Stanford



Elliot J. Krane

Professor of Anesthesiology, Perioperative and Pain Medicine (Pediatric Anesthesia) at the Stanford University Medical Center, Emeritus

Curriculum Vitae available Online

CONTACT INFORMATION

- **Administrative Contact**

  Annah Hoang - Pediatric Anesthesia Administrative Associate

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  Tel 650.497.9690

Bio

BIO

Krane was born in Philadelphia and grew up in Tucson, the son of a watchmaker and a bookkeeper. He attended Reed College in Portland, Oregon (the Dana Scholarship for Excellence in Humanities, Phi Beta Kappa) and the University of Arizona (MD, Alpha Omega Alpha). He also worked during med school for 13 months in the Physiological Laboratory at Cambridge University under the mentorship of Peter Nathanielsz, MD, PhD, introducing the laboratory to computerized data recovery and Fourier analysis of EEG for fetal EEG measurement. He trained in pediatrics and anesthesiology at Massachusetts General Hospital and completed a fellowship in pediatric anesthesiology and critical care at Boston Children's Hospital.

From 1983 until 1994 he was on the faculty at the University of Washington and the staff of Seattle Children's Hospital practicing OR anesthesiology, pediatric critical care medicine and pain medicine. Here he started one of the first pain centers for children in North America.

In 1994 he joined the faculty at Stanford University School of Medicine as the Chief of Pediatric Anesthesiology and Professor. In 2003, he resigned as the anesthesiology chief but continued as the Chief of Pain Management. He holds board certification in Pediatrics, Anesthesiology, Pediatric Anesthesiology, Critical Care Medicine, and Pain Management, and is a Fellow of the American Academy of Pediatrics. He retired in May, 2023 and now has emeritus status.

Elliot Krane has received the Physician’s Recognition Award in both Anesthesiology and Pediatric Critical from the American Medical Association, the Poster Award from the Vienna International Congress on Anesthesiology and Perioperative Care, the Jeffrey Lawson Award for Advocacy in Children’s Pain Relief from the American Pain Society (APS), the Ellis N. Cohen Achievement Award from the Stanford University Department of Anesthesiology, Perioperative and Pain Medicine, and the International Association for the Study of Pain (IASP) Distinguished Career Award in Pediatric Pain. He has also been the recipient of grants from the Mayday Fund, the NIH, the American Medical Association, the Washington State Society of Anesthesiologists, the Diabetes Research and Education Foundation, and the American Society of Anesthesiologists as well as from pharmaceutical companies for new drug development for the treatment of pediatric pain.

ACADEMIC APPOINTMENTS

- Professor Emeritus-Hourly, Anesthesiology, Perioperative and Pain Medicine
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)

ADMINISTRATIVE APPOINTMENTS

- Adjunct Assistant Professor, Pediatrics, University of Washington, (1983-1989)
- Assistant Professor, Anesthesiology, University of Washington, (1983-1989)
- Adjunct Associate Professor, Pediatrics, University of Washington, (1989-1994)
- Associate Professor, Anesthesiology, University of Washington, (1989-1994)
- Chief of Anesthesia, LPCH, (1994-2003)
- Chief of Pain Management Service, LPCH, (1994-2023)
- Professor, Anesthesiology, Perioperative & Pain Medicine, Stanford University School of Medicine, (1994-2023)
- Professor, Pediatrics, Stanford University School of Medicine, (1994-2023)
- Professor, Emeritus, Anesthesiology, Perioperative & Pain Medicine and Pediatrics, Stanford University School of Medicine, (2023- present)

