



John Schoeneman Vorhies

Associate Professor of Orthopaedic Surgery

 Curriculum Vitae available Online

CLINICAL OFFICE (PRIMARY)

- **Palo Alto Orthopedics and Sports Medicine Clinic**

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ACADEMIC CONTACT INFORMATION

- **Academic Admin**

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Bio

CLINICAL FOCUS

- Pediatric Spinal Deformity
- Pediatric Hip Disorders
- Neuromuscular Disorders
- Pediatric Orthopaedic Trauma
- General Pediatric Orthopaedics
- Foot and Ankle
- Pediatric Orthopedic Surgery

ACADEMIC APPOINTMENTS

- Associate Professor - University Medical Line, Orthopaedic Surgery
- Member, Maternal & Child Health Research Institute (MCHRI)

ADMINISTRATIVE APPOINTMENTS

- Stanford Medicine Children's Healthcare Director of Scoliosis & Spine Deformity Surgery & Research, Stanford, (2022- present)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- FAAOS, American Academy of Orthopaedic Surgeons (2020 - present)

PROFESSIONAL EDUCATION

- Medical Education: Stanford University School of Medicine (2011) CA
- Board Certification: Orthopaedic Surgery, American Board of Orthopaedic Surgery (2019)
- Fellowship: University of Texas Southwestern Pediatric Orthopaedic Surgery Fellowship (2017) TX
- Residency: Stanford University Orthopaedic Surgery Residency (2016) CA

Research & Scholarship

CLINICAL TRIALS

- Pediatric Scoliosis ESPB, Recruiting

Publications

PUBLICATIONS

- **Segmental trans-endplate pedicle screws do not induce spinal deformity in a porcine model.** *Spine deformity*
Johnson, T. R., Generoso, T. O., Farnsworth, C., Jobanputra, A., Wen, J. H., Stoner, A. J., Salunga, A., Ho, V., Guzman, M., Berry, D., Upasani, V., Vorhies, J. S.
2026
- **What Graft Should Be Used in Pediatric Posterior Spinal Fusion? Current Trends and Perspective Among Experts.** *Journal of the Pediatric Orthopaedic Society of North America*
Okonkwo, D. D., Moore-Lotridge, S. N., Schoenecker, J. G., Jain, A., Hariharan, A. R., Vorhies, J. S., Yaszay, B., Louer, C. R.
2026; 14: 100290
- **What Graft Should Be Used in Pediatric Posterior Spinal Fusion? Current Trends and Perspective Among Experts** *JOURNAL OF THE PEDIATRIC ORTHOPAEDIC SOCIETY OF NORTH AMERICA*
Okonkwo, D. D., Moore-Lotridge, S. N., Schoenecker, J. G., Jain, A., Hariharan, A. R., Vorhies, J. S., Yaszay, B., Louer Jr, C. R., Harms Study Grp
2026; 14
- **Saving Fusion Levels in Lenke 1/2 AR Curves: Can We Stop Short of the Last Substantially Touched Vertebra (LSTV)?** *Spine*
Brown, M. W., Hariharan, A. R., Bryan, T., Feldman, D. S., Louer, C. R., Vorhies, J. S., Murphy, J. S., Bachmann, K., Cho, R. H., Gabos, P. G., Jain, A., Lonner, B. S., Miyanji, et al
2025
- **Distal Radius Interventions for Fracture Treatment (DRIFT) trial: study protocol for a multicentre randomised clinical trial of completely translated distal radius fractures at paediatric hospitals in North America.** *BMJ open*
Balmert Bonner, L., Janicki, J., Georgiadis, A., Truong, W., Harris Beauvais, D., Belthur, M., Daley, E. L., Franzone, J., Howard, A., May, C., Rockhold, F., Schulz, J., Bailey, et al
2025; 15 (10): e088273
- **Spinal Fusion in Patients with GMFCS IV or V Cerebral Palsy: Durable Correction and Lasting Quality of Life Improvements: Five-Year Multicenter Outcomes.** *The Journal of bone and joint surgery. American volume*
Hariharan, A. R., Brown, M. W., Bryan, T., Louer, C. R., Vorhies, J. S., Cho, R. H., Sponseller, P., Parent, S., Shah, S. A., Cahill, P., Pahys, J. M., Upasani, V. V., Lonner, et al
2025
- **Artificial Intelligence-Based Large Language Models Can Facilitate Patient Education.** *Journal of the Pediatric Orthopaedic Society of North America*
Bryson, X., Albarran, M., Pham, N., Salunga, A., Johnson, T., Hogue, G. D., Brooks, J. T., Tileston, K. R., Louer, C. R., El-Hawary, R., Imrie, M. N., Policy, J. F., Bouton, et al
2025; 12: 100196
- **Anterior release is not needed to restore kyphosis in moderate AIS with hypokyphosis.** *Spine deformity*
Louer, C. R., Pennings, J. S., Petcharaporn, M., Hariharan, A. R., Vorhies, J. S., Kelly, M. P., Shah, S. A., Newton, P. O., Yaszay, B., Group, H. S.
2025
- **Bedside Aspiration for Workup of the Pediatric Septic Hip: Avoid Trips to the OR and Expedited Time to Diagnosis.** *Journal of pediatric orthopedics*
Skaggs, K. F., Okoli, O., Naz, H., Pham, N. S., Vorhies, J. S., Tileston, K. R.
2025
- **Smartphone-based surface topography app accurately detects clinically significant scoliosis.** *Spine deformity*
Rohde, M. S., Albarran, M., Catanzano, A. A., Sachs, E. J., Naz, H., Jobanputra, A., Ribet, J., Tileston, K., Vorhies, J. S.
2025

