

CURRICULUM VITAE
(Abridged version)

Thomas Paul Schmalzried, M.D.

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Children

Born

Richmond, VA
January 31, 1958

Katherine Christine
February 15, 1989

Hope Victoria
April 21, 1998

Married

Michele Boileau
December 27, 1986

Current Positions

Associate Director, Joint Replacement Institute, 2200 West Third Street, Suite 120, Los Angeles, CA 90057 **(213) 484-7600 Fax: (213) 484-7566**

Physician Specialist, Harbor-UCLA Medical Center, 1000 West Carson Street, Torrance, CA 90509 (310) 222-2716

President, California Orthopaedics and Sports Medicine Associates (COSMA), 11645 Wilshire Blvd., Suite 800, Los Angeles, CA 90025 (310) 996-0223

Education and Training

Stanford University, 1976-1980: B.A., Human Biology

Phi Beta Kappa
Distinction and Departmental Honors
Roscoe Maples Scholarship
3 Year Varsity Letterman (Basketball)
Rhodes Scholarship Nominee

UCLA Medical School, 1980-1984

Alpha Omega Alpha
Bicknell Scholarship
Lange Medical Book Award

Post-Graduate

Internship, Surgery, UCLA; 1984-1985
Residency, Orthopaedics, UCLA; 1985-1990
N.I.H. Research Fellow in Joint Replacement, UCLA; 1986-1987
Hip and Implant Fellow, Harvard University; 1990-1991
Assistant in Orthopaedic Surgery, Mass. General Hospital; 1990-1991

Honors and Awards

1991 John Charnley Award from the Hip Society:

"The Mechanism of Loosening of Cemented Acetabular Components in Total Hip Arthroplasty: Analysis of Specimens Retrieved at Autopsy"

1991 AOA-Zimmer Travel Award for Orthopaedic Fellows:

"The New Number One Problem in Total Hip Replacement"

1993 John J. Fahey North American Traveling Fellow of the American Orthopaedic Association (AOA)

Honors and Awards, con't.

1994 Presidential Guest Speaker, Orthopaedic Research Society:

"Polyethylene Issues in Total Hip Replacement"

1994 John Charnley Award from the Hip Society (co-author):

"The Origin of Sub-Micron Polyethylene Wear Particles in Total Hip Replacement"

1994 Orthopaedic Research and Education Foundation (OREF) Research Grant:

"Canine Model of the Effective Joint Space"

1995 Presidential Guest Speaker, California Orthopaedic Association

"Wear Debris as the Predominant Cause of Late Failure in Prosthetic Joints"

1996 Earl C. Marmor Lecture, Albert Einstein Medical Center (Visiting Professor)

"Wear Issues in Total Hip Arthroplasty"

1997 Visiting Professor, Texas Tech. University Health Sciences Center

1998 Elected to Active Membership in The Hip Society

1998 Visiting Professor, University of Pennsylvania

1999 Visiting Professor, University of Alabama, Birmingham

1999 Elected to Active Membership in The American Orthopaedic Association

2000 John Charnley Award from the Hip Society:

"Wear is a Function of Use, Not Time"

2001 Visiting Professor, University of New Mexico

2001 Visiting Professor Medical University of South Carolina

2004 Presidential Guest, Japanese Orthopaedic Society

Licensures

California Medical Licence Number G55401
California DEA Number AS3243211

Board Certification

Diplomat of the American Board of Orthopaedic Surgery; July 9, 1993 - Dec. 31, 2003
Recertification in 2003

Journal Reviewer / Editorial Advisory Board

Orthopaedics Today; Section Editor, Joint Arthroplasty
Journal of Bone and Joint Surgery (American)
Journal of Applied Biomaterials
Clinical Orthopaedics and Related Research
Journal of the American Academy of Orthopaedic Surgeons
Journal of Orthopaedic Research
The Journal of Knee Surgery

Memberships and Societies

Los Angeles County Medical Association
California Medical Association
American Medical Association
Orthopaedic Research Society; Local Area Host, 1999; Board of Directors, 2000-2003
California Orthopaedic Association
American Academy of Orthopaedic Surgeons; Board of Directors, 1998-2000
Orthopaedic Research and Education Foundation; Order of Merit, 1994-2001
Association of Bone and Joint Surgeons
Western Orthopaedic Association; Board of Directors, 1996-97
CAP-MPT Education Committee, 1998-
The Hip Society
American Association of Arthritic Hip and Knee Surgeons; Board of Directors, 2000-
The American Orthopaedic Association; Critical Issues Committee, 2001-2003

