Philosophy and Practice of Ancient Egyptian Medicine

Kip L. McGilliard, Ph.D.

Egyptian Culture

- Civilization far exceeded that of other groups who settled elsewhere
- More is known about Egypt than any other ancient culture
- Egyptian society was held together by an absolute monarchy
Ancient Writing

- Hieroglyphics

Ancient Egyptian eye tests.

Ancient Writing

- Hieroglyphics
  - Carved in stone or written on paper scrolls called papyri
Immortality

Book of the Dead
Mummies

- Preserved by dessication
- Powdered natron packed into body cavities
- Heart and kidneys left in place
- Other internal organs removed and placed in jars or wrapped separately
Medical Examination of Mummies

- Autopsy

- X-rays
Medical Examination of Mummies

- Autopsy
- X-rays
- CT scans

Growth

Average Adult Height

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- Ancient Egyptian
- Modern Egyptian
- Modern American
Life Expectancy

- Average age of marriage was 15-20 years for men and 12-13 years for women
- Half of Egyptians died by age 34
- 90% died by age 50
- Ramses II lived to be 92 years old

Diseases Found in Mummies

- Heart
  - Pericarditis
  - Atherosclerosis
- Lungs
  - Emphysema
  - Pneumoconiosis
  - Pneumonia
  - Tuberculosis
Diseases Found in Mummies

- Kidneys
  - Kidney stones
  - Glomerulosclerosis
- Digestive system
  - Tapeworm, including guinea worm
- Bone
  - Osteoarthritis
  - Evidence of violent deaths
- Brain
  - Stroke
- Few cases of cancer

Dental Medicine

- Few dental caries
- Extreme wear on the crowns
- Dental bridge attached by gold wire
Egyptian Healers

- Theurgic or upper class
  - Priests
  - Practiced rituals and magic
  - Called on the gods
  - Interpretation of dreams

- Inferior class
  - Physicians (swnw)
  - Used natural means of healing

- Lowest ranks
  - Bandagers
  - Trainees
  - Both were managed by physicians
Dualism

- First step in the transition from magical to rational

- Causes of illness
  - Displeasure of the gods
  - Natural causes

Imhotep

- First physician known to history

- Born around 2650 BC in Memphis

- Served the pharaoh Djoser (2630 - 2611 BC)
Imhotep

- Built Egypt’s first pyramid
- After his death, he was elevated to Egyptian God of Medicine
Imhotep

- Built Egypt’s first pyramid
- After his death, he was elevated to Egyptian God of Medicine
- Commemorated in 1928 Egyptian postage stamp

Female Physicians

- Peseshet was the earliest known female physician – “Overseer of the female physicians”
- More than 100 prominent female physicians in Egypt
Anatomy and Physiology

- Embalming provided opportunities to study the internal organs

- The heart was the most important organ
  - Seat of intelligence and emotion

- The brain was not seen to be of any importance

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Anatomy and Physiology

- Air was recognized as vital to life
  - Air passed through the trachea to the heart and lungs
  - Then traveled in the blood to other organs through vessels called metu
  - Secondary metu led to the surface of the body, releasing sweat, tears, semen, and urine
Anatomy and Physiology

- Disease was transported as a foul substance, ukhedu, to various organs

- The goal of healing was to expel the ukhedu in the feces

- Pus was ukhedu attempting to escape from the body, so drainage of pus was encouraged

Anatomy and Physiology

- Buildup of ukhedu in the organs led to decay of the flesh (aging)

- Laxatives were taken routinely to prevent ukhedu from building up
Healing Arts

- Kahun papyrus (1800 BC)
  - Oldest known medical papyrus
  - Gynecological diseases and pregnancy

Healing Arts

- Hearst papyrus (2000 BC)
  - Magical remedies
  - Doubts as to its authenticity
Healing Arts

- Belief in the supernatural
- Temples were places of healing

Edfu Temple

Isis (Mother Earth) and Osiris (Sun God) created agriculture and the medical arts

Horus had healing powers and the gift of prophecy

Horus standing on a crocodile
Amulets

Hand and Foot

Hearts

Hippopotamus

Scarab Beetles

Tawaret

Nephthys, Horus, Isis

Surgery

- Edwin Smith papyrus (1600 BC)
  - Rational scientific approach to medicine
  - Surgical practice arranged according to general parts of the body
Surgery
Surgery

- Circumcision

Surgery

- Circumcision

- Repair of wounds
  - Splinting
  - Stitching
  - Bandaging

- Prosthetics
Obstetrics and Gynecology

- Diseases of the female reproductive tract
- Fertility aids
- Contraceptives
  - Drink a mixture of beer, celery, and oil
  - Apply substances to vagina to increase acidity
    - Crocodile dung and sour milk
- Pregnancy tests
- Sagging breasts

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Obstetrics and Gynecology

- Childbirth
  - Birthing stool made of bricks
  - Midwives

- Mothers typically nursed for 3 years
  - Natural birth control
  - Averaged 4 children
Medicinal Remedies

- Ebers papyrus (1550 BC)
  - Oldest complete medical book in the world
  - 110 pages
  - 700 magical formulas and remedies
Medicinal Remedies

- Prescriptions included:
  - Name and amount of the ingredients
  - Directions for preparing the medicine
  - Instructions for taking the medicine

- Routes of administration
  - Ointments applied topically
  - Oral medications

Medicinal Remedies

- Common solvents
  - Water
  - Honey
  - Beer
  - Vegetable oils
  - Animal fats
Medicinal Remedies

“Active” ingredients

- Djaret
  - Untranslated plant material
  - Diarrhea, eye problems

- Frankincense
  - Aromatic resin from *Boswellia*
  - Pain in the head or limbs

Medicinal Remedies

“Active” ingredients

- Castor bean plant (ricinus)
  - Laxative
  - Topical

Castor beans

Ricinus
Medicinal Remedies

“Active” ingredients

- Castor bean plant (ricinus)
  - Laxative
  - Topical

- Aloe
  - Eye problems
  - Immortality

Medicinal Remedies

“Active” ingredients

- Figs
  - Abdominal pains
  - Urinary disorders
  - Hippopotamus bites
Medicinal Remedies

“Active” ingredients

- Figs
  - Abdominal pains
  - Urinary disorders
  - Hippopotamus bites

- Colocynth
  - Strong laxative
  - Abortifacient

Medicinal Remedies

Derived from animals

- Stallion semen to restore sexual drive
- Raven blood to treat hair problems
- Fish skulls for headache
- Pig eyes for blindness
Medicinal Remedies

- Malachite (copper salt)
  - Green eye shadow
  - Used only topically (antibacterial)
  - Malachite jewelry protected from epidemics

Medical Advice

- “Do not slight a small illness for which there is a remedy; use the remedy.”

- “Do not say ‘My illness has passed, I will not use medication.’”

- “A remedy is effective only through the hand of its physician.”
Medical Advice

- “A timely remedy is to prevent illness by having the greatness of the god in your heart.”
- “Do not be despondent when you are ill; your death is not made yet.”
- “Do not pamper yourself when you are young, lest you be weak when you are old.”

Resources