



## Mucormycosis Fungal Infection

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 [drishtias.com/printpdf/mucormycosis-fungal-infection](https://drishtias.com/printpdf/mucormycosis-fungal-infection)

### Why in News

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Recently, doctors have witnessed increased cases of **Covid-19 triggered Mucormycosis**.

The **reduced immunity** of Covid-19 patients **makes them more susceptible** to this **fungal infection**.

### Key Points

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- **Mucormycosis** is also called **Black Fungus** or **Zygomycosis** and is a **serious but rare fungal infection** caused by a **group of molds called mucormycetes**.
- **Types of Mucormycosis:**
  - **Rhinocerebral (Sinus and Brain) Mucormycosis:** It is an infection in the sinuses that can spread to the brain. It is the most common in people with uncontrolled diabetes and in people who have had a kidney transplant.
  - **Pulmonary (Lung) Mucormycosis:** It is the most common type of mucormycosis in people with cancer and in people who have had an organ transplant or a stem cell transplant.
  - **Gastrointestinal Mucormycosis:** It is more common among young children than adults, especially premature and low birth weight infants less than 1 month of age, who have had antibiotics, surgery, or medications that lower the body's ability to fight germs and sickness.
  - **Cutaneous (Skin) Mucormycosis:** It occurs after the fungi enter the body through a break in the skin (for example, after surgery, a burn, or other types of skin trauma). It is most common among people who do not have weakened immune systems.
  - **Disseminated Mucormycosis:** It occurs when the infection spreads through the bloodstream to affect another part of the body. The infection most commonly affects the brain, but also can affect other organs such as the spleen, heart, and skin.

- **Transmission:**
  - It occurs through **inhalation, inoculation, or ingestion of spores** from the environment.
    - For example, the lung or sinus forms of the infection can occur after someone inhales the spores from the air.
  - Mucormycosis **does not spread between people or between people and animals.**
  - It **usually occurs in people who have health problems or take medicines** that lower the body's ability to fight germs and sickness.
- **Symptoms:**
  - General symptoms are **one-sided facial swelling and numbness, headache, nasal or sinus congestion, black lesions** on nasal bridge or upper inside of the mouth, **fever, abdominal pain, nausea and gastrointestinal bleeding.**
  - Disseminated mucormycosis typically occurs in people who are already sick from other medical conditions, so it can be **difficult to know which symptoms are related to mucormycosis.** Patients with disseminated infection in the brain can develop **mental status changes or coma.**
- **Diagnosis and Testing:**
  - Healthcare providers **consider medical history, symptoms, physical examinations, and laboratory tests** when diagnosing mucormycosis.
  - If suspected of the infection, healthcare providers collect a **sample of fluid from the respiratory system** or may **perform a tissue biopsy.**
    - In tissue biopsy, a small sample of affected tissue is analysed in a laboratory for evidence of mucormycosis under a microscope or in a fungal culture.
- **Treatment:**
  - It needs to be treated with **prescription antifungal medicine** to prevent mucormycosis and other mold infections.
  - Often, mucormycosis **requires surgery to cut away the infected tissue.**

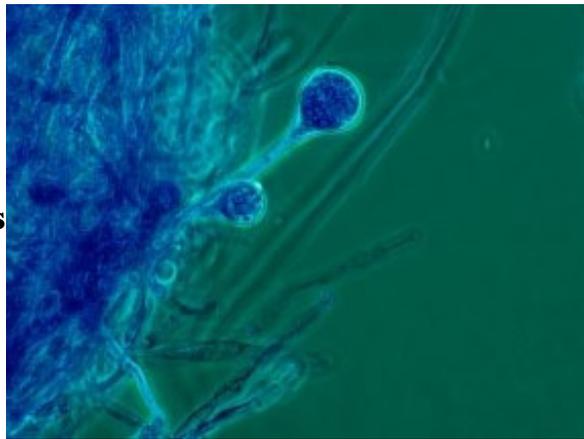
- **Prevention and Cure:**

- There is **no vaccine to prevent** mucormycosis and it is **difficult to avoid breathing in fungal spores** because the **fungi are common in the environment.**

- For people who have weakened immune systems, there may be some **ways to lower the chances of developing mucormycosis.**

These include **avoiding areas with a lot of dust** like construction or excavation sites, avoiding direct contact with water-damaged buildings and flood water after hurricanes and natural disasters and **avoiding activities that involve close contact to soil.**

- **Early detection** can prevent loss of eyesight, nose or jaw through clinical intervention.



**Mucormycetes**

- Mucormycetes, the **group of fungi that cause mucormycosis**, are **present throughout the environment**, particularly in soil and in association with decaying organic matter, such as leaves, compost piles, and animal dung.
  - Several different types of fungi can cause mucormycosis and belong to the **scientific order *Mucorales*.**
  - The most common types that cause mucormycosis are ***Rhizopus species*** and ***Mucor species*.**
- They are **more common in soil than in air**, and **in summer and fall than in winter or spring.**
- These fungi are **not harmful to most people but for people who have weakened immune systems**, breathing in micromycetes spores can cause an infection.

**Source: IE**