- **Delayed-Onset Neurologic Changes Following Posterior Spinal Fusion: A Case Series.** *The Journal of bone and joint surgery. American volume*
Fletcher, N. D., Harris, H., Fabregas, J., Vorhies, J. S., Sponseller, P. D., Lonner, B. A., George, S. G., Garg, S., Lovejoy, J. F., Vitale, M. G., Ramo, B. A., El-Hawary, R., Jain, et al
2025
- **Correction: Mobile device-based 3D scanning is superior to scoliometer in assessment of adolescent idiopathic scoliosis.** *Spine deformity*
Oquendo, Y., Hollyer, I., Maschhoff, C., Calderon, C., DeBaun, M., Langner, J., Javier, N., Bryson, X., Richey, A., Naz, H., Tileston, K., Gardner, M., Vorhies, et al
2025
- **Mobile device-based 3D scanning is superior to scoliometer in assessment of adolescent idiopathic scoliosis.** *Spine deformity*
Oquendo, Y., Hollyer, I., Maschhoff, C., Calderon, C., DeBaun, M., Langner, J., Javier, N., Bryson, X., Richey, A., Naz, H., Tileston, K., Gardner, M., Vorhies, et al
2024
- **Impact of Surgical Upper Lumbar Changes on Unfused Lower Lumbar Segments in Adolescent Idiopathic Scoliosis.** *Spine*
Hariharan, A. R., Bryan, T., Nugraha, H. K., Feldman, D. S., Vorhies, J. S., Louer, C. R., Newton, P. O., Shah, S. A., Shufflebarger, H. L., Fletcher, N. D., Lonner, B. S., Kelly, M. P., Harms Study Group, et al
2024
- **Reply: Peripheral Nerve Blocks and Opioid Use After ACL Reconstruction in Adolescents.** *Orthopedics*
Vorhies, J. S.
2024; 47 (5): 262
- **Peripheral Nerve Blocks and Opioid Use After ACL Reconstruction in Adolescents** *ORTHOPEDICS*
Vorhies, J.
2024; 47 (5): 261-262
- **3D CT modeling demonstrates the anatomic feasibility of S1Al screw trajectory for spinopelvic fixation in neuromuscular scoliosis.** *Spine deformity*
Bryson, X. M., Pham, N. S., Hollyer, I., Hu, S., Rinsky, L. A., Vorhies, J. S.
2024
- **A New Look at Vertebral Body Tethering (VBT): Through the Modified Clavien-Dindo-Sink (mCDS) Classification.** *Journal of pediatric orthopedics*
Vorhies, J. S., Hauth, L., Garcia, S., Roye, B. D., Poon, S., Sturm, P. F., Glotzbecker, M., Fletcher, N. D., Stone, J. D., Cahill, P. J., Anari, J. B., Pediatric Spine Study Group
2024
- **Use of Peripheral Nerve Blocks Is Not Associated With Decreased Postoperative Opioid Prescription After ACL Reconstruction in Adolescents** *ORTHOPEDICS*
Kaur, J., Pham, N., Cahan, E., Halvorsen, K., Langner, J. L., Bryson, X. M., Chan, C. M., Vorhies, J.
2024; 47 (2): 83-88
- **Cannabidiol Use Patterns and Efficacy for Children Who Have Cerebral Palsy** *ORTHOPEDICS*
Seltzer, R. A., Langner, J. L., Javier, N. M., Kaur, J., Shafau, A., Ezeonu, T., Bryson, X., Hastings, K., Tileston, K., Vorhies, J. S.
2024; 47 (1): 52-+
- **Variations in Duration of Clinical Follow-up After Spinal Fusion for Adolescent Idiopathic Scoliosis: A Survey of POSNA and SRS Membership.** *Journal of the Pediatric Orthopaedic Society of North America*
Johnson, T. R., Segovia, N. A., Bryson, X., Imrie, M. N., Vorhies, J. S.
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- **Effectiveness of an early operating room start time in managing pediatric trauma.** *World journal of orthopedics*
Kym, D., Kaur, J., Pham, N. S., Klein, E., Langner, J. L., Wang, E., Vorhies, J. S.
2023; 14 (7): 516-525
- **Temporary Flexible Rods for Correction of Severe Pediatric Spinal Deformity** *ORTHOPEDICS*
Kwong, J. W., Tileston, K. R., Kaur, J., Segovia, N. A., Imrie, M. N., Rinsky, L. A., Vorhies, J. S.
