

## WHAT IS HYPERSENSITIVITY PNEUMONITIS?

by American Lung Association

**H**ypersensitivity pneumonitis (also called allergic alveolitis) is a disease in which the air sacs (alveoli) of the lungs become inflamed when certain dusts are inhaled to which the person is sensitized or allergic.

These dusts contain organic substances, such as fungus spores from moldy hay or the droppings of birds. When a person inhales such dusts the first time, no problem is noticed. But, after repeated exposure to the dust some people may develop symptoms. The tiny air sacs in the lung known as alveoli become inflamed, their walls fill with white blood cells, and sometimes the sacs fill with fluid. If the disease recurs as a result of continued or repeated exposure to the offending dusts, parts of the lung may develop fibrous scar tissue and can no longer function normally in breathing.

### WHAT ARE THE SYMPTOMS?

The symptoms of an acute attack are similar to those of the flu and appear some 4-6 hours after the person breathes the offending dust. These symptoms include chills, fever, dry cough, shortness of breath, a tight feeling in the chest, and tiredness. The symptoms may persist for as little as 12 hours or as long as 10 days. Between attacks the person may have no symptoms and feel quite normal.

After repeated exposure to the

dust, chronic cough may develop with excessive sputum production containing pus, and eventually there may be chronic shortness of breath. The person may also show loss of appetite and weight loss.

### WHO GETS HYPERSENSITIVITY PNEUMONITIS?

Hypersensitivity pneumonitis occurs most often in people exposed to certain organic dusts in their daily work or living, especially dusts which contain fungus spores from mold.

Only a small proportion of people who are exposed, perhaps 5 to 20 percent, develop the disease. When there is frequent exposure to high concentrations of the offending substances, the likelihood of developing hypersensitivity pneumonitis is greatest.

### WHAT CAUSES HYPERSENSITIVITY PNEUMONITIS?

The disease is caused by organic material that is inhaled as a fine dust. Sensitization (allergy) develops over a period of several months to a number of years.

Farmer's lung is the best-known example. It is caused by an organism that grows on hay, straw, or grains, and by other organic materials found on farms. Also known to cause hypersensitivity pneumonitis are dusts from moldy sugar cane and barley, maple bark, cork, animal hair, bird feathers and droppings, mushroom compost, coffee beans, and paprika. Often the disease is named for the occupations: for example mushroom-worker's lung or paprika-splitter's lung. The organism of farmer's lung also grows in the water of both commercial and home humidification systems, particularly if they are not adequately maintained.

### HOW IS HYPERSENSITIVITY PNEUMONITIS DIAGNOSED?

A careful, detailed history is

necessary so that the occurrence of symptoms can be related to environmental exposure. Laboratory tests of the patient's blood and identification of specific molds from material at the workplace may help. Chest X-ray films and lung function tests may show effects of the disease during acute episodes or in the chronic stage of the disease - but they may be normal between episodes when the patient is without symptoms. Also chest X-ray and pulmonary function test results are not specific for hypersensitivity pneumonitis, and positive results may be due to other causes. Inhalation of the materials to which the person is sensitive (challenge test) may be necessary to confirm the diagnosis. The challenge test should be done only under the expert medical supervision of a specialist. Sometimes, a lung biopsy is needed to distinguish it from other lung diseases.

### IS HYPERSENSITIVITY PNEUMONITIS PREVENTABLE?

Properly dried and stored farm products are unlikely to cause hypersensitivity pneumonitis because the particular organism causing farmer's lung grows only in moist conditions. Other approaches to prevention are to reduce exposure by proper ventilation and the use of respiratory protection (masks).

If a worker begins to have symptoms of hypersensitivity pneumonitis due to occupational exposure, the process can be stopped if it is identified early enough. Permanent lung damage is prevented by eliminating the exposure. If control measures do not work or are not feasible, it may be necessary to change jobs, even though doing so may be difficult for many reasons. Therefore the medical necessity for a change should be determined only after careful evaluation to establish the diagnosis and specific cause.

### WHAT CAN BE DONE TO TREAT HYPERSENSITIVITY

### PNEUMONITIS?

Avoidance of the offending dust is the single most important measure because in the early stages the disease is completely reversible.

Most drugs are of limited value in treatment; antihistamines and bronchodilators are ineffective. Steroids can relieve the symptoms of acute attacks but do not cure the disease. Recovery from acute attacks may take as long as three weeks. Residual lung damage in the form of [pulmonary fibrosis](#) is permanent and may occur even after symptoms have disappeared. Avoiding exposure in the first place eliminates any possibility of later permanent damage.

### DOES SMOKING AFFECT HYPERSENSITIVITY PNEUMONITIS?

There is no evidence that cigarette smoking helps cause hypersensitivity pneumonitis. It may, however, aggravate the symptoms of a person who has the disease. And smokers are likely to get complicating lung diseases, such as emphysema, chronic bronchitis, or lung cancer

<http://www.lungusa.org/site/pp.asp?c=dvLUK9O0E&b=849121>