

Amputation

The surgeon's solution when faced with compound fractures, severe infection, crushed bones, and gaping wounds of the extremities. The tool chest said it all: saws, tourniquets, retractors, and knives.



Angelic conjunction

Faith was indivisible from medical treatment in New England, although prayer did not always replace treatment. Many ministers were knowledgeable about science and medicine. Cotton Mather, one of Boston's leading Puritan ministers and a member of the Royal Society, wrote of the "angelic conjunction of medicine with divinity," with faith and prayer vital to a patient's recovery. Mather also pioneered smallpox inoculation in Boston.

Apothecary

The forerunner of today's pharmacists, apothecaries prepared medications. In 17th century Britain, many owned their own shops; in New England, women compounded medicine in their homes. From London, physician Edward Stafford sent John Winthrop recipes including those "for Madnesse," "ye Falling Sicknesse," "ye Bloddie Flux," and "The best purgers," with ingredients from sweet milk and saltpeter to roasted toads. Medical Directions, Written for Governor Winthrop by Edward Stafford, of London, 1643.



Barber-surgeon

"He who wishes to be a surgeon should go to war," wrote Hippocrates. Europe's very first surgeons were those who wielded the razor and the knife for a living: barbers. Armed with instruments of amputation and blood-staunching, barber-surgeons trained on the battlefield. New England's surgeons also trained in war, during the bloody violence of the Pequot and King Philip's Wars.



Cataplasm

A poultice or "plaister," often made with crumbs and warm milk, applied to boils and sores.

Caudle

A warm drink of thinned gruel, usually sweetened and sometimes with wine, for the sick or for post-partum women. "Went to bed and got a caudle made me, and sleep upon it very well," recorded Samuel Pepys in his diary, April 7, 1660.

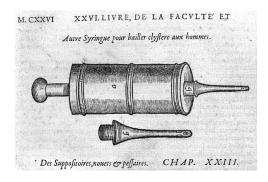
Cauterie/cauterization

The use of small iron tools to burn arteries and veins in an open wound to stop bleeding; sometimes applied to the forehead and elsewhere to treat headaches, fits, and other ailments.



Clyster, or glister

Widely favored by Galenists, a "clyster," or enema, sometimes a suppository, was thought to balance the humors. "This clyster is lenitiue [laxative] and a great easer of paine,' Gervase Markham, *Maister-peece*, London, 1610.

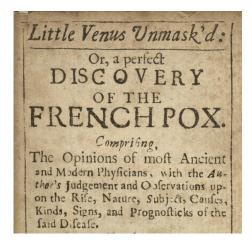


Electuary

Medicine sweetened with honey or sugar to make it more palatable. Sugar was thought to have healing powers.

French pox, or *leues venerea*

Venereal disease was a scourge of London and other English cities and soon infected both colonial and Native New Englanders. In his 1584 *Treasurie of commodious Conceites, and hidden Secrets*, John Partridge recommended the "perfect waye to cure the loathsome... French Pockes": clean clothes, seclusion, and a diet of chicken, pheasant, rabbit, veal, and mutton.



Galenism

The early modern world inherited the theory of humors from Hippocrates (5th century BCE) and Galen $(2^{nd}$ century CE). Galenism was the foundation of European medicine for more than 1400 years — indeed, in many ways it *was* medicine. In a pre-scientific era without an understanding of germ theory and pathology, Galenism held that disease had physical, non-mystical causes. As such,

disease could be cured through natural means.

The key was keeping the four humors in balance, a theory and practice predicated on a belief that organs functioned independently of each other. After William Harvey demonstrated that blood was pumped by the heart and circulated through the body, Galenism slowly gave way to new medical theories based on accurate anatomy and experimentation.



Humors

In Galenic theory, the body was regulated by the "humors": black bile, yellow bile, phlegm, and blood, each related to different elements (fire, air, earth, water.) Human organs and even temperaments could be moist, dry, hot,

or cold. Black bile, for instance, indicated melancholy, while yellow bile signaled aggression. Humors were balanced through elimination, eg bloodletting by leeches and the knife, but also through emetics. Sir Charles Scarburgh, one of the physicians treating Charles II after he suffered a minor stroke (which treatment arguably led to his death), noted: "[The physicians] gave...[Charles II] one drachm of two-blend Pills, likewise dissolved in Paeony Water, and this so as to drain away the humours more speedily by his nether channels."

