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Magnificent Physician

He was the most famous doctor of his time, a tireless worker who revolutionized medical education and virtually created the modern hospital. Here, a look at the achievements of Sir William Osler as part of our occasional series on great Canadians of the past...

Sir William Osler probably would have been a great man whatever his country of birth, but he may have been rendered just that much greater by the fact that he was born in Canada. He was above all a man of character, and the solid character that made him a hero to the world was primarily moulded by the rugged challenges of his early life on the Canadian frontier.

He never lost the perseverance, the pioneering spirit, the common touch, nor the free and easy manners he acquired while growing up on the fringes of the Precambrian wilderness. Though his parents were English, "Willie" Osler, as he called himself, was typically Canadian in attitude and personality.

The child who would become the leading medical man of his age was born July 12, 1849, in Bond Head, a pioneer village of 200 souls in the Lake Simcoe area of what is now Ontario. He was the son of Featherstone Lake Osler and the former Ellen Free Pickton, the eighth and last child in a brood that produced one of Canada's most prominent lawyers and one of its leading financiers.

The senior Oslers had emigrated from Cornwall in 1837 to take charge of the Anglican parishes of Techumseth and West Gwillimbury, Upper Canada. Willie's distinctive olive complexion and blazing black eyes were attributed to his mother's "black Celt" Cornish ancestry.

Living in a rambling wooden parsonage which posed only a faulty defence against the winter cold, the family depended on farming to stretch out Canon Osler's



sparse income. Willy began doing farm chores at an early age, an experience that evidently helped to develop his astonishing capacity for hard work.

But the minister's son was no Goody Two Shoes: once he was expelled from the village school for playing a prank that disrupted classes. The practical jokes he would practise all his life were an outlet for an extraordinary store of imagination and energy. While heading his class and excelling at sports, he found time in his youth to read widely and pursue a hobby that proved a key stepping-stone to his life's work.

This was zoology, a popular pastime among Victorian gentlemen in that golden age of amateur scientists. The lad ranged the nearby woods, streams and ponds, collecting frogs, fish and insects for examination under the microscope of his mentor, an eccentric teacher named William Johnson. Osler became adept at dissecting, examining, mounting, noting and cataloguing specimens.

Microscopes were a novelty in those days, and Osler was thrilled by the secrets revealed by their lenses. He found "surpassing beauty" in organisms invisible to the naked eye. Soon he was collecting and analyzing microscopic parasites from the flesh and blood of animals.

Osler was 19 and a second-year scholarship Arts student in Toronto when he chose to become a doctor. He threw himself single-mindedly into his courses and assisted a friendly physician in his practice. He spent long hours alone dissecting cadavers. As a first-year

medical student he discovered a parasite in the muscles of a body which no one else had detected. It confirmed his feeling that many of the mysteries of medicine could be unravelled through assiduous searches for the hidden causes of disease.

In 1870 he moved to Montreal to study at McGill University. There he interned at the Montreal General Hospital, "an old coccus- and rat-ridden building, but with two valuable assets for the student — much acute disease and a group of keen teachers," as he wrote.

While pneumonia, sepsis and dysentery raged around him, he served as a dresser and clerk to the qualified doctors and did his share of night nursing. The clerking entailed reporting on cases of special interest in the local medical monthly. This duty gave him a strong appreciation of the importance of spreading information among the medical profession as a kind of strategic intelligence in the war against disease.

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At McGill he found a role model in the person of Dr. Palmer Howard. What impressed Osler about his new mentor was that he was both a teacher and a constant student, ever open to

fresh ideas. When Osler graduated as an MD in 1872, Dr. Howard encouraged him to continue his studies. Thus Osler became a precursor of a now-familiar figure around the world: the Canadian post-graduate student seeking knowledge in foreign universities.

He did the rounds of the venerable medical schools of Dublin, Glasgow and Edinburgh before settling into studies at the Physiology Laboratory at University College, London. There he made one of his most far-reaching discoveries — the presence of platelets in blood.

He then went off to study histology (the science of human tissue) and pathology in Berlin and Vienna. Wherever he roamed, he conscientiously reported on his observations to Canadian medical publications. Here he displayed another trait that would help him win distinction: he was an excellent writer who could combine scientific precision with readability.

In 1874 he returned to McGill as a lecturer and later professor of histology and physiology. He regarded the preparation of lectures as a "ghastly task," but his students would remember them to their dying days. For he did not simply teach medicine; he taught the philosophy of medicine. One of his biographers, Edith Gittings Reid, summarized the creed he propagated in the lecture room:

"You must treat the man as well as the disease. The poor you have always with you and you must consider them above all others." Osler liked to quote the 17th century physician-philosopher Sir Thomas Browne: "No one should approach the temple of science with the soul of a money-changer."

