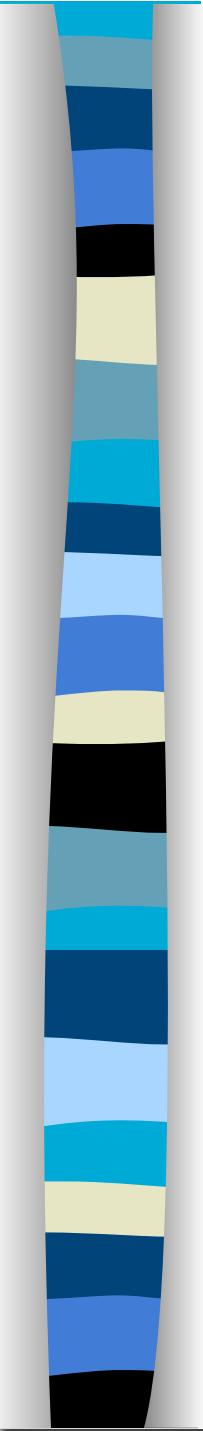
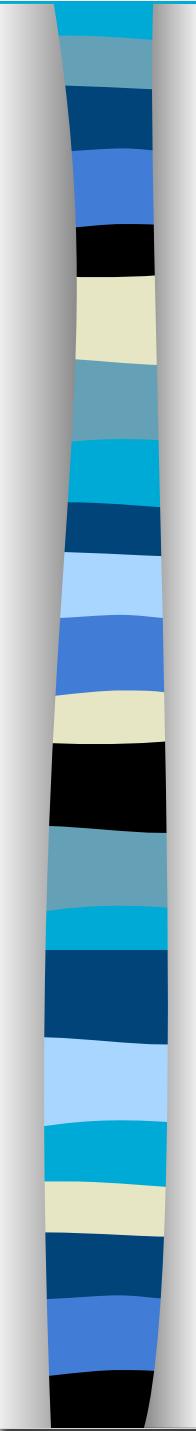


1a Health & Hygiene (H&H) Disease and Prevention



1a Health & Hygiene (H&H) Disease and Prevention

- 5 minutes Attendance, Breath of Arrival, and Reminders
- 50 minutes Lecture
- 5 minutes Flex time
- 60 minutes total class time



1a Health & Hygiene (H&H) Disease and Prevention Class Reminders

Assignments:

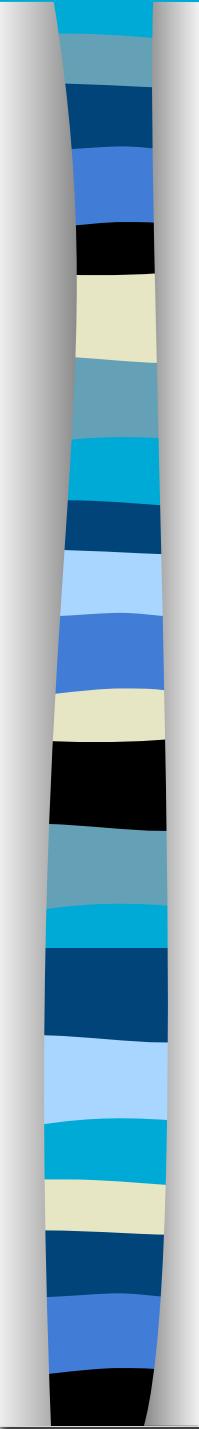
- 3a Student Handbook Review Questions (A: 115-118)
- 4a Autobiography and Photo (B-4)
- 7a Written Exam Review Questions (A: 119-130)

Quizzes:

- **1b H&H Disease and Prevention Quiz TODAY!**
- 5b Kinesiology Quiz (A-73, and A: 75-80)
 - 25 multiple-choice questions in 20 minutes
 - Study terms on page A-51 and
 - AOIs for deltoid, traps, lats, teres major, rhomboids, triceps, and erectors

Preparation for upcoming classes:

- 2a Kinesiology: Names and Locations of Bones and Posterior Muscles
 - Trail Guide: Trapezius
 - Salvo: Pages 374-375
 - Packet E: 17
 - RQ Packet A: 120
- 2b H&H: Tools of the Trade
 - Salvo: Chapter 3
 - Packet F: 1-16
 - RQ Packet A: 121-122



Classroom Rules

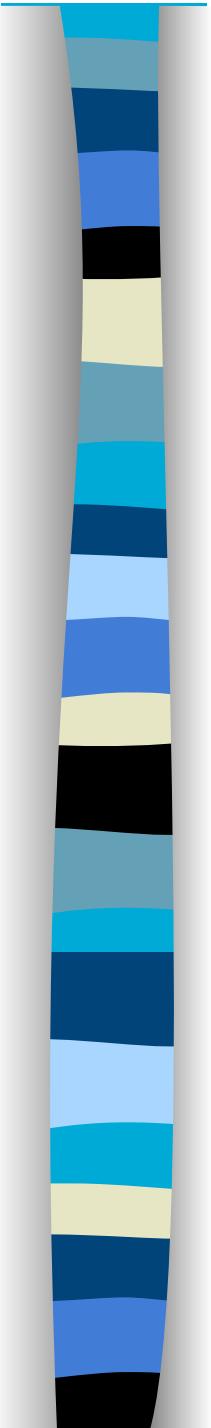
Punctuality - everybody's time is precious