HONORS AND AWARDS

- Dana Scholarship for Excellence in Humanities, Reed College (1970)
- Phi Beta Kappa, Reed College (1974)
- Alpha Omega Alpha, University of Arizona (1977)
- Cerebral blood flow in an infant animal model, American Society of Anesthesiologists (1984)
- Comparison of caudal morphine bupivacaine, and IV morphine for pain relief in children, NIH Biomedical Research Grant (1986)
- Prevention of brain swelling during diabetes ketoacidosis, Diabetes Research and Education Foundation Grant (1987)
- Epidural Sufentanil in Children, NIH Biomedical Research Grant (1991)
- Physician's Recognition Award, American Medical Association (1997)
- Physician's Recognition Award, Pediatric Critical Care Medicine, American Medical Association (1997)
- Poster Award, Vienna International Congress 1998 on Anesthesiology and Perioperative Care, European Society of Anesthesia (1998)
- A Placebo- Controlled of Effectiveness and Safety of ALGRX 3268 In Pediatrics, Corgentech Corporation (2005)
- A Study of Safety and Efficacy of Epidural MS Extended-Release Liposome Injection in Pediatrics, Skye Pharma, Inc. (2006)
- Pfizer Visiting Professor in Pain Medicine, University of Hawaii (2006)
- A Phase III Study of the Safety and Efficacy of IV APAP in Pediatric Inpatients, Cadence Pharmaceuticals, Inc. (2007)
- Initiation of a Juvenile CRPS National Consensus Group, Mayday Fund (2007)
- Diagnosis and Treatment of Complex Regional Pain Syndromes in Childhood, Mayday Fund (2008)
- Safety and Tolerability of Extended-Release Oxymorphone in Pediatric Subjects, Endo Pharmaceuticals, Inc. (2008)
- Safety, PK, and Effectiveness of Oxymorphone for Acute Surgical Pain in Pediatrics, Endo Pharmaceuticals, Inc. (2008)
- Mayday Pain & Society Fellowship, Mayday Fund (2010)
- Lawson Award for advocacy in pediatric pain, American Pain Society (2012)
- Ellis M. Cohen Achievement Award, Stanford University School of Medicine Department of Anesthesia (2015)
- Distinguished Career Award in Pediatric Pain, International Association for the Study of Pain (2023)
- Robert M. Smith. Award for Contributions to the Specialty, American Academy of Pediatrics (Section on Anesthesiololgy and Pain Medicine) (2024)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Associate Editor, Frontiers in Pain (Pediatric Pain) (2021 - 2022)
- Appointed, International Association for the Study of Pain Presidential Commission on Cannabis Use (2018 - 2022)
- Board Member, CHYP (Creative Healing for Youth in Pain Foundation) (2021 - present)
- Founding member, President-Elect, Pediatric Research Network for Pain (PRN-Pain) (2005 - present)
- Member, California Society of Anesthesiologists (1994 - present)
- Member, American Pain Society (1985 - 2019)
- Founding Member, Society for Pediatric Anesthesiology (1989 - present)
- Elected member, Association of University Anesthesiologists (1990 - present)
- Fellow, American Academy of Pediatrics (1985 - present)
- Member, International Anesthesia Research Society (1982 - present)
- Member, American Society of Anesthesiologists (1980 - present)
- Member, International Association for the Study of Pain (1984 - present)

PROFESSIONAL EDUCATION

- BA, Reed College , Chemistry (1974)
- No degree, Cambridge University , Endocrinology (1976)
- MD, University of Arizona , Medicine (1977)
- Recertification, American Board of Anesthesiology , Anesthesia (2009)
- Recertification, American Board of Anesthesiology , Anesthesia (2014)

COMMUNITY AND INTERNATIONAL WORK

- Tutoring MUR students, East Palo Alto
- TeleHelp Ukraine, Ukraine
- Operation Rainbow: Surgery for children in Nicaragua, Esteli, Nicaragua
- Project Hope, Taipei
- Project Hope, Russia, Ukraine, Moldova

PATENTS

- Elliot Krane. "United States Patent 13/041,387 Indwelling Nerve Block Catheters", SRI, Stanford University, Sep 8, 2011

LINKS

- Professional Web Site:: http://pedsanesthesia.stanford.edu/faculty/bio/krane.html
- CAP: http://tinyurl.com/munhsgu

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The management of pain in children using intraspinal opioids, regional anesthetics, and novel analgesic agents; cerebral and osmolar complications of diabetic ketoacidosis in children.

CLINICAL TRIALS

- Efficacy and Safety of ALGRX 3268 in Children Undergoing Minor Needle-Stick Procedures., Not Recruiting

- Outcome Measures in Infant/Early Childhood Lung Disease w/ Chest CT Scanning & Lung Function Testing, Not Recruiting

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Anesthesia (Fellowship Program)

Publications

PUBLICATIONS

- **Review of Ultrasound-Guided Procedures in the Management of Chronic Pain.** *Anesthesiology clinics*
  Aggarwal, A. K., Ottestad, E., Pfaff, K. E., Huai-Yu Li, A., Xu, L., Derby, R., Hecht, D., Hah, J., Pritzlaff, S., Prabhakar, N., Krane, E., D'Souza, G., Hoydonckx, et al
  2023; 41 (2): 395-470

