



Wilfred G. Bigelow MD

Dr. Wilfred Gordon Bigelow's key discovery, made in 1950, was recognizing how to lower the body's oxygen requirements while lowering the body's core temperature to a point at which safe open heart surgery was possible. The first successful human application of Dr. Bigelow's hypothermia research for open heart surgery, occurred in 1953. Meanwhile, he had pioneered another major advance, in the management of heart disease -- the pacemaker -- which evolved quite unexpectedly out of his hypothermia research in 1951. Together, these discoveries revolutionized heart surgery and have made a significant difference to the lives of millions of people with heart disease.

Bigelow earned his MD from the University of Toronto in 1938, and this was followed by a surgical residency at Toronto General Hospital. During World War II he served as a surgeon in casualty clearing stations, during which time he grew interested in the ravages of injury brought on by hypothermia, or total body cooling. After the war, Dr. Bigelow studied at Johns Hopkins University, the Toronto General Hospital and at the University of Toronto, investigating the physiological effects of hypothermia.

Dr. Bigelow's contributions to medical history in Canada have extended far beyond the operating room. For more than three decades he was an inspiring surgical teacher at the Toronto General Hospital and the University of Toronto, especially at the postgraduate level, where he trained 40 cardiac surgeons. He also established the first Division of Cardiac Surgery in Toronto in 1947, and in 1957 set up the first inter-hospital postgraduate cardiovascular surgical training programme in Canada.

Dr. Bigelow, is the author of 120 publications, including important historical works on hypothermia and the pacemaker, and on the development of heparin in Toronto. He is also the recipient of some 25 major awards, including the International Gairdner Award for Medical Science (1959), the Officer of the Order of Canada (1981), and the F.N.G. Starr Medal (1992), which is the Canadian Medical Association's highest honor. Dr. "Bill" Bigelow is one of the most distinguished surgeons Canada has ever produced and stands among the world's titans of medicine.