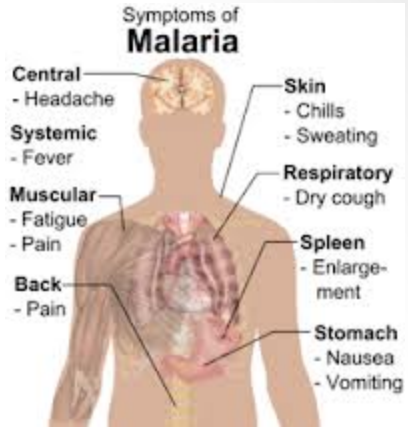
Notable Diseases

AP Environmental Science

Malaria



- Pathogen and/or Vector
  - Protozoa carried by mosquitos
- Health Impacts
  - Fever, chills. Kills millions each year
- Other important information
  - Medicine will cure, but hard to get in Africa. Mosquito nets prevent infection. DDT also prevents.

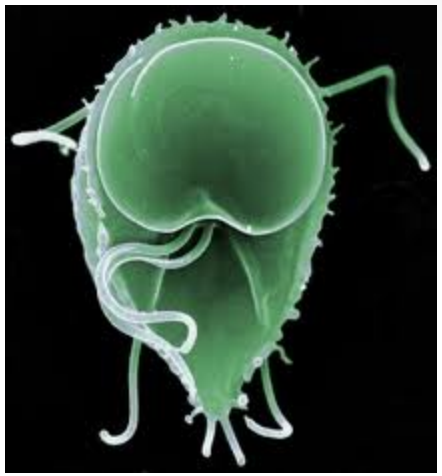
West Nile Virus

- Pathogen and/or Vector
  - Virus carried by mosquitos
- Health Impacts
  - Fever, chills. Can be deadly
- Other important information
  - Dead birds are 1st indicators of disease. “Newer” disease in USA

Cholera

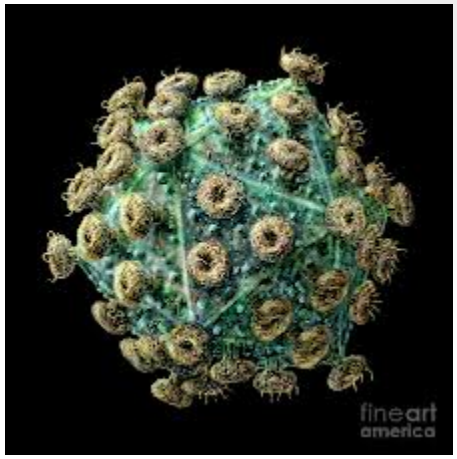
- Pathogen and/or Vector
  - Bacteria in water
- Health Impacts
  - Diarrhea and death
- Other important information
  - Eliminated in USA, but still in developing countries without clean water to drink

Giardia



- Pathogen and/or Vector
  - Protozoa in water
- Health Impacts
  - Diarrhea and sometimes death
- Other important information
  - In rivers and streams in USA. Hikers/backpackers need to filter water

HIV/AIDS



- Pathogen and/or Vector
  - Virus in blood and sexual secretions
- Health Impacts
  - Attacks the immune system. Deadly
- Other important information
  - Worldwide, but epidemic in Africa

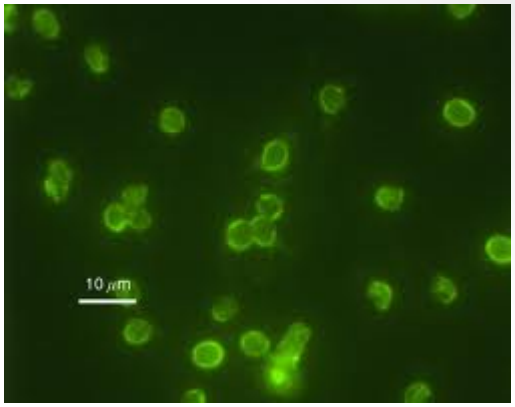
Food-borne illness

- Pathogen and/or Vector
  - E. Coli and Salmonella are two kinds (bacteria)
- Health Impacts
  - Vomiting, diarrhea, occassional death
- Other important information
  - Affects 48 million each year in US
  - Increasing due to industrialized agriculture

Yellow Fever

- Pathogen and/or Vector
  - Virus carried by mosquitos
- Health Impacts
  - Fever, chills, and death. Damages liver (turns people “yellow”)
- Other important information
  - “older disease”→ used to kill lots of people in tropical countries

Cryptosporidium

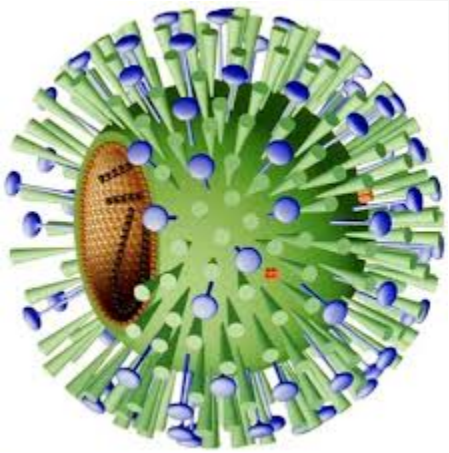


- Pathogen and/or Vector
  - Bacteria with hard capsule or shell
- Health Impacts
  - Diarrhea and death
- Other important information
  - Cannot be killed by chlorine. Needs to be “zapped” with ozone or UV. Killed 69 people in Milwaukee in 1993 with 400,000 sick.

Hepatitis A,B,C

- Pathogen and/or Vector
  - Virus in blood and feces
- Health Impacts
  - Jaundice –liver damage. Possible death
- Other important information
  - Vaccines available

Influenza



- Pathogen and/or Vector
  - Virus
- Health Impacts
  - Fever, chills. Kills thousands in USA each year (usually elderly)
- Other important information
  - H1N1 (swine flu) tends to infect young people

Urban Ecology has lead to higher disease risk

- Use Services
  - Day Care, cleaning services, food prep service, spa and beauty
- Restaurants and pre-made food
  - Increased dramatically. Levels of food-borne illness have skyrocketed despite better refrigeration and food preservation.

Urban Ecology has lead to higher disease risk

- Beauty parlor/Barbershops have increased services
  - Each extra service (waxing, mani/pedi, facial etc.) adds to additional reservoirs of pathogens, vectors and transmission risk.
- Health clubs and gyms
  - Mycobacterium is found in indoor pools and hot tubs.
  - Many pathogens are now chlorine-resistant.

Urban Ecology has lead to higher disease risk

- Globalization
  - Allows pathogens to “hitchhike” their way to new hosts in new parts of the world
- More urban dwellers
  - Any concentration of people will increase the risk of disease transmission.
  - Floods, El Nino, hurricanes, earthquakes (Haiti for example) in cities bring high risk of disease