Stanford



Joshua Levin, MD

- Clinical Professor, Orthopaedic Surgery
- Clinical Professor, Neurosurgery

CLINICAL OFFICE (PRIMARY)

- **Stanford Orthopaedic Spine Center in Redwood City**
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  Redwood City, CA 94063
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ACADEMIC CONTACT INFORMATION

- **Alternate Contact**
  Irma Serrano - PM&R Residency Program Coordinator
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Bio

BIO

Dr. Levin completed a residency in physical medicine and rehabilitation at the University of Michigan in 2007, and a pain medicine fellowship at the Virginia Commonwealth University in 2008. Currently, he is a Clinical Professor in both the departments of Orthopedic Surgery and Neurosurgery at Stanford University, where he also is the director of the PM&R residency program and the associate director of the interventional spine and musculoskeletal medicine fellowship.

CLINICAL FOCUS

- Spine care
- Spine Injections
- EMG (nerve tests)
- Pain Medicine

ACADEMIC APPOINTMENTS

- Clinical Professor, Orthopaedic Surgery
- Clinical Professor, Neurosurgery
- Member, Wu Tsai Human Performance Alliance

ADMINISTRATIVE APPOINTMENTS

- Director, Physical Medicine and Rehabilitation Residency, Stanford, (2018- present)
- Director, Physical Medicine and Rehabilitation Spine Fellowship, Stanford, (2015-2025)
- Associate Director, Physical Medicine and Rehabilitation Spine Fellowship, Stanford, (2025- present)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Research Division Member, International Pain and Spine Intervention Society (IPSIS) (2022 - present)
- Health Policy Division Member, International Pain and Spine Intervention Society (IPSIS) (2014 - 2022)

- Interventional Spine & Musculoskeletal Medicine Fellowship Committee Member, North American Spine Society (2019 - present)

PROFESSIONAL EDUCATION

- Fellowship: Virginia Commonwealth University Health System (2007) VA
- Residency: University of Michigan Physical Medicine and Rehab Residency (2007) MI
- Internship: St Joseph Mercy Hospital (2004) MI
- Medical Education: Virginia Commonwealth University School of Medicine Registrar (2003) VA
- Board Certification: Physical Medicine and Rehab, American Board of Physical Medicine and Rehabilitation (2008)
- Board Certification: Pain Medicine, American Board of Physical Medicine and Rehabilitation (2008)
- Board Certification: Electrodiagnostic Medicine, American Board of Electrodiagnostic Medicine (2010)

LINKS

- Get a Second Opinion: https://stanfordhealthcare.org/second-opinion/overview.html

Publications

PUBLICATIONS

- **Prevalence of MRI findings in adults with scapular pain: An exploratory cross-sectional study.** *Interventional pain medicine*
  Potu, C. K., Wong, H. J., Levin, J., Chou, R.
  2026; 5 (4): 100827
- **2026 AAPM&R Annual Assembly Abstracts.** *PM & R : the journal of injury, function, and rehabilitation*
  Potu, C., Wong, H., Levin, J., Chou, R.
  2026; 18 Suppl 3: S46-S47
- **2026 AAPM&R Annual Assembly Abstracts.** *PM & R : the journal of injury, function, and rehabilitation*
  Wen, J., Dwyer, S., Kou, M., Alam, A., Pai, N., Hsu, M., Addleman-Jensen, J., Levin, J.
  2026; 18 Suppl 3: S154-S155
- **Geographic variations in ACGME PGY-2 PM&R residency program salaries compared to cost of living.** *PM & R : the journal of injury, function, and rehabilitation*
  Wen, J., Dwyer, S., Kou, M., Zhu, A., Alam, A., Pai, N., Addleman, J. S., Levin, J.
  2026
- **Early outcomes from intra-articular lateral C1-2 joint steroid injections: A retrospective case series.** *Interventional pain medicine*
  Kaufman, M. W., Yeung, G., Rittenberg, J., Huynh, L., Smuck, M., Levin, J.
  2026; 5 (1): 100737
- **Is a case of one thromboembolic event one too many?** *Interventional pain medicine*
  Levi, D., Levin, J.
  2026; 5 (1): 100729
- **Evaluating the utility of using ChatGPT 3.5 to generate research ideas for non-operative spine medicine** *JOURNAL OF MEDICAL ARTIFICIAL INTELLIGENCE*
  Kaufman, M., Pham, N., Levin, J.
  2025; 8
- **Intra-articular cervical facet joint corticosteroid injections in patients with increased peri-facet MRI STIR signal. A prospective, multi-center case series.** *Interventional pain medicine*
  Levin, J., Barrette, K., Ghaffari, C., Ehsanian, R., Koltsov, J., Giacomazzi, C., Prabhakar, N., Huynh, L., Smuck, M., Summers, W., Schneider, B.
  2025; 4 (4): 100646
- **Understanding Ways to Improve Interventional Spine Exposure During Medical Training: A Quality Survey of Interventional Spine and Musculoskeletal Medicine Fellowship Program Directors.** *American journal of physical medicine & rehabilitation*
  Wen, J., Shehabat, M., Ansari, U., Syed, B., Nadora, D., Dwyer, S., Razick, D., Puglisi, J., Levin, J.

