Mold-Related Hypersensitivity Pneumonitis

Pulmonary Fibrosis Foundation™

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What is mold-related hypersensitivity pneumonitis?

Mold-related hypersensitivity pneumonitis (HP) is a form of interstitial lung disease (ILD) caused by a reaction to breathing in mold particles (spores, mold fragments, and mold-containing dusts) generally in a damp or water-damaged environment. Even though it is caused by mold, it is not an infection and is not contagious. Instead, it is the immune system's response to the mold that causes the disease. In general, it is very rare to develop hypersensitivity pneumonitis from mold, and small amounts of mold likely do not cause disease.

What are the symptoms of mold-related hypersensitivity pneumonitis?

The most common symptoms of mold-related HP are cough and shortness of breath. Some individuals with mold-related HP first experience acute symptoms that occur after exposure to mold and may even require hospitalization in severe cases. Other patients experience symptoms that come on gradually over months or years.

What causes mold-related hypersensitivity pneumonitis?

Mold is a type of fungus and is normally present in the air, but when wet conditions have caused mold to grow on surfaces indoors, concentration levels of mold in the indoor air can be very high. Types of mold species include Cladosporium, Penicillium, Aspergillus, Alternaria, and Aureobasidium, as well as many others. In most cases, mold exposure does not lead to any respiratory symptoms or disease. However, in some individuals mold inhalation can cause activation of the immune system which is called sensitization. In sensitized individuals, mold exposure can trigger pulmonary symptoms, particularly when there is extensive mold damage and mold is inhaled in high concentrations. Bacteria can also grow in wet or humid environments along with mold and may cause HP in sensitized people. Mold exposure may occur at home or at work. Exposure to mold may also occur through wind instruments, humidifiers, wet wood or saw dust, farming, or composting.

How is mold-related hypersensitivity pneumonitis diagnosed?

The most important clue to diagnosing mold-related HP is a good clinical history, including exposures in the home or work environment and whether symptoms occur when the person is in these environments. If other individuals who are also in these settings have similar symptoms, that is another clue that the environment is the cause. Your doctor may also take a blood sample to test for sensitivity to several molds and bacteria. A positive test generally means that you have been sensitized or exposed to a particular antigen but does not necessarily indicate that your lung inflammation or scarring is due to mold-related HP. A negative test does not exclude a diagnosis of HP.

HP can take a nonfibrotic (inflammatory) or fibrotic (scar) form, and this can be identified with a specialized lung X-ray called a high-resolution CT scan (HRCT). Sometimes a bronchoscopy or a surgical lung biopsy may be necessary to make the diagnosis.

How is mold-related hypersensitivity pneumonitis treated?

Identifying and eliminating the exposure is an important part of treatment of HP. In mold-related nonfibrotic HP, individuals often improve when the exposure is removed, sometimes along with medications such as corticosteroids. In patients with fibrotic HP, sometimes treatment with corticosteroids or other anti-inflammatory medications such as azathioprine and mycophenolate, or an antifibrotic medication may be recommended. Patients with nonfibrotic HP are more likely to improve with treatment or exposure removal than patients with fibrotic HP (HP with scarring on CT scan). Some

patients with fibrotic HP due to mold may experience some improvement or may stabilize with mold remediation. Unfortunately, some patients with fibrotic HP related to mold may continue to progress even when exposure stops. Mold-related HP is not treated with antibiotics or antifungal therapy. Pulmonary rehabilitation, supplemental oxygen, smoking cessation, routine vaccinations (such as COVID-19, influenza and pneumonia vaccination) may be useful in some patients living with mold-related hypersensitivity pneumonitis.

You can learn more about supplemental oxygen at **pulmonaryfibrosis.org/oxygen.**

You can learn more about pulmonary rehabilitation at **pulmonaryfibrosis.org/PR.**

Lung transplantation may be an appropriate treatment for some people living with mold-related HP when scar tissue is present. Early evaluation for lung transplant is important because the process involves a series of appointments to provide the patient with information about transplantation and to determine if they are an appropriate candidate.

What is my prognosis?

Mold-related HP may be nonfibrotic (inflammatory) and may improve with either treatment or removal from exposure. In individuals with scarring, exposure removal may help stabilize disease and occasionally improve disease. Chronic scarring (fibrosis) may build up and progress even when the exposure is no longer present. As mentioned, medications such as corticosteroids, azathioprine, mycophenolate and antifibrotics may help stabilize or slow the disease process. No one can predict exactly how long you will live with mold-related hypersensitivity pneumonitis. Everyone is different. Your doctor can give you more detailed information about your prognosis.

Are there experimental therapies available?

There may be experimental research opportunities available. You can search for research studies closest to you on our PFF Clinical Trial Finder at **trials.pulmonaryfibrosis.org.**

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