

BIOGRAPHICAL SKETCH

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NAME Brian D. Snyder, M.D., Ph.D.	POSITION TITLE Associate Professor of Orthopaedic Surgery		
eRA COMMONS USER NAME BRIANSNYDER			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Pennsylvania, Philadelphia, PA	B.Sc.	1979	Bioengineering
University of Pennsylvania, Philadelphia, PA	M.Sc.	1982	Bioengineering
University of Pennsylvania, Philadelphia, PA	M.D.	1986	Medicine
University of Pennsylvania, Philadelphia, PA	Ph.D.	1991	Bioengineering

A. Positions and HonorsPositions and Employment

1985-1986 Research Fellow in Orthopaedic Surgery, Orthopaedic Biomechanics Laboratory, Beth Israel Hospital, Boston, MA

1986-1987 Internship General Surgery, Harvard 5th Surgical Service, New England Deaconess Hospital, Boston, MA

1987-1988 Research Fellow in Orthopaedic Surgery, Orthopaedic Biomechanics Laboratory, Beth Israel Hospital, Boston, MA

1988-1992 Residency Orthopaedic Surgery, Harvard Combined Orthopaedic Surgery Training Program, Boston, MA

1992 Chief Resident Orthopaedic Surgery, Brigham and Women's Hospital, Boston, MA

1993-1994 Clinical Fellow Pediatric Orthopaedic Surgery, Childrens Hospital, Boston, MA

1993 Attending Physician, Orthopaedic Surgery, Childrens Hospital, Boston, MA

1993 Instructor in Orthopaedic Surgery, Harvard Medical School, Boston, MA

1994 Assistant in Orthopaedic Surgery, Children's Hospital, Boston, MA

1994 Associate Orthopaedic Surgeon, Brigham and Womens Hospital, Boston, MA

1996 Research Associate in Orthopedic Surgery, Beth Israel Deaconess Medical Center, Boston, MA

1999 Assistant Professor of Orthopaedic Surgery, Harvard Medical School, Boston, MA

Other Experience

1998 Director, Orthopedic Biomechanics Laboratory, Beth Israel Deaconess Medical Center, Boston, MA

1999 Director, Cerebral Palsy Clinic, Children's Hospital, Boston, MA

Awards and Honors

1976 Designated Benjamin Franklin Scholar, University of Pennsylvania

1977 Designated University Scholar, University of Pennsylvania

1979 Tau Beta Pi (Engineering Honor Society), University of Pennsylvania

1980 Mary Ellis Bell Award for Outstanding Research, University of Pennsylvania School of Medicine

1981 NIH Medical Scientist Training Program, University of Pennsylvania (Grant #5-T32-GM-07170)

1985 & 1987 NIH Research Fellowship in Orthopaedic Surgery, Harvard Medical School

2000 Member, Selection Committee, Bristol-Myers Squibb/Zimmer 14th Annual Distinguished Award in Orthopaedic Research, January 25, Vail, CO

2001- Member, Research Committee, Pediatric Orthopaedic Society of North America

2001- Member, NIH Study Section, Center for Scientific Review Special Emphasis Panel ZRG1-SSS-5 (15) Small Business Orthopaedic Medicine

2002- Member, NIH/NIAMS Special Review Committee, New Research Strategies for Evaluation and Assessment of Bone Quality

2003- Member, NIH/NIAMS Special Emphasis Panel Meeting, Core Center for Muscular Disorders

2004 Kappa Delta Ann Doner Vaughan Award

2004- Co-Chair, Research Grant Committee, Scoliosis Research Society

2005- Chair, Research Committee, Pediatric Orthopaedic Society of North America

B. Peer-Reviewed Publications

1. Cheal EJ, Hayes WC, Lee CH, Snyder BD, Miller J: Stress analysis of a condylar knee tibial component influence of metaphyseal shell properties and cement injection depth. J Orthop Res 3:424-434, 1985.