- Be ready to learn at the start of class; we'll have you out of here on time
- Tardiness: arriving late, returning late after breaks, leaving during class, leaving early

The following are not allowed:

- Bare feet
- Side talking
- Lying down
- Inappropriate clothing
- Food or drink except water
- Phones that are visible in the classroom, bathrooms, or internship

You will receive one verbal warning, then you'll have to leave the room.



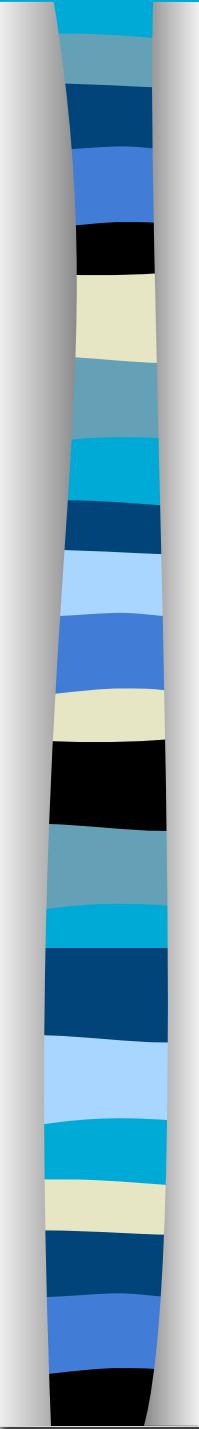
1a Health & Hygiene (H&H) Disease and Prevention

H-37

Definitions

- Miriam-Webster calls Disease-
- **a condition of the living animal or plant body or of one of its parts that impairs normal functioning and is typically manifested by distinguishing signs and symptoms**
- Sickness- a disordered, weakened, or unsound condition



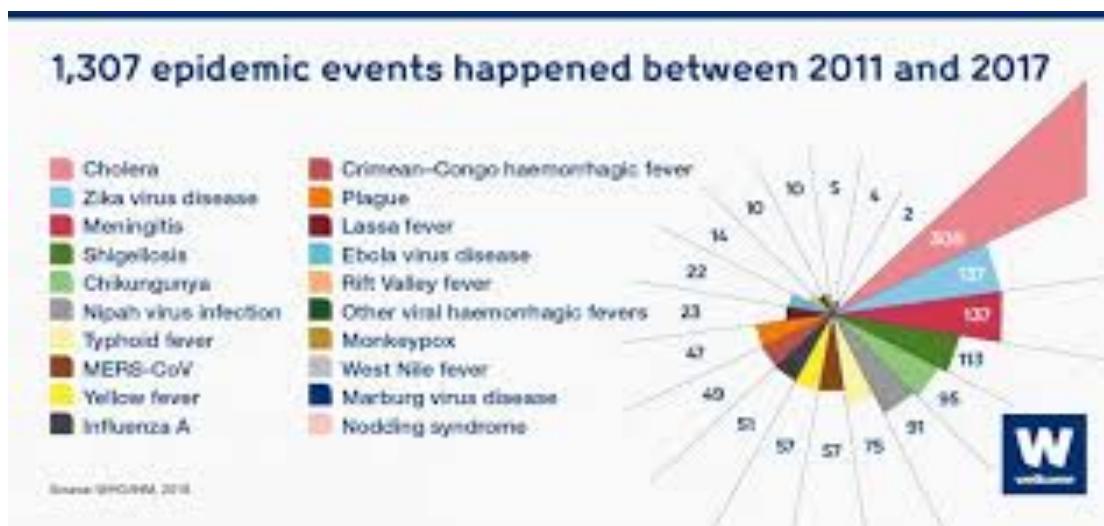


Definitions

- Cambridge Dictionary calls Disease-
 - (an) illness of people, animals, plants, etc., caused by infection or a failure of health rather than by an accident
- Traditional Chinese Medicine breaks it down simply as-
 - A Dis-Ease of or lack of ease or health in the body resulting in stagnation or the free flow of Qi and blood.

Definitions

- Epidemic-
- Affecting or tending to affect a disproportionately large number of individuals within a population, community, or region at the same time.
- **America and most of Planet Earth has a flu epidemic yearly**



Definitions

- Epidemic-
- A disease can be declared an *epidemic* when it spreads over a wide area and many individuals are taken ill at the same time.
- If the spread escalates further, an epidemic can become a *pandemic*, which affects an even wider geographical area and a significant portion of the population becomes affected.

