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RCP Image Archive: Engravings of the Bones, Muscles, and Joints Illustrating the First Volume of the Anatomy of the Human Body

BONEN

Introduction

The history of medicine is the history of life and death, and we all are connected to it.

- Royal College of Physicians

Almost as long as there has been human life, scientists and physicians have worked to preserve it. Every theory, breakthrough and setback of the past lay the foundation for healthcare and disease prevention as we know them today.

The medical pioneers that came before—Galen, Harvey, Linacre and so many others—changed the face of healthcare, from increasing the understanding of how the human body worked, to protecting patients from harm by ensuring that every physician was licensed to practice.

This look book provides a window into some of the stories that shaped modern medicine, from the use of astrology in disease diagnosis, to the development of the smallpox vaccine, to the female physicians who fought for their own stethoscopes. Each shaped history and fundamentally impacted the quality of care—and the quality of life—for all of us who followed.

To learn more about these and other stories in the Royal College of Physicians archive, *visit wileydigitalarchives.com/rcp*.



The First Vaccine

Pestilence during the whole time of it aging without any other protection it or three Vaccine Vesides upon you would send the person her s. & land me one of your The This is he longe minutes have written for many months & eal bits me Il A dien my old huend let me sometimes hear from you come here again after a little like whether your designs have en property careated Most bruly grass 1 I downot fer

Autograph Letter from Edward Jenner to Rev. Robert Ferryman, Relating to His Recovery from Lameness, a Letter from Filkin, and Anecdotal Proof of the Efficacy of the Smallpox Vaccination. Autograph Letter Sequence, 9 Nov. 1820. Wiley Digital Archives.

FILE THIS UNDER

Immunology, Biology, Medical Humanities, Non-Traditional Medicine, British History, Public Health, Health Education, History of Science and Medicine, Social Factors in Health, Medical Research, Global Health Policy, General History Research

HISTORICAL CONTEXT

With little to no regulation, medical practice from the 16th century through the 18th century often consisted of "physicians" with no formal training or knowledge. Malpractice in England was rampant and unnecessary deaths abundant as unqualified impersonators took advantage of the wild west of practicing medicine.

According to the World Health Organization, smallpox was one of the world's most devastating diseases known to humanity. An infectious disease which existed for thousands of years, the illness killed one of every three people infected. In the 17th century, "treatment" for smallpox included procedures such as bloodletting, purging, fresh air and the use of red curtains around the bed.



Wiley Digital Archives

Edward Jenner, known as the "Father of Immunology"

WHY HE'S NOTABLE

Edward Jenner (1749 – 1823), an English physician and scientist, was the pioneer of the smallpox vaccine, the first vaccine in the world. He wasn't, however, the first to suggest that infection with cowpox led to immunity to smallpox, nor the first to try cowpox inoculation. The process was to take puss from a smallpox sufferer and use that to inoculate someone healthy. There was a risk of death, but usually, a mild case of smallpox developed and sometimes led to lifelong immunity.

In the 1700s, there were tales of milkmaids who reported having cowpox, and afterwards being immune to smallpox. In 1796, Jenner brought these two ideas together in an experiment on 8-year-old James Phipps. He took the pus from a cowpox pustule and inserted it into James's arm, and proved that subsequently – the boy was immune to smallpox. Jenner even coined the word vaccine from the Latin 'vacca' for cow.

In 1852, the 'National Vaccine Establishment' produced a report on the benefits of vaccinations, and showed how since the introduction of vaccinations, death rates in London due to smallpox had fallen by two-thirds. It also showed that members of the public were still not convinced about vaccinations, marking the beginning of the anti-vaccination movement that is still prevalent to this day. Even until his death, Jenner continued to advocate on behalf of vaccination, engaging with the public and practitioners to promote the benefits.

Despite these first "anti-vaxxers", rumors and fears about vaccines, smallpox vaccination was made compulsory in 1853, and as a result the disease was officially eradicated in 1979. However, vaccination still remains a controversial issue today amongst modern-day anti-vaxxers who continue to protest against inoculation due to lingering philosophical or religious beliefs.



Pettigrew, Joseph Thomas. "Medical Portrait Gallery. Biographical Memoirs of the Most Celebrated Physicians, Surgeons, Etc. Etc. Who Have Contributed to the Advancement of Medical Science." RCP Library, Whittaker & Co., 1852. Wiley Digital Archives.

