

SACROILIAC JOINT INJECTIONS

These safety practices have been developed to highlight the important elements in the safe performance of interventional pain procedures. Adherence to these practices will help decrease the risk of preventable complications. For additional information about the indications and technical aspects that yield improved treatment outcomes, refer to the *SIS Practice Guidelines for Spinal Diagnostic and Treatment Procedures*.

PERSONNEL

- Only physicians trained in the performance and interpretation of sacroiliac joint (SIJ) injections should perform this procedure.
- Appropriately trained personnel are needed for the operation of the fluoroscopy unit and to assist the physician.

CONTRAINDICATIONS

- An active systemic infection or a localized infection within the procedural field
- Uncooperative patient
- Allergy to medication(s) that cannot safely be mitigated by pre-treatment
- Pregnancy (for fluoroscopically and CT-guided injections)

SEDATION

- Sedation is not intrinsically necessary for SIJ injections, but if employed in unique circumstances (e.g. movement disorder, cases of extreme anxiety, previous vasovagal response), the patient should remain able to communicate pain or other adverse sensations or events.
- Use of sedation may alter diagnostic conclusions.
- The decision to use sedation should be made on a case-by-case basis.
- If the physician performing the procedure decides to administer and supervise the sedation, they should be trained and qualified to do so. In these situations, a separate healthcare provider is required to assist with the administration of the medications and monitoring of the patient.
- Resuscitation drugs, monitoring equipment, and oxygen must be available if sedation is utilized.

SAFE, ASEPTIC PRACTICES

- Strict aseptic technique should be followed at all times as they pertain to the facilities, materials, patient preparation, physician preparation, personnel, and injectate/syringe preparation. Examples include, but are not limited to:
 - o Skin overlying the target region should be prepared for an aseptic procedure, preferably using chlorhexidine in alcohol. The area should then be draped to create a sterile field.
 - o A face mask and sterile gloves must be worn during the procedure.
 - o Sterile single-use syringes and needles are required, and single-dose vials should be utilized when available. Centers for Disease Control and Prevention (CDC) guidelines



for safe injection practices must be followed.

- o Acquisition, storage, and utilization of medications should be in accordance with relevant governmental guidelines such as those of the CDC in the United States.

IMAGING

- Use of image guidance is critical to ensuring appropriate needle placement and monitoring injectate flow patterns.
- The imaging technique should follow the ALARA protocols (as low as reasonably achievable) to minimize x-ray exposure for both the patient and the healthcare team.
- Fluoroscopic guidance has been used in the primary literature validating the safety and efficacy of sacroiliac joint injections, while the same rigor of investigation has not occurred for alternative image-guidance (e.g. CT or US). Fluoroscopy is currently the recommended image-guidance modality for sacroiliac joint injections.
- If using fluoroscopy, multiplanar views should be used to avoid placement too far inferior, which risks going through the greater sciatic foramen into the pelvic cavity.
- Obtain images documenting final needle position and satisfactory contrast spread.

PROCEDURE TECHNIQUE

- The total volume of all medications injected into the joint (including contrast medium) should not exceed 2.5 ml. Physicians injecting a higher volume should be aware of the possibility of injectate spreading to unintended areas.

POST-PROCEDURE MONITORING/FOLLOW-UP

- A certain percentage of patients will have a ventral capsular defect in the joint capsule, which “if present” may allow for medication spread onto the lumbosacral plexus. Therefore, physicians should consider observing patients for 30-60 minutes post-procedure to ensure normal neurologic function of the lower extremities.
- The patient should be instructed not to drive or operate machinery for the remainder of the day.
- Provide detailed oral and written discharge instructions to patients that outline:
 - o restrictions and recommendations for the immediate post-injection period,
 - o potential expected side effects that may occur immediately post-injection and in the first few days following the procedure (e.g. pain at injection site, increased blood glucose level), and
 - o symptoms that merit immediate medical attention (including but not limited to fever, severe worsening of pain, purulent discharge, and new or worsening neurologic deficits), and
 - o when to resume usual medications and anticoagulants if discontinued for the procedure.
- Ensure patients have a follow-up plan.



