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# Dr. John P. Girvin – an obituary (1934–2024)

Dr. John Patterson Girvin, one of Canada's leading neurosurgeons and a greatly respected teacher and surgeon-scientist, has died. He was born February 5th, 1934 in Detroit, to Dr. Patterson Girvin, a dentist, and Sally, a homemaker. His father was from Ottawa, his mother from Tweed. John attended Henry Ford Public School and early high school in Highland Park. Completing high school at Ridley College in St. Catharines, Ontario, he was guided by his headmaster, Dr. J.R. Hamilton, and participated in numerous sports, including cricket and lacrosse. His roommate and lifelong friend was Peter Gzowski, a future leader in Canadian broadcasting.

Girvin completed two years of pre-medical studies and then four years of medicine at Western. A renowned athlete, he competed in swimming, football and basketball. While football captain, the 1957 Western Mustangs were undefeated and won the Yates Cup. He was inducted into the Wall of Champions.

Medical school exposed John to remarkable postwar growth in local medical school and health care facilities. He was inspired towards neurosurgery by Charles Drake who had returned as London's first neurosurgeon a few years before. Graduating at the top of his class in 1958, Girvin then interned for a year at the Montreal General Hospital.

John had two three-month rotations at the Charlotte Memorial Hospital in North Carolina. While in Charlotte, he and Bettye Parker met. Bettye graduated from the School of Nursing at Charlotte and worked on staff there. They married September 13, 1959 and settled in Montreal, where they had many friends and started a family that grew to include Douglas, Michael, and Jane.

John completed a PhD in physiology at McGill under Professor Benedict Burns, investigating neuronal relationships in the mammalian brain. Neurosurgical training comprised a year each in Montreal, in Scotland at the West of Scotland Neurosurgical Unit (then in Killearn), in Cleveland for neuropathology at Case Western Reserve, and in London with Drake.

Killearn led to mentorship with Mr. Alistair Paterson and Mr. Sloane Robertson, who were developing interdisciplinary neuroscience in Scotland, influenced by their training in Montreal. Alistair and his wife Elspeth were a welcome support to the young Girvin family, remaining lifelong friends. In Cleveland, John studied neuropathology with Dr. Betty Banker, with whom he conducted seminal work on the ultrastructure of muscle.

Ten years' postgraduate training led to Girvin's recruitment to two academic departments at Western: the Department of Surgery and the Department of Physiology. A perfectionist and workaholic, John became a busy clinical surgeon with a referral base extending far outside London. The Girvins integrated into the London community, and both Bettye and John volunteered with numerous organizations. They continued a tradition of extending warm friendship to neuroscience colleagues and their partners, and to trainees and their families. They loved to entertain at their home. Their social events were legendary, including an annual

"Beaujolais Nouveau" event unequalled in its inclusiveness and ambiance. John also loved the rivers of Canada's north, organizing paddling trips there with friends for several years.

Dr. Girvin's research contributed significantly to Western's international reputation. In the 1950s and 1960s, accurate localization for many neurological conditions depended on the clinical examination. Advanced brain and spine imaging were decades in the future. John described the revolution in brain and spine imaging, heralded by CT scanning in the 1970s and by MRI in the 1980s, "as though you took a brain from the autopsy table and simply sliced it every centimetre and just turned the slices over and looked at them... it's just absolutely revolutionized the way we investigate people." His early research comprised studies of muscle rigidity and Parkinsonian tremor. He began outcomes research in the 1970s, finding antifibrinolytics to be of no use in preventing brain aneurysm re-rupture. Later he helped advance the understanding of the brain's regulation of the heart through stimulation of the human insular cortex. He promulgated the value of awake brain surgery, leading to the first successful injections of glue material into diseased brain blood vessels at craniotomy.

Girvin's skill and reputation attracted the attention of William Dobelle at Columbia University. Fifty years before Neuralink, they pioneered artificial vision for the blind via stimulation of the visual cortex. In the summer of 1973, Girvin performed the first implant in a Vietnam war veteran who had been blinded seven years earlier. The patient was able to visualize a phosphene triangle.

The crowning achievement of Girvin's career was kindled with the recruitment of Warren Blume to the neurology division in 1972. Three years later, John applied for grant support to open a centre for the treatment of epilepsy, garnering support from the Richard and Jean Ivey fund, as well local hospital, university and provincial medical sources. Epilepsy became a formal program in July 1977, the second unit in Canada after Montreal.

The success of Girvin's early epilepsy surgeries exceeded all expectations. Between 1974 and 1988, 288 people had surgery, almost half became free of seizures, one-quarter had 90% seizure reduction, and none were worse off. In the 1990s when the opportunity for scientific proof of the benefit of epilepsy surgery became apparent, Girvin gave up half of his epilepsy surgical practice in order to compare surgery to drug treatment alone. The trial was published in the New England Journal of Medicine in 2001, and not only proved that surgery for temporal lobe epilepsy was beneficial, but changed epilepsy care around the world, leading epilepsy units to develop the resources needed for advanced surgery.

As a teacher, John Girvin was unparalleled. He was the most respected teacher of neurosurgery at Western. For many, he became a close mentor and friend. After more than thirty years at Western, he was recruited to the King Faisal Specialist Hospital & Research Centre, in Jeddah, Saudi Arabia. As chair of their Department of Neurosciences, he led their development of epilepsy surgery. He also trained the first female neurosurgeon in the KSA.

Girvin was a founding member of the Department of Clinical Neurological Sciences in 1969. Throughout his career, he remained committed to a multidisciplinary neuroscience, earning the

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respect of the neurologists, neurosurgeons and many other neuroscience specialists. He served as Chair of the C.N.S. Department from 1984 to 1989, and Chief of Neurosurgery for a further decade. From 1995 he served as Senior Medical Advisor during the amalgamation of Victoria and University Hospitals into London Health Sciences Centre. He served or led in numerous administrative roles in the national educational and organizational bodies of Canadian neurosurgery, and was on the editorial boards of national and international neuroscience journals.

With his legendary accomplishments, John Girvin was universally respected as a surgeon-statesman. Yet for many, it was his innate humanity, his empathy for patients, collegiality, and sense of humour that is most fondly remembered. John is survived by Bettye, his spouse of 65 years, their three children, and their six grandchildren

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