Determinants of Peak Bone Mass

November 17, 2015, 8:00 a.m.–5:00 p.m.
Lister Hill Auditorium (Building 38A), NIH Main Campus

Co-Chairs: Clifford Rosen, MD (Maine Medical Center Research Institute), and Karen Winer, MD (NICHD)

8:00 a.m. Welcome and Opening Remarks

- Karen Winer, M.D., Director, Endocrine and Bone Programs, NICHD
- Della Hann, Ph.D., Director, Division of Extramural Research, NICHD
- Clifford Rosen, M.D., Maine Medical Center Research Institute

Session 1 Intrinsic Factors in Bone Accretion
Co-Chairs: Mary L. Bouxsein, Ph.D. (Harvard Medical School); John Shepherd, Ph.D. (University of California San Francisco [UCSF])

8:10 a.m. Peak Bone Mass: When Is It Achieved?
Babette Zemel, Ph.D. (Children’s Hospital of Philadelphia)

8:30 a.m. Gender Differences in Bone Accrual and Structure
Vicente Gilsanz, M.D. (Children’s Hospital Los Angeles)

8:50 a.m. Bone Strength Accrual
Tishya Wren, Ph.D. (Children’s Hospital Los Angeles)

9:10 a.m. Tracking and Fracture Risk
Heidi J. Kalkwarf, Ph.D. (Cincinnati Children’s Hospital Medical Center)

9:30 a.m. Genetic Determinants of Bone Mass
Struan F. A. Grant, Ph.D. (Children’s Hospital of Philadelphia)

9:50 a.m. Panel Discussion

10:10 a.m. Break

Session 2 Growth and Development
Chair: Erik Imel, M.D. (Indiana University)

10:30 a.m. Endocrine Aspects of Linear Bone Growth and Determinants of Epiphyseal Closure
Ron Rosenfeld, M.D. (Oregon Health & Science University)

10:50 a.m. Effects of Puberty on Bone
Frank Rauch, M.D. (Shriners Hospitals for Children)
11:10 a.m. Bone as an Endocrine Organ
Gerard Karsenty, M.D., Ph.D. (Columbia University Medical Center)

11:30 a.m. Bone–Fat Interactions
Clifford Rosen, M.D. (Maine Medical Center Research Institute)

11:50 a.m. Maternal Obesity: Effects on Fetal Bone Development
Jin-Ran Chen, M.D., Ph.D. (University of Arkansas)

12:10 p.m. Panel Discussion

12:30 p.m. Lunch

Session 3 Nutrition and Exercise
Co-Chairs: Jin-Ran Chen, M.D., Ph.D. (University of Arkansas); Catherine Gordon (University of Cincinnati)

1:30 p.m. Evidenced-Based Review of Nutrition and Physical Activity
Connie M. Weaver, Ph.D. (Purdue University)

1:50 p.m. Vitamin D Effects on Bone Development
Richard Lewis, Ph.D. (University of Georgia)

2:10 p.m. Calcium Effects on Bone Development
Joan Lappe, Ph.D. (Creighton University)

2:30 p.m. Effects of Physical Activity on Bone Development
Kathleen F. Janz, Ed.D. (University of Iowa)

2:50 p.m. Panel Discussion

3:10 p.m. Break

Session 4 Chronic Illness and Impairment of Normal Bone Accrual
Chair: Laura Bachrach, M.D. (Stanford University)

3:30 p.m. Effects of Nutritional Deprivation on Bone
Catherine Gordon, M.D. (Cincinnati Children’s Hospital Medical Center)

3:50 p.m. Effects of Hormonal Contraception on Bone
Madhusmita Misra, M.D. (Harvard Medical School)

4:10 p.m. Effects of Glucocorticoids on Bone
Mary Leonard, M.D. (Stanford University)

4:30 p.m. Panel Discussion
4:50 p.m.    **Wrap-Up Discussion and Future Directions**

Cliff Rosen (Maine Medical Center Research Institute) and Session Chairs: Mary L. Bouxsein, Ph.D. (Harvard Medical School); John Shepherd, Ph.D. (UCSF), Erik Imel, M.D. (Indiana University), Jin-Ran Chen, M.D., Ph.D. (University of Arkansas); Catherine Gordon (University of Cincinnati); Laura Bachrach, M.D. (Stanford University)

5:00 p.m.    **Adjourn**