



# THE BETH ISRAEL DEACONESS MEDICAL CENTER

BENJAMIN E BIERBAUM, MD, ORTHOPEDIC SURGEON-IN-CHIEF



The Beth Israel Deaconess Medical Center appointed me as Chairman of the Department of Orthopedic Surgery and Clinical Professor of Orthopedics at Harvard Medical School on December 1, 2000. I am honored to accept this position and look forward to the important role that the Beth Israel Deaconess Medical Center plays in the Harvard Combined Orthopedic Residency. As an alumnus of the program, I am dedicated to the quality of teaching of residents to further strengthen the program and to maintain its high standards. Don Reilly will continue to act as Vice-Chair of the Department and I have appointed Greg Altman to head the Musculoskeletal Trauma Unit. I want to thank Dr. Steve Lipson for his many years of dedicated teaching and contributions to the Program. I look forward to the opportunity to interact with the residents and further our educational mission.

The Beth Israel Hospital in 1995 became a Level 1 trauma center. With the merger of Beth Israel and Deaconess Hospitals, CareGroup has continued to make a strong commitment to the multiply-injured patient. In 1998, the emergency department received accreditation for a Harvard Emergency Room Residency program with 7 residents per year. In July 2001, Beth Israel Deaconess Medical Center will open their new state-of-the-art Emergency Department equipped to handle the trauma patient. The new Emergency Department will provide 20% more treatment rooms as well as many improvements intended to improve the quality and efficiency of care. Four large resuscitation rooms will allow for simultaneous treatment of major trauma patients. The rooms will be fully equipped to manage major orthopedic trauma, including equipment for applying external pelvic fixation, skeletal and halo traction. A large orthopedic procedure room will be available for routine orthopedic procedures and equipped for the performance of conscious sedation. Both CT scanning and radiography rooms will be located within the new department. The Department of Orthopedics has a renewed commitment to orthopedic trauma. Our orthopedic trauma service, headed by Gregory T. Altman, MD, is comprised of 3 orthopedic surgeons committed to providing both patient care and teaching.

Our Sports Medicine program continues to grow under the direction of Drs. Jeffrey Zilberfarb, Louis Meeks and Robert G. Davis. The Sports Medicine rotation provides residents an experience in both the operating room and outpatient office setting. The residents consistently rate this as one of their best rotations in the 5 year Harvard Orthopedic program. There is an emphasis on the clinical experience as well as bi-weekly faculty lectures on current sports orthopedic topics.

During the upcoming year we plan to integrate rheumatology, musculoskeletal and orthopaedic surgery services to offer combined patient care and teaching for residents. The integrated programs will offer efficient, seamless, patient-focused care provided by a multidisciplinary team consisting of medical and surgical physicians, nurse practitioners, physician assistants and residents. The combined program will reside in a newly designed center that supports the philosophy of the program.

Aimed at the diagnosis and medical management of patients with regional musculoskeletal disease, patients in the Musculoskeletal Medicine Unit have acute, sub-acute or chronic musculoskeletal complaints that are not identifiably "orthopedic" or clearly "rheumatologic". Disorders seen in the Unit include neck pain, low back pain, disc disorders, spinal stenosis, myofascial pain syndromes, minor sports injuries, bursitis, tendonitis, shoulder pain, and extremity pain among others. The Musculoskeletal Medicine Unit is staffed by two clinicians, John Donohue, MD, a rheumatologist with special interest in regional musculoskeletal disease and Sharon Gates, MSN, RNCS Nurse Practitioner with extensive experience in orthopedics. A fundamental premise of the Unit's function is that patients and referring clinicians have prompt access for care.

The Orthopedic Biomechanics Laboratory of the Beth Israel Deaconess Medical Center is a world renowned center for biomechanics research in orthopaedics. In addition, the lab trains numerous Harvard residents, Harvard medical students, and engineering students from the Massachusetts Institute of Technology. The Orthopedic Biomechanics Laboratory has been in transition since Dr. Wilson C. (Toby) Hayes left for Oregon in 1998. Dr. Brian Snyder of Children's Hospital has been acting director while a Harvard Medical School search committee seeks a new lab director.