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- **Spinal fusion is an aerosol generating procedure.** *World journal of orthopedics*
Langner, J. L., Pham, N. S., Richey, A., Oquendo, Y., Mehta, S., Vorhies, J. S.
2023; 14 (5): 340-347
- **Does spinal deformity affect adolescents' quality of life before we tell them it should?** *Spine deformity*
Langner, J. L., Kaur, J., Pham, N. S., Richey, A., Hastings, K., Mehta, S., Bryson, X., Vorhies, J. S.
2023
- **The Influence of Race, Income, and Sex on Treatment and Complications of Common Pediatric Fractures** *ORTHOPEDICS*
Montgomery, B. K., Joseph, G., Segovia, N., Koltsov, J., Thomas, T. L., Vorhies, J. S., Tileston, K. R.
2023; 46 (3): E156+
- **Introduction of a Novel Sequential Approach to the Ponte Osteotomy to Minimize Spinal Canal Exposure.** *Children (Basel, Switzerland)*
Hollyer, I., Johnson, T. R., Kha, S. T., Foreman, C., Ho, V., Klemt, C., Chan, C. K., Vorhies, J. S.
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- **Opioid Represcriptions After ACL Reconstruction in Adolescents are Associated With Subsequent Opioid Use Disorder.** *Journal of pediatric orthopedics*
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- **Effectiveness of psychosocial interventions for pediatric patients with scoliosis: a systematic review** *World Journal of Pediatric Surgery*
van Niekerk, M., Richey, A., Vorhies, J., Wong, C., Tileston, K.
2023; 6 (e000513)
- **Curve Characteristics and Surgical Outcomes in Scoliosis Associated With Childhood Sternotomy or Thoracotomy.** *Journal of pediatric orthopedics*
Langner, J. L., Ezeonu, T., Shafau, A., Javier, N., Bryson, X., Kaur, J., Poppino, K., Shivers, C., Chilakapati, S., Hall, K. E., Imrie, M. N., Rinsky, L., Riccio, et al
2022
- **The effect of intraoperative lidocaine administration in a disrupted erector spinae fascial plane on intercostal transcranial motor evoked potentials.** *Journal of clinical anesthesia*
Pan, S. J., Vorhies, J. S., Lee, L. H., López, J. R., Tsui, B. C.
2022; 82: 110956
- **Complication risks and costs associated with Ponte osteotomies in surgical treatment of adolescent idiopathic scoliosis: insights from a national database.** *Spine deformity*
Shaheen, M., Koltsov, J. C., Cohen, S. A., Langner, J. L., Kaur, J., Segovia, N. A., Vorhies, J. S.
2022
- **Innovative technique for early-onset scoliosis casting using Jackson table.** *Spine deformity*
Montgomery, B. K., Tileston, K., Kaur, J., Kym, D., Segovia, N. A., Imrie, M., Policy, J., Rinsky, L., Vorhies, J.
2022
- **Indications for and Risks Associated With Implant Removal After Pediatric Trauma.** *Journal of the American Academy of Orthopaedic Surgeons. Global research & reviews*
Montgomery, B. K., Gamble, J. G., Kha, S. T., Hecht, G. G., Vorhies, J. S., Lucas, J. F.
2022; 6 (4)
- **Indications for and Risks Associated With Implant Removal After Pediatric Trauma** *JOURNAL OF THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS GLOBAL RESEARCH AND REVIEWS*
Montgomery, B. K., Gamble, J. G., Kha, S. T., Hecht, G. G., Vorhies, J. S., Lucas, J. F.
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- **Systemic lidocaine absorption from continuous erector spinae plane catheters after paediatric posterior spine fusion surgery.** *Regional anesthesia and pain medicine*
Pan, S., Lee, C. K., Caruso, T. J., Vorhies, J. S., Tsui, B. C.
2022
- **Does Navigation Make Spinal Fusion for Adolescent Idiopathic Scoliosis Safer? Insights From a National Database.** *Spine*