Definitions

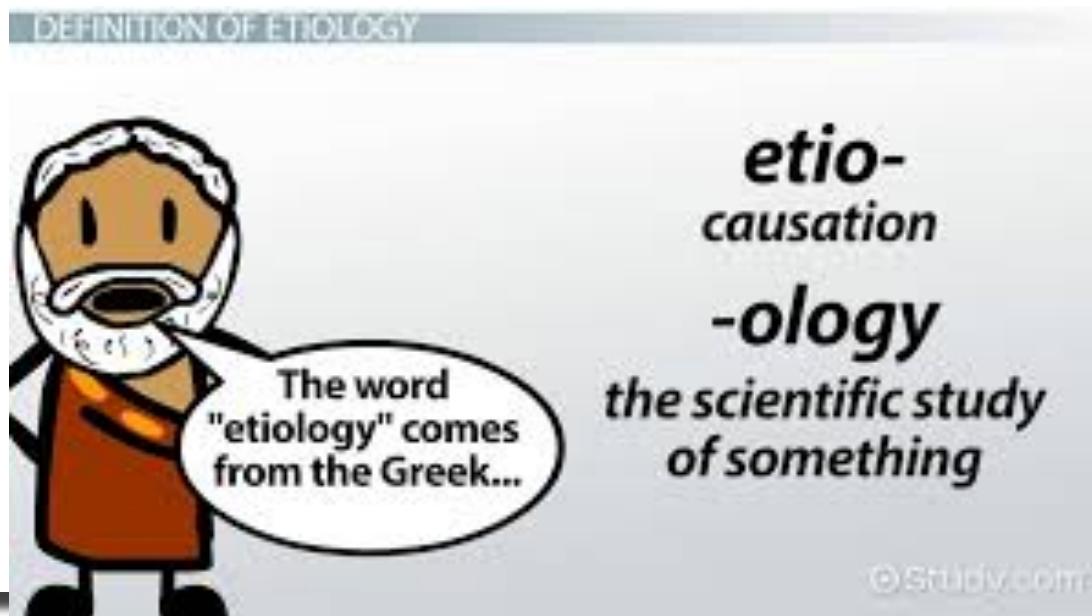
- **Pandemic-**
- occurring over a wide geographic area and affecting an exceptionally high proportion of the population

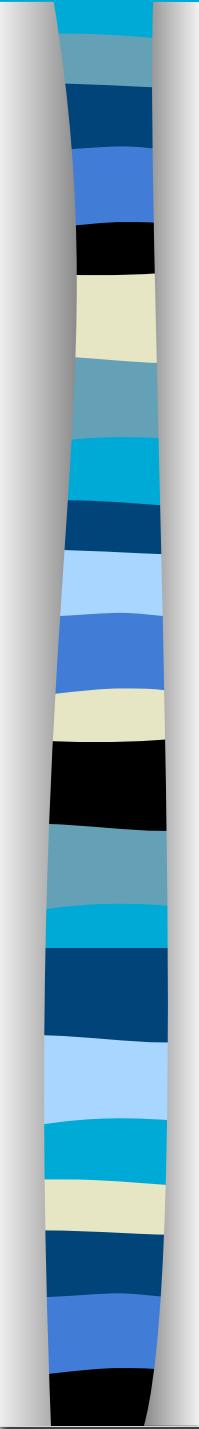


Stephanie Franziska Scholz

Definitions

- Etiology-
- 1: CAUSE, ORIGIN
- *specifically : the cause of a disease or abnormal condition*
- 2: a branch of knowledge concerned with causes
- *specifically : a branch of medical science concerned with the causes and origins of diseases*





Definitions

- Epidemiology-
- the branch of medicine which deals with the incidence, distribution, and possible control of diseases and other factors relating to health
- Since the terms Disease and Disease Prevention can be addressed on an incredibly wide and varied scope, we will narrow our conversation to the basics and look at how you can keep you and your clients safe when performing massage.
- Etiology and Epidemiology are very interesting subjects and we invite you to find out more.

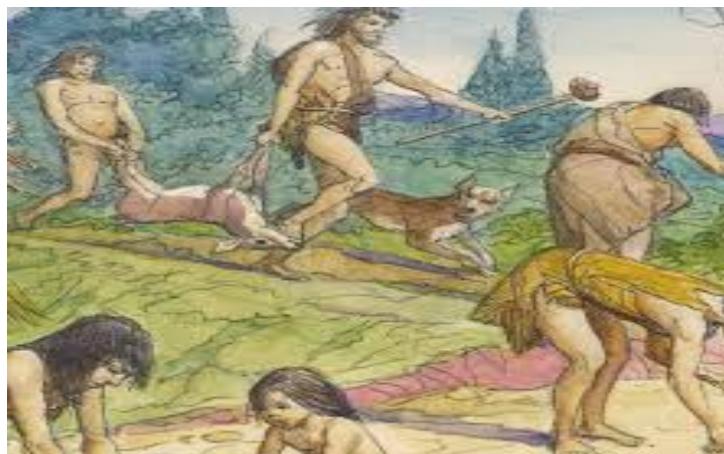
Origins of Disease: History and Early Humans



Ten thousand years ago humans were hunter-gatherers.

