

## **Indoor Mold Information**

### **Alternaria**

Extremely widespread and ubiquitous. Outdoors it may be isolated from soil, seeds, and plants. It is commonly found in outdoor samples. It is often found in carpets, textiles, and horizontal surfaces in building interiors. Often found on window frames. It may be related to baker's asthma. It has been associated with hypersensitivity pneumonitis, sinusitis, dermatomycosis, onychomycosis, subcutaneous phaeohyphomycosis, and invasive infection. Common cause of extrinsic asthma (immediate type hypersensitivity: Type I). Acute symptoms include edema and bronchospasm. Chronic cases may develop pulmonary emphysema.

### **Aspergillus**

This species is considered common to indoor environments. It is widespread in the soil and on plants, and is also considered a common contaminant of food. It has a musty odor. It is reported to be allergenic. It is commonly being implicated in pulmonary disease in immunocompromised hosts. It has also been reported to cause skin infections.

### **Aureobasidium**

A cosmopolitan fungus with the main habit apparently on the aerial parts of plants. Frequently found in moist environments. This fungus should be considered allergenic. This species has been associated with dermatitis peritonitis, pulmonary infections, and invasive diseases in AIDS patients. Probably acquired by traumatic implantation. May be recovered as contaminant from human cutaneous sites. No toxic diseases have been documented to date.

### **Bipolaris**

A widespread fungus that is most frequently associated with grasses, plants material, and soil. Should be considered allergenic. Has been reported as an infrequent agent of phaeohyphomycosis, particularly fungal sinusitis. It can occasionally cause a corneal infection of the eye.

### **Botrytis**

It is parasitic on plants, vegetables, and soft fruits but may also be found in soil. Reported to be allergenic. No toxic or invasive diseases have been documented to date.

### **Chaetomium**

Commonly found on a variety of substances containing cellulose, including paper and plant compost. It can readily be found on the damp or water-damaged paper in drywall. Should be considered allergenic. The thermophilic, neurotropic nature of this organism suggests it is a potentially aggressive pathogen. No toxic diseases have been documented to date.

### **Cladosporium**

Commonly found on dead plants, woody plants, food, straw, soil, paint, and textiles. Common cause of extrinsic asthma (immediate-type hypersensitivity: Type I). Acute symptoms include edema and bronchospasm. Chronic cases may develop pulmonary emphysema, reported to be allergenic.

### **Curvularia**

Reported to be allergenic. It may cause corneal infections, mycetoma, and infections in immunocompromised hosts.

### **Epicoccum**

A common allergen found in plants, soil, grains, textiles, and paper products. Secondary invader of damaged plant tissue. Common cause of Type I allergies (hay fever, asthma). No cases of infection have been reported in humans or animals.

### **Fusarium**

A common soil fungus. It is found on a wide variety of plants. The fungus also has been found in humidifiers. Symptoms may occur either through ingestion of contaminated foods or inhalation of spores. In severe cases, the fungus can produce hemorrhagic syndrome in humans. This is characterized by nausea, vomiting, diarrhea, dermatitis, and extensive internal bleeding. Reported to be allergenic. Frequently involved in eye, skin, and nail infections.

### **Geotrichum**

A common contaminant of grains, fruits, dairy products, paper, textiles, soil, and water. Often present as part of the normal human flora. The species *Geotrichum candidum* can cause a secondary infection (geotrichosis) in association with tuberculosis. This rare disease can cause lesions of the skin, bronchi, mouth, lung, and intestine.

### **Nigrospora**

Rarely found growing indoors. Often found on decaying plant material and soil. Reported to be allergenic. Common cause of Type I allergies (hay fever, asthma).

### **Penicillium**

Commonly found in soil, food, cellulose, and grains. It is also found in paint and compost piles. It may cause hypersensitivity pneumonitis and allergic alveolitis in susceptible individuals. It is reported to be allergenic. Common cause of extrinsic asthma (immediate-type hypersensitivity: Type I). Acute symptoms include edema and bronchospasm. Chronic cases may develop pulmonary emphysema.

### **Periconia**

Most commonly identified outdoor fungus. The outdoor numbers reduce in winter. Often found indoors in numbers less than outdoors. It is a common allergen. It is commonly found on the surface of fiberglass duct liner in the interior of supply ducts. A wide variety of plant life serves as food sources for this fungus. It is found on dead plants, woody plants, food, straw, soil, and textiles. Common cause of extrinsic asthma. Acute symptoms include edema and bronchospasm. Chronic cases may develop pulmonary emphysema.

### **Pithomyces**

Grows on dead grass and plants. Prolonged exposure can cause facial eczema. Reported to be allergenic. Causes Type II allergies (hay fever type symptoms, asthma).

### **Rhizomucor/Mucor**

This fungus is reported to be allergenic. It may cause mucorosis in immunocompromised individuals. The sites of infection are the lung, sinus, brain, eye, and skin. Infection may have multiple sites.

### **Rhizopus**

This fungus is reported to be allergenic. It may cause mucorosis in immunocompromised individuals. It is often linked to occupational allergy. The sites of infections are the lung, nose, sinus, eye, and skin. Infection may have multiple sites.

### **Rhodotorula**

Rhodotorula is commonly identified in indoor air samples. Rhodotorula is reported to be allergenic. It can cause problems if a person has had previous exposure and developed hypersensitivity. Yeast can be allergenic to susceptible individuals when present in sufficient concentrations.

### **Stachybotrys**

Several strains of this fungus (*S. atra*, *S. chartarum*, and *S. alternans* are synonymous) may produce a trichothecene mycotoxin (satratoxin H) which is poisonous by inhalation. The toxins are present on the fungal spores. This is a slow-growing fungus on media. It does not compete well with other rapidly growing fungi. The dark-colored fungus grows on building materials with a high cellulose content and a low nitrogen content. Individuals with chronic exposure to the toxin produced by this fungus reported cold and RU symptoms, sore throats, diarrhea, headaches, fatigue, dermatitis, intermittent local hair loss, and generalized malaise. The toxins produced by the fungus will suppress the immune system, affecting the lymphoid tissue and bone marrow. The mycotoxin is also reported to be a liver and kidney carcinogen. Affects by absorption of the toxin in the human lung are known as pneumomycosis. This organism is rarely found in outdoor samples. It is usually difficult to find in indoor air samples unless it is physically disturbed. The spores are in a gelatinous mass. The spores will die readily after release. The dead spores are still allergenic and toxigenic.

### **Stemphylium**

Isolated from dead plants, cellulose material, and soil. Common in air samples in the late summer and fall. Certain species can occur as leaf-spotting parasites of hosts such as tomatoes and other plants. Reported to be allergenic. Often the cause of sinusitis, hay fever, and asthma. Can also cause keratomycosis, skin infections, osteomyelitis, pulmonary disease, and nasal septum infections.

### **Trichoderma**

It is commonly found in soil, dead trees, pine needles, paper, and unglazed ceramics. It often will grow on other fungi. It produces antibiotics that are toxic to plants. It has been reported to be allergenic. It readily degrades cellulose.

### **Ulocladium**

Reported to be allergenic. Isolated from dead plants, cellulose materials, and textiles. Causes Type II allergies (hay fever, flu-like symptoms).