Occupational Asthma – Quick Tips

Occupational asthma (OA) is an illness in which the breathing passages shrink, swell or become inflamed or congested as a result of exposure to irritants in the workplace. There are two types of occupational asthma: immunologic asthma and irritant-induced asthma.

Immunologic asthma develops after a variable period of time in which a person is exposed to an agent and has become sensitized. (An agent can be an animal protein, a plant protein, a polysaccharide or a chemical.)

Irritant-induced asthma occurs after an intense exposure to an irritating dust, mist, vapor or fume. According to the Occupational Safety and Health Administration, an estimated 11 million workers in various industries and occupations are potentially exposed to at least one of over 200 agents known to be associated with the development of occupational asthma.

Asthma, whether job-related or not, is characterized by wheezing, shortness of breath, chest tightness and coughing. Additional signs may include itching, burning, watery eyes, congestion, runny nose, scratchy throat, nausea, headache and fatigue. Work-related asthma symptoms do not always occur in the workplace. The following are several situations that may help diagnose occupational asthma:

- You have no symptoms away from work, but shortly after arriving at work your symptoms begin
- Your symptoms begin a few hours after coming home, and then are gone by the next morning
- Your symptoms increase as you continue through the workweek
- Your symptoms increase the longer you work at your present place of employment
- You have no symptoms when on vacation

There are primarily three components to occupational asthma:

- The substance itself, such as dust, fumes and vapors
- The sensitivity of the individual—even though anyone can develop occupational asthma, people with pre-existing asthma and those with other allergies are at higher risk.
- The amount of exposure to an agent that provokes occupational asthma

Once occupational asthma is suspected, the individual should seek medical help in diagnosing the condition. An allergist, an occupational medicine specialist or a doctor who treats lung disease can perform a thorough physical examination and do a medical history report that explores:

- What kind of work the individual has done
- What types of exposures the individual may have experienced
- Which symptoms the individual has had
- When, how often and how severely the symptoms have occurred

The physical exam may include a physical examination of the chest if the appointment is several hours after the exposure has taken place. Pulmonary function tests that are performed both before and after the work shift can show how job-related exposures have affected the airways. Laboratory tests on blood and sputum may also help in determining a diagnosis of occupational asthma. A challenge test, in which the individual is required to inhale suspected agents, may be necessary for an accurate diagnosis.

OSHA does not have a standard that specifically applies to occupational asthma; Occupational asthma is addressed in specific standards for recordkeeping and the general industry. The following standards can be used to address safety from occupational asthma causal agents:

- OSHA Act of 1970, general duty clause 5(a)(1)
- OSHA 29 CFR 1904, recording and reporting occupational injuries and illnesses
- OSHA 29 CFR 1910.134, respiratory protection standard

Commonly Asked Questions

Q: How can occupational asthma be treated?

A: The most effective treatment for occupational asthma is to reduce or eliminate exposure to symptom-producing substances. Medication may be prescribed for workers who can't prevent occasional exposure. In addition to medication, physical therapy and breathing aids may be needed to relieve symptoms of advanced occupational asthma that has caused airway damage.

Q: Once diagnosed with occupational asthma, will I always have it?

A: Occupational asthma is usually reversible; however, continued exposure to the causal agents can lead to permanent lung damage.

Q: Can occupational asthma be prevented?

A: In industries and environments that expose employees to causal agents, changes in the manufacturing process, use of engineering controls and changes in work practices can be used to reduce or eliminate the agent(s) or the exposure to the agent(s).

Sources

OSHA Quick Takes on Occupational Asthma

The American Academy of Allergy Asthma & Immunology
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The Occupational Safety and Health Administration

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