- **Signature for Pain Recovery IN Teens (SPRINT): protocol for a multisite prospective signature study in chronic musculoskeletal pain.** *BMJ open*
  Simons, L., Moayedi, M., Coghill, R. C., Stinson, J., Angst, M. S., Aghaeepour, N., Gaudilliere, B., King, C. D., López-Solà, M., Hoeppli, M. E., Biggs, E., Ganio, E., Williams, et al
  2022; 12 (6): e061548

- **International Association for the Study of Pain Presidential Task Force on Cannabis and Cannabinoid Analgesia: research agenda on the use of cannabinoids, cannabis, and cannabis-based medicines for pain management.** *Pain*
  Haroutounian, S., Arendt-Nielsen, L., Belton, J., Blyth, F. M., Degenhardt, L., Di Forti, M., Eccleston, C., Finn, D. P., Finnerup, N. B., Fisher, E., Fogarty, A. E., Gilron, I., Hohmann, et al
  2021; 162 (Suppl 1): S117-S124

- **A systematic review and meta-analysis of cannabis-based medicines, cannabinoids and endocannabinoid system modulators tested for antinociceptive effects in animal models of injury-related or pathological persistent pain.** *Pain*
  Soliman, N., Haroutounian, S., Hohmann, A. G., Krane, E., Liao, J., Macleod, M., Segelcke, D., Sena, C., Thomas, J., Vollert, J., Wever, K., Alaverdyan, H., Barakat, et al
  2021

- **Cannabinoids, the endocannabinoid system, and pain: a review of preclinical studies.** *Pain*
  Finn, D. P., Haroutounian, S., Hohmann, A. G., Krane, E., Soliman, N., Rice, A. S.
  2021

- **Outcome in young adults who were diagnosed with complex regional pain syndrome in childhood and adolescence.** *Pain reports*
  Wong, B. J., Yoon, I. A., Krane, E. J.
  2020; 5 (6): e860

- **Cannabinoids, cannabis, and cannabis-based medicines for pain management: an overview of systematic reviews.** *Pain*
  Moore, R. A., Fisher, E., Finn, D. P., Finnerup, N. B., Gilron, I., Haroutounian, S., Krane, E., Rice, A. S., Rowbotham, M., Wallace, M., Eccleston, C.
  2020

- **Cannabinoids, cannabis, and cannabis-based medicine for pain management: a systematic review of randomised controlled trials.** *Pain*
  Fisher, E., Moore, R. A., Fogarty, A. E., Finn, D. P., Finnerup, N. B., Gilron, I., Haroutounian, S., Krane, E., Rice, A. S., Rowbotham, M., Wallace, M., Eccleston, C.
  2020

- **Long-term Outcome of Complex Regional Pain Syndrome Diagnosed and Treated in Childhood and Adolescence**
  Wong, B., Krane, E. J.
  LIPPINCOTT WILLIAMS & WILKINS.2020: 608–9

- **Societal issues and policy implications related to the use of cannabinoids, cannabis, and cannabis-based medicines for pain management.** *Pain*
  Haroutounian, S. n., Gilron, I. n., Belton, J. n., Degenhardt, L. n., DiForti, M. n., Finn, D. P., Fogarty, A. n., Kalso, E. n., Krane, E. n., Moore, R. A., Rowbotham, M. n., Wallace, M. n., Rice, et al
  2020

- **Team Approach: Complex Regional Pain Syndrome in Children and Adolescents.** *JBJS reviews*
  Tileston, K. R., Griffin, A. n., Wagner, J. F., O'Day, M. N., Krane, E. J.
  2020; 8 (4): e0174

- **Variation Between and Within Hospitals in Single Injection Caudal Local Anesthetic Dose: A Report From the Pediatric Regional Anesthesia Network.** *Anesthesia and analgesia*
  Taenzer, A. H., Hoyt, M., Krane, E. J., Walker, B. J., Flack, S., Bosenberg, A., Sethna, N. F., Franklin, A. D., Polaner, D. M., PRAN investigators
  2019

- **The Opioid Debate-PRO Opioids Have an Important Role in Pain Management in Children** *CLINICAL JOURNAL OF PAIN*
  Krane, E. J.
  2019; 35 (6): 468–72