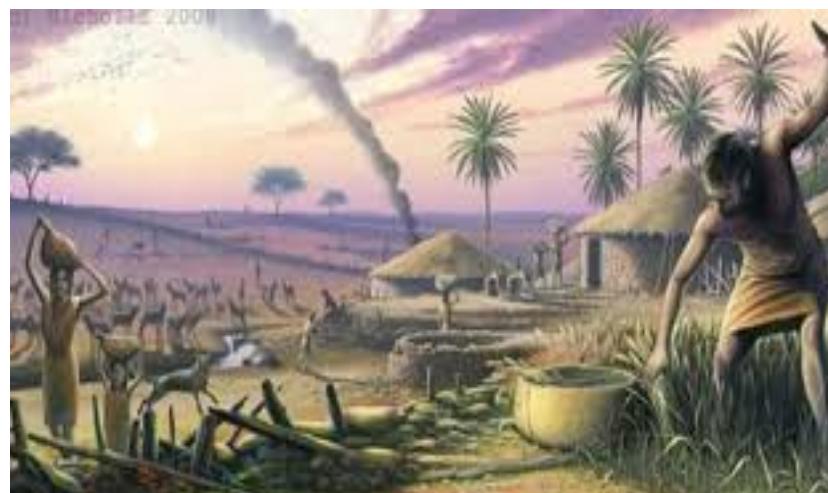
Origins- History- Early Humans

- They had a short life span, but not because of epidemics; their primary problem was just finding enough food to eat.
- They lived and traveled in small groups and hunted and foraged for food.
- Their mixed diet was probably fairly balanced and nutritionally complete. **Since they lived in small groups and moved frequently, they had few problems with accumulating waste or contaminated water or food.**



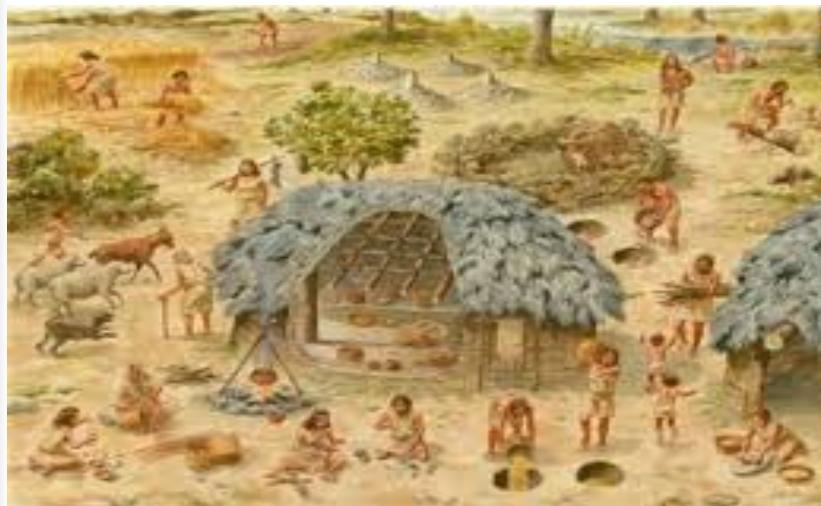
Origins- History- Early Humans

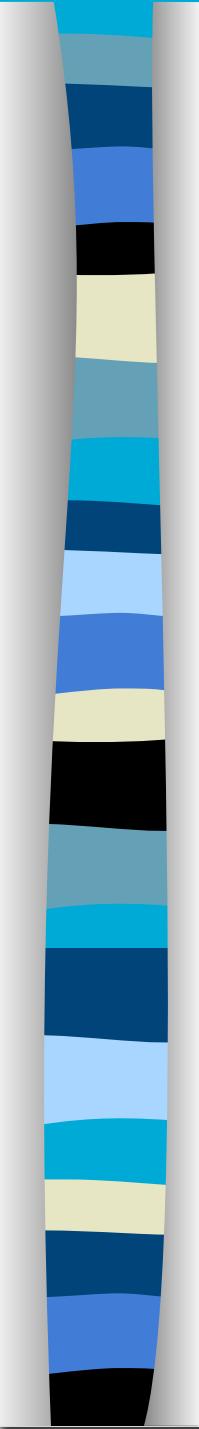
- The shift from the hunter-gather mode of living to an agricultural model provided a more secure supply of food and enabled expansion of the population.
- However, domesticated animals provided not only food and labor; they also carried diseases that could be transmitted to humans.
- People also began to rely heavily on one or two crops, so their diets were often lacking in protein, minerals, and vitamins.



