



# Occupational Exposure to Communicable Diseases

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# 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 scabiei*) 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 if 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



# Community MRSA

(Dermal Transmission)

## 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