- **Design and Reporting Characteristics of Clinical Trials of Select Chronic and Recurrent Pediatric Pain Conditions: An Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks Systematic Review** *JOURNAL OF PAIN*
  Connolly, M. R., Chaudari, J. Y., Yang, X., Ward, N., Kitt, R. A., Herrmann, R. S., Krane, E. J., LeBel, A. A., Smith, S. M., Walco, G. A., Weisman, S. J., Turk, D. C., Dworkin, et al
  2019; 20 (4): 394–404

- **Pharmacological interventions for chronic pain in children: an overview of systematic reviews.** *Pain*
  Eccleston, C. n., Fisher, E. n., Cooper, T. E., Grégoire, M. C., Heathcote, L. C., Krane, E. n., Lord, S. M., Sethna, N. F., Anderson, A. K., Anderson, B. n., Clinch, J. n., Gray, A. L., Gold, et al
  2019; 160 (8): 1698–1707

- **Cannabinoids, cannabis, and cannabis-based medicine for pain management: a protocol for an overview of systematic reviews and a systematic review of randomised controlled trials.** *Pain reports*
  Fisher, E. n., Eccleston, C. n., Degenhardt, L. n., Finn, D. P., Finnerup, N. B., Gilron, I. n., Haroutounian, S. n., Krane, E. n., Rice, A. S., Rowbotham, M. n., Wallace, M. n., Moore, R. A.
  2019; 4 (3): e741

- **A Case Report of Combined Ultrasound and Fluoroscopic-Guided Percutaneous Radiofrequency Lesioning of the Obturator and Femoral Articular Branches in the Treatment of Persistent Hip Pain in a Pediatric Patient** *PAIN PRACTICE*
  Khan, J. S., Krane, E. J., Higgs, M., Pritzlaff, S., Hoffinger, S., Ottestad, E.
  2019; 19 (1): 52–56

- **Pharmacological interventions for chronic pain in children: an overview of systematic reviews.** *Pain*
  Eccleston, C. n., Fisher, E. n., Cooper, T. E., Grégoire, M. C., Heathcote, L. C., Krane, E. n., Lord, S. M., Sethna, N. F., Anderson, A. K., Anderson, B. n., Clinch, J. n., Gray, A. L., Gold, et al
  2019

- **Complications in Pediatric Regional Anesthesia An Analysis of More than 100,000 Blocks from the Pediatric Regional Anesthesia Network** *ANESTHESIOLOGY*
  Walker, B. J., Long, J. B., Sathyamoorthy, M., Birstler, J., Wolf, C., Bosenberg, A. T., Flack, S. H., Krane, E. J., Sethna, N. F., Suresh, S., Taenzer, A. H., Polaner, D. M., Pediat Regional Anesthesia Network
  2018; 129 (4): 721–32

- **Design and Reporting Characteristics of Clinical Trials of Select Chronic and Recurrent Pediatric Pain Conditions: An Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks Systematic Review.** *The journal of pain : official journal of the American Pain Society*
  Connolly, M. R., Chaudari, J. Y., Yang, X., Ward, N., Kitt, R. A., Herrmann, R. S., Krane, E. J., LeBel, A. A., Smith, S. M., Walco, G. A., Weisman, S. J., Turk, D. C., Dworkin, et al
  2018

- **The National Opioid Epidemic and the Risk of Outpatient Opioids in Children** *PEDIATRICS*
  Krane, E. J., Weisman, S. J., Walco, G. A.
  2018; 142 (2)

- **Complications in Pediatric Regional Anesthesia: An Analysis of More than 100,000 Blocks from the Pediatric Regional Anesthesia Network.** *Anesthesiology*
  Walker, B. J., Long, J. B., Sathyamoorthy, M., Birstler, J., Wolf, C., Bosenberg, A. T., Flack, S. H., Krane, E. J., Sethna, N. F., Suresh, S., Taenzer, A. H., Polaner, D. M., Martin, et al

2018

- **The National Opioid Epidemic and the Risk of Outpatient Opioids in Children.** *Pediatrics*
  Krane, E. J., Weisman, S. J., Walco, G. A.
  2018

- **A case report of combined ultrasound and fluoroscopic-guided percutaneous radiofrequency lesioning of the obturator and femoral articular branches in the treatment of persistent hip pain in a pediatric patient.** *Pain practice : the official journal of World Institute of Pain*
  Khan, J. S., Krane, E. J., Higgs, M., Pritzlaff, S., Hoffinger, S., Ottestad, E.
  2018