2025

- **Intraosseous Basivertebral Nerve Ablation for Spinal Pain: A Perspective Review.** *Annals of rehabilitation medicine*
  Ciralsky, T., Fox, S., Levin, J.
  2025; 49 (5): 259-262
- **Safety profile of cervical transforaminal epidural steroid injections performed while maintaining anticoagulation, aspirin, or NSAIDs.** *Interventional pain medicine*
  Levi, D., Randall, D., Horn, S., Russo, A., Gabri, J., Durand, M., Levin, J.
  2025; 4 (3): 100618
- **Hematoma formation after basivertebral nerve ablation.** *Interventional pain medicine*
  Fox, S., Levin, J.
  2025; 4 (3): 100617
- **Bone marrow concentrate intradiscal injection for chronic discogenic low back pain: A double-blind randomized sham-controlled trial.** *Interventional pain medicine*
  Levi, D., Tyszko, S., Horn, S., Pham, N., Levin, J.
  2025; 4 (3): 100611
- **"Is this injection going to hurt?" Quantifying the pain experience during common lumbosacral spine injections.** *Interventional pain medicine*
  Smuek, A., Bakshi, R., Mays, R., Huynh, L., Levin, J., Rittenberg, J., Smuck, M.
  2025; 4 (3): 100632
- **Geographic impact on relative locations of interventional spine and musculoskeletal medicine fellowships relative to residency and first job placement.** *PM & R : the journal of injury, function, and rehabilitation*
  Wen, J., Ansari, U., Shehabat, M., Syed, B., Dwyer, S., Nadora, D., Razick, D., Akhtar, M., Levin, J.
  2025
- **Patient Acceptance of Reoperation Risk for Lumbar Decompression Versus Fusion.** *The spine journal : official journal of the North American Spine Society*
  Pius, A. K., Joseph, Y. D., Mullis, D. M., Koduri, J., Levin, J., Alamin, T. F.
  2024
- **Clinical history correlates with lateral atlantoaxial (C1-2) joint edema. A pilot study.** *Interventional pain medicine*
  Levin, J., Kaufman, M., Yeung, G.
  2024; 3 (3): 100434
- **Rates of positive vs negative studies in the spine literature.** *Interventional pain medicine*
  Levin, S., Levin, J.
  2024; 3 (3): 100423
- **A randomized, placebo-controlled trial of long-acting dexamethasone viscous gel delivered by transforaminal injection for lumbosacral radicular pain.** *Pain*
  Miller, A., Candido, K. D., Knezevic, N. N., Rivera, J., Lunseth, P., Levinson, D. J., Formoso, F., Solanki, D., Tavel, E., Krull, A., Radnovich, R., Burkhead, D., Souza, et al
  2024
- **Systemic steroids for cervical radicular pain: A systematic review.** *Interventional pain medicine*
  Gall, N., Ghaffari, C., Koduri, J., Dove, C., Levin, J.
  2023; 2 (4): 100280
- **Intraosseous basivertebral nerve ablation: Pooled long-term outcomes from two prospective clinical trials.** *Interventional pain medicine*
  Smuck, M., Truumees, E., Macadaeg, K., Jaini, A. M., Chatterjee, S., Levin, J.
  2023; 2 (2): 100256
- **Is a history of episodic low back pain an indicator of Modic changes?** *Interventional pain medicine*
  Levin, J., Schirmer, D., Garcia, R., Levi, D.
  2023; 2 (1): 100239
- **Safety of dexamethasone in transforaminal epidural steroid injections: A case of temporary paraplegia caused by injection of lidocaine and dexamethasone into a lumbar radiculomedullary artery, with no neurologic sequelae.** *Interventional pain medicine*

