

Stanford



David Lowenberg, MD

Clinical Professor, Orthopaedic Surgery

Curriculum Vitae available Online

CLINICAL OFFICE (PRIMARY)

- Orthopaedic Surgery Clinic
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ACADEMIC CONTACT INFORMATION

- Alternate Contact
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Bio

CLINICAL FOCUS

- Osteomyelitis
- Nonunions and Malunions
- Limb Lengthening and Reconstruction
- Limb Salvage
- Limb Transplantation via Immunotolerance
- Orthopaedic Trauma

ACADEMIC APPOINTMENTS

- Clinical Professor, Orthopaedic Surgery

ADMINISTRATIVE APPOINTMENTS

- Unit Based Medical Director, Stanford Hospital and Clinics, (2016-2019)

HONORS AND AWARDS

- Landstuhl Distinguished Visiting Scholar, United States Department of Defense (May, 2010)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- President, Osteosynthesis and Trauma Care Foundation (OTC) International (2018 - 2019)
- President, Limb Lengthening and Reconstruction Society of North America (2006 - 2007)
- President, Foundation for Orthopaedic Trauma (2013 - 2016)

PROFESSIONAL EDUCATION

- Medical Education: UCLA David Geffen School Of Medicine Registrar (1985) CA
- Residency: University of California at San Francisco School of Medicine (1990) CA

- Internship: University of California at San Francisco School of Medicine (1986) CA
- Board Certification: Orthopaedic Surgery, American Board of Orthopaedic Surgery (1992)

LINKS

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

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Dr. Lowenberg is a Past President of the Limb Lengthening and Reconstruction Society of North America. His clinical and research interests are in the treatment of nonunions and malunions with or without accompanying osteomyelitis and infection. He is well-published in the field of limb salvage and treatment of devastating limb injuries. He has ongoing research in limb transplantation via immunotolerance as well as biomechanics.

Publications

PUBLICATIONS

- **Are Postoperative Complications of Joint Replacement Correlated With the Phase of the Moon? An Analysis of Data From the Medicare Registry** *DEUTSCHES ARZTEBLATT INTERNATIONAL*
Walter, N., Hinterberger, T., Loew, T., Lowenberg, D. W., Alt, V., Lau, E. C., Rupp, M.
2023; 120 (51-52): 888-889
- **Complications and associated risk factors after surgical management of proximal femoral fractures.** *Bone & joint open*
Walter, N., Szymski, D., Kurtz, S. M., Lowenberg, D. W., Alt, V., Lau, E. C., Rupp, M.
2023; 4 (10): 801-807
- **What Are the Mortality, Infection, and Nonunion Rates After Periprosthetic Femoral Fractures in the United States?** *Clinical orthopaedics and related research*
Walter, N., Szymski, D., Kurtz, S. M., Alt, V., Lowenberg, D. W., Lau, E. C., Rupp, M.
2023
- **Epidemiology and treatment of proximal femoral fractures in the elderly U.S. population.** *Scientific reports*
Walter, N., Szymski, D., Kurtz, S. M., Lowenberg, D. W., Alt, V., Lau, E. C., Rupp, M.
2023; 13 (1): 12734
- **Factors associated with mortality after proximal femoral fracture.** *Journal of orthopaedics and traumatology : official journal of the Italian Society of Orthopaedics and Traumatology*
Walter, N., Szymski, D., Kurtz, S., Alt, V., Lowenberg, D. W., Lau, E., Rupp, M.
2023; 24 (1): 31
- **Proximal Humerus Fractures in the Elderly U.S. Population: A Cross-Sectional Study of Treatment Trends and Comparison of Complication Rates after Joint Replacement, Open Reduction and Internal Fixation, and Non-Surgical Management.** *Journal of clinical medicine*
Walter, N., Szymski, D., Riedl, M., Kurtz, S. M., Alt, V., Lowenberg, D. W., Lau, E. C., Rupp, M.
2023; 12 (10)
- **Femoral shaft fractures in elderly patients - An epidemiological risk analysis of incidence, mortality and complications.** *Injury*
Walter, N., Szymski, D., Kurtz, S. M., Alt, V., Lowenberg, D. W., Lau, E. C., Rupp, M.
2023
- **Selecting a High-dose Antibiotic-laden Cement Knee Spacer.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*
Hollyer, I., Ivanov, D., Kappagoda, S., Lowenberg, D. W., Goodman, S. B., Amanatullah, D. F.
2023
- **Proximal humerus fractures - epidemiology, comparison of mortality rates after surgical versus non-surgical treatment, and analysis of risk factors based on Medicare registry data.** *Bone & joint research*
Walter, N., Szymski, D., Kurtz, S. M., Lowenberg, D. W., Alt, V., Lau, E., Rupp, M.
2023; 12 (2): 103-112