- **Clinical trial designs and models for analgesic medications for acute pain in neonates, infants, toddlers, children, and adolescents: ACTTION recommendations** *PAIN*
  Walco, G. A., Kopecky, E. A., Weisman, S. J., Stinson, J., Stevens, B., Desjardins, P. J., Berde, C. B., Krane, E. J., Anand, K. J. S., Yaster, M., Dampier, C. D., Dworkin, R. H., Gilron, et al
  2018; 159 (2): 193–205

- **Management of a Ventral Cerebrospinal Fluid Leak With a Lumbar Transforaminal Epidural Blood Patch in a Child With Persistent Postdural Puncture Headache: A Case Report.** *Regional anesthesia and pain medicine*
  D'souza, G., Seidel, F. G., Krane, E. J.
  2017; 42 (2): 263-266

- **Pediatric-Collaborative Health Outcomes Information Registry (Peds-CHOIR): a learning health system to guide pediatric pain research and treatment.** *Pain*
  Bhandari, R. P., Feinstein, A. B., Huestis, S. E., Krane, E. J., Dunn, A. L., Cohen, L. L., Kao, M. C., Darnall, B. D., Mackey, S. C.
  2016; 157 (9): 2033-2044

- **Applying a Lifespan Developmental Perspective to Chronic Pain: Pediatrics to Geriatrics.** *journal of pain*
  Walco, G. A., Krane, E. J., Schmader, K. E., Weiner, D. K.
  2016; 17 (9): T108-17

- **The European Society of Regional Anaesthesia and Pain Therapy and the American Society of Regional Anesthesia and Pain Medicine Joint Committee Practice Advisory on Controversial Topics in Pediatric Regional Anesthesia.** *Regional anesthesia and pain medicine*
  Ivani, G., Suresh, S., Ecoffey, C., Bosenberg, A., Lonnqvist, P., Krane, E., Veyckemans, F., Polaner, D. M., Van de Velde, M., Neal, J. M.
  2015; 40 (5): 526-532

- **Paraplegia after epidural-general anesthesia in a Morquio patient with moderate thoracic spinal stenosis** *CANADIAN JOURNAL OF ANESTHESIA-JOURNAL CANADIEN D ANESTHESIE*
  Drummond, J. C., Krane, E. J., Tomatsu, S., Theroux, M. C., Lee, R. R.
  2015; 62 (1): 45-49

- **Interscalene Brachial Plexus Blocks Under General Anesthesia in Children: Is This Safe Practice? A Report From the Pediatric Regional Anesthesia Network (PRAN)** *REGIONAL ANESTHESIA AND PAIN MEDICINE*
  Taenzer, A., Walker, B. J., Bosenberg, A. T., Krane, E. J., Martin, L. D., Polaner, D. M., Wolf, C., Suresh, S.
  2014; 39 (6): 502-505

- **Asleep versus awake: does it matter?: Pediatric regional block complications by patient state: a report from the Pediatric Regional Anesthesia Network.** *Regional anesthesia and pain medicine*
  Taenzer, A. H., Walker, B. J., Bosenberg, A. T., Martin, L., Suresh, S., Polaner, D. M., Wolf, C., Krane, E. J.
  2014; 39 (4): 279-283

- **The ACTTION-American Pain Society Pain Taxonomy (AAPT): An Evidence-Based and Multidimensional Approach to Classifying Chronic Pain Conditions** *JOURNAL OF PAIN*
  Fillingim, R. B., Bruehl, S., Dworkin, R. H., Dworkin, S. F., Loeser, J. D., Turk, D. C., Widerstrom-Noga, E., Arnold, L., Bennett, R., Edwards, R. R., Freeman, R., Gewandter, J., Hertz, et al
  2014; 15 (3): 241-249

- **Chest CT in children: anesthesia and atelectasis.** *Pediatric radiology*
  Newman, B., Krane, E. J., Gawande, R., Holmes, T. H., Robinson, T. E.
  2014; 44 (2): 164-172

- **Pediatric Regional Anesthesia Network (PRAN): A Multi-Institutional Study of the Use and Incidence of Complications of Pediatric Regional Anesthesia** *ANESTHESIA AND ANALGESIA*
  Polaner, D. M., Taenzer, A. H., Walker, B. J., Bosenberg, A., Krane, E. J., Suresh, S., Wolf, C., Martin, L. D.
  2012; 115 (6): 1353-1364