Levi, D., Horn, S., Murphy, J., Levin, J.
2023; 2 (1): 100240

- **The type 2 high intensity zone: Two cases of axial low back pain in the setting of high T1 and high T2 signal in the posterior annulus.** *Interventional pain medicine*
  Ghaffari, C., Heit, J., Levin, J.
  2022; 1 (4): 100131
- **Results of lumbar transforaminal epidural steroid injections based on the physician referral source.** *Interventional pain medicine*
  Levin, J., Li, W., Gall, N., Chan, J., Caragea, M., Huynh, L., Koltsov, J., Smuck, M.
  2022; 1 (3): 100114
- **Yes but no.** *Interventional pain medicine*
  Levin, J.
  2022; 1 (2): 100110
- **Retrospective analysis of cervical transforaminal versus interlaminar epidural steroid injections.** *Interventional pain medicine*
  Levin, J., Chan, J., Gall, N., Koltsov, J., Huynh, L.
  2022; 1 (2): 100102
- **Attempted aspiration of a symptomatic lumbar juxtafacet cyst resulting in improvement of acute onset radiculopathy with progressive motor weakness.** *Interventional pain medicine*
  Su, S., Mitsuya, Y., Schirmer, D., Levin, J.
  2022; 1 (2): 100101
- **Thoracic transforaminal epidural steroid injection for management of thoracic spine pain: A multicenter cross-sectional study of short-term outcomes.** *Interventional pain medicine*
  Levin, J., Chan, J., Huynh, L., Smuck, M., Koltsov, J., Kesikburun, B., Wagner, G. E., Caragea, M., Kuo, K., McCormick, Z. L., Schneider, B., Berlin, E., Kennedy, et al
  2022; 1 (1): 100004
- **Results of cervical epidural steroid injections based on the physician referral source.** *Interventional pain medicine*
  Levin, J., Gall, N., Chan, J., Huynh, L., Koltsov, J., Kennedy, D. J., Smuck, M.
  2022; 1 (1): 100001
- **Improving environmental sustainability in outpatient clinics: Lessons from a waste audit** *JOURNAL OF CLIMATE CHANGE AND HEALTH*
  Taylor, A., Levin, J., Chan, J., Lee, M., Kasitinon, D., Miller, E., Fox, P.
  2021; 4
- **Extensor Digitorum Brevis Bulk and Associations with Fibular Motor Nerve Conduction Amplitude.** *PM & R : the journal of injury, function, and rehabilitation*
  Levin, J., Lowe, A., Tamura, L., Miller, E., Koltsov, J., Kenrick, A., Barrette, K., Richardson, J.
  2021
- **Contrast Flow Patterns Based on Needle Tip Position During Cervical Transforaminal Epidural Injections.** *PM & R : the journal of injury, function, and rehabilitation*
  Levin, J. n., Levi, D. n., Gall, N. n., Horn, S. n., Smuck, M. n.
  2021
- **Thoracic Transforaminal Epidural Steroid Injection for Management of Thoracic Spine Pain: A Multicenter Study of Short-Term Outcomes** *Interventional Pain Medicine*
  Levin, J., Chan, J., Huynh, L., Kesikburun, B., Wagner, G., Caragea, M., Kuo, K., McCormick, Z., Schneider, B., Berlin, E., Smuck, M., Kennedy, D., Kesikburun, et al
  2021; 1 (1)
- **Results of Cervical Epidural Steroid Injections Based on the Physician Referral Source.** *Interventional Pain Medicine*
  Levin, J., Gall, N., Chan, J., Huynh, L., Kennedy, D., Koltsov, J., Smuck, M.
  2021; 1 (1)
- **Neuromuscular Ultrasound for Myeloid Sarcoma Affecting the Sciatic Nerve: A Case Report.** *Ultraschall in der Medizin (Stuttgart, Germany : 1980)*