Related Items & Special Collections in the RCP Archive: Edward Jenner's diary and letters, related reports, papers, minutes and letters concerning inoculation and vaccination by: Edward Joshua Edwardes, the National Vaccine Establishment, the Royal Jennerian Society, Dr. J.T.A. Reed, Dr. Amian, the R.C.P. Committee on Vaccination and more.

Sources: http://www.medieval-life-and-times.info/ medieval-life/medieval-doctors.htm

https://www.bbc.co.uk/history/british/empire_ seapower/smallpox_01.shtml

of Physicians



History of Medicine



Baas, Hermann Johann. "William Harvey, Der Entdecker Des Blutkreislaufs Und Dessen Anatomisch-Experimentelle Studie Über Die Herz-Und Blutbewegung Bei Den Thieren. Culturhistorisch-Medicinische Abhandlung Zur Feier Des Dreihundertjährigen Gedenktags Der Geburt Harvey's (1. April 1578)." RCP Library, Ferdinand Enke, 1878. Wiley Digital Archives.

FILE THIS UNDER

Hematology, Biology, Medical Humanities, Anatomy, British History, Public Health, Health Education, History of Science and Medicine, Social Factors in Health, Medical Research, General History Research



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HISTORICAL CONTEXT

The Royal College of Physicians (RCP) was founded on September 23, 1518 in response to a lack of regulation in the medical field. To combat "the quacks" and impose consequences on malpractice, the small group of leading physicians secured a royal charter from King Henry VIII to grant licenses to those with actual credentials and to punish unqualified practitioners.

Throughout the following centuries, the RCP evolved and grew as it continued to influence the medical field and take an active role in public health. In 1768, it published its first journal, *Medical Transactions*, with the aim of disseminating authoritative information on diseases and treatments to further the knowledge of the profession. This would mark the beginning of a long, successful future in publishing world-class medical content; for example, in 1869, the RCP published the *Nomenclature*, a definitive classification of diseases, which remained the standard until the 1960 publication by the World Health Organization.

The 20th century marked a critical turning point for the RCP; in 1909, the College began to include women, allowing them to sit for exams and become licensed practitioners. The 20th century also marked a pivotal shift for the College as it started to assume an "active voice" in the community; this was a notable retreat from its historic impartiality that declined to offer any public advice on matters of health. This was exemplified in the RCP's 1962 publication *Smoking and health*, a groundbreaking study that detailed the dangers of smoking.

Today, the RCP has 34,000 members in 33 specialties, but it continues to remember the accomplishment of its community of medical members throughout history.



William Harvey, known for the discovery of the circulation of blood

WHY HE'S NOTABLE

One of the most famous fellows of the RCP is William Harvey, a physician most notable for his discovery of the systematic circulation of the blood pumped around the body by the heart and for his propagation of the empirical pillars of observation and experimentation to understand "the secrets of nature."

William Harvey started delivering the College's famous anatomy lectures and in 1628 published his groundbreaking theory on the circulation of blood, *De Motu Cordis* ('on the motion of the heart'), controversially challenging over 1,500 years of established scientific and medical belief.

Through a series of experiments, Harvey demonstrated that the heart is a pump, pushing the blood through the body with every beat. The findings were a radical departure from the prevailing belief that the lungs were responsible for blood circulation. At the time, blood was not thought to circulate around the body; it was believed to be consumed by the body at the same rate that it was produced.

Harvey was appointed physician to James I in 1618 and continued as physician to Charles I upon Charles's accession to the throne in 1625. When rumors began to circulate that James I died because he was poisoned by a medical treatment, Charles I granted a pardon to Harvey, which demonstrated his support for Harvey and his belief that he had no part in the previous monarch's death.



Dr. William Harvey and St. Bartholomew's Hospital. RCP Library, St Bartholomew's Hospital, London, 1924. Wiley Digital Archives.

Related items & special collections in the RCP

Archive: William Harvey's letters, related reports, monographs, papers, minutes concerning witch trials and blood circulation, histories of the Royal College of Physicians, biography of Michael Servetus, the discoverer of pulmonary circulation and more.

Source: https://www.britannica.com/biography/ William-Harvey



Women in Medicine

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Culpeper, Nicholas. "A Directory for Midwives: Or, a Guide for Women, in Their Conception, Bearing, and Suckling Their Children. The First Part" RCP Library, Printed for C. Hitch and L. Hawes, S. Crowder and Co. S. Ballard, C and R. Ware, and B. Law. And Co., 1762. Wiley Digital Archives.