- Kaur, J., Koltsov, J. C., Kwong, J. W., Cheng, I., Vorhies, J. S.
2021; 46 (19): E1049-E1057
- **Remodeling of Sagittal Plane Malunion After Pediatric Supracondylar Humerus Fractures.** *Journal of pediatric orthopedics*
Gamble, J. G., Vorhies, J. S.
2021; 41 (8): e700-e701
 - **The Utility of Intraoperative Arthrogram in the Management of Pediatric Lateral Condyle Fractures of the Humerus** *ORTHOPEDICS*
Vorhies, J., Funk, S., Elliott, M., Riccio, A., Ramo, B.
2020; 43 (1): 30–35
 - **Automatic Extraction of Skeletal Maturity from Whole Body Pediatric Scoliosis X-rays Using Regional Proposal and Compound Scaling Convolutional Neural Networks**
Ha, A., Vorhies, J., Champion, A., Fang, C., Fadell, M., Dou, S., Halabi, S., Larson, D., Wang, E., Lee, Y., Langner, J., Kaur, J., Do, et al
edited by Park, T., Cho, Y. R., Hu, Yoo, H. G., Wang, J., Facelli, J., Nam, S., Kang, M.
IEEE COMPUTER SOC.2020: 996-1000
 - **Remodeling of Sagittal Plane Malunion After Pediatric Supracondylar Humerus Fractures.** *Journal of pediatric orthopedics*
Gamble, J. G., Vorhies, J. S.
2020
 - **The Impact of Subspecialty Fellows on Orthopaedic Resident Surgical Experience: A Multicenter Study of 51,111 Cases.** *The Journal of the American Academy of Orthopaedic Surgeons*
Jiang, S. Y., Carlock, K. D., Campbell, S. T., Vorhies, J. S., Gardner, M. J., Leucht, P. n., Bishop, J. A.
2020
 - **Posterior Sternoclavicular Dislocation: Do We Need "Cardiothoracic Backup"? Insights from a National Sample.** *Journal of orthopaedic trauma*
Leonard, D. A., Segovia, N., Kaur, J., Lucas, J., Bishop, J., Vorhies, J. S.
2019
 - **Debridement, antibiotic pearls, and retention of the implant (DAPRI): A modified technique for implant retention in total knee arthroplasty PJI treatment.** *Journal of orthopaedic surgery (Hong Kong)*
Calanna, F., Chen, F., Risitano, S., Vorhies, J. S., Franceschini, M., Giori, N. J., Indelli, P. F.
2019; 27 (3): 2309499019874413
 - **Moving toward patients being pain- and spasm-free after pediatric scoliosis surgery by using bilateral surgically-placed erector spinae plane catheters.** *Canadian journal of anaesthesia = Journal canadien d'anesthesie*
Tsui, B. C., Esfahanian, M. n., Lin, C. n., Policy, J. n., Vorhies, J. n.
2019
 - **Treatment in a Nonpediatric Hospital Is a Risk Factor for Open Reduction of Pediatric Supracondylar Humerus Fractures: A Population-Based Study.** *Journal of orthopaedic trauma*
Vorhies, J. S., Uzosike, O. B., Imrie, M. N., Rinsky, L. n., Hoffinger, S. n.
2019; 33 (9): e331–e338
 - **An Excellent Addition to Recent Studies in the US From Various Disciplines and Locations That Show Similar Results Response** *JOURNAL OF ORTHOPAEDIC TRAUMA*
Bishop, J., Vorhies, J., Paci, G.
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 - **In response.** *Journal of orthopaedic trauma*
Bishop, J., Vorhies, J., Paci, G.
2019; 33 (1): e38
 - **Severity Adjusted Risk of Long-Term Adverse Sequelae Among Children with Osteomyelitis.** *The Pediatric infectious disease journal*
Vorhies, J. S., Lindsay, E. A., Tareen, N. G., Kellum, R. J., Jo, C. H., Copley, L. A.
2018
 - **Treatment of Degenerative Lumbar Spondylolisthesis With Fusion or Decompression Alone Results in Similar Rates of Reoperation at 5 Years.** *Clinical spine surgery*