Kim, J. n., Park, H. J., Levin, J. n., Won, S. J.
2020

- **Modification of the Cervical Transforaminal Epidural Steroid Injection Technique Based Upon the Anatomic Angle of the Superior Articular Process on MRI.** *Pain medicine (Malden, Mass.)*
  Levi, D. n., Horn, S. n., Murphy, J. n., Smuck, M. n., Levin, J. n.
  2020

- **Incidence of Extravascular Perivertebral Artery Contrast Flow During Cervical Transforaminal Epidural Injections.** *Pain medicine (Malden, Mass.)*
  Levin, J. n., Mohan, M. n., Levi, D. n., Horn, S. n., Smuck, M. n.
  2020

- **Ultrasonographic measurement of the cross-sectional area of the axillary nerve** *MUSCLE & NERVE*
  Yoon, J., Park, J., Levin, J., Roh, E. Y., Park, H., Won, S.
  2019; 60 (1): 95–98

- **Intra-articular Steroids vs Saline for Lumbar Z-Joint Pain: A Prospective, Randomized, Double-Blind Placebo-Controlled Trial** *PAIN MEDICINE*
  Kennedy, D. J., Fraiser, R., Zheng, P., Huynh, L., Levin, J., Smuck, M., Schneider, B. J.
  2019; 20 (2): 246–51

- **Pain and Functional Outcomes After Sacroiliac Joint Injection with Anesthetic and Corticosteroid at Six Months, Stratified by Anesthetic Response and Physical Exam Maneuvers.** *Pain medicine (Malden, Mass.)*
  Schneider, B. J., Ehsanian, R. n., Huynh, L. n., Levin, J. n., Zheng, P. n., Kennedy, D. J.
  2019

- **Intra-articular Sacroiliac Joint Needle Placement: Ultrasound, Fluoroscopy, and the Criterion Standard.** *American journal of physical medicine & rehabilitation*
  Schneider, B. J., Ehsanian, R. n., Levin, J. n., Huynh, L. n., Kennedy, D. J., McCormick, Z. L.
  2019

- **Validity of Physical Exam Maneuvers in the Diagnosis of Sacroiliac Joint Pathology.** *Pain medicine (Malden, Mass.)*
  Schneider, B. J., Ehsanian, R. n., Rosati, R. n., Huynh, L. n., Levin, J. n., Kennedy, D. J.
  2019

- **Intra-articular Steroids vs Saline for Lumbar Z-Joint Pain: A Prospective, Randomized, Double-Blind Placebo-Controlled Trial.** *Pain medicine (Malden, Mass.)*
  Kennedy, D. J., Fraiser, R., Zheng, P., Huynh, L., Levin, J., Smuck, M., Schneider, B. J.
  2018

- **The Value of Electrodiagnostic Studies in Predicting Treatment Outcomes for Patients with Spine Pathologies.** *Physical medicine and rehabilitation clinics of North America*
  Barrette, K., Levin, J., Miles, D., Kennedy, D. J.
  2018; 29 (4): 681-687

- **Corticosteroid Injections Into Lumbar Facet Joints: A Prospective, Randomized, Double-Blind Placebo-Controlled Trial** *AMERICAN JOURNAL OF PHYSICAL MEDICINE & REHABILITATION*
  Kennedy, D. J., Huynh, L., Wong, J., Mattie, R., Levin, J., Smuck, M., Schneider, B. J.
  2018; 97 (10): 741–46

- **Is a History of Severe Episodic Low Back Pain an Indicator of a Discogenic Etiology?** *PAIN MEDICINE*
  Levi, D., Carnahan, D., Horn, S., Levin, J.
  2018; 19 (7): 1334–39

- **The Value of Electrodiagnostic Studies in Predicting Treatment Outcomes for Patients with Spine Pathologies.** *Physical Medicine and Rehabilitation Clinics of North America*
  Barrette, K., Levin, J., Miles, D., Kennedy, D.
  2018

- **Does Immediate Pain Relief After an Injection into the Sacroiliac Joint with Anesthetic and Corticosteroid Predict Subsequent Pain Relief?** *Pain medicine (Malden, Mass.)*

Schneider, B. J., Huynh, L., Levin, J., Rinkaekan, P., Kordi, R., Kennedy, D. J.
2017