FILE THIS UNDER

Gender Studies, Biology, Medical Humanities, Anatomy, British History, Public Health, Health Education, History of Science and Medicine, Social Factors in Health, Medical Research, General History Research

HISTORICAL CONTEXT

Women have always been central in providing medical care, whether offering remedies in the home, nursing or acting as herbalists. However, the medical profession has been male dominated for most of its history.

In Europe, this began around the 1400s, when many cities and governments decided that only those trained in universities were allowed to formally practice medicine. As women were not allowed into the universities, they could not gain a license or take advantage of the developing science of medicine.

Despite being excluded from formal education, women provided many paid services that the public needed, including sick-nursing and wet-nursing, midwifery, minor surgery and general physic. However, women still competed with male practitioners even in areas such as childbirth.

It was through nursing that women first made significant progress into formal medical practice, with the hospital and prison reforms in the late 1700s. The nursing role was seen as an extension of women's social role: caring and nurturing. However, there still was not the same openness to women becoming doctors, although many women began to attempt to qualify in the 1800s. It was only at the end of the century, after much struggle, that women won the right to study and practice medicine in the same way as men.

Elizabeth Garrett Anderson, the first female doctor to qualify in England.

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WHY SHE'S NOTABLE

Elizabeth Garrett Anderson, a pioneering feminist and physician, was born in Whitechapel, London in 1836. She decided to become a doctor after meeting Dr. Elizabeth Blackwell, the first female doctor to graduate in the United States.

Anderson faced numerous challenges as she strove to enter the medical profession. After failing to get into any medical school, she enrolled as a nursing student at the Middlesex Hospital. She attended classes with male colleagues, but was barred after complaints. She then took the Society of Apothecaries examination and qualified in 1865, causing the society to subsequently change its rules in order to ban female entrants.

In 1866, she was appointed as a medical attendant at the St. Mary's Dispensary in London, and she taught herself French in order to receive her medical degree in Paris. Despite this degree, she was still refused entry into the British Medical Register. She was instrumental in establishing specialist clinics for women and children, in addition to women's training hospitals; she set up the New Hospital for Women at the St. Mary's Dispensary, later the London School of Medicine for Women, in 1872.

Partly as a result of her open campaigning, an act was passed in 1876 permitting women to enter the medical profession. Anderson was appointed Dean at the London School of Medicine for Women in 1883, and oversaw its expansion. She retired in 1902 to Suffolk, where she became the first female mayor in England in 1908. In 1918, the London School of Medicine for Women was renamed the Elizabeth Garrett Anderson Hospital (now part of the University of London).

MEDICAL INSTITUTE FOR WOMEN 144, EUSTON ROAD, N.W. INEW HOSPITAL FOR WOMEN) W. Sarret Andorson bys to acknowledge with many Thanks Dr. Coreman's Rind contribution to The hibrary of the hedrical Institute for Work

Autograph Letter from Elizabeth Garrett Anderson to Dr. Copeman Thanking Him for His Contribution to the Library of the Medical Institute for Women. Autograph Letter Sequence, 25 Feb. 1891. Wiley Digital Archives.

Related items & special collections in the RCP Archive: Letters from Elizabeth Garrett Anderson to people in need of medical advice, a letter from Elizabeth Garrett Anderson to the RCP enclosing a list of universities and examining bodies which admitted women, RCP application records, lectures and notes on the diseases of women, lectures on midwifery, a monograph on women physicians and more.

Sources: http://broughttolife.sciencemuseum.org.uk/ broughttolife/people/elizabethgarrettanderson

http://broughttolife.sciencemuseum.org.uk/ broughttolife/themes/practisingmedicine/women



Human Anatomy



Vesalius, Andreas. "Andreae Vesalii Bruxellensis, Invictissimi Caroli V. Imperatoris Medici, de Humani Corporis Fabrica Libri Septem." RCP Library, Oporinus, Joannes, 1555. Wiley Digital Archives.

FILE THIS UNDER

Biology, Medical Humanities, Anatomy, Ethics in Medicine, British History, Public Health, Health Education, History of Science and Medicine, Social Factors in Health, Medical Research, General History Research

HISTORICAL CONTEXT

Prior to the 16th century, human anatomy was seriously misunderstood. Because human dissection was forbidden in medieval times, discoveries through animal dissection were broadly applied to human anatomy by default.

When it came to expertise in the field during these early centuries, the theories of Galen, the 2nd century Greek physician who wrote books on anatomy, were considered authoritative in medical education, despite that fact that Galen learned primarily by studying pigs and apes.

As the 16th century began, medical topics were taught primarily by reading these classical texts, followed by an animal dissection by a barber-surgeon whose work was directed by a lecturer. Galen's classical texts were generally considered unassailable until the Galenic doctrine was first seriously challenged in the 16th century.



