

THE OSTEOPOROSIS RESEARCH CENTER

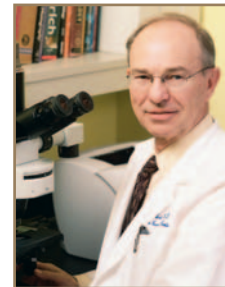
osteoporosis

It is a major public health threat for more than 44 million Americans. It can strike at any age with debilitating effects. The disease is characterized by bones becoming thinner, fragile and breakable. Bone, many people do not realize, is a living tissue—it is always changing. Your body keeps your bones strong and healthy by continuously replacing old bone with new. Osteoporosis disrupts this process. Low levels of physical activity and calcium intake among men, women and children, as well as women losing 12 percent of their entire skeleton at menopause, are just some of the causes. It is considered a silent disease with few warning signs and symptoms. Many sufferers never realize they have it until they experience their first broken bone. In 2003 national health care costs associated with osteoporosis reached \$17 billion—and continue to rise.



leadership, faculty and staff

Leading the Center's efforts are Robert R. Recker, M.D., M.A.C.P., F.A.C.E. and Robert P. Heaney, M.D., F.A.C.P., F.A.C.N. Dr. Recker serves as the director and is an internationally recognized expert in the field of metabolic bone. His 35-plus year career as a physician-scientist includes laboratory and research, teaching, patient care, professional leadership and publication of more than 250 original papers, chapters, monographs and reviews. Dr. Heaney is a world renowned expert in the field of bone and calcium nutrition. With more than 45 years in the study of osteoporosis, he has published more than 300 original papers, chapters, monographs, and reviews in scientific and educational fields. Faculty and staff include physician-scientists, molecular biologists and geneticists, nurse-scientists, biomechanical engineers, nutritionists, nurses and much more.



Robert R. Recker, M.D.
M.A.C.P., F.A.C.E.



Robert P. Heaney, M.D.
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Identifying the disease, providing treatment, gaining research insights that lead to better patient care within a University-based educational environment are just a few of the features of the work at Creighton University's Osteoporosis Research Center.

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Creighton
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research vital to care, learning

While at this time osteoporosis is to some extent preventable, medical experts agree that only through intensive research will this disease be conquered. If the toll of osteoporosis is to be reduced, the commitment to this research must be increased.

Creighton University is committed to research. While researchers are visionaries, they are also teachers. A research environment can provide the best atmosphere for student learning while advancing health care. That spirit of inquisitiveness and passion is an integral part of the spirit of Creighton University.

CREIGHTON'S
OSTEOPOROSIS
RESEARCH
CENTER IS
RECOGNIZED
AS ONE OF
THE TOP BONE
RESEARCH
CENTERS IN
THE WORLD



THE OSTEOPOROSIS RESEARCH CENTER



The University established research facilities for the study of osteoporosis in the early 1960s and founded the Osteoporosis Research Center (ORC) in 1985. A world-renowned staff of three physicians and five PhD's conduct both basic and clinical research involving volunteer participants, with the help of close to 60 nurses, technicians and administrators. Numerous studies are conducted where data are gathered, stored and analyzed to provide insight into causes and treatments for this debilitating disease. Bone density screening is offered on a regular basis to aid in early detection of the disease. The Center always provides invaluable patient care including use of state-of-the art evaluation, diagnosis and treatment. Its national reputation for patient care and its association with the University and its medical facilities provides high quality referral services for physicians.

THE ORC IS A NATIONAL
AND INTERNATIONAL
RESOURCE THROUGH ITS
UNIQUE ARCHIVAL PROGRAM
OF HUMAN BONE BIOPSY
SPECIMENS, DNA CLINICAL
DATA, OTHER HUMAN SUBJECT
ARCHIVES AS WELL AS ITS
RESEARCH EXPERTISE

technology for learning

The Center has made numerous health advances. ORC researchers have discovered that most Americans are not getting enough Vitamin D to maintain normal skeletal strength throughout life. They discovered an age-related reduction in the ability of the skin to make Vitamin D on exposure to the sun as a contributing cause. Further, osteoporosis is strongly determined by family history. Thus genetic research by ORC investigators discovered a mutation among members of a family that produced massive, strong bones, resistant to fracture. They were able to isolate a gene that regulates bone growth which has led the way for additional research to find a drug that mimics the effect of the mutation. The ORC is a national and international resource through its unique archival program of human bone biopsy specimens, DNA specimens, clinical data, and other human subject archives as well as its research expertise. Other collaborators use these for application of new technology and as data sources for their research.

