

Moore W (2009). John Hunter (1728-93).



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Scottish-born 18th-century surgeon John Hunter is acclaimed today as one of the founders of an approach to surgery based on observation and experiment. He was born in East Kilbride, Scotland, in 1728, the youngest of 10 children in a relatively humble farming family. Attending the local village school, he experienced great difficulties learning to read and write and gave up all formal education when he was 13. Most of his time was spent exploring the local countryside, collecting birds' eggs and insects, and dissecting small mammals.

Cite as:

Moore W (2009). John Hunter (1728-93). JLL Bulletin: Commentaries on the history of treatment evaluation (www.jameslindlibrary.org).

After kicking his heels on the farm with no apparent ambition, John Hunter went to London in 1748 at the age of 20, to join his brother William. Ten years his senior, William had recently opened an anatomy school in Covent Garden. A revolutionary development, the school gave young surgeons and medical students their first opportunity to dissect human corpses for themselves. The school proved an overnight success. Working as his brother's pupil and assistant, John was entrusted with the task of obtaining the school's vital teaching material - a regular supply of fresh bodies dug up from paupers' graves. After initially leading students on forays to unearth corpses for themselves, he embarked on a close relationship with professional body-snatchers, a relationship that was to last all his life.

In the 12 years the Hunter brothers worked together, John was present at the dissection of more than 2,000 bodies. His time at the school - teaching students, preparing specimens and carrying out his own research - was a remarkable voyage of discovery. During this period, Hunter established the circulation of the placenta, traced the nerves of smell, described the descent of the testes in the womb, explained the cause of congenital hernias, demonstrated the circulation of the lymphatic system, and conducted numerous experiments on animals. By the time he left the Covent Garden school, he knew the human body better than anyone else of his day. It was this unparalleled knowledge of the human body that made him the skilled surgeon he became.

After 12 years working shoulder to shoulder with William, sibling tensions and professional rivalry impelled Hunter to sign up as a surgeon with the army. He treated casualties at the capture of Belle-Île and in the campaign in Portugal during the Seven Years War. It was during his time on Belle-Île that Hunter made comparisons between five French soldiers whose gun-shot wounds had gone untreated and a British soldier who had undergone surgery. Discovering that the French soldiers' wounds had healed better for their lack of surgery, he recommended leaving simple gun-shot wounds untreated - a wise precaution in the days before antisepsis ([Hunter 1794](#); Moore 2005; Moore 2009).

Returning to London in 1763, Hunter found work in dentistry and popularised tooth transplants. Taking healthy front teeth from paupers he transplanted these into the mouths of rich paying patients, although the practice quickly fell into disrepute. Building up his clientele, Hunter treated many patients for venereal disease which was then ubiquitous in London. Determined to discover whether syphilis and gonorrhoea were the same diseases Hunter inoculated an unnamed subject - almost certainly himself - with gonorrhoea in a flawed experiment to test whether this developed into syphilis. Unfortunately the matter Hunter used to inoculate himself was seemingly contaminated with syphilis so that he erroneously concluded that gonorrhoea did indeed develop into syphilis. During the same period, believing that gonorrhoea resolved spontaneously without the standard of mercury, he secretly administered bread pills to some of his patients ([Hunter 1788](#)).

Gathering esteem as a surgeon and anatomist, Hunter made post mortems respectable by persuading many of his influential friends to give prior consent to autopsies on themselves or family members. He conducted post mortems on Sir Joshua Reynolds, the Marquis of Rockingham, and Daniel Solander, among many others. Fascinated by genetic abnormalities he paid exorbitant sums to the grave-robbers for unusual human specimens and masterminded the theft of the body of Charles Byrne, known as the Irish Giant. Yet he was just as fascinated by animals, rearing a variety of creatures at his farm and prototype research centre in Earls Court, dissecting every species he could obtain and collecting body parts for his burgeoning museum. For most of his life Hunter worked towards the formulation of a theory which would explain all life on earth, eventually concluding that the earth was immensely old and that all species had descended from common ancestors (Hunter 1859; 1861) although he did not manage to work out how this change occurred.

Ultimately, Hunter became the most popular and best-paid surgeon in London. He treated Georgian London's poorest in St George's Hospital, and its best-known celebrities including William Pitt, David Hume, Adam Smith and the young Lord Byron in his private practice, based at his consulting rooms in Leicester Square. Hunter pioneered several medical innovations, including a famous operation in 1785 when he cured a coach-driver of a popliteal aneurysm by tying the artery in the patient's thigh so that a collateral circulation would develop and bypass the swelling. In a typical example of his scientific approach, he had developed his hypothesis, tested it first on animals and then attempted the operation. When the patient died just over a year later from unrelated causes, Hunter obtained his leg – through his usual underground contacts – to examine the results of his handiwork.

Hunter's enduring legacy was his insistence on observation and experiment in developing surgery. He argued that all medical treatments and surgical procedures should be tried and tested, and that only proven therapies should be introduced into practice. He encouraged his many students continually to review their work and update their methods, and to learn from their mistakes. His revolutionary views were disseminated throughout the UK and the United States by his numerous pupils through the first half of the nineteenth century. In a statement which still has resonance today he urged: 'I think we may set it down as an axiom, that experiments should not be often repeated which tend merely to establish a principle already known and admitted; but that the next step should be, the application of that principle to useful purposes.' ([Hunter 1835](#)).

Hunter died, of a heart attack, in the board room of St George's Hospital, London, in 1793. On the following day, as usual, his pupils gathered in the dissecting room of his Leicester Square house for an anatomy lesson – but this time the corpse on the table belonged to their former teacher. John Hunter had left prior instructions that his body was to be dissected by his students as his final contribution to their education.

About one-third of Hunter's original collection of human and animal specimens survives today and can now be seen at the [Hunterian Museum](#), at the Royal College of Surgeons of England, 35-43 Lincoln's Inn Fields, London WC2A 3PE, free to visitors.

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[Home](#)

[Contents](#)