Andreas Vesalius, known as the Reformer of Anatomy

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WHY HE'S NOTABLE

Andreas Vesalius was a Renaissance physician who revolutionized the study of biology and the practice of medicine by his careful description of the anatomy of the human body. Basing his observations on human dissections he made himself, he wrote and illustrated the first comprehensive textbook of anatomy.

Openly criticizing Galenic anatomy for its basis in animal dissection, Vesalius demonstrated his own method by performing human dissections himself, learning anatomy from cadavers and critically evaluating ancient texts. He wrote and published his own book, *De humani corporis fabrica libri septem* ("The Seven Books on the Structure of the Human Body") commonly known as the *Fabrica*, which was printed in 1543.

The *Fabrica* was a more extensive and accurate description of the human body
than any put forward by his predecessors; it gave anatomy a new language
and included the use of illustration, which was not common. Early in 1543,
Vesalius left for Mainz, to present his book to the Holy Roman emperor Charles
V, who engaged him as regular physician to the household. His prestige was
further enhanced when Charles V, on abdication from the Spanish throne in
1556, provided him with a lifetime pension and made him a count.



Andreas Vesalius the Reformer of Anatomy. RCP Library, Medical Science Press, 1920. Wiley Digital Archives.

Related items & special collections in the RCP Archive: Monograph on Andreas Vesalius as the reformer of anatomy, medical notes, meeting meetings, correspondence, lectures on anatomy, histories of anatomy and barber-surgeons, index of Galen's work and more.

Source: https://en.wikipedia.org/wiki/History_of_ anatomy#From_ancient_to_medieval



"Shell Shock" and Post-Traumatic Stress Disorder in the 20th Century

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The Interpretation of the Pulsations in the Jugular Veins. Polygraph Charts. Mackenzie, James, 1889–1945. Wiley Digital Archives.

FILE THIS UNDER

Psychology, Psychiatry, Biology, Medical Humanities, Anatomy, Ethics in Medicine, British History, Public Health, Health Education, History of Science and Medicine, Social Factors in Health, Medical Research, General History Research

HISTORICAL CONTEXT

Although widely known today, the origins of Post-Traumatic Stress Disorder (PTSD) or its precursor "shell shock" only emerged as a phenomenon following the onset of World War I. As the magnitude and deadliness of wartime munitions and explosives increased, and the establishment of bombardments (shelling) became a staple of warfare, soldiers were returning from the trenches with a multitude of conditions that had no apparent physical cause. Also initially referred to as "war neurosis", "combat stress" and "soldier's heart", shell shock characterized an array of seemingly inexplicable symptoms amongst returning soldiers including paralysis, nervous disorders and irregular behaviors such as panic attacks and not eating or sleeping.

Initial medical case reports from these years demonstrate the challenge of understanding the illness in the context of the prevailing knowledge and sentiment of the time, as the condition was categorized as an unexplained heart disorder without connection to any sort of emotional trauma. To question an otherwise "normal" patient's psychological state would have interfered with the widely accepted cultural belief of the time that mental illness applied only to "weak degenerating constitutions"—not strong, brave, healthy men fighting for their country.

As a result, treatment for these soldiers rarely included any sort of psycho-analytical therapies, but rather focused on restoring physical health to ameliorate perceived exhaustion. In the worst cases, applied "therapies" weren't therapeutic at all but rather disciplinary in nature, and included what would later become widely controversial treatments such as electroshock therapy and admission to so-called lunatic asylums.





Sir James Mackenzie, Scottish cardiologist and pioneer in the study of cardiac arrhythmias

WHY HE'S NOTABLE

RCP fellow and esteemed cardiologist James Mackenzie was one of many doctors who were called upon to treat soldiers during World War I. Prior to his appointment in the Royal Infirmary, he studied medicine at Edinburgh and settled in general practice at Burnley, where he arrived at certain conclusions that revolutionized many existing conceptions of the action of the heart in health and disease.

Of these many accomplishments was being the first to make simultaneous records of the arterial and venous pulses to evaluate the condition of the heart, a procedure that laid the foundation for much future research. Mackenzie also drew attention to the question of the heart's capacity for work, paving the way for the study of the energetics of the heart muscle.

During WWI, Mackenzie served as a consultant to the Military Heart Hospital. There, he treated soldiers for PTSD without an understanding of exactly what it was. Mackenzie referred to shell shock and PTSD as "Soldiers' Heart", and he thought that the actual circumstance of being at war, with the physical burden of extreme exhaustion and stress, weakened men and provided a suitable environment for toxic bacteria. The result, he believed, was a state of general exhaustion and that heart abnormalities were not cardiac in origin but the outcome of injury to the central nervous system.