Origins- History- Early Humans

- People began living in larger groups and staying in the same place, so there was more opportunity for transmission of diseases.
- Garbage and waste accumulated, and rodents and insect vectors were attracted to human settlements, providing sources of disease.



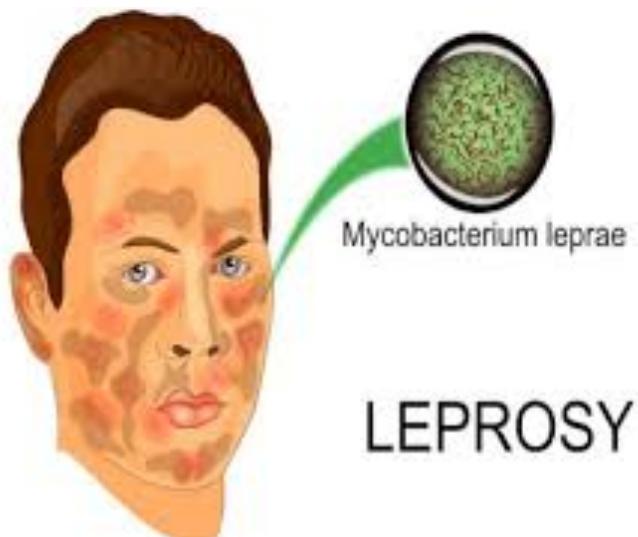


First Recorded Disease- Leprosy

- In 2014 A University of Texas Houston study found two **leprosy**-causing bacteria's came from a common bacterial ancestor around 10 million years ago.
- Humans carried **leprosy** bacteria when departing Africa around 100,000 years ago to populate the rest of the world
- Hundreds of thousands of people around the world still suffer from the disease, which attacks a sufferer's skin and nerves

First Recorded Disease- Leprosy

- **Leprosy** is a disease that has been known *since biblical times*. It causes nerve damage and muscle weakness that can lead to deformities, crippling, blindness and isolation.
- **Every two minutes** someone is diagnosed with **leprosy**. Many Americans think **leprosy** no longer exists, but it still occurs in more than 100 countries worldwide.



LEPROSY

The Bubonic Plague (1347-1700s)

- Bubonic plague is an acute infectious disease caused by the bacterium *Yersinia pestis*. **The bacteria live in the intestines of fleas and are transmitted to rats by flea bites.**



The Bubonic Plague (1347-1700s)

- Occasionally, an infected flea would jump to a human and introduce the bacteria when a blood meal was taken.
- The bacteria would then spread to the regional lymph nodes and multiply, causing dark, tender, swollen nodules (buboës), for example, a walnut-sized swelling in the inner aspect of the upper thigh.
- As the infection spread, the victim would experience headache, high fever, delirium, and finally death in about 60% of cases.



The Bubonic Plague (1347-1700s)

- Starting in 1347, Europe experienced multiple waves of bubonic plague epidemics that lasted until the late 1700s.
- It is believed that the bubonic plague originated in Asia and traveled along trade routes into the Black Sea and then into the Mediterranean Sea.
- From there, it swept through Sicily and Italy and then up through France and the northern European countries all the way up into Scandinavia.
- There were many subsequent waves of plague that swept through Europe until the late 1700s.



Typhoid 'Mary' Mallon



Typhoid 'Mary' Mallon (1869-1938)

- Mary Mallon was born in 1869 in Ireland and emigrated to the US in 1884. She had worked in a variety of domestic positions for wealthy families prior to settling into her career as a cook.
- As a healthy carrier (Asymptomatic) of *Salmonella typhi* her nickname of "Typhoid Mary" had become synonymous with the spread of disease, as many were infected due to her denial of being ill.



Typhoid 'Mary' Mallon (1869-1938)

- No one ever attempted to explain to Mary the significance of being a “carrier”, instead **they had offered to remove her gallbladder**, something she had denied.
- **A post mortem revealed that she shed *Salmonella typhi* bacteria from her gallstones** raising the issue of what would have happened if she had accepted the proposed operation.



Typhoid 'Mary' Mallon (1869-1938)

- She was forced into quarantine on two separate occasions on North Brother Island off of Manhattan for a total of 26 years and died alone without friends, having evidently found consolation in her religion to which she gave her faith and loyalty.



Typhoid 'Mary' Mallon (1869-1938)

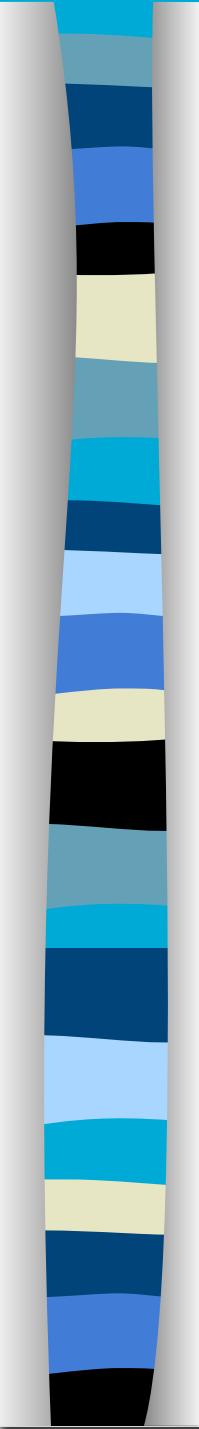
- In 1907, about 3,000 New Yorkers had been infected by *Salmonella typhi*, and probably Mary was the main reason for the outbreak. Immunization against *Salmonella typhi* was not developed until 1911, and antibiotic treatment was not available until 1948

