GENERAL PRINCIPLES

- Incubation period
  - Time from exposure to disease
- Resistance
  - Individual differences in susceptibility to disease

AN OVERVIEW OF THE EPIDEMIOLOGY OF INFECTIOUS DISEASE

CLASSIFICATION OF INFECTIOUS DISEASE

- Clinical
- Microbiologic
- Means of transmission
- Reservoir in nature

BIOLOGIC CHARACTERISTICS OF THE ORGANISM

- Infectivity - the ability of an agent to cause infection in a susceptible host
- Pathogenicity - the ability of an agent to induce disease
- Virulence - the severity of the disease after infection

BIOLOGIC CHARACTERISTICS OF THE ORGANISM (2)

- Immunogenicity
  - The ability of an organism to produce an immune response after infection
- Inapparent infections
  - An infection that can be documented by culture by a person is asymptomatic
- Carrier state
  - An individual with an inapparent infection who transmits disease
- http://www.pbs.org/wgbh/nova/body/typhoid-mary-villain-or-victim.html

HOST-PARASITE RELATIONSHIP

- Natural History
  - Varies by organism
- Immune Response
  - Various levels of immunity
    - B Lymphocytes
    - Local Immunity
    - T Lymphocytes
    - Granulocytes
    - Innate immunity
TEMPORAL TRENDS

- Seasonal variation
- Annual variation
- Herd immunity