the vault

Sir Hugh Cairns

In a career spanning two world wars and three continents, Sir Hugh William Bell Cairns made a major contribution to pioneering developments in neurosurgery – and road safety.

The story of renowned London Hospital neurosurgeon Hugh Cairns began thousands of miles from Whitechapel, in Port Pirie, South Australia, where he was born in 1896. His father, William, was an immigrant Scottish timber contractor and his mother, Amy, a music teacher. A high achiever from an early age, young Hugh reached the Faculty of Medicine at Adelaide University aged just 15 and a half years.

In 1915, during the First World War, he signed up as a private, serving in an Australian army hospital as a radiographer on the Greek island of Lemnos. He returned home after the evacuation of Gallipoli in early 1916 to finish his medical training, graduating in 1917.

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Following duty as a medical officer in the Australian Army in France, he continued his studies in England in 1919, with a Rhodes Scholarship to Balliol College, Oxford. It was there that he met his future wife, Barbara Forster, the youngest daughter of the Master of Balliol. He also met the man who would become the greatest influence on his life, American neurosurgeon Harvey Cushing.

Surgeon's protégé

From Balliol, Cairns embarked on his career at The London Hospital – as The Royal London was then known – where he became FRCS in 1921. Working first in pathology, then in urology, he was a protégé of surgeon Sir Henry Souttar and rose to the position of assistant surgeon.

It was, however, a further meeting with Harvey Cushing, in 1925, that set him on the trajectory for which he is most known. Cushing was widely recognised as the father of modern neurosurgery, with a method for cauterising damaged blood vessels during surgery to avoid damaging bleeds. Inspired by his example, Cairns followed Cushing to Boston, with a prestigious fellowship from the Rockefeller Foundation to fund his studies there.

Returning from Boston in late 1927, Cairns was keen to put Cushing's pioneering neurosurgical techniques into practice at The London – one of the first three surgeons to do so in the UK. But, to do this, he had first to overcome a number of logistical obstacles: beds were scattered, theatres not easily available, nurses and radiologists were untrained in this new kind of surgery – and some colleagues were hostile.

Rockefeller babies

Undaunted, Cairns had confidence in what he could achieve, with support from "first rate colleagues…all Rockefeller babies like myself", drawn from a wide range of excellent backup disciplines such as neurology, psychiatry, pathology, radiology and anaesthetic departments. His success was such that, in 1932, the *Daily Mirror* led with an article headlined 'Amazing Feat of Brain Surgery', on a revolutionary all-day operation in which Cairns removed a tumour and saved the sight of a schoolteacher who was going blind.

Although some colleagues frowned on the publicity, it was no stop to his career. Cairns continued to research and publish papers, and, in 1933, he finally got his neurosurgery department at The London, designed in conjunction with the Rockefeller Foundation and the Medical Research Council to be a centre for teaching British and overseas surgeons.

In 1937, Cairns left Whitechapel to become the first Nuffield Professor of Surgery at Oxford University, leaving his assistant, Douglas Northfield, to take over as Director of The London's Neurosurgery Department.

Nutcrackers Suite

Even with these achievements behind him, the major impact of his work was still to come. During the Second World War, Cairns would help save literally tens of thousands of lives by setting up eight mobile neurosurgical units in North Africa, Italy and Europe, as well as helping found the Combined Services Hospital for Head Injuries (known as the 'Nutcrackers Suite'). He even had an unsung role in developing penicillin, testing the drug in North Africa for one of its Nobel Prize-winning co-discoverers, Sir Howard Florey, a friend and fellow Australian.

The other long-reaching legacy of Cairns' work was developed in a very different arena. Moved by being unable to save one of his most famous patients – Colonel Thomas Edward Lawrence, better know as Lawrence of Arabia – who died from fatal head injuries after a motorbike accident, as well as witnessing high death rates in British Army motorcycle riders, he designed and introduced compulsory helmets for motorcyclists.

Hugh Cairns died of cancer in Oxford in 1952, aged just 56, after a life filled with many 'amazing feats' both on the operating table and away from it.