**'Typhoid Mary'
Dead at 70; Gave
Fever to Many**

Typhoid 'Mary' Mallon (1869-1938)

If Mary Mallon would have washed her hands diligently (most at this time did not) she may have never infected anyone...

Do you see a trend here?



Definitions

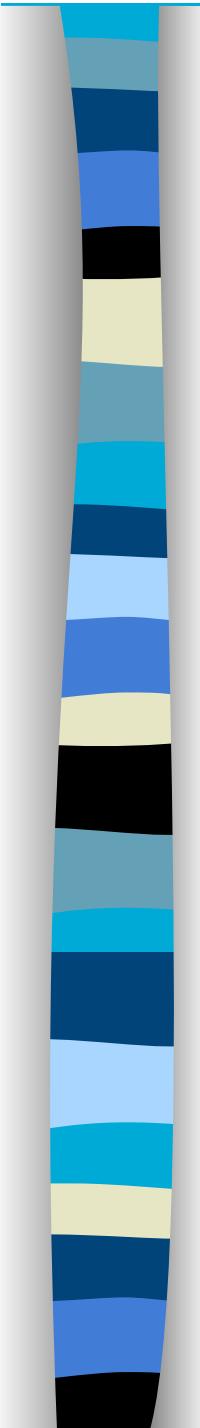
- **Quarantine-**
- 1: **a period of 40 days**
- 2: a term during which a ship arriving in port and suspected of carrying contagious disease is held in isolation from the shore
- b: a regulation placing a ship in quarantine
- c: a place where a ship is detained during quarantine

- 3: a restraint upon the activities or communication of persons or the transport of goods designed to prevent the spread of disease or pests
- b: **a place in which those under quarantine are kept**
- 4: **a state of enforced isolation**

Before cures there was Quarantine

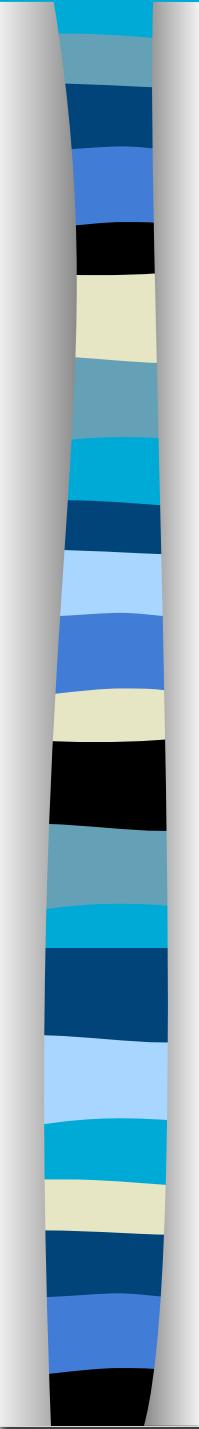
- The use of quarantine as a public health measure dates back to the 14th century.
- Quarantine comes from the Italian *quarantena*, meaning **forty-day period**.
Travelers and merchandise that had potentially been exposed to disease were isolated for a period of time to ensure that they weren't infected.
- Some cities and towns would create a "cordon sanitaire," **a physical barrier that could only be crossed with permission**. This practice persisted into the late 19th century and early 20th century.





Before cures there was Quarantine

- While quarantine is one of the oldest public health measures, it is still useful today.
- During the SARS epidemic (2003), Toronto quarantined individuals who had potentially been exposed by confining them to their homes until it was certain that they weren't infected.
- This measure was effective in controlling SARS because individuals infected with SARS were not infectious until they began to exhibit symptoms.
- Consequently, if an individual was possibly exposed, but did not yet show symptoms, quarantine prevented them from infecting others.



Before cures there was Quarantine

- However, quarantine is less useful for diseases like influenza, or COVID19 when an infected person can spread the disease even before they begin having symptoms.

Definitions

- Vaccine-
- **A substance used to stimulate the production of antibodies and provide immunity against one or several diseases**, prepared from the causative agent of a disease, its products, or a synthetic substitute, treated to act as an antigen without inducing the disease.