- **Neurological Complications Associated with Epidural Analgesia in Children: A Report of 4 Cases of Ambiguous Etiologies** *ANESTHESIA AND ANALGESIA*
  Meyer, M. J., Krane, E. J., Goldschneider, K. R., Klein, N. J.
  2012; 115 (6): 1365-1370

- **Pediatric Analgesic Clinical Trial Designs, Measures, and Extrapolation: Report of an FDA Scientific Workshop** *PEDIATRICS*
  Berde, C. B., Walco, G. A., Krane, E. J., Anand, K. J., Aranda, J. V., Craig, K. D., Dampier, C. D., Finkel, J. C., Grabois, M., Johnston, C., Lantos, J., Lebel, A., Maxwell, et al
  2012; 129 (2): 354-364

- **Neuropathic Pain in Children: Special Considerations** *MAYO CLINIC PROCEEDINGS*
  Walco, G. A., Dworkin, R. H., Krane, E. J., LeBel, A. A., Treede, R.
  2010; 85 (3): S33-S41

- **Recommendations for the Pharmacological Management of Neuropathic Pain: An Overview and Literature Update** *MAYO CLINIC PROCEEDINGS*
  Dworkin, R. H., O'Connor, A. B., Audette, J., Baron, R., Gourlay, G. K., Haanpaa, M. L., Kent, J. L., Krane, E. J., LeBel, A. A., Levy, R. M., Mackey, S. C., Mayer, J., Miaskowski, et al
  2010; 85 (3): S3-S14

- **Patient-controlled analgesia: Proxy-controlled analgesia?** *ANESTHESIA AND ANALGESIA*
  Krane, E. J.
  2008; 107 (1): 15-17

- **A comparison of the clinical utility of pain assessment tools for children with cognitive impairment** *ANESTHESIA AND ANALGESIA*
  Voepel-Lewis, T., Malviya, S., Tait, A. R., Merkel, S., Foster, R., Krane, E. J.
  2008; 106 (1): 72-78

- **A randomized multicenter study of remifentanil compared with halothane in neonates and infants undergoing pyloromyotomy. I. Emergence and recovery profiles** *Annual Meeting of the American-College-of-Clinical-Pharmacy*
  Davis, P. J., Galinkin, J., McGowan, F. X., Lynn, A. M., Yaster, M., Rabb, M. F., Krane, E. J., Kurth, C. D., Blum, R. H., Maxwell, L., Orr, R., Szmuk, P., Hechtman, et al
  LIPPINCOTT WILLIAMS & WILKINS.2001: 1380–86

- **A randomized multicenter study of remifentanil compared with halothane in neonates and infants undergoing pyloromyotomy. II. Perioperative breathing patterns in neonates and infants with pyloric stenosis** *Annual Meeting of the American-College-of-Clinical-Pharmacy*
  Galinkin, J. L., Davis, P. J., McGowan, F. X., Lynn, A. M., Rabb, M. F., Yaster, M., Henson, L. G., Blum, R., Hechtman, D., Maxwell, L., Szmuk, P., Orr, R., Krane, et al
  LIPPINCOTT WILLIAMS & WILKINS.2001: 1387–92

- **Outcomes after single injection caudal epidural versus continuous infusion epidural via caudal approach for postoperative analgesia in infants and children undergoing patent ductus arteriosus ligation** *PAEDIATRIC ANAESTHESIA*
  Lin, Y. C., Sentivany-Collins, S. K., Peterson, K. L., Boltz, M. G., Krane, E. J.
  1999; 9 (2): 139-143

- **The safety of epidurals placed under general anesthesia (editorial).** *Regional Anesthesia and Pain Medicine*
  Krane, E.J., Dalens, B.J., Murat, I, Murrell, D.
  1998

- **SUBCLINICAL BRAIN-SWELLING IN CHILDREN DURING TREATMENT OF DIABETIC-KETOACIDOSIS** *NEW ENGLAND JOURNAL OF MEDICINE*
  Krane, E. J., Rockoff, M. A., WALLMAN, J. K., Wolfsdorf, J. I.
  1985; 312 (18): 1147-1151

- **Thank you, Larry Saidman: Comment.** *Anesthesiology*
  Krane, E. J.