Mackenzie recommended outdoor games, exercise and leisurely activities to reduce the strain on the heart and promote healing.



Mackenzie, James. "Soldiers' Hearts Case Notes C-E." Mackenzie, James, 1910–1919. Wiley Digital Archives.

Related items & special collections in the RCP Archive: Case notes from the research of Sir James Mackenzie, letters and reports related to mental illness criteria and definitions, accounts of common methods for treating mental illness in the 19th

century, a study on the frequency on mental illness, letters from doctors discussing King George III's illness and more!

Source: https://www.britannica.com/biography/James-Mackenzie



Wiley Digital Archives

Medieval and Early Modern Scholars



De Ketham, Joannes. "Fasciculus medicine: similitudo complexionum & elementorum." RCP Library, 1500. Wiley Digital Archives.

FILE THIS UNDER

R

Medieval Studies, Medieval and Early Modern Studies, Biology, Medical Humanities, Ethics in Medicine, British History, Public Health, Health Education, History of Science and Medicine, Social Factors in Health, Medical Research, General History Research

HISTORICAL CONTEXT

In the 1400's, methods of medical practice were basic and medieval doctors had limited knowledge. When it came to tending to patients, doctors paid attention to four bodily fluids, called humors: yellow bile, black bile, blood and phlegm. Medieval doctors tried to ensure that the four humors were properly balanced in order to maintain health. The body of the patient was also viewed as a part of the universe, and medicine was directly influenced by other disciplines of study that were thought to align with the body.

For example, in Renaissance Europe, astrology was actually a part of everyday medical practice. Physicians combined medical knowledge with careful studies of the stars and often carried special almanacs containing star charts which were said to rule each part of the body. In fact, in the books of one of Tudor England's most enigmatic figures, John Dee, a table illustration links the different signs of the zodiac with the four humors of the body.

It wasn't until the 18th century that emergent scientific disciplines led to the breakdown of astrology as part of the medical realm.





John Dee, a well-known Tudor polymath, scholar, courtier and magician

WHY HE'S NOTABLE

John Dee (1527–1609) was one of Tudor England's most extraordinary and enigmatic figures – a Renaissance polymath, with interests in almost all branches of learning. He served Elizabeth I at court, advised navigators on trade routes to the 'New World', travelled throughout Europe and studied ancient history, astronomy, cryptography and mathematics. He is also known for his passion for mystical subjects, including astrology, alchemy and the world of angels.

Dee built, and lost, one of the greatest private libraries of 16th century England. He claimed to own over 3,000 books and 1,000 manuscripts, which he kept at his home in Mortlake near London, on the River Thames. The authors and subjects of Dee's books are wide-ranging, and reflect his extraordinary breadth of knowledge and expertise. They include diverse topics such as mathematics, natural history, music, astronomy, military history, cryptography, ancient history and alchemy. These books give us an extraordinary insight into Dee's interests and beliefs – often in his own words – through his hand-written illustrations and annotations.

He continues to fascinate and inspire centuries after he entered the court of Elizabeth I.



Anconitano, Buratellus Gabriel. "Præcipuarum Controversiarum Arist. et Platonis Conciliatio: Opus Div Desderatum, et À Veribus, Ac Recentioribus Pollicitum Non Tamen Absolutum." John Dee, Bindoni, Francesco; Bindoni, Gaspare, 1573. Wiley Digital Archives.

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Related items & special collections in the RCP Archive: The majority of John Dee's library, which includes works by Galen and other famous original doctors, monographs, meeting notes and more.

Source: http://www.medieval-life-and-times.info/ medieval-life/medieval-doctors.htm



About the Royal College of Physicians Archive

Wiley Digital Archives' Royal College of Physicians archive showcases the history and development of modern Western medicine, while documenting the interactions of the medical community with monarchies, political systems and the general public.

This two-million-image digital archive includes rare, unique materials dating from 1205 through 1980, covering topics ranging from astronomy and anatomical studies to neurology and botanical research. Researchers can explore how medical practice standards, medical education and public health policy evolved over time, as well as gain insight into the how certain medical disciplines expanded into specialty areas of practice.

Content includes archival images of diaries, correspondence, casework, illustrations, photographs, policy statements and early medical texts.

To learn more about the Royal College of Physicians archive, *visit wileydigitalarchives.com/rcp*.