- **Revision Rates and Associated Risk Factors after Shoulder Arthroplasty.** *Journal of clinical medicine*
Walter, N., Lowenberg, D. W., Kurtz, S. M., Alt, V., Lau, E. C., Rupp, M.
2022; 11 (24)
- **Approach to Complex Lower Extremity Reconstruction.** *Seminars in plastic surgery*
Cholok, D., Saberski, E., Lowenberg, D. W.
2022; 36 (4): 233-242
- **Terminology of bone and joint infection BONE & JOINT RESEARCH**
Rupp, M., Walter, N., Baertl, S., Lang, S., Lowenberg, D. W., Alt, V.
2021; 10 (11): 742-743
- **Terminology of bone and joint infection.** *Bone & joint research*
Rupp, M., Walter, N., Baertl, S., Lang, S., Lowenberg, D. W., Alt, V.
2021; 10 (11): 742-743
- **Tolerant Small-colony Variants Form Prior to Resistance Within a *Staphylococcus aureus* Biofilm Based on Antibiotic Selective Pressure.** *Clinical orthopaedics and related research*
Manasherob, R. n., Mooney, J. A., Lowenberg, D. W., Bollyky, P. L., Amanatullah, D. F.
2021
- **Interlocking screw configuration influences distal tibial fracture stability in torsional loading after intramedullary nailing.** *European journal of orthopaedic surgery & traumatology : orthopedie traumatologie*
Lowenberg, D. W., DeBaun, M. R., Behn, A., Sox-Harris, A.
2020
- **Pain management in the orthopaedic trauma patient: Non-opioid solutions** *INJURY-INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED*
Gessner, D. M., Horn, J., Lowenberg, D. W.
2020; 51: S28–S36
- **Synthetic bone tissue engineering graft substitutes: What is the future?** *Injury*
Valtanen, R. S., Yang, Y. P., Gurtner, G. C., Maloney, W. J., Lowenberg, D. W.
2020
- **Distal Tibial Fractures With or Without Articular Extension: Fixation With Circular External Fixation or Open Plating? A Personal Point of View.** *Journal of orthopaedic trauma*
Lowenberg, D. W., Smith, R. M.
2019; 33 Suppl 8: S7–S13
- **Influence of fracture obliquity and interlocking nail screw configuration on interfragmentary motion in distal metaphyseal tibia fractures.** *European journal of orthopaedic surgery & traumatology : orthopedie traumatologie*
Lowenberg, D. W., DeBaun, M. R., Sox-Harris, A., Behn, A.
2019
- **Newer perspectives in the treatment of chronic osteomyelitis: A preliminary outcome report** *INJURY-INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED*
Lowenberg, D. W., DeBaun, M., Suh, G. A.
2019; 50: S56–S61
- **Congenital internal rotation deformity of the distal femur presenting as patellofemoral instability and pain** *JOURNAL OF ISAKOS JOINT DISORDERS & ORTHOPAEDIC SPORTS MEDICINE*
Zhang, X., Attenello, J., Safran, M. R., Lowenberg, D. W.
2019; 4 (2): 93-97
- **Newer perspectives in the treatment of chronic osteomyelitis: A preliminary outcome report.** *Injury*
Lowenberg, D. W., DeBaun, M. n., Suh, G. A.
2019
- **Newer Perspectives In the Treatment of Chronic Osteomyelitis: A Preliminary Outcome Report.** *Injury*
Lowenberg, D. W., DeBaun, M., Suh, G. A.