American Academy of Orthopaedic Surgeons (AAOS) Activities

Board of Directors, 1998-2000

Chairman, Task Force on Gifts and Lectureships
Chairman, Task Force on the Internet and the AAOS Website

Scientific Exhibits

The Extensor Apparatus of the Knee:
Decreased Mechanical Advantage Following Total Knee Replacement
63rd Annual Meeting, Atlanta, GA, 1996

Access Disease: The Pathophysiology of Osteolysis
63rd Annual Meeting, Atlanta, GA, 1996

Factors Contributing to the Variability of Clinical Wear Rates of Polyethylene
Implants
64th Annual Meeting, San Francisco, CA, 1997

Long-Term Experience with Precision-Fit Hemi-Resurfacing for Osteonecrosis of
the Hip
64th Annual Meeting, San Francisco, CA, 1997

Variables Affecting Utilization of Orthopaedic Specialty Services
65th Annual Meeting, New Orleans, LA, 1998

The Multi-Factorial Nature of Polyethylene Wear *In Vivo*
66th Annual Meeting, Anaheim, CA, 1999

Committees

Basic Science Evaluations Committee, 1996-1999
Internet Communications Committee, 2000-2002

AAOS and NIH Consensus Workshop

"Considerations of Implant Wear for the Future of Total Joint Replacement"
September 1995

"Wear 2000"
October 2000

Publications (2000 to present)

71. Scott, D.L.; Campbell, P.A.; McClung, C.D. and Schmalzried, T.P.: Factors contributing to rapid wear and osteolysis in hips with modular acetabular bearings made of Hylamer. *J. Arthroplasty* 15:35-46, 2000.
72. McClung, C.D. et al.: The relationship between body mass index and activity in hip or knee arthroplasty patients. *J. Orthop. Res.* 18:35-39, 2000.
73. Schmalzried, T.P. and McKellop, H.A.: Rationale for crosslinked polyethylene in hip and knee replacement surgery. *Current Opinion in Orthopedics* 11:387-402, 2000.
74. Schmalzried, T.P.; Zahiri C.A. and Woolson, S.T.: The significance of stem-cement loosening of grit-blasted femoral stems. *Orthopedics* 23:1157-1164, 2000.
75. Schmalzried, T.P. et al: Wear is a function of use, not time. *Clin. Orthop.* 381:36-46, 2000.
76. Jackson, W.O. and Schmalzried, T.P.: Limited role of direct-exchange arthroplasty in the treatment of infected total hip replacements. *Clin. Orthop.* 381:101-105, 2000.
77. Mikulak, S.A.; Mahoney, O.M.; Dela Rosa, M.; Schmalzried, T.P.: Loosening and osteolysis with the Press-Fit Condylar posterior-cruciate-substituting total knee replacement. *J. Bone Joint Surg.* 83-A:398-403, 2001.
78. Beaulé, P.E.; Schmalzried, T.P.; Campbell, P. A.; Dorey, F. and Amstutz, H.C.: Duration of symptoms and outcome of hemiresurfacing for hip osteonecrosis. *Clin. Orthop.* 385:104-117, 2001.
79. Tharani, R. Dorey, F. J. and Schmalzried, T.P.: The risk of cancer following total hip or total knee replacement. *J. Bone Joint Surg.* 83-A:774-780, 2001.
80. Schmalzried, T.P.; Campbell, P. and Chan, F.W.: Biological issues in metal-metal total hip arthroplasty. *Biomat. Forum* 23:6-20, 2001.
81. Beaulé, P.E.; Campbell, P. A.; Hooper, J. and Schmalzried, T.P.: Osteolysis in a cementless, second generation metal-on-metal hip replacement. *Clin. Orthop.* 386:159-165, 2001.
82. Schmalzried, T. P.: Patient Activity and Wear. *In* World Tribology Forum. Rieker, C. and Oberholzer, S. eds. Hans Huber, Bern, 2001.

