Pharmacy History – I - Pharmacy in Ancient Times up to Modern Era

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• **Outline:**
  • Brief overview of profession roots
  • Highlight history from its origin in ancient Mesopotamia to early modern times
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• No one can be sure when pharmacy started.
• However, early humans most likely discovered that by applying water, mud, and some plants the skin.
• By simple trial and error, humans slowly discovered things in nature that helped them.
• Therefore pharmacy was practiced instinctively as people used the elements around them for soothing compresses on wounds and ailments.
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• The earliest known record of the art of apothecary (the forerunner of the pharmacist) is in Mesopotamia at about 2600 B.C.

• Babylonian healing practitioners combined the responsibilities of priest, physician, and pharmacist.

• Some of the oldest pharmacy records are found in Sumerian (Babylonian) clay cuneiform tablets that date back to about 2000 B.C.
Sumerian clay cuneiform tablets
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• In ancient China (2000 B.C.) legend tells that Emperor Shen Nung investigated the medical properties of hundreds of herbs.

• He recorded 365 native herbal drugs in the first pen T’sao. (Book called “the Great Herbal”)

[Picture of a mortar and pestle]
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- In ancient Egypt, Egyptian priests, as part of their duties, prepared medicines.
- Exact time unknown, approximate time 1900-1100 B.C., the most famous papyrus of Egyptian medicine was written.
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• It was uncovered by a German Egyptologist Georg Ebers, and is now known as Ebers Papyrus.
• It is the best known and most important pharmaceutical record from ancient history.
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- It contains 800 prescriptions using 700 drugs, of particular note in the papyrus is inclusion of quantities of substances, which were largely missing from Babylonian clay tablets.
- Many modern dosage forms are also referred to in the Ebers Papyrus as gargles, inhalations, suppositories, ointments, plasters, and lotions.
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- **In ancient Greece**
- Lived the father of Botany, Theophrastus (300 B.C.). His observations about the medicinal qualities of herbs have proven uncannily accurate.
- Theophrastus covered most aspects of botany: descriptions of plants, classification, plant distribution, propagation, germination, and cultivation.
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- In ancient Greece
- Hippocrates of Cos was a Greek Physician and considered one of the most outstanding figures in the history of medicine. He is credited with greatly advancing the medical profession and for writing the Hippocratic oath.
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- While the oath is rarely used in its original form today, it serves as a foundation for other, similar oaths and laws that define good medical practice and morals.
  - He also formulated the theory of the four humors that parallel the four elements.
    - air- blood,
    - water- phlegm,
    - earth-black bile,
    - fire- yellow bile.
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- He surmised that disease was caused by an imbalance of these bad humors. This lead to centuries of medicine aimed at expelling from the ill person of the offending, excess, bad humors.
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- In Ancient Rome,
  - Galen (A.D 130-200) was a prominent Roman (of Greek ethnicity) physician, surgeon, and philosopher.
  - Developed principles of preparing and compounding medicinal agents
  - Sought to restore humeral balances within a patient by the use of medicine of opposing qualities.
  - e.g. *inflammation would be treated with cucumber, a cool drug.*
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• Moreover, Galen also drew from many available sources and attempted to systematize the work begun by Hippocrates.
• What’s more from the Roman era came the twin brothers Damian and Cosmas. They were Christians of Arabian Descent. Damian was the apothecary, and Cosmas the Physician.
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- **The Middle Ages:**
- Pharmacy differentiates in the middle ages. Pharmaceutical Knowledge, and the number of drugs available began to grow considerably, thanks to the Arab World.
- Pharmacy as a separate activity began to develop and privately owned pharmacies were established in Islamic lands.
- Medicine and pharmacy were for the first time separated from each other.
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• First known apothecary shop was opened in Baghdad in the 18th century, and the Muslims carried this concept into Europe during wars and other excursions into Africa, Spain, southern France.

• These shops were open street stalls that sold sweets, syrups, perfumes, and medicines.
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• Ibn Sina (980-1037 A.D) – Avicenna - intellectual giant, he was a physician, poet, philosopher, diplomat.

• His Canon Medicinae brought together the best knowledge of the Greeks and Arabs into a single medical text.
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- Pharmacy differentiate during middle ages
  - German emperor Frederick II issued an edict in about 1240 that legally separated pharmacy from medicine in southern Italy and Sicily
  - German emperor Frederick II
  - This edict is known as the Magna Carta of pharmacy.

Magna- Great (Latin)
Carta- Charter, or document (Italian)
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• The three decrees of the Magna Carta:
• *The pharmaceutical profession was to be separated from the medical profession.*
• *The pharmaceutical profession should be supervised officially.*
• *Pharmacists should take an oath to prepare drugs reliably, according to skilled art, and in a uniform suitable quality.*
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• The Renaissance: Pharmacists Flourished Too
  • Following the Middle Ages, many parts of European Society reexamined the Greek and Roman tenets (theories, ideology) that they had held as fact.
  • Contemporary beliefs arose and Homeopathy had its origins in the Renaissance period.
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- The Swiss physician Parcelsus (1493-1541 A.D) introduced two ideas:
- *The first* - disease might be localized in a specific organ (rather than the entire body being affected), and that such conditions could be treated internally using the chemical properties of medicinal agents.
- *The second* - some plants contained minute quantities of active chemicals, which could be removed by making tinctures, extracts, and essences.
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• During the Renaissance Professional associations of pharmacists emerged.

• In England, the pharmacist was under jurisdiction (سلطة القضاء) of Guild of grocers, which monopolized the drug and spice trade.

• King James I granted a charter recognizing the Society of Apothecaries of London in 1671 A.D.

• Early English apothecaries compounded as well as dispensed drugs. They also provided medical advice.
Thank You for your attention

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