2019; S56-S61

● **Pain management in the orthopaedic trauma patient: Non-opioid solutions.** *Injury*

Gessner, D. M., Horn, J. L., Lowenberg, D. W.
2019

● **Effect of Electron Beam Sterilization on Three-Dimensional-Printed Polycaprolactone/Beta-Tricalcium Phosphate Scaffolds for Bone Tissue Engineering** *TISSUE ENGINEERING PART A*

Bruyas, A., Moeinzadeh, S., Kim, S., Lowenberg, D. W., Yang, Y.
2019; 25 (3-4): 248–56

● **Fracture Healing Adjuncts-The World's Perspective on What Works** *JOURNAL OF ORTHOPAEDIC TRAUMA*

Giannoudis, P., Krettek, C., Lowenberg, D. W., Tosounidis, T., Borrelli, J.
2018; 32: S43–S47

● **Cement Arthrodesis of the Knee with a Custom Long Recon Nail After Failed Total Knee Arthroplasty: Surgical Technique and Results.** *The Open Orthopaedics Journal*

Lowenberg, D. W., DeBaun, M. R., Goodman, S. B.
2018; December (1): 554-566

● **Proper Use of Antibiotic Agents in the Management of Musculoskeletal Infection.** *Instructional course lectures*

Lowenberg, D. W., Goel, R. n., Parvizi, J. n.
2018; 67: 543–54

● **Proper Understanding and Usage of Antibiotics in Musculoskeletal Infections** *Instr Course Lect. American Academy of Orthopaedic Surgeons*

Lowenberg, D. W., Parvizi, J.
2018; 67: 543-554

● **Unstable Proximal Femur Fractures Treated With Proximal Femoral Locking Plates: A Retrospective, Multicenter Study of 111 Cases.** *Journal of orthopaedic trauma*

Collinge, C. A., Hymes, R., Archdeacon, M., Streubel, P., Obremskey, W., Weber, T., Watson, J. T., Lowenberg, D.
2016; 30 (9): 489-495

● **A Technotheoretical Approach to the Management of Osteomyelitis** *TECHNIQUES IN ORTHOPAEDICS*

Lowenberg, D. W.
2015; 30 (4): 209–14

● **In Memorium: George Cierny, MD - Modern Father of Osteomyelitis Surgery** *TECHNIQUES IN ORTHOPAEDICS*

Lowenberg, D. W.
2015; 30 (4): 207–8

● **Complex Limb Reconstruction With Simultaneous Muscle Transfer and Circular External Fixation** *TECHNIQUES IN ORTHOPAEDICS*

Lowenberg, D. W., Githens, M.
2015; 30 (3): 156–60

● **A Clinical Perspective on Musculoskeletal Infection Treatment Strategies and Challenges** *JOURNAL OF THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS*

Shirwaiker, R. A., Springer, B. D., Spangehl, M. J., Garrigues, G. E., Lowenberg, D. W., Garras, D. N., Yoo, J. U., Pottinger, P. S.
2015; 23: S44-S54

● **Advances in the understanding and treatment of musculoskeletal infections.** *Instructional course lectures*

Lowenberg, D. W., Watson, J. T., Levin, L. S.
2015; 64: 37-49

● **Malignant Transformation in Chronic Osteomyelitis: Recognition and Principles of Management** *JOURNAL OF THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS*

Panteli, M., Puttaswamaiah, R., Lowenberg, D. W., Giannoudis, P. V.
2014; 22 (9): 586-594

● **Temporal trends in the incidence, treatment and outcomes of hip fracture after first kidney transplantation in the United States.** *American journal of transplantation*

Sukumaran Nair, S., Lenihan, C. R., Montez-Rath, M. E., Lowenberg, D. W., Chertow, G. M., Winkelmayer, W. C.
2014; 14 (4): 943-951

• **Principles of Tibial Fracture Management with Circular External Fixation** *ORTHOPEDIC CLINICS OF NORTH AMERICA*

Lowenberg, D. W., Githens, M., Boone, C.
2014; 45 (2): 191-?

• **Long-term results and costs of muscle flap coverage with Ilizarov bone transport in lower limb salvage.** *Journal of orthopaedic trauma*

Lowenberg, D. W., Buntic, R. F., Buncke, G. M., Parrett, B. M.
2013; 27 (10): 576-581

• **Temporal Trends in the Incidence, Treatment, and Outcomes of Hip Fracture in Older Patients Initiating Dialysis in the United States** *CLINICAL JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY*

Nair, S. S., Mitani, A. A., Goldstein, B. A., Chertow, G. M., Lowenberg, D. W., Winkelmayer, W. C.
2013; 8 (8): 1336-1342

• **Assessment of Compromised Fracture Healing** *JOURNAL OF THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS*

Bishop, J. A., Palanca, A. A., Bellino, M. J., Lowenberg, D. W.
2012; 20 (5): 273-282