Medical professors were expected to subsidize their teaching with the proceeds of private practices, but Osler was too absorbed in the study of disease to want to keep office hours. Besides, he made little income during his brief foray into family medicine. If his patients were poor, he would give them money instead of letting them pay him.

So he gave up his practice in favour of treating smallpox patients, work which could prove fatal if a doctor was infected. In the crowded ill-lit wards, surrounded by dying people, he noted the nurses' lack of training and lowly status. The experience made him a lifelong exponent of nursing education.

The anti-vaccination riots which broke out in Montreal during the smallpox epidemic of 1876 steered Osler's attention towards public health, a cause he was to pursue purposefully thereafter. Not the kind of medical doctor who looked down on veterinary science, he worked with veterinarians at McGill on studies of trichinosis in the pork supply, promoting more-thorough inspection of meat.

He used his position as a smallpox specialist to perform autopsies on fatal victims of the disease. This enabled him to do ground-breaking research into such unrelated conditions as endocarditis, tuberculosis and "miner's lung." He spent the \$600 he earned in the smallpox wards on 15 microscopes from France for the use of his students. In so doing, he established Canada's first physiological laboratory.

One might think that the grim work of cutting up dead bodies would make for a grim personality, but Osler was the soul of cheerfulness and bonhomie. He lived in rooms among other medical men, a merry group who revelled in boisterous meetings of their dining club. A notably witty man ("Save the fleeting moment. Learn gracefully to dodge the bore," he once advised), he wrote playful letters to his beloved nephews and nieces. One niece has left a verbal picture of Osler in a silk hat and a flower in his lapel, humming and whistling his way down Ste. Catherine Street. Medicine was never far from his mind, however. He gave his overcoat to an alcoholic panhandler on the street in return for a promise that the man would

bequeath him his liver for research.

His sunny disposition was part and parcel of his healing technique. "The effect of his debonair manner and ready banter, his quick step and radiant vitality," wrote Edith Gittings Reid, "were like oxygen in a sick room." When he was appointed [Chief] Physician of the Montreal General in 1879, a colleague recounted, "Older doctors looked at him with bated breath, expecting disastrous consequences. He began by clearing up his ward completely. All unnecessary semblance of sickness and treatment was removed; it was turned from a sickroom into a bright, cheerful room of repose. Then he started in on the patients. Very little medicine was given. To the astonishment of everyone, the chronic beds instead of being emptied by disaster, were emptied rapidly through recovery."

Activating his belief that physicians can learn more at the bedside than in the lecture room, he had his students do his rounds with him. He impressed upon them that illness always had a psychological side. Though a consummate scientist, he believed that the practice of medicine was an art — an art "working with science, in science, and for science." The physician must "generalize the disease and individualize the patient." The generalization was science; the individualization was art.

His thinking was usually far in advance of his colleagues

In this as in many of his other views, Osler's thinking was far in advance of his colleagues. The old world of medicine was dy-

ing hard, as he found when he visited Berlin on a sabbatical in 1884. There anti-Semitism was blocking Jewish doctors off from medical faculties. Osler sprang to their defence in a letter to a Canadian medical journal. If Jews were deprived of advancement, he wrote, "there is not a profession which would not suffer the serious loss of its most brilliant ornaments and in none more so than our own."

Near the end of that German sojourn he received a cable offering him the Chair of Clinical Medicine at the University of Pennsylvania in Philadelphia, then the leading medical centre in North America. It was a measure of Osler's prestige at the comparatively young age of 35 that the university reached beyond the United States to recruit him. Torn between his loyalty to McGill and the opportunity to work in the continent's premier medical school, he flipped a coin which came

down on the side of Philadelphia.

He left Montreal having done much to put it on the map of the world's top-ranking medical cities. A partial list of his accomplishments in his 10 years of teaching at McGill includes introducing modern methods of teaching physiology, editing the first clinical and pathological reports from a Canadian hospital, writing "epoch-making" papers, amassing a vast collection of pathological specimens, and reporting on almost 1,000 autopsies in five large volumes of intensely detailed notes.

At Johns Hopkins, he was able to build the hospital of his dreams

With his move to Philadelphia, Osler became a precursor of another common Canadian type — the "star" in one field or another who gains international recognition by leaving Canada. He was a bit disappointed by what he found in the oldest medical school in the United States. There was no laboratory for clinical research, so he promptly set one up in a hospital amphitheatre. To teach dissection, he had to take his students to a dead house adjoining a potter's field.

