Occupational Exposure to Communicable Diseases

SAN DIEGO STATE UNIVERSITY
ENVIRONMENTAL HEALTH & SAFETY
(619) 594-6778
Communicable Diseases

- **Communicable Disease**
  - Transmitted from one person to another
  - Transmitted from one species to another
  - Spreads through contact with
    - Blood or other infectious bodily fluids
    - Nasal or sputum discharge
    - Objects that an infected person came into contact with
    - Vectors
Communicable Diseases

- Vector transmitted diseases
  - West Nile Virus – mosquitoes, birds
  - Scabies – microscopic mites

- Airborne Transmitted Disease
  - Tuberculosis
  - Avian Influenza (Bird Flu)

- Dermal Contact
  - Community MRSA
  - Flesh Eating Bacteria
West Nile Virus
(Vector-borne Disease)

- Transmission
  - Through bite by mosquito
  - Virus transmitted from infected bird to mosquito

- Symptoms
  - 80% - no symptoms
  - 20% - flu-like symptoms

- Occupational Exposure
  - Through mosquito bites
  - Contact with infected persons blood or other potentially infectious material
  - Handling of dead birds of a certain species

- Treatment
  - No proven treatment
  - Hospital care with intravenous fluids and respiratory assistance

- Reporting & Assessment of Dead Birds
Scabies

(Vector-borne Disease)

Transmission
- Transfer of mites (*Sarcoptes scabei*) from one person to another, but can also be spread through bedding, padded seats
- Contact must be prolonged

Symptoms
- Mites burrow into skin, causing dermal irritation
- Pimple-like irritations on webbing of fingers, elbows, shoulder blades
- Intense itching at night
- Develop sores from scratching

Treatment
- Medicated lotions
- Wash bedding/clothes in hot water and dry with hot air
Tuberculosis
(Airborne Disease)

- **Transmission**
  - Spreads from infected person to non-infected person through sputum droplets in the air
  - Sneezing, speaking, coughing
  - Contact must be prolonged; Hours of exposure to droplets

- **Symptoms**
  - Chest pain, fever, coughing up blood, weakness
  - Latent TB Infection vs TB Disease
    - Latent – TB infection with no symptoms, cannot spread to others
    - TB Disease – symptomatic for TB, capable of spreading the disease

- **Treatment**
  - Mantoux tuberculin skin test, chest X-ray if test is positive
  - Drug treatment for 6-12 months
  - Potential for Drug Resistant TB
Avian Influenza
(Airborne Disease)

- **Transmission**
  - Contact with infected birds with Avian Influenza Virus
  - Possible infected person to non-infected person through air transmission, currently very rare transmission route
  - Usually in Asian countries where poultry are housed with humans

- **Symptoms**
  - Fever, cough, eye infections, pneumonia
  - Only certain strains of Avian Influenza Virus can infect humans, but these strains mutate readily

- **Treatment**
  - Currently working on vaccinations for the different strains
  - Medications are quickly becoming obsolete due to quickly changing virus
Methicillin Resistant *Staphylococcus aureus*  
- Staph infection that is resistant to most antibiotics

- **Transmission**  
  - Skin to skin contact with sores  
  - Contaminated items  
  - Crowded living conditions

- **Symptoms**  
  - Boils, sores, pimples, abscesses  
  - Usually acquired in a hospital setting or institution

- **Treatment**  
  - Antibiotic cocktails  
  - Draining of abscesses or boils

- **Prevention**  
  - Practice good hygiene
Flesh Eating Bacteria
(Dermal Transmission)

Group A Streptococcus
- Necrotizing Fasciitis (NF)
- Streptococcal Toxic Shock Syndrome (STSS)

Transmission
- Direct contact of broken skin with infected person’s mucous
- Bacteria enter into a location not generally populated by bacteria, grow without competition or immune system attacks (muscles, blood stream, pleural sacs)

Symptoms
- NF – fever, severe pain, swelling at wound site
- STSS – fever, dizziness, confusion, flat red rash over large amount of body

Treatment
- Antibiotics for early detected illness
- NF – surgical removal of affected area
- Hyperbolic chambers