SOURCES

Bogduk N (ed). Practice Guidelines for Spinal Diagnostic and Treatment Procedures, 2nd edn. International Spine Intervention Society, San Francisco, 2013.

Fortin JD, Tolchin RB. Sacroiliac provocation and arthrography. *Archi Phys Med Rehabil* 1993; 74:125-129.

Aprill CN. The role of anatomical specific injections into the sacroiliac joint. In: Vleeming A, Mooney V, Snijders C, Dorman T (eds). *First Interdisciplinary World Congress on Low Back Pain and its Relation to the Sacroiliac Joint*, San Diego, November 5-6, 1992. Rotterdam, ECO 1992, pp 373-380.

Schwarzer AC, Aprill CN, Bogduk N. The sacroiliac joint in chronic low back pain. *Spine* 1995; 20:31-37.

Fortin JD, Dwyer AD, West S, Pier J. Sacroiliac joint: pain referral maps upon applying a new injection/arthrography techniques. part 1: asymptomatic volunteers. *Spine* 1994; 19:1475-1482.

DISCLAIMER

While these Safety Practices are intended to identify elements critical to the safe performance of interventional spine procedures, they are not intended to be inclusive of all proper methods relevant to the safe performance of spine procedures, or exclusive of other methods of care reasonably utilized to obtain the same results. Nothing contained in these documents is intended to be used as a substitute for the care and knowledge of the individual clinician. They are guidelines based on evidence-informed expert consensus. SIS makes no representation and assumes no responsibility for the accuracy of the information contained or available through this website, and such information is subject to change without notice. The clinician's independent medical judgment, given the individual patient's clinical circumstances and preferences, should always determine patient care and treatment. Practitioners are advised to consider management options in the context of their own training and background and institutional capabilities when selecting recommended treatment options. SIS is not responsible nor does it assume any legal liability or responsibility for the accuracy, completeness, clinical efficacy, or value of any such information or any apparatus, product, or process described or referenced through this website or the information contained therein.



SPINE INTERVENTION SOCIETY

SAFETY PRACTICES FOR INTERVENTIONAL PAIN PROCEDURES

MODULE 1 EPIDURAL STEROID INJECTIONS
MODULE 2.1 FACET INTERVENTIONS: MEDIAL BRANCH BLOCKS
MODULE 2.2 FACET INTERVENTIONS: INTRA-ARTICULAR (ZYGAPOPHYSIAL) JOINT INJECTIONS
MODULE 2.3 FACET INTERVENTIONS: MEDIAL BRANCH RADIOFREQUENCY NEUROTOMY
MODULE 2.4 FACET INTERVENTIONS: LATERAL ATLANTO-AXIAL JOINT INJECTIONS
MODULE 3.1 SACROILIAC INTERVENTIONS: SACRAL LATERAL BRANCH BLOCKS
MODULE 3.2 SACROILIAC INTERVENTIONS: SACROILIAC JOINT INJECTIONS
MODULE 3.3 SACROILIAC INTERVENTIONS: SACRAL LATERAL BRANCH RADIOFREQUENCY NEUROTOMY
MODULE 4.1 NEUROSTIMULATION: SPINAL CORD AND DORSAL ROOT GANGLION STIMULATION
MODULE 4.2 NEUROSTIMULATION: PERIPHERAL NERVE STIMULATION
MODULE 5 PROVOCATION DISCOGRAPHY
MODULE 6 VERTEBRAL AUGMENTATION

THE INTERVENTIONAL SPECIALISTS' FREE RESOURCE TO HELP DECREASE THE RISK OF PREVENTABLE COMPLICATIONS

For additional information about the indications and technical aspects that yield improved treatment outcomes, refer to the *SIS Practice Guidelines for Spinal Diagnostic and Treatment Procedures*.

