**ZOONOSIS د.خلود حمدان**

**Fungal Zoonosis Diseases**

**zoonosis disease** is a disease that can be transmitted from an animal to a human. Or **Zoonosis is** any infectious disease that may be transmitted from animals to humans, or from humans to animals

**Fungal Diseases**:

# Dermatophytosis (Ringworm)

The most famous fungal zoonosis disease is known as **Dermatophytosis**, or more commonly known as ringworm. The name It's not caused by a worm, . They are called "ringworm" due to the characteristic red ringed appearance of the infection in humans and animals.

it's caused by fungi known as dermatophytes.



**Figure 1. Ringworm lesions on a human arm**.

## Ringworm is a general term used to describe a number of fungal skin infections in animals and man caused by Three different types of fungi can cause this infection. They are called *trichophyton*, *microsporum*, and *epidermophyton*. It’s possible that these fungi may live for a long period as spores in soil. Humans and animals can get a ringworm after direct contact with this soil. The infection can also spread through contact with infected animals or humans.

Children are most commonly affected, although people of any age may develop these characteristic lesions.

**Symptoms**

Ringworm is a fungal infection that grow on **keratin**, the structural material of the outer layer of the skin, hair, and nails. When a person gets ringworm from an animal, including a dog, cat, or other types , a red circular rash may appear on their body. Sometimes it itches and sometimes it doesn't. The red circle sometimes surrounds by area of skin that looks more normal at the center.

**Transmission**  This fungal diseases is spread to people by contact with the fungal organisms. However, it is not necessary to have direct contact with an infected animal, as the fungal spores can live for months on bedding, brushes, clothes etc.

**Prevention** The prevention of infection can by careful handling of any animals with skin lesions, and good personal hygiene. It should also be remembered that infected people might spread ringworm to their animals

# Blastomycosis

Blastomycosis is a fungal infection usually acquired by breathing in the spores of a fungus (**Blastomyces dermatitidis**) that grows in moist soils, particularly in wooded areas and along waterways.

**Transmission**

* Blastomycosis is caused by inhaling airborne spores into the lungs after contaminated soil and is disturbed by activities such as wood clearing.
* You can only get Blastomycosis from the fungus spores that is in soil or spores in the air.
* It is spread from person-to-person or from animal-to-person.

**Symptoms**

* Symptoms of Blastomycosis may include:
  + Fever
  + Cough, or cough with blood
  + Shortness of breath
  + Muscle aches
  + Bone pain
  + Back pain
  + Chest pain
  + Weight loss
  + night sweats
  + Skin painful

**Diagnosis**

Blastomycosis may be diagnosed by:

* + 1- Culture (*Blastomyces* can be isolated from saliva, bronchial washes, lung biopsies, skin, or other infected tissues)
  + 2- Smear (direct microscopic identification)
  + 3- Histopathology of surgical biopsies
  + 4- serum antigen test .
  + 5- Radiology (chest X-ray, bone X-ray)
  + 6- Serum antibody test .

**Treatment**

* Blastomycosis can be treated with anti-fungal medications. Anti-fungal treatment is usually continued for 6 months and recovery is usually complete.
* Antibiotics do not work against Blastomycosis.

# Histoplasmosis

Histoplasmosis is an infection caused by a fungus called **Histoplasma**. The fungus lives in the environment, particularly in soil that contains large amounts of bird or bat droppings.

**Transmission**  People can get Histoplasmosis after breathing in the microscopic fungal spores from the air. Many people who get direct Histoplasmosis from the bird without medication, but in some people, such as those who have weakened immune systems, the infection can become severe.

**Symptoms**:

* Fever
* Cough
* Fatigue or tired
* Headache
* Chest pain
* Body aches

Symptoms of Histoplasmosis may appear between 3 and 17 days after a person breathes in the fungal spores.

In some people, usually those who have weakened immune systems, Histoplasmosis can develop into a lung infection, or it can spread from the lungs to other parts of the body, such as the central nervous system (the brain and spinal cord).

**Treatment**

Histoplasmosis can be treated with anti-fungal medications that long action .