

# Medical Mycology

By

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# Lecture 1: Medical Mycology

- **Mycoses & bacterial diseases**
- **Definitions**
- **Disease pathway**
- **Classes of medical fungi**
- **Environment of pathogenic fungi**
- **Example of environment requirement**
- **Mycoses divisions**

# Lecture 2: Virulence factors

- **Important of Virulence factors**
- **Types of virulence factors:**
  - 1- Spore size
  - 2- Temperature
  - 3- Pigments
  - 4- Cell wall protein
  - 5- Adaptation with nutrients in human body
  - 6- Enzymes
  - 7- Immunosuppressive materials
  - 8- Dissemination
  - 9- Mycotoxin production
  - 10- Strain differences
  - 11- Transformation from spore to hyphae



## Lecture 3: The human risk factors

- 1- Immunosuppressive drugs
- 2- Neutropenia
- 3- Hematopoietic stem cell transplantation
- 4- Solid organ transplantation
- 5- Viral infection
- 6- Debilitate of mucociliary layer
- 7- Lung cavitations
- 8- Immunocompetent individuals





# Lecture 4: Transporting methods of fungal spores

- 1- Air
- 2- Water
- 3- Animals
- 4- Contaminated foods
- 5- Contaminated materials



# Lecture 5: Diagnostic Methods

- **Collection methods of clinical samples**
- **Diagnostic methods**
- **General recommendation for control or prophylaxes of fungal infection**




## Lecture 6:

# Opportunistic mycoses: Candidiasis

- **Candidiasis**
- **Etiology**
- **Candidiasis types**
- **Oral Candidiasis**
- **Candidal vulvovaginitis**
- **Cutaneous candidiasis: Paronychia**
- **Antibiotic Candidiasis**
- **Systemic Candidiasis**
- **Treatment**





# **Lecture 7:**

## **Opportunistic mycoses: Aspergillosis**

- **Types**
- **Etiology**
- **Diagnosis**
- **Treatments**





# Lecture 8: Superficial Mycoses

- Diseases
- Tinea versicolor
- Etiology
- Symptoms
- Diagnosis
- Treatment



## Lecture 9: Piedra

- **Black piedra**
- **Clinical features of black piedra**
- **White piedra**
- **Source**
- **Clinical features**
- **Diagnosis**
- **Treatment**



# Lecture 10: Cutaneous Mycoses

- **Dermatophytoses**
- **Types**
- **Symptoms**
- **Etiology**
- **Diagnosis**
- **Preventions**
- **Treatments**





# **Lecture 11: Subcutaneous mycoses (1)**

- **Diseases of Subcutaneous mycoses**
- **Chromomycosis or Chromoblastomycosis**
- **Mycetoma**
- **Sporotrichosis**



## Lecture 12: Subcutaneous mycoses (2)

- **Rhino-entomophthoromycosis**
- **Phaeohyphomycosis**
- **Lobomycosis**



# Lecture 13: Systemic mycoses

- Diseases
- Histoplasmosis
- Blastomycosis
- Coccidioidomycosis
- Penicilliosis





## **Lecture 14:Antifungal agents (1)**

- **Differ from antibacterial**
- **Types of antifungal agents**
- **Polyene agents**
- **Mechanism of action**
- **Amphotericin B**
- **Nystatin**



## **Lecture 15:Antifungal agents (2)**

- **Azole agents**
- **Mechanism of action**
- **Ketoconazole**
- **Allylamines**
- **Terbinafine**
- **Echinocandins**
- **Caspofungin**
- **Other antifungal agents**
- **Griseofulvin**