

Robert Bruce Salter
1924-2010



Dr. Robert Bruce Salter, world-renowned orthopaedic surgeon, researcher, professor, humanitarian and “medical giant” whose pioneering work has impacted millions of people around the world, died May 10 at the age of 85. Dr. Salter was born in Stratford, Ontario on December 15, 1924.

Dr. Salter was a Senior Scientist Emeritus in the Physiology & Experimental Medicine program at The Hospital for Sick Children (SickKids) and a Professor Emeritus in the Department of Surgery at the University of Toronto. His career spanned 55 years at both institutions.

He was a constant presence at SickKids and at the University of Toronto until just before his death. He never retired and until the end of March, could often be found at SickKids, engaging colleagues and sharing his wisdom with a new generation of orthopaedic surgeons.

Forty years ago, Dr. Salter developed a surgical technique that revolutionized the way joint injuries are treated around the world.

For 22 centuries, the traditionally accepted and enforced treatment for diseased and injured joints was immobilization. This strategy had an important drawback: the potential for joint cartilage to heal or to regenerate was notoriously limited. In 1970, Dr. Salter concluded from his previous 15 years of research that immobilization was very harmful to joints and furthermore, that immobilization did not stimulate joint cartilage either to heal or to regenerate. Consequently, he originated the new biological concept of continuous passive motion (CPM) of joints. In 35 experimental investigations at SickKids, he demonstrated that CPM for four weeks has a remarkably beneficial effect on the healing and regeneration of joint cartilage.

Following eight years of initial basic research, Dr. Salter began to apply CPM to the care of human patients in 1978, while continuing this research. Devices based on Dr. Salter’s findings are currently being used in more than 15,000 hospitals in 50 countries. It is estimated that more than nine million patients have been treated with CPM worldwide. This contribution to the field of orthopaedic surgery represented a paradigm shift through translational research.

While best known for developing the CPM technique, Dr. Salter’s reputation as a developer of innovative orthopaedic treatments was established in 1957, when he first performed the innominate osteotomy. Also known as the “Salter Operation,” the procedure was used to repair congenital hip dislocations.

Dr. Salter graduated from the Faculty of Medicine at the University of Toronto in 1947. He then spent two years in a Grenfell medical mission in Newfoundland-Labrador. His career at SickKids and the University of Toronto included a variety of roles at both institutions. He served as Surgeon-in-Chief and Head of the Division of Orthopaedic Surgery at SickKids, a Senior Scientist at SickKids Research Institute, and was Professor and Head of the Division of Orthopaedic Surgery at the University of Toronto. He was President of the Canadian Orthopaedic Association, as well as the Royal College of Physicians and Surgeons of Canada and the International Federation of Surgical Colleges.

Dr. Salter was given the distinction of University Professor at the University of Toronto, was elected a Fellow of the Academy of Science of the Royal Society of Canada, was inducted into the Canadian Medical Hall of Fame and was appointed an Officer of the Order of Canada and Order of Ontario. His clinical and research-related contributions earned him numerous awards and honours, including honorary degrees from several universities. In 1977, Dr. Salter was promoted to Companion, the highest rank of the Order of Canada. He was also awarded the Gairdner Award for medical science, the FNG Starr Medal of the Canadian Medical Association and the Bristol-Myers Squibb/Zimmer Award for Distinguished Achievement in Orthopaedic Research. In 2006 he was named one of the “Giants of Medical Research” – the 10 most outstanding University of Toronto scientists of the last 80 years. In 2007 Prime Mentors of Canada presented Salter with an Honorary Prime Mentor Award.

SickKids and the University of Toronto have paid tribute to Dr. Salter for several years through the establishment of awards in his honour. SickKids’ Robert Salter Humanitarian Award recognizes a SickKids staff member annually for their compassion and humanitarianism, demonstrated through their interactions with children, parents and colleagues. The University of Toronto’s R.B. Salter Award for Excellence in Orthopaedic Education was created in recognition of his teaching abilities, and is also awarded on an annual basis.

A widely respected teacher, Dr. Salter has been recognized by former postgraduate students with the establishment of The Salter Society. The 330-member organization, comprised of surgical fellows who trained under Dr. Salter, meets annually to share achievements inspired by his teaching and mentoring.

Dr. Salter wrote more than 120 articles in scientific journals, numerous book chapters, as well as three editions of his book, Textbook of Disorders and Injuries of the Musculoskeletal System. This medical textbook has sold 195,000 copies since 1970 and has been translated into six languages.

Retrieved from the Hospital for Sick Children website
<http://www.sickkids.ca/AboutSickKids/Newsroom/Past-News/2010/dr-robert-salter.html>
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(Author’s title given as of the time of writing)