2026

- **Analgesic Drug Development for Children: A History of Shortcomings Until Now.** *Journal of pain research*
  Dinh, A., Berger, A., Krane, E.
  2021; 14: 867–70

- **Evaluating Telehealth Implementation in the Context of Pediatric Chronic Pain Treatment during COVID-19.** *Children (Basel, Switzerland)*
  Richardson, P. A., Parker, D. M., Chavez, K., Birnie, K. A., Krane, E. J., Simons, L. E., Cunningham, N. R., Bhandari, R. P.
  2021; 8 (9)

- **With Apologies to Lennon and McCartney, All We Need is Data Opioid Concerns in Pediatrics** *CLINICAL JOURNAL OF PAIN*
  Krane, E. J., Walco, G. A.
  2019; 35 (6): 461–62

- **With Apologies to Lennon and McCartney, All We Need is Data: Opioid Concerns in Pediatrics.** *The Clinical journal of pain*
  Krane, E. J., Walco, G. A.
  2019

- **The Opioid Debate-PRO: Opioids Have an Important Role in Pain Management in Children.** *The Clinical journal of pain*
  Krane, E. J.
  2019

- **Antiepileptic drugs for chronic non-cancer pain in children and adolescents** *COCHRANE DATABASE OF SYSTEMATIC REVIEWS*
  Cooper, T. E., Wiffen, P. J., Heathcote, L. C., Clinch, J., Howard, R., Krane, E., Lord, S. M., Sethna, N., Schechter, N., Wood, C.
  2017: CD012536

- **Opioids for chronic non-cancer pain in children and adolescents** *COCHRANE DATABASE OF SYSTEMATIC REVIEWS*
  Cooper, T. E., Fisher, E., Gray, A. L., Krane, E., Sethna, N., van Tilburg, M. A. L., Zernikow, B., Wiffen, P. J.
  2017: CD012538

- **Prevention and Treatment of Pain in Children: Toward a Paradigm Shift** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*
  Friedrichsdorf, S. J., Sidman, J., Krane, E. J.
  2016; 154 (5): 804–5

- **Two Virtual Reality Pilot Studies for the Treatment of Pediatric CRPS** *PAIN MEDICINE*
  Won, A., Tataru, C. A., Cojocaru, C. M., Krane, E. J., Bailenson, J. N., Niswonger, S., Golianu, B.
  2015; 16 (8): 1644–47

- **Editorial Comment: Thoracic Paravertebral Blockade for the Management of Pain Associated with Cystic Fibrosis** *A & A CASE REPORTS*
  Krane, E. J.
  2015; 4 (3): 33

- **Interscalene brachial plexus blocks under general anesthesia in children: is this safe practice?: A report from the Pediatric Regional Anesthesia Network (PRAN).** *Regional anesthesia and pain medicine*
  Taenzer, A., Walker, B. J., Bosenberg, A. T., Krane, E. J., Martin, L. D., Polaner, D. M., Wolf, C., Suresh, S.
  2014; 39 (6): 502-505

- **QUANTITATIVE CENTRAL AIRWAY MEASUREMENTS DO NOT DEMONSTRATE PROGRESSION IN BRONCHIECTSIS IN OLDER CHILDREN WITH MILD CF LUNG DISEASE**
  Robinson, T., Ziyeh, T., Tu, C., Yilma, M., Krane, E., Newman, B.
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- Headache Management in Children: Is it Evidence or Bias - American Society of Anesthesiology Annual Meeting (October 2014)
- Pain Management in Children and Adolescents - The Northern California Kaiser Permanente Medical Group (August 2014)
- Complications of Spinal Anesthesia in a Newborn - American Society of Anesthesiology Annual Meeting (October 2013)
- How to Build a Bridge: Communicating from Bench to Bedside - 9th International Symposium on Pediatric Pain (June 20, 2013)
- Public - private partnerships: Structuring PRN-Pain to Fulfill Multiple Functions - 9th International Symposium on Pediatric Pain (June 19, 2013)
- Pediatric Regional Anesthesia, the Good, the Bad, and the Ugly - Pittsburgh Children’s Hospital (May 15, 2013)
- Models for Analgesic Trials in Children - ACTTION (January 24, 2013)
- The Opioid Epidemic, a View from the Inside - APhA (American Pharmacists Association) Annual Meeting & Exposition (3/4/2017)
- Pain, Opioids, Addiction - Navy SEALS Foundation (November 6, 2017)