



History of Healthcare Day 3

19th century



19th Century

The *Industrial Revolution*

- Major progress was achieved in medical science due to:
 - Development of machinery
 - Ready access to books due to better printing techniques



19th Century

René Laënnec

- Invented the *stethoscope in 1819*.
- Allowed a physician to listen to internal body sounds more clearly which greatly increased the knowledge of the functioning of the human body.





19th Century

Thinking Point ---

Physicians needed to hear heart and other body sounds to find out if there were problems with body organs.

Question ---

Before the origination of the stethoscope how did a physician listen to body sounds?



19th Century

Answer ---

The physician would simply lay his head on the patient's body in the appropriate area and listen for any sounds they could hear.



19th Century

Thinking Point ---

The original “stethoscope” was simply a rolled up newspaper held to a patient's chest with the other end against the physician’s ear.

Question ---

How would this enable a physician to hear body sounds more clearly versus how they had been doing it before?



19th Century

Answer ---

Sounds could travel to the ear without much outside noise or interference



19th Century

- The original stethoscope quickly evolved into a wooden tube that pressed against the physician's ear

[Development of the Stethoscope](#) (2 min)



19th Century

Florence Nightingale (3 min)

- Known as the “Founder of Modern Nursing”
- Established efficient and sanitary nursing units during the Crimean War in 1854
- Invented the call bell system and use of dumbwaiters to deliver meals
- Begin the professional education of nurses





19th Century

- ***Infection Control*** was another major development in this time period
- Physicians began to associate the tiny microorganisms observed with the microscope with diseases



19th Century

Louis Pasteur (3 min)

- Known as the “Father of Microbiology”
- His germ theory proved that microorganisms cause disease
- Proved that heat can be used to destroy germs through a process called pasteurization
- Created a vaccine for rabies in 1885
- Founded the basic rules for sterilization





19th Century

Joseph Lister

- Used carbolic acid on wounds to kill germs
- First doctor to use an antiseptic during surgery





19th Century

Elizabeth Blackwell (2 min)

- The first female physician in the United States in 1849
- Women became active participants in medical care





19th Century

Dorothea Dix

- Appointed the Superintendent of Female Nurses of the Army.
- Activist on behalf of the indigent insane.
- Created the first generation of American mental asylums.





19th Century

Clara Barton

- Volunteer nurse for wounded soldiers during the Civil War
- After Civil War, established a bureau of records to search for missing men
- Campaigned for the USA to sign the Treaty of Geneva, which provided relief for sick and wounded soldiers
- Formed American Red Cross in 1881 and served as its first president

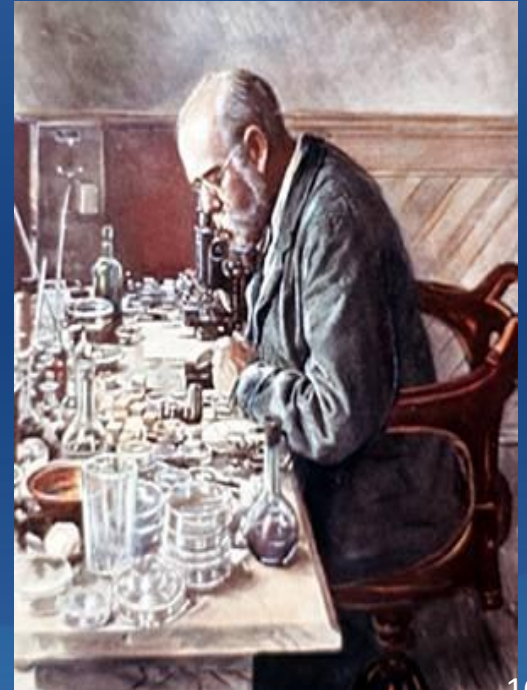




19th Century

Robert Koch

- Developed the culture plate method to identify pathogens
- Isolated the bacterium that causes tuberculosis

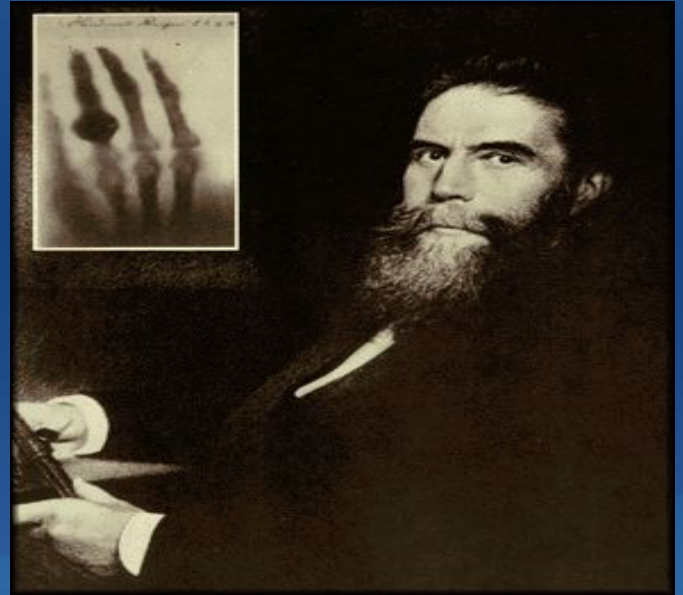




19th Century

Wilhelm Roentgen (2 min)

- Discovered roentgenograms (X-rays) in 1895
- Let doctors see inside the body
- X-rayed wife's hand

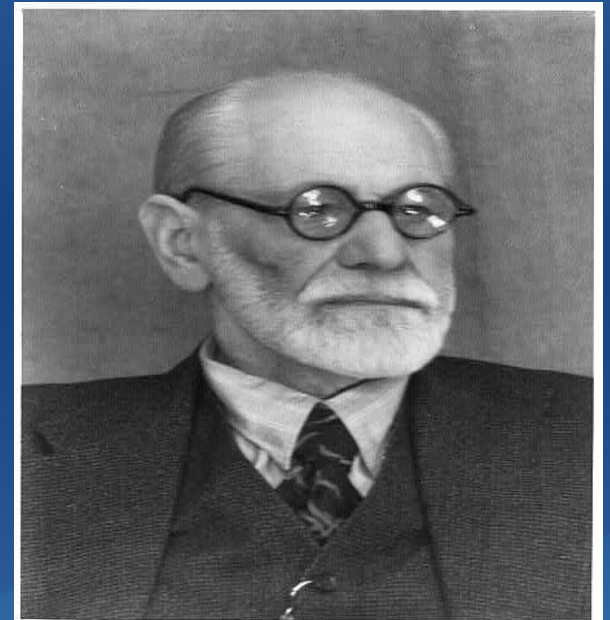




19th Century

Sigmund Freud (1836-1939)

- Discovered the conscious and unconscious part of the mind
- His studies were the basis for psychology and psychiatry





19th Century

- Many vaccines and medications were developed:
 - 1879--vaccine for cholera
 - 1885--vaccine for rabies
 - 1890--vaccine for tetanus
 - 1896--vaccine for typhoid fever
 - 1897--vaccine for bubonic plague



19th Century

- Average lifespan for most increased to 40-65 yrs
- Treatment for disease more specific after causes of disease were identified