Now more than ever, the Orthopedic Biomechanics Lab is a resource for orthopaedic researchers at all of the hospitals in the Harvard Combined Orthopaedic Residency Program. Brian Snyder, MD, PhD, is investigating the biomechanics of metastatic defects in bone, the biomechanics of fracture healing, as well as a breadth of clinical investigations centered in pediatric orthopaedics at The Children's Hospital. Mary L. Boussein, PhD is involved in research on the etiology of osteoporosis, non-invasive methods to predict osteoporotic fracture risk, and growth factors for the acceleration of fracture healing. Dr. Guoan Li focuses on utilizing the most recent technological advances to delineate the musculoskeletal joint

function and investigate the etiology of joint disease. He and his students are specifically interested in the biomechanical factors that lead to joint injuries and long-term joint degeneration. Their research also includes examination of the biomechanical effects of current surgical options (e.g., ligament reconstruction, total joint replacement) used to treat these injuries and devise new techniques (e.g., minimally invasive surgical technique). Ron Alkalay, PhD focuses on spinal biomechanics in the areas of instrumentation and the use of biomaterials to enhance surgical procedures. Of particular interest, is the relationship between mechanical

forces and biological processes affecting spinal fusion and the degeneration process of the intervertebral disc. Diana Hauser, PhD is investigating the biomechanics of benign and metastatic defects in the appendicular skeleton, as well as radiological predictors of pathological fracture risk derived from DEXA, QCT and QMRI techniques. Dietrich von Stechow, MD focuses on tissue engineering of bone and cartilage. Current projects include the angiogenesis of tissue engineered bone as well as the biomechanical behavior of a newly developed bone cement.

### Beth Israel Deaconess Medical Center Department of Orthopaedic Surgery

#### Clinical Faculty

**Benjamin E. Bierbaum, MD**  
Clinical Professor Orthopedic Surgery,  
Harvard Medical School  
Orthopedic Surgeon-in-Chief

**Gregory T. Altman, MD**  
Instructor, Harvard Medical School

**Robert G. Davis, MD**  
Instructor, Harvard Medical School

**Tobin N. Gerhart, MD**  
Assistant Clinical Professor, Harvard Medical School

**Paul A. Glazer, MD**  
Clinical Instructor, Harvard Medical School

**Hyman Glick, MD**  
Clinical Instructor, Harvard Medical School

**Stephen J. Lipson, MD**  
Clinical Professor of Orthopedic Surgery,  
Harvard Medical School

**Louis W. Meeks, MD**  
Clinical Instructor, Harvard Medical School

**William A. Mitchell, Jr., MD**  
Clinical Instructor, Harvard Medical School

**Stephen B. Murphy, MD**  
Clinical Instructor, Harvard Medical School

**Donald T. Reilly, MD**  
Assistant Clinical Professor, Harvard Medical School

**Hillel Skoff, MD**  
Clinical Instructor, Harvard Medical School

**Augustus A. White, III, MD**  
Professor of Orthopaedic Surgery, Harvard Medical School

**Harris Yett, MD**  
Clinical Instructor, Harvard Medical School

**Jeffrey L. Zilberfarb, MD**  
Clinical Instructor, Harvard Medical School

#### Fellows

**Spine**  
**Devin Datta, MD**  
**Saechin Kim, MD**

### Beth Israel Deaconess Medical Center Orthopedic Biomechanics Laboratory

#### Basic Science Faculty

**Brian D. Snyder, MD, PhD**  
Assistant Professor of Orthopaedic Surgery,  
Harvard Medical School  
Acting Director, Orthopedic Biomechanics Laboratory

**Mary Boussein, PhD**  
Assistant Professor, Harvard Medical School

**Guoan Li, PhD**  
Assistant Professor, Harvard Medical School

**Ron Alkalay, PhD**  
Instructor, Harvard Medical School

**Diana Hauser, PhD**  
Instructor, Harvard Medical School

**Dietrich von Stechow, MD**  
Research Fellow in Orthopaedic Surgery,  
Harvard Medical School