83. Schmalzried, T.P. et al.: Contemporary issues in total hip arthroplasty. *Am. J. of Orthop.* 30:626-632, 2001.
84. Schmalzried, T.P. and Huk, O.: What patient-related factors contribute to implant wear? In *Implant Wear*. Wright, T.M. and Goodman, S.B., eds. AAOS, Rosemont, IL, 2001.
85. Park, S.-H. et al: Cement-cement interface strength: Influence of time to apposition. *J. Biomed. Mater. Res.* 58:741-746, 2001.
86. Beaulé, P.E.; Schmalzried, T.P. et al.: Jumbo femoral head for the treatment of recurrent dislocation following total hip replacement. *J. Bone Joint Surg.* 84-A:256-263, 2002.
87. Beaulé, P.E. et al.: Polyethylene wear characteristics in vivo and in a knee simulator. *J. Biomed. Mater. Res.* 60:411-419, 2002.
88. Mahoney, O.; McClung, C.D.; dela Rosa, M. and Schmalzried, T.P.: The effect of total knee arthroplasty design on extensor mechanism function. *J. Arthroplasty* 17:416-421, 2002.
89. Barrack R.L. and Schmalzried, T.P. Impingement and rim wear associated with early osteolysis after a total hip replacement: A case report. *J. Bone Joint Surg.* 84-A: 1218-1220, 2002.
90. Silva, M. et al.: Average patient walking activity approaches 2 million cycles per year: Pedometers under-record walking activity. *J. Arthroplasty* 17:693-697, 2002.
91. Callaghan, J.J. et al: Tibial post impingement in posterior-stabilized total knee arthroplasty. *Clin. Orthop.* 404:83-88, 2002.
92. Silva, M.; Tharani, R. and Schmalzried, T.P.: Results of direct exchange or debridement of the infected total knee arthroplasty. *Clin. Orthop.* 404:125-131, 2002.
93. Maloney, W.J.; Schmalzried, T.P. and Harris, W.H.: Analysis of long-term cemented total hip arthroplasty retrievals. *Clin. Orthop.* 405:70-78, 2002.
94. Barrack, R.L. et al.: Analysis of retrieved uncemented porous-coated acetabular components in patients with and without pelvic osteolysis. *Orthopedics* 25:1373-1378, 2002.
95. Skipor, A.K. et al.: Serum and urine metal levels in patients with metal-on-metal surface arthroplasty. *J. Mater. Sci. Mater. Med.* 13:1227-1234, 2002.
96. Klein, R. et al.: Rotational constraint in posterior-stabilized total knee prostheses. *Clin.*

- Orthop. 410:82-89, 2003.
97. Silva, M. and Schmalzried, T.P.: Polyethylene in total knee arthroplasty. *In* The Adult Knee. Callaghan, J.J.; Rosenberg, A.G.; Rubash, H.E.; Simonian, P.T.; and Wickiewicz, T.A., eds, pp. 278-288, Lippincott William & Wilkins, Philadelphia, 2003.
 98. Heisel, C.; Silva, M. and Schmalzried, T.P.: Bearing surface options for total hip replacement in young patients. *J. Bone Joint Surg.* 85-A: 1366-1379, 2003.
 99. Beaulé, P.E. et al.: [Tripolar arthroplasty for recurrent total hip prosthesis dislocation.] *Rev. Chir. Orthop. Reparatrice Appar. Mot.* 89:242-249, 2003.
 100. Silva, M. and Schmalzried, T.P.: Metal-on-metal: history, basic science, and toxicity. *Semin. Arthroplasty* 14:113-122, 2003.
 101. Nellans, K; Schmalzried, T.P. and Macaulay, W.: Effect of patient-controllable factors on survivorship of primary total hip arthroplasty. *J. South Orthop. Assoc.* 12:72-74, 2003.
 102. Silva, M. et al.: Knee strength after total knee replacement. *J. Arthroplasty* 18:605-611, 2003.
 103. Campbell, P. et al.: Autopsy analysis thirty years after metal-on-metal total hip replacement. A case report. *J. Bone Joint Surg.* 85-A:2218-2222, 2003.
 104. Silva, M. et al.: Surface damage on open box posterior-stabilized polyethylene tibial inserts. *Clin. Orthop.* 416:135-144, 2003.
 105. Silva, M. et al.: The biomechanical results of total hip resurfacing arthroplasty. *J. Bone Joint Surg.* 86-A:40-46, 2004.
 106. Schmalzried, T.P. and Huk, O.L.: Patient factors and wear in total hip arthroplasty. *Clin. Orthop.* 418:94-97, 2004.
 107. Heisel, C.; Silva M.; dela Rosa, M. and Schmalzried, T.P.: Short-term in vivo wear of crosslinked polyethylene. *J. Bone Joint Surg.* 86-A:748-751, 2004.
 108. Heisel, C.; Silva M. and Schmalzried, T.P.: Bearing surface options in total hip replacement. *Instr Course Lect* 53:49-66, 2004.
 109. Schmalzried, T.P.: Total resurfacing for osteonecrosis. *Clin. Orthop.* 429: 151-156, 2004.
 110. Schmalzried, T.P.: How I choose a bearing surface for my patients. *J. Arthroplasty* 19

