

OCCUPATIONAL ASTHMA

INTRODUCTION

Occupational asthma is a reversible narrowing of the airways caused by inhaling work related particles or vapors that act as irritants or cause an allergic reaction. Many substances in the workplace can cause narrowing of the airways, which makes breathing difficult. Some people are particularly sensitive to airborne allergens, some develop disease from very high exposures to airborne irritants even if they do not have an allergy, and some develop building-related illness. Examples of workers at risk for occupational asthma from exposure to allergens include animal handlers and bakers.

SYMPTOMS

Occupational asthma may cause shortness of breath, tightness in the chest, wheezing, and coughing.

Sometimes people show signs of allergy to dust at work, with symptoms of sneezing, runny nose, and watery eyes. For some people, wheezing at night is the only symptom. Symptoms may develop during work hours but often do not start until a few hours after work. In some people, symptoms begin as much as 24 hours after exposure. Also, symptoms may come and go for a week or more after exposure. Commonly, people who have daytime exposures start having symptoms at nighttime. Thus, the link between the workplace and the symptoms is often obscured. Symptoms often become milder or disappear on weekends or over holidays. They worsen with repeated exposure.

DIAGNOSIS

To make a diagnosis, doctors ask about the symptoms and about exposure to any substances known to cause asthma. Occasionally, the allergic reaction can be detected with a skin test (patch test), in which a small amount of a substance that is suspected of causing a reaction is placed on the skin. When making the diagnosis is more difficult, doctors in specialized centers use an inhalation challenge test, in which the person inhales small amounts of the substance being tested and is observed for wheezing and shortness of breath and tested for decreased lung function.

Because the airways may begin to narrow before symptoms appear, a person with delayed symptoms may use a device to monitor the airways while at work. This device, a portable peak flow meter, measures the speed at which a person can blow air out of the lungs. When the airways narrow, the rate slows significantly, suggesting occupational asthma.

PREVENTION AND TREATMENT

Industries using substances that can cause asthma must have dust and vapor control measures, but sometimes eliminating the dusts and vapors may be impossible. Workers with occupational asthma should change jobs, if possible. Continued exposure often leads to more severe and persistent asthma.

Treatments are the same as for other types of asthma. Drugs that open the airways (bronchodilators) may be given, preferably in an inhaler. Drugs that reduce inflammation may be given, either in an inhaler (corticosteroid triamcinolone) or as a tablet (montelukast). For severe attacks, corticosteroids such as prednisone may be taken by mouth for a short time. For long-term management, inhaled corticosteroids are preferred.