the needle goes as it is inserted. This makes the injection much safer and much more accurate. Once the needle is in the right location, a small amount of radiographic dye is injected. This liquid dye shows up on the x-ray image, and the doctor can watch where it goes. The anesthetic medication and the cortisone will go in the same place. The doctor wants to make sure the injection will put the medication where it can do the most good. Once the correct position is confirmed, the anesthetic and cortisone are injected, and the needle is removed.



You will then be taken out of the procedure room to the recovery area. You will remain in the recovery area until the nurse is sure that you are stable and you do not have any allergic reaction to the medications.

Your doctor will be interested in how much the pain is reduced while the anesthetic (numbing medication) is working. You may be given a *pain diary* to record what you feel for the next several hours. This is important for making decisions, so keep track of your pain.

The anesthetic may cause some temporary numbness and weakness. You will be free to go when these symptoms have resolved.

Complications

What might go wrong?

There are several complications that may occur during or after the SI joint injection. This document doesn't provide a complete list of the possible complications, but it does highlight some of the most common problems. Injection procedures are safe and unlikely to result in a complication, but no procedure is 100% foolproof. Complications are uncommon, but you should know what to watch for if they occur.

Allergic reaction

Like most procedures where medications are injected, there is always a risk of allergic reaction. The medications that are commonly injected include lidocaine, bupivacaine, radiographic dye, and cortisone. Allergic reactions can be as simple as developing hives or a rash. They can also be life threatening and restrict breathing. Most allergic reactions will happen immediately while you are in the procedure room so that help is available immediately. Most reactions are treated and cause no permanent harm. You should alert your doctor if you have known allergies to any of these medications.

Infection

Several types of infections are possible complications of SI joint injections. Any time a needle is inserted through the skin, there is a possibility of infection. Before any injection is done, the skin is cleansed with a disinfectant and the health care provider doing the injection uses what is called *sterile technique*. This means that the needle and the area where the needle is inserted remains untouched by anything that is not sterile. The provider may also use sterile gloves.

Infections can occur just underneath the skin, in a muscle, or in the facet joint. You should watch for signs of increasing redness, swelling, pain, and fever. Almost all infections will need to be treated with antibiotics. If an abscess forms, then a surgical procedure may be necessary to drain the pus in the abscess. Antibiotics will also be necessary to treat the infection.

Increased pain

Not all injections work as expected. Sometimes, injections cause more pain. This may be due to increased spasm in the muscles around the injection. The increased pain is usually temporary, lasting a few hours or a few days. Once the medication has a chance to work, the injection may actually perform as expected and reduce your pain. Increased pain that begins several days after the injection may be a sign of infection. You should alert your doctor if this occurs.

After Care

What happens after the procedure?

If everything goes as planned, you will be able to go home soon after the injection, probably within one hour. There are no restrictions on diet or activity after the SI joint injection. You can return to physical therapy or chiropractic care as soon as you like.

Most doctors will arrange a follow-up appointment, or phone consult, within one or two weeks after the procedure to see how you are doing and what affect the procedure had on your symptoms.

Notes