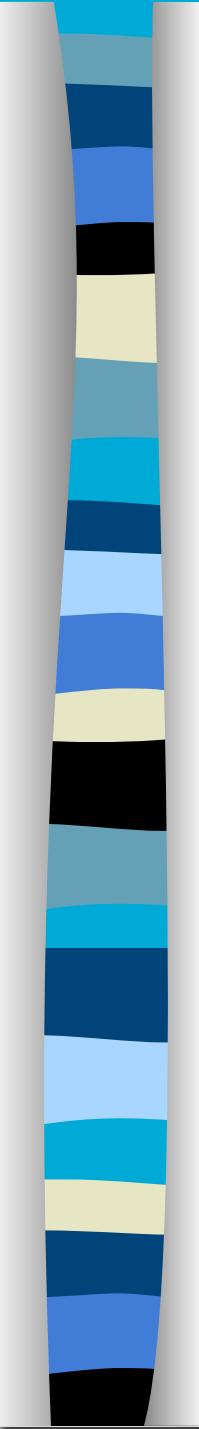
Vaccines

- At the beginning of the 20th century, infectious diseases such as **smallpox, measles, diphtheria, and pertussis were widely prevalent.**
- Since there were few effective measures available, death tolls were high.
- Both the development and promotion of **vaccinations** against preventable diseases **has resulted in dramatic declines in morbidity and mortality and even results in the eradication of smallpox.**



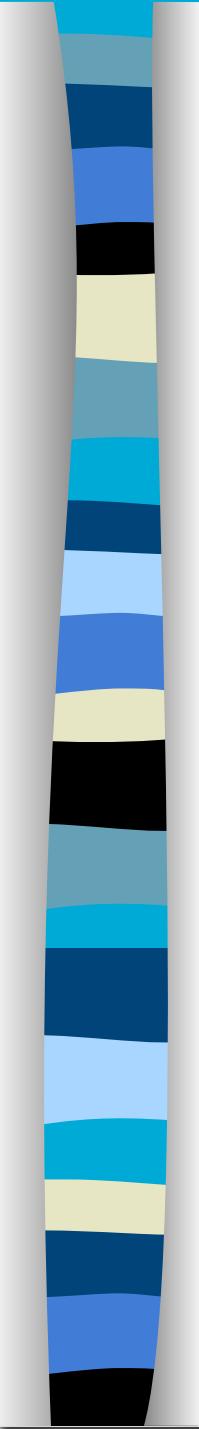
Disease Prevention- It's in your hands

- The leading causes of death in 1900 were pneumonia, tuberculosis (TB), and diarrhea and enteritis whereas in 1997, 4.5% of deaths were attributable to pneumonia, influenza, and HIV infection.
 - Sanitation and hygiene, vaccination, and antibiotics are among the control measures responsible for this marked decrease.**
 - Who knew hand washing could be so powerful!**



Agencies- CDC 'Center for Disease Control'

- Established July 1, 1946 the Communicable Disease Center (CDC, now known as the Center for Disease Control) opened its doors and occupied one floor of a small building in Atlanta.
- Its primary mission was simple yet highly challenging: prevent malaria from spreading across the nation. With only a budget of only \$10 million budget and 400 employees.
- Medical epidemiologists were scarce in those early years, disease surveillance became the cornerstone of CDC's mission of service to the states and over time changed the practice of public health.



Agencies- **CDC** 'Center for Disease Control'

- There have been many significant accomplishments since CDC's humble beginnings.
- Today, **CDC** is one of the major operating components of the Department of Health and Human Services and is recognized as Americas premiere health promotion, prevention, and preparedness agency.
- Visit: www.cdc.gov

Agencies- **DHSS** ‘Department of Health and Human Services’

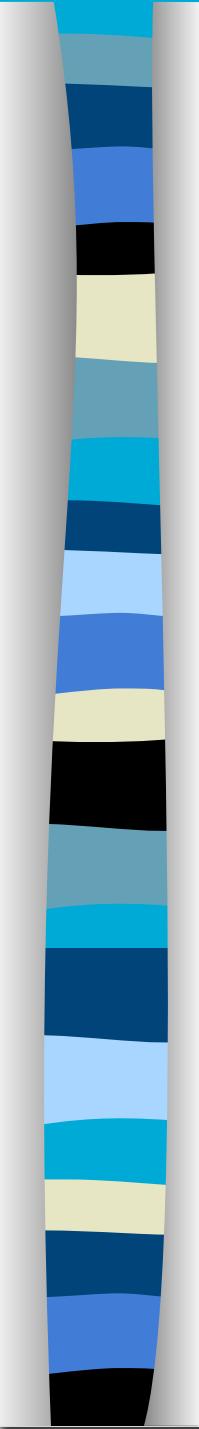
- In 1979, the Department of Education split from HEW (Department of Health, Education, and Welfare) and the HEW was renamed to the Department of Health and Human Services.