King's evil

Scrofula, or the swelling of the lymph nodes (caused by tuberculosis), was thought to be cured by a monarch's touch.



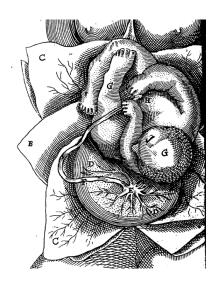
Lithotomy

Bladder stones were agonizingly common in early modern England and New England, but the surgical solution terrified most sufferers. Also known as "cutting for stone," lithotomy was a brutal procedure. The patient was tightly tied down, even the fingers and feet, and the surgeon would make an incision in the perineum before grasping and retracting the stone with an instrument. The alternatives were herbal remedies or a painful, drawn-out death. "This being, by God's great blessing, the fourth solemn day of my cutting for the stone this day four years, and am by God's mercy in very good health," wrote Samuel Pepys, March 26, 1662.



Monstrous births

The English fascination with "wonders," from comets to two-headed cows and infants with ruffled skin, travelled easily to New England, where each event signaled a message from God. When Mary Dyer gave birth to a "monster," John Winthrop described its "horns and claws [and] scales," and condemned it as a sign of God's wrath. Mary Dyer's stillborn baby had a birth defect called anencephaly, in which the brain and skull are not fully developed.



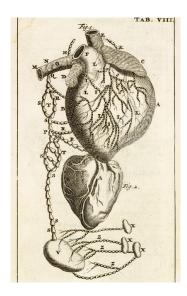
Mother fits

Convulsions, "choking in the throat," difficulty breathing, and

rapid heartbeat were the symptoms of women of childbearing age afflicted by mother fits, according to English physician Edward Jorden, author of the first English work on hysteria. Jorden wrote *A briefe discourse* in 1603 after testifying at a witchcraft trial, where he argued that the accused was suffering from "suffocation of the mother," the word "mother" meaning "womb."

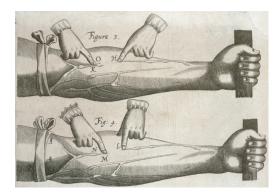
Natural philosophy

"The secrets of art and nature, being the summe and substance of naturall philosophy, methodically digested," read the title page of the 1660 English translation of Johann Wecker's book ("a like work never before in the English tongue," boasted the publisher.) Natural philosophy – what we now know as science - blossomed in the 17th century. Natural philosophers (scientists) set themselves the task of investigating the entire natural world, including the human body, and creating knowledge, medicine included.



Phlebotomy

Bloodletting or, in Steven Blankaart's words, the "opening of a Vein" by a Phlebotomus, or "Blood-letter." This Galenic practice continued into the 19th century, even though William Harvey's 1628 description of the circulation of blood challenged the theory underpinning it. *The Physical Dictionary*, 1697.

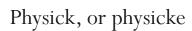


Physician

Few, if any, formally trained physicians ventured to early New England; a handful of "physicians," usually educated men with English medical handbooks, simply set up practice. Samuel Fuller, who arrived with the *Mayflower*, was probably the first in New England.

Medical practitioners faced a long and daunting list of ailments: "plague, small-pox, scurvy; fevers, poisons; madness, epilepsy, hysteria, lethargy, vertigo; dysentery, jaundice; pains; affections of the urinary organs; pleurisies; water humors, or dropsies; catarrhal affections... fractures, dislocations, wounds, bites of venomous creatures, boils, ulcers, gangrene, scrofula, burning with gunpowder, &c...." Oliver Wendell Holmes, introduction to *Medical Directions*.





Usually cathartics or purgatives, physick was administered to patients as a cure-all, commonly causing 17th century patients to retreat to their homes on the day they "took physick." More broadly, "physick" referred to the practice of medicine.

Plethorie

The Rev. Thomas Thacher's recommendation for a plethorie was pure Galenism. In his 1677 Brief Rule to guide the Common People of New England, thought to be New England's first medical publication, he counseled: "If a Phrensie happen, or through a Plethorie (that is fulness of blood) the Circulation of the blood be hindred, and thereupon the whole mass of blood choaked up, then either let blood, Or see that their diet, or medicines be not altogether cooling."

