



The Sixth Annual Raymond G. Tronzo Lectureship



Harry E. Rubash, MD

Chief, Department of Orthopaedic Surgery, Massachusetts General Hospital, Edith M. Ashley Professor of Orthopaedic Surgery, Harvard Medical School.

Covered by Barkha Gurbani

The University of Pennsylvania Department of Orthopaedic Surgery held its 6th annual Raymond G. Tronzo Lectureship on September 17, 2009. The lectureship was endowed through the generosity of Dr. Ray and Diana Tronzo.

Dr. Ray Tronzo received his BS and MS from Penn State. He graduated from Thomas Jefferson School of Medicine in 1957. After an internship at Charity Hospital in New Orleans, he completed his orthopaedic residency at Philadelphia General Hospital under the mentorship of Doctors Anthony DePalma and John Royal More. From 1962-1968, he was a member of the faculty at the Medical College of Pennsylvania, where he was appointed Chief of the Orthopaedic section. He then joined the staff of the Department of Orthopaedic Surgery at the University of Pennsylvania in 1968. Dr. Tronzo established the first Hip Clinic at HUP. In 1972, he chaired one of the first Academy symposia on the hip, and in 1973 he edited what is considered perhaps the first modern textbook on the hip, entitled *Surgery of the Hip Joint*. Dr. Tronzo is recognized for his prolific publications, presentations, and excellence as a surgeon and teacher.

However, amongst Dr. Tronzo's top accomplishments is the fact that he has always been an innovator. He is perhaps best known for the development of the Tronzo total hip prosthesis in the 1960's. Prior to FDA release of methyl methacrylate, these components could be used with press fit fixation without the need for cement. Once methacrylate was approved, it was used to augment the fixation of these devices. An uncemented version was also manufactured with a sintered surface to provide biological fixation through bone in growth. This was perhaps the first such device designed in the United States.

The invited speaker for the 6th Annual Raymond G. Tronzo Lectureship, Dr. Harry Rubash, shares Dr. Tronzo's interest in straddling the disciplines of clinical medicine and basic science in hopes to better understand the biomechanics and failure mechanisms of total joint arthroplasty in the hip and knee. Dr. Rubash is the Chief of the Department of Orthopaedic Surgery at Massachusetts General Hospital and Edith M. Ashley Professor of Orthopaedic Surgery at Harvard Medical School.

He is also coauthor of two of the premier texts, *The Adult Hip* and *The Adult Knee* and has won a number of prestigious awards such as the Otto Aufranc Award, the Stinchfield Award, the Charnley Award from the Hip Society, and the Ranawat Award from the Knee Society. Dr. Rubash is recognized as one of the nation's top leaders in joint arthroplasty and is respected for his research to develop better implant designs and new materials for implant bearing surfaces. Additionally, like Dr. Tronzo, Dr. Rubash has a longstanding and genuine commitment to orthopaedic education. It is his vision to help educate the next generation of orthopaedic surgeons through his devotion to the laboratory, operating room, and classroom that led us to choose Dr. Rubash as this year's speaker.



Dr. Harry Rubash

During the first half of the lecture, Dr. Rubash listened to our residents present selected complex hip and knee arthroplasty cases. Having performed over 3,500 joint replacements himself, Dr. Rubash's thoughtful observations on his experience and advice on how he would approach each case were well received. During the second half of his lecture, titled "*Highly Crosslinked Polyethylene: State of the Art*," Dr. Rubash reviewed his investigations of the pathophysiology of implant failure by evaluating implant failure patterns and *in vivo* wear debris. He then engaged the department by describing his many recent experiments that have led to therapies for periprosthetic bone loss as it relates to implant loosening. We were privileged to hear the summary of his years of basic science research findings and the projection of where future research is targeted. The morning was a brilliant example of synergy between laboratory research and its translation to medical science and patient care.

We sincerely thank Dr. Rubash for coming to Penn to share his knowledge and truly honor the legacy of Dr. Tronzo.