2. Cheal EJ, Snyder BD, Nunamaker DM, Hayes WC: Trabecular bone remodeling around smooth and porous implants in an equine patellar model. *J Biomech* 20:1121-1134, 1987.
3. Snyder BD, Edwards WT, Hayes WC: Letter to the Editor: Osteoporosis induced changes in trabecular bone structure. *N Engl J Med* 319:793-794, 1988.
4. Snyder BD, Piazza SJ, Edwards WT, Hayes WC: Role of trabecular morphology in the etiology of age-related vertebral fractures. *Calcif Tissue Int* 53(S1):514-522, 1993.
5. Snyder BD, Zaltz I, Breitenbach M, Kido TH, Myers ER, Emans JB: Does bracing affect bone density in adolescent idiopathic scoliosis. *Spine* 20: 1554-1560, 1995.
6. Snyder BD, Zaltz I, Hall JE, Emans JB: Predicting the integrity of vertebral bone screw fixation in anterior spinal instrumentation. *Spine* 20(14): 1568-1577, 1995.
7. Hipp JA, Jansujwicz AO, Simmons CA, Snyder BD: Trabecular bone morphology from micro-magnetic resonance imaging. *J Bone Miner Res*, 11: 286-297, 1996.
8. Waters PM, Mintzer CM, Hipp JA, Snyder BD: Non-invasive measurement of distal radius fracture instability using computed tomography. *J Hand Surg*, 22A: 572-579, 1997.
9. Ring D, Snyder B: Spinal canal compromise in proteus syndrome: Case report & review of the literature. *Am J Orthop* 26:275-278, 1997.
10. Hong J, Hipp JA, Mulkern RV, Jaramillo D, Snyder BD: Magnetic resonance imaging measurements of bone density and cross-sectional geometry. *Calcif Tissue Int*, 66:74-78, 2000.
11. Whealan KM, Kwak SD, Tedrow JR, Inoue K, Snyder BD: Non-invasive imaging predicts fracture load of spines with simulated osteolytic defects. *J Bone Joint Surg*, 82(A):1240-1251, 2000.
12. Boutis K, Komar L, Jaramillo D, Babyn P, Alman B, Snyder B, Mandl KD, Schuh S: Sensitivity of a clinical examination to predict the need for radiography in children with ankle injuries: A prospective study. *Lancet*, 358:2118-2121, 2001.
13. Abel MF, Damiano DL, Blanco JS, Conaway M, Miller F, Dabney K, Sutherland D, Chambers H, Dias L, Sarwark J, Killian J, Doyle S, Root L, LaPlaza J, Widmann R, Snyder B: Relationships among musculoskeletal impairments and functional health status in ambulatory cerebral palsy. *J Pediatr Orthop*, 23(4):535-541, 2003.
14. von Stechow D, Nazarian A, Cordio MA, Mueller R, Snyder BD: Biomechanical behavior of skeletal metastases. *Oncology* 17(4(S3)):28, 2003.
15. Cordio MA, Wilson SB, Kwak SD, Zurakowski D, Parker L: Noninvasive prediction of fracture in patients with metastatic breast cancer to the spine. *Oncology* 17(4(S3)):29, 2003.
16. Meinel L, Karageorgiou V, Fajardo R, Snyder B, Shinde-Patil V, Zichner L, Kaplan D, Langer R, Vunjak-Novakovic G: Bone tissue engineering using human mesenchymal stem cells: Effects of scaffold material and medium flow. *Ann Biomed Eng* 32:112-122, 2004.
17. Hong J, Cabe GD, Tedrow JR, Hipp JA, Snyder BD: Failure of trabecular bone with simulated lytic defects can be predicted non-invasively by structural analysis. *J Orthop Res* 22:479-486, 2004.
18. Meinel L, Karageorgiou V, Hofmann S, Fajardo R, Snyder B, Li C, Zichner L, Langer R, Vunjak-Novakovic G, Kaplan DL: Engineering bone-like tissue in vitro using human bone marrow stem cells and silk scaffolds. *J Biomed Mater Res A* 71:25-34, 2004.
19. Snyder BD, Katz DA, Myers ER, Breitenbach MA, Emans JA: Bone density accumulation is not affected by brace treatment of idiopathic scoliosis in adolescent girls. *J Pediatr Orthop* 25:423-428, 2005.
20. Miller BS, Taylor B, Widmann RF, Bae DS, Snyder BD, Waters PM: Cast immobilization versus percutaneous pin fixation of displaced distal radius fractures in children: A prospective, randomized study. *J Pediatr Orthop* 25:490-494, 2005.
21. Meinel L, Fajardo R, Hoffman S, Langer R, Chen J, Snyder B, Vunjak-Novakovic G, Kaplan D: Silk-implants for the healing of critical size bone defects. *Bone* 37:688-698, 2005.
22. Snyder BD, Hauser-Kara DA, Hipp JA, Zurakowski D, Hecht AC, Gebhardt MC: Predicting fracture through benign skeletal lesions with quantitative computed tomography. *J Bone Joint Surg AM* 88:55-70, 2006.
23. Murray MM, Spindler KP, Devin C, Snyder BD, Muller J, Takahashi M, Ballard P, Nanney LB, Zurakowski D: Use of a collagen-platelet rich plasma scaffold to stimulate healing of a central defect in the canine ACL. *J Orthop Res* 24:820-830, 2006.
24. Diab M, Daluovoy S, Snyder BD, Kasser JR: Osteotomy does not improve early outcome after slipped capital femoral epiphysis. *J Pediatr Orthop British*, 15:87-92, 2006.
26. Mehta HP, Snyder BD, Callender NN, Bellardine CL, Jackson AC. The reciprocal relationship between thoracic and spinal deformity and its effect on pulmonary function in a rabbit model: A pilot study. *Spine*, accepted for publication.
27. Nazarian A, Stauber M, Zurakowski D, Snyder BD, Mueller R: The interaction of microstructure and volume fraction in predicting failure in cancellous bone. *Bone*, accepted for publication.