Agencies- WHO 'World Health Organization'

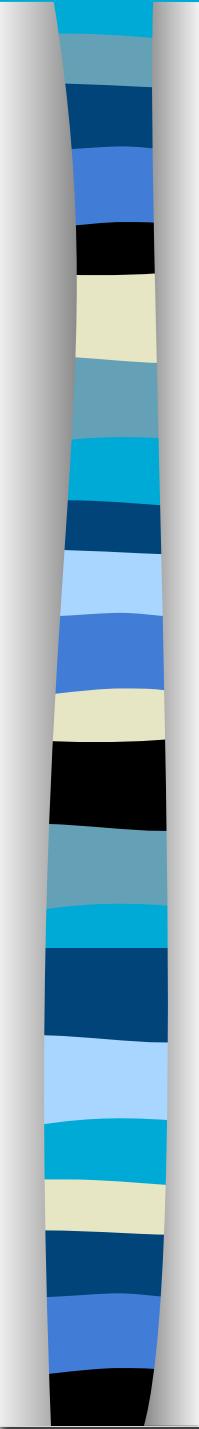
- **The WHO- (World Health Organization)**
- When the United Nations was formed in 1945, one of the mandates discussed was creating a global health organization.
- WHO's Constitution came into force on 7 April 1948 – a date now celebrated every year as World Health Day.





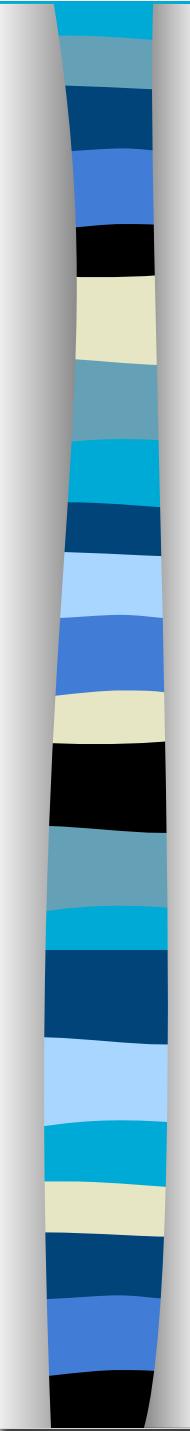
Agencies- WHO 'World Health Organization'

- WHO, adheres to the UN values of integrity, professionalism and respect for diversity.
- Their mission is to promote health, keep the world safe and serve the vulnerable, with measurable impact for people at country level. We are individually and collectively committed to put these values into practice.
- The WHO has been on the frontline of every health related outbreak on Planet Earth since 1948.
- www.who.int



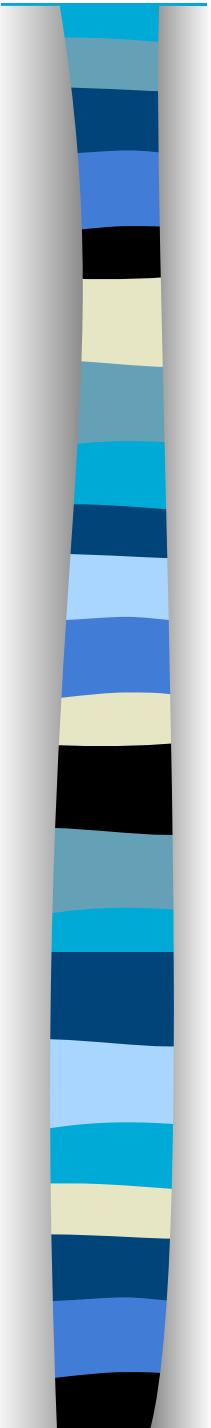
Disease and Prevention Review

- Q & A
- Disease is a condition of the living animal or plant body or of one of its parts that impairs normal functioning and is typically manifested by distinguishing signs and symptoms.
- America and most of Planet Earth has a flu epidemic yearly.
- Etiology is the study of the cause of a disease or abnormal condition. A branch of medical science concerned with the causes and origins of diseases.
- Early humans lived in small groups and moved frequently, they had few problems with accumulating waste or contaminated water or food.
- Leprosy is a disease that has been known *since biblical times*.
- The Bubonic plague bacteria lived in the intestines of fleas and are transmitted to rats by flea bites.



Disease and Prevention Review

- Mary's nickname was 'Typhoid Mary' because she was a healthy carrier (Asymptomatic) of *Salmonella typhi*. A post mortem revealed that she (Mary Mallon) shed *Salmonella typhi* bacteria from her gallstones.
- Quarantine is a period of 40 days or a place in which those under quarantine are kept or a state of enforced isolation or Travelers and merchandise that had potentially been exposed to disease were isolated for a period of time to ensure that they weren't infected or a physical barrier that could only be crossed with permission.
- Vaccine is a substance used to stimulate the production of antibodies and provide immunity against one or several diseases.
- Vaccinations have resulted in dramatic declines in morbidity and mortality.
- Sanitation and hygiene, vaccination, and antibiotics are among the control measures responsible for this marked decrease.
- CDC, DHHS, WHO are agencies who aid the public in disease control, prevention, and education.



1a Health & Hygiene (H&H) Disease and Prevention