Paraguay

**Common Diseases: Prevention, Signs/Symptoms, Treatment**

A. Communicable diseases

**Meningococcal meningitis**—spread from person to person by exchanging respiratory and throat secretions during close or lengthy contact
- Prevention: vaccination, avoid close contact with infected persons
- Symptoms: stiff neck, high fever, sensitivity to light, confusion, headache, vomiting
- Treatment: antibiotics (ceftriaxone is preferred)

**HIV**—caused by contact of between broken skin, wounds, or mucous membranes and HIV infected blood or contaminated bodily fluids
- Prevention: avoid high risk behaviors such as needle sharing and having unprotected sex
- Symptoms: fever, headache, tiredness, enlarged lymph nodes (flu like),
- Treatment: antiretroviral therapy

B. Infectious Disease

**Hepatitis A** – transmitted by virus being ingested by mouth through contact with objects, food, or drinks
- Prevention: vaccination, washing hands after going to the bathroom and before eating, as well as after coming into contact with diapers or stool. Most commonly contaminated foods are fruits, vegetables, shellfish, ice, and water—be cautious when consuming.
- Symptoms: fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, joint pain, jaundice. Symptoms appear anywhere from 2 to 6 weeks after exposure
- Treatment: no special treatment for Hepatitis A—proper nutrition and hydration can help. Avoid alcohol, prescription pills, supplements, and over the counter medications that can damage the liver.

**Hepatitis E**—transmitted through fecal contamination of water, mainly in areas of poor sanitation
- Prevention: follow safe food and water guidelines and practice cleanliness and hygiene (wash hands or use alcohol based hand sanitizer often)
- Symptoms: jaundice, fatigue, abdominal pain
- Treatment: usually resolves on its own, no retroviral therapy available. Patients are advised to get rest and adequate nutrition and fluids

**Typhoid Fever**—transmitted by consuming food or beverages that have been handled by a person who is shedding Salmonella Typhi or if sewage containing the bacteria interacts with food or beverages
- Prevention: vaccination, hand washing, boil water or buy bottled water, avoid ice/raw food and vegetables
Symptoms: fever (as high as 103/104), weakness, stomach pains, loss of appetite, rash present in some cases

Treatment: antibiotics (fluoroquinolones, ceftriaxone, and azithromycin)

**Bacterial and Protozoal Diarrhea**—caused by ingesting food or beverages that have come in contact with feces

- Prevention: wash hands or use alcohol based hand sanitizers, antimicrobial drugs, Pepto Bismol (2oz liquid or 2 chewable tablets 4 times per day—not recommended for children younger than 12)
- Symptoms: abrupt onset of diarrhea, nausea and vomiting, bloating, malaise, explosive/painful gas, cramps, loss of appetite
- Treatment: antibiotics, antimotility agents (symptomatic relief), oral rehydration therapy, for protozoan caused diarrhea: metronidazole, tinidazole, and nitazoxanide

C. Vector-borne diseases

**Malaria** – caused by parasites passed to humans via mosquito bite

- Prevention: sleep under insecticide coated mosquito nets, wear protective clothing, DEET, anti-malarial medicine (Lariam)
- Symptoms: high fever, sweats, headache, body aches, nausea/vomiting
  - *Symptoms can be cyclical, receding and peaking every 48-72 hours*
- Diagnosis: + blood smear, CBC indicating anemia, abnormal liver function tests (LFTs)
- Treatment: anti-parasitic drug regimen with follow-up testing and treatment as indicated

**Dengue** – caused by a virus passed to humans via mosquito bite

- Prevention: sleep under insecticide coated mosquito nets, wear protective clothing, DEET
- Symptoms: high fever, severe joint pain, headaches, pain behind the eyes, extreme fatigue, nausea/vomiting, rash 2-5 days after onset of fever
- Treatment: manage symptoms with acetaminophen, fluids, rest

**Yellow Fever** – caused by a virus transmitted to humans via mosquito bite

- Prevention: Use insect repellent (DEET), wear protective clothing such as long sleeves/pants and socks, spraying clothing with permethrin provides extra protection, peak mosquito hours are dusk to dawn so be sure to take extra precautions during daylight hours
- Symptoms: initial symptoms include sudden onset of fever, chills, severe headache, back pain, general body aches, nausea, vomiting fatigue and weakness (most people improve after this initial presentation of symptoms), severe form of the disease is characterized by high fever, jaundice, bleeding
- Treatment: manage symptoms with rest, fluid, and use of pain relievers and medication to reduce fever (nonsteroidal anti-inflammatory drugs such as ibuprofen should be avoided as they may increase the risk of bleeding)

**Plague**—transmitted by fleas and airborne contact with infected persons
- Prevention: reduce rodent habitat around the home, wear gloves when coming in contact with rodents, use insect repellent containing DEET and avoid dogs and cats that roam free in endemic areas
- Symptoms: fever, headache, painfully swollen lymph nodes
- Treatment: antibiotics

**Chikungunya**—transmitted by infected mosquitoes
- Prevention: protect against mosquitoes with insect repellent containing DEET, wear long sleeves and pants when possible during the daytime when mosquitoes are most active
- Symptoms: fever, rash, headache, muscle pain, severe joint pain—can result in persistent arthritis
- Treatment: symptomatic—rest, fluids, acetaminophen to reduce fever and headache (avoid NSAIDS)

**Schistomiasis**—when people suffering from **schistosomiasis** contaminate freshwater sources with their excreta containing parasite eggs, which hatch in water. People become infected when larval forms of the parasite penetrate the skin during contact with infested water
- Prevention: avoid swimming or wading in freshwater, drink safe water, towel off vigorously after accidental water exposure
- Symptoms: rash, fever, cough, chills, muscle aches
- Treatment: prescription medication (Praziquantel)

**D. Reproductive Issues:**

- Abortion is illegal under all circumstances, except when the mother is in immediate danger
  - 23 out of 100 deaths of young women are the result of illegal abortions
- Use of modern contraceptives such as birth control, IUDs, etc. is above 60%
- Zika virus can result in birth defects in pregnant women

**E. Chronic diseases/problems:**

- **Ischemic Heart Disease**—14.59% of deaths. Caused by buildup of plaque in arteries
  - Symptoms sometimes include chest pain, but may not be symptomatic
  - Treatment: lifestyle changes, medications, angioplasty, surgery
- **Chronic kidney disease**—kidneys begin failing causing waste to build up in the body
  - Can use medications to manage symptoms, eventually dialysis/transplant are needed
- **Stroke**
  - Clinical criteria = BMI >/= 30
  - Self treatment = prevent risk factors such as obesity, hypertension, diabetes, and smoking
- **Tobacco use**
  - Regular/daily use of tobacco products
  - Self treatment = taper down, avoid triggers, exercise, behavior replacement
• Diabetes/Prediabetes
  o Clinical criteria:
    ▪ A1C >/= 6.5%
    ▪ Fasting plasma (blood) glucose >/= 125 mg/dL
    ▪ Random plasma (blood) glucose >/= 200 mg/dL
  o Symptoms: frequent urination, sweet smelling sweat/urine/breath, extreme thirst, extreme fatigue, blurry vision, slow healing of cuts/bruises, tingling/pain/numbness in hands/feet
  o Self treatment = weight loss, abstain from alcohol, increase nutrient dense foods (vegetables, lean protein), avoid “empty” calories - packaged foods, sugar, flour, “white” foods

• Lung Cancer
  o Prevention: Avoid smoking and engage in healthy behaviors such as limited alcohol consumption, eating healthfully, exercising regularly, etc.