Pniese / powwow

Native American holistic medical practitioners. They sometimes accompanied Native warriors in the field. William Wood wrote of the "sick or lame being brought before... the Pow-wow sitting downe, the rest of the *Indians* giving attentive audience..." *New Englands Prospect*, 1634.



Scorbutic

Symptomatic of scurvy, a severe vitamin C deficiency; also a remedy for scurvy. Physicians prescribed scorbutics of fresh fruit and vegetables, citrus juice during long ocean voyages. "The poorer sort of people ...were much afflicted with the scurvy and many died," wrote John Winthrop. "But when [the] ship came and brought store of juice of lemons many recovered speedily." *Journal*, February 10, 1631.



Using a vise, awl, and drill, barber-surgeons would "trepan" or "trephan" patients with subdural hematomas (blood clots on the surface of the brain), releasing pressure on the brain. John Clark, who settled in Boston in 1650, was supposedly the first physician in New England to perform the operation of trepanning the skull.



Virtues

The benefits of medicines in addressing ailments. "Great palsie water," according to Anna Cromwell Williams, had a remarkable multitude of "vertues," including healing "weakness of hearte, decaying of spirits, ...all palsies, apoplexies,...paynes of jointes, coming of cold causes, ... bruises,...[it] strengtheneth memory, [and] restoreth lost speech." *Charles Brigham Account Book*, 1650-1730.





Usually fruit wines or liquids created from herbs, waters were an important component of almost all medical recipes. A remedy for "winde from ye spleen and ye vapours" prescribed "orringe water" combined with sherry and sugar. *Charles Brigham Account Book*, 1650-1730.



Wen

A lump, growth, or tumor. "I saw the Bullet lye like a small Wen or Scrophul, thrusting out under the Skin," Richard Wiseman, *Treatise of Wounds*, 1672.



"The vital Faculty." Steven Blankaart, *A Physical Dictionary*, 1684.

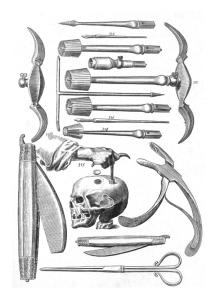


Welcome to Medicine and Mortality in 17th Century Boston, a series of talks and events marking the naming of Boston in 1630. We invite you to explore the transitional moment of the 17th century: a world of physicians and midwives, herbalists and bloodletters, when colonists and Native Americans met on the battlefield, epidemics swept through communi-

ties, and ministers joined medicine to prayer.

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From cover: Steven Blankaart, Anatomia Reformata, 1695; surgical instruments; Nicholas Culpepper's The Expert Doctor's Dispensary; London Barber-Surgeons' Company, 1677; cauterization, 1694; clyster instruments, 1585; Little Venus Unmask'd, 1670; Galenic scholars, 1532; Charles II touches patients with the king's evil; Pepys, National Portrait Gallery; The Ladies Companion, 1671, British Library; Steven Blankaart, Anatomia Reformata; William Harvey, De Motu Cordis, 1628; Le chirvrgie francoise, 1594; Metacomet, or "King Philip," 1689; anon, "John Clark," Center for the History of Medicine, Harvard University; John Gerard, The Herball, 1633; The accomplished ladies rich closet of rarities, 1691; the key to the "treasure-house of reason," c. 1680; John Woodall, The Surgeons Mate, 1639. Back cover: Cesare Ripa, a "sanguine" temperament, c. 1610.



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"Who is there from the highest to the lowest that's not concerned in this Subject of procuring and preserving Health?"

- The Sick-Mans Rare Jewel, London, 1674



From caudle to cauterie, a glance at English $17^{\mbox{\tiny th}}$ century medical texts will send you scrambling for the dictionary. But today's lexicons can't always help.

This short glossary of medical terms untangles the arcane verbiage of 17th century English and New England medicine. As little else, words reveal how western medical knowledge stood at the threshold of modern medical practice, with one foot in magic and Galenic humors, the other in the world of experimentation and inoculation.

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