- **A Paradigm Shift?** *Pain medicine (Malden, Mass.)*
  Schneider, B. J., Levin, J., Kennedy, D. J.
  2017
- **TO THE EDITOR.** *Spine*
  Levi, D., Levin, J.
  2016; 41 (6): E379-?
- **A Narrative Review of Intraarticular Zygapophysial Steroid Injections for Lumbar Zygapophysial Mediated Pain.** *Current Physical Medicine and Rehabilitation Reports*
  Schneider, B., Levin, J.
  2016; 4 (2): 108-116
- **Spinal Cord Stimulation for CRPS.** *Current Physical Medicine and Rehabilitation Reports*
  Drakeley, M., Ho, S., Helm, E., Levin, J., Rosenquist, R.
  2016; 4 (2)
- **Intradiscal Platelet-Rich Plasma Injection for Chronic Discogenic Low Back Pain: Preliminary Results from a Prospective Trial.** *Pain medicine (Malden, Mass.)*
  Levi, D. n., Horn, S. n., Tyszko, S. n., Levin, J. n., Hecht-Leavitt, C. n., Walko, E. n.
  2016; 17 (6): 1010–22
- **A Systematic Review of Available Treatments for Discogenic Low Back Pain.** *Current Physical Medicine and Rehabilitation Reports*
  Lucas, M., Stewart, C., Mattie, R., McCormick, Z., Saltychev, M., Levin, J.
  2016; 4 (2): 117-131
- **Epidural Steroid Injections are Safe and Effective: Multisociety Letter in Support of the Safety and Effectiveness of Epidural Steroid Injections** *PAIN MEDICINE*
  Kennedy, D. J., Levin, J., Rosenquist, R., Singh, V., Smith, C., Stojanovic, M. P., Vorobeychik, Y.
  2015; 16 (5): 833-838
- **A Systematic Review of the Literature on Caudal, Interlaminar, and Transforaminal Injections From the Last 5 Years.** *Curr Phys Med Rehabil Rep*
  Mattie, R., McCormick, Z., Yu, S., Kennedy, D., Levin, J.
  2015: 159-172
- **A Quantitative Study of Intervertebral Disc Morphologic Changes Following Plasma-Mediated Percutaneous Discectomy** *PAIN MEDICINE*
  Smuck, M., Levin, J., Zemper, E., Ali, A., Kennedy, D. J.
  2014; 15 (10): 1695-1703
- **The importance of image guidance during epidural injections: Rates of incorrect needle placement during non-image guided epidural injections** *J Spine*
  Levin, J., Wetzel, R., Smuck, M.
  2012; 1 (2)
- **Evidence-Based Conviction** *PM&R*
  Levin, J. H., Smuck, M.
  2009; 1 (9): 891-892
- **Prospective, double-blind, randomized placebo-controlled trials in interventional spine: what the highest quality literature tells us** *SPINE JOURNAL*
  Levin, J. H.
  2009; 9 (8): 690-703
- **Rethinking convention.** *PM & R : the journal of injury, function, and rehabilitation*
  Levin, J. H.
  2009; 1 (7): 694-?

- **Re: Manchikanti L, Singh V, Falco FJ, et al. Cervical medial branch blocks for chronic cervical facet joint pain: a randomized, double-blind, controlled trial with one-year follow-up. Spine 2008;33:1813-20.** *SPINE*
  Smuck, M., Levin, J. H.
  2009; 34 (10): 1116-1116

- **Re: Scanlon GC, Moeller-Bertram T, Romanowsky SM, et al. Cervical transforaminal epidural steroid injections: more dangerous than we think? Spine 2007;32:1249-56.** *Spine*
  Smuck, M. W., Levin, J. H.
  2007; 32 (23): 2638-?

- **Epidural fibrosis following percutaneous disc decompression with coblation technology.** *Pain physician*
  Smuck, M., Benny, B., Han, A., Levin, J.
  2007; 10 (5): 691-696

- **Radiculopathy from herniation of the nucleus pulposus: 1. Epidemiology, pathophysiology, and natural history** *J. Back Musculoskeletal Rehabil*
  Levin J, Smuck M
  2007; 20 (2,3): 97-101

- **Radiculopathy from herniation of the nucleus pulposus: 2. The role of corticosteroids** *J. Back Musculoskeletal Rehabil*
  Levin J, Smuck M
  2007; 20 (2,3): 103-13