# Sacroiliac Joint Pain Following Lumbar Fusion

Kelsey A. Clark[1], John R. Edwards[1], Jennifer A. Bowden[1,2]
[1]Summit Brain, Spine, and Orthopedics, Lehi, UT, [2]Brigham Young University, Provo, UT

**DISCLOSURES: K.A. Clark: None. J.R. Edwards: 5; Orthofix. 8; 33 Medical. J.A. Bowden: None.**

**INTRODUCTION:** The sacroiliac joint is a known etiology of pain following lumbar fusion and can be categorized as either new onset or a contributing factor to ongoing low back pain after surgery. Postsurgical pain and discomfort of the sacroiliac joints may be due to increased biomechanical stress across the joint, which is richly innervated and the source of several nociceptive ligamentous connections. The purpose of this study was to evaluate the incidence of new onset sacroiliac joint pain following lumbar fusion surgery.

**METHODS:** In this retrospective study, records of 407 surgical lumbar fusion cases performed between February 2020 to April 2023 were considered. All surgical cases were performed by a single surgeon and Orthofix hardware. Descriptive statistics were utilized for data analysis.

**RESULTS:** Of the 407 patients who underwent lumbar fusion, 17.69% (n = 72) reported postsurgical pain in either the unilateral or bilateral sacroiliac joints and received a diagnosis of sacroiliac joint dysfunction in their postoperative visits (≤2 years). An additional 7.62% of patients (n = 31) described symptoms mirroring sacroiliitis (i.e., one-sided hip pain, buttock pain) but did not receive a definitive diagnosis either due to negative provocative testing or insufficient follow-up after the initial complaint. 0.49% of patients (n = 2) did exhibit postoperative sacroiliac joint pain but did not respond to diagnostic injections and thus alternative diagnoses were considered.

**DISCUSSION:** Nearly one-fifth of the lumbar fusion patients in this study developed sacroiliac joint pain within their 2-year follow-up windows. The results of this analysis prompt the need for preoperative counseling on the risk of sacroiliac joint dysfunction following fusion surgery and the encouragement of postoperative physical therapy with an emphasis on proper spinal biomechanics.

**CLINICAL SIGNIFICANCE:** Sacroiliac joint pain occurs in a large number of patients due to alterations in biomechanics following lumbar fusion. Preoperative education and targeted postoperative physical therapy are important to help reduce and alleviate the incidence of postoperative sacroiliac pathology.