- Suppl. 3:50-53, 2004.
111. Silva M.; Heisel, C. and Schmalzried, T.P.: Metal-on-metal total hip replacement. *Clin. Orthop.* 430: 53-61, 2005.
 112. Heisel, C.; Silva, M.; dela Rosa, M. and Schmalzried, T.P.: The effects of lower-extremity total joint replacement for arthritis on obesity. *Orthopedics* 28: 157-160, 2005.
 113. Heisel, C.; Silva, M.; Skipor, A.K.; Jacobs, J.J. and Schmalzried, T.P.: The relationship between activity and ions in patients with metal-on-metal bearing hip prostheses. *J. Bone Joint Surg.* 87-A:781-787, 2005.
 114. Schmalzried, T.P.: Metal-on-metal resurfacing arthroplasty: No way under the sun!--In opposition. *J. Arthroplasty* 20(4 Suppl 2): 70-71, 2005.
 115. Schmalzried, T.P.: Preoperative templating and biomechanics in total hip arthroplasty. *Orthopedics* 28 (8 Suppl): S849-S851, 2005
 116. Silva, M.; McClung, C.D.; dela Rosa, M.A.; Dorey, F.J., and Schmalzried, T.P.: Activity sampling in the assessment of patients with total joint arthroplasty. *J. Arthroplasty* 20: 487-491, 2005.
 117. Heisel, C.; Schmalzried, T.P.: In vivo wear of bilateral total hip replacements: conventional versus crosslinked polyethylene. *Arch. Orthop. Trauma Surg.* 20:1-3, 2005.
 118. Fowble, V.A. and Schmalzried, T.P.: Nerve palsy associated with total hip arthroplasty. *Seminars in Arthroplasty* 16:114-118, 2005.
 119. Schmalzried, T.P.; Silva, M.; de la Rosa, M.; Choi, E.S. and Fowble, V.A. : Optimizing patient selection and outcomes with total hip resurfacing. *Clin. Orthop.* 441:200-204, 2005.
 120. Jacobs, J.J.; Skipor, A.K.; Campbell, P.A.; Gitelis, S.; Berger R.A.; Schmalzried, T.P. and Amstutz, H.C.: Three-Year Prospective Study of Serum and Urine Metal Levels In Patients With Metal-on-Metal Total Hip and Surface Arthroplasty. *Journal of Arthroplasty* 21:303-304, 2006.
 121. Schmalzried, T.P.: The Optimal Metal-Metal Arthroplasty is Still a Total Hip Arthroplasty: In Opposition. *Journal of Arthroplasty* 21S:77-79, 2006.
 122. Schmalzried, T.P.: The Infected Hip: Telltale Signs and Treatment Options. *Journal of Arthroplasty* 21S:97-100, 2006.
 123. Mont, M.A.; Ragland, P.S.; Etienne, G.; Seyler, T.M. and Schmalzried, T.P.: Hip resurfacing arthroplasty. *J. Am. Acad. Orthop. Surg.*14:454-463, 2006.

124. Theinpont, E.; Schmalzried, T.; Bellemans, J.: Ankylosis due to heterotopic ossification following primary total knee arthroplasty. *Acta Orthop. Belg.* 72(4):502-6, 2006.
125. Bitsch, R.G.; Heisel, C.; Silva, M.; Schmalzried, T.P.: Femoral cementing technique for hip resurfacing arthroplasty. *J Orthop. Res.*, 2007.