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- Vorhies, J. S., Hernandez-Boussard, T. n., Alamin, T. n.
2018; 31 (1): E74–E79
- **Pediatric Supracondylar Humerus Fractures: Does After-Hours Treatment Influence Outcomes?** *Journal of orthopaedic trauma*
Paci, G. M., Tileston, K. R., Vorhies, J. S., Bishop, J. A.
2018; 32 (6): e215–e220
 - **Does the Watson-Jones or Modified Smith-Petersen Approach Provide Superior Exposure for Femoral Neck Fracture Fixation?** *Clinical orthopaedics and related research*
Lichstein, P. M., Kleimeyer, J. P., Githens, M. n., Vorhies, J. S., Gardner, M. J., Bellino, M. n., Bishop, J. n.
2018
 - **Admission Through the Emergency Department Is an Independent Risk Factor for Lower Satisfaction With Physician Performance Among Orthopaedic Surgery Patients: A Multicenter Study** *JOURNAL OF THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS*
Vorhies, J. S., Weaver, M. J., Bishop, J. A.
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 - **Growth mechanisms and geochemistry of carbonate concretions from the Cambrian Wheeler Formation (Utah, USA)** *SEDIMENTOLOGY*
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 - **Legal restrictions and complications of abortion: Insights from data on complication rates in the United States** *JOURNAL OF PUBLIC HEALTH POLICY*
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 - **Decreased Length of Stay After TKA Is Not Associated With Increased Readmission Rates in a National Medicare Sample** *CLINICAL ORTHOPAEDICS AND RELATED RESEARCH*
Vorhies, J. S., Wang, Y., Herndon, J. H., Maloney, W. J., Huddleston, J. I.
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 - **Readmission and Length of Stay After Total Hip Arthroplasty in a National Medicare Sample** *JOURNAL OF ARTHROPLASTY*
Vorhies, J. S., Wang, Y., Herndon, J., Maloney, W., Huddleston, J. I.
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 - **siRNA Versus shRNA for Personalized Cancer Therapy: Mechanisms and Applications** *GENE-BASED THERAPIES FOR CANCER*
Vorhies, J. S., Rao, D. D., Senzer, N., Nemunaitis, J.
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 - **siRNA vs. shRNA: Similarities and differences** *ADVANCED DRUG DELIVERY REVIEWS*
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 - **"Bifunctional" Short Hairpin RNA for Cancer Gene Therapy**
Rao, D. D., Wang, Z., Kumar, P., Yu, Y., Haddock, C., Vorhies, J., Tong, A. W., Maples, P. B., Senzer, N. N., Nemunaitis, J.
NATURE PUBLISHING GROUP.2009: S255
 - **Microbial dissolution of clay minerals as a source of iron and silica in marine sediments** *NATURE GEOSCIENCE*
Vorhies, J. S., Gaines, R. R.
2009; 2 (3): 221–25
 - **Nucleic acid aptamers for targeting of shRNA-based cancer therapeutics.** *Biologics : targets & therapy*
Vorhies, J. S., Nemunaitis, J. J.
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Nemunaitis, J., Senzer, N., Khalil, I., Shen, Y., Kumar, P., Tong, A., Kuhn, J., LaMont, J., Nemunaitis, M., Rao, D., Zhang, Y., Zhou, Y., Vorhies, et al
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2007; 7 (3): 373-382