

Sacro-Iliac Joint Injection

Sacroiliac (SI) joint injections are commonly used to determine what is causing back pain. If the SI joint is injected and your pain improves, 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.

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.

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, Eliquis, Xarelto, and Pradaxa 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.

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.