He had the temerity as an outsider to criticize the American system of medical education. "How it is that such a shrewd, practical people as those in the United States should have drifted into such a loose, slipshod way of conducting medical schools, is unintelligible," he said. After four years at the University of Pennsylvania in which his eminence in clinical research grew steadily (much of his celebrated work on angina pectoris was done in Philadelphia) he was offered an ideal opportunity to put his educational ideas into effect.

In 1876 an merchant grocer in Baltimore named Johns Hopkins had died and bequeathed \$7.5 million to establish a university and hospital in his home city. The university was already a going concern in 1888 when Osler was asked to become chief physician at the yet-unbuilt hospital. He knew that he was on the road to organizing the institution of his dreams when the head of the university, Dr. Gilman, asked him to meet him in a New York hotel where the manager was a friend of Gilman. They inspected every department, each with a chief reporting to an overall director. "This," Gilman told Osler, "is really a hospital and we shall model ours upon it."

When Johns Hopkins Hospital opened the following year, Osler organized it along lines that are followed to this very day throughout North America. He



designed it on a German model, with each section under a house physician. A system of long-term residents as well as short-term interns was introduced. Well-equipped laboratories were dedicated to research. The medical school, which Osler was to head, was considered an integral part of the hospital, and vice-versa. A school of nursing was opened, the first to be incorporated into a hospital in North America.

For several years Osler had been giving public lectures touching on medicine and education, which had found their way into books of essays. His literary fame led to an approach to write a textbook to be called *The Practice of Medicine*. He set about doing this with characteristic energy, drawing heavily on his Montreal experiences for vivid accounts of diseases

and treatments. It was published in 1891 and quickly became the bible of medical education around the world.

The book was scarcely complete when, at 41, he married Grace Linzee Revere, the widow of a colleague in Philadelphia. Their

cosy home became a haven for out-of-town students of Johns Hopkins, including several Canadians who had followed their hero south and were to go on to prominence in their own right.

"Dr. Osler" became a household name in the English-speaking world. His speeches and writings drew wide public attention, and the opinions he expressed in them might be considered progressive even today. Though he could not abide quacks, he was tolerant of alternative medicine as long as the practise of it had honest intentions. He believed there was such a thing as faith healing, but that the faith dwelt within the patient. "Phenomenal, even what could be called miraculous, cures are not very uncommon," he said. He preached that medication should be applied sparingly. As a former student wrote, "He used drugs not empirically but scientifically, and in his teaching laid great stress on the general management of the disease."

Such was his fame that, when he suggested in a speech in 1905 that all men should be retired at 60, it caused an international sensation. The press played his remark as a call for mass euthanasia, sparking a hot and prolonged debate. By that time he had been invited to become Regius Professor of Medicine at Oxford University. It was unprecedented that someone from

outside of Great Britain should be called to the post, arguably the most prestigious in all medicine. In it, Osler found himself in the familiar Canadian role of acting as an interpreter between the British and the Americans.

He had never forsaken his Canadian roots. Throughout his many years as an expatriate, he continued to contribute to Canadian medical journals and visited his homeland frequently. When he was offered a baronetcy in 1911, he was reluctant as a democrat to take it, but said, "I think I'll have to accept — Canada will be so pleased."

His never-ending love of children came to full flower in his relationship with his son Revere. Like his father, Revere became an ardent and knowledgeable book collector and amateur librarian.

Osler's years of tranquillity in Oxford were interrupted by World War I. Though he loathed war, he felt he had a duty to do, using his influence to ensure that Allied soldiers were properly protected against diseases and that unfit men were not enlisted. When Canadian troops arrived in Britain, he agreed to act as physician-in-chief at their hospitals; ultimately there were four of these. He found himself supervising the treatment of a sad, steady flow of casualties.

He was busy with war work when the news came in August 1917 that his son had been killed at the front at the age of 19. He never really recovered from the realization of his deepest fear. He died of bronchial pneumonia at 70 on Dec. 29, 1919, having bequeathed his magnificent collection of medical books to McGill to form the unique library known as *Bibliotheca Osleriana*. He specified in his will that his ashes be placed among the bookcases there.

At his death, a colleague, Professor Adami of Liverpool, called Osler "the greatest physician in history," a large claim made on the reasonable grounds that no physician had ever done so much in so many facets of his profession. He had pioneered clinical research in North America, revolutionized medical teaching, and left a permanent mark on every town and city on the continent by organizing hospitals along modern lines.

He had done much to improve public health everywhere, and written textbooks that guided the treatment of illness for generations. Above all, he had a strong moral influence on modern medical practice through his philosophical writings and, indeed, his very person. Canadians can be proud to call this marvellous man one of their own.

*Writing the bible
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