Work-Related Lung Diseases

Most types of lung disease can be caused by work exposures including: asthma, chronic obstructive pulmonary disease (COPD), interstitial lung diseases, lung cancer, pulmonary infections, and pleural disease. It is important to recognize whether exposures in your workplace are contributing to your lung disease because often steps can be taken to prevent the lung disease or keep it from progressing.

If you are having problems, there may be other workers who are also at risk for the disease. You may also be eligible for workers' compensation and other benefits.

The most common work-related lung diseases include:

- **Work-related Asthma:** Asthma may be caused or made worse by work. People with work-related asthma often have more symptoms at work and improve away from work (on weekends and vacations). Many different exposures at work can cause occupational asthma. In addition, people who already have asthma may have work-exacerbated asthma due to asthma triggers at work, such as irritants, allergens, and temperature or humidity extremes. For more information see www.thoracic.org/patients for the ATS Patient Series on Work-related Asthma.
- **Chronic obstructive pulmonary disease (COPD):** Breathing in airborne substances at work can cause COPD or worsen the condition in people who already have COPD. This can happen to both smokers and non-smokers. Chronic exposure to inhaled mineral dusts, metal fumes, organic dusts (e.g. wood, grains), diesel exhaust fumes, and/or chemical gases or vapors can lead to COPD. For more information about COPD see www.thoracic.org/patients.
- **Interstitial or fibrotic lung diseases:** Inhalation of mineral dusts such as silica, asbestos, coal dust, and/or various metals can cause inflammation and scarring that can lead to interstitial lung disease, such as asbestosis, silicosis or coal workers pneumoconiosis. Beryllium can cause chronic beryllium disease (CBD), an interstitial lung disease that can look just like sarcoidosis. Other metals such as indium, used to produce computer monitors, and cobalt, in tungsten carbide tools, can also cause lung disease.
- **Hypersensitivity pneumonitis:** Inhalation of certain substances can trigger an immune inflammatory reaction in the lungs called acute hypersensitivity pneumonitis. Symptoms including fever, chills, and shortness of breath develop after you breathe in substances such as certain molds, bacteria, and bird proteins, or select chemicals such as isocyanates. Hypersensitivity pneumonitis can become chronic, leading to scarring and interstitial lung disease that can be difficult to distinguish from other forms of chronic interstitial lung disease.
- **Lung Cancer:** While tobacco smoke exposure is the leading cause of lung cancer, it can also develop from workplace exposures such as asbestos, silica, and diesel exhaust fumes. Work exposures can increase the risk of lung cancer in both smokers and non-smokers.
- **Lung infections:** You could develop an infection related to your workplace. You might be in contact with other people who are ill or you might be infected from a source at work, such as a contaminated humidifier. Influenza and other infections such as tuberculosis or legionella can be occupational infections.
- **Bronchiolitis obliterans / airway destruction:** Damage to the very small airways (bronchioles) can occur with inhalation of certain flavoring chemicals, like diacetyl butter flavor, resulting in chronic airflow obstruction that can progress to airway scarring and severe obstructive lung disease.

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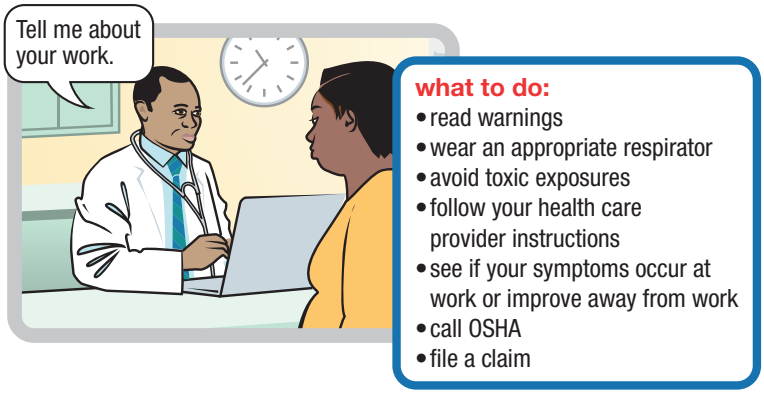

Do work-related lung diseases still occur in the United States and other developed countries?

Yes!!! While some diseases such as asbestosis are less frequent than they once were, other occupational lung diseases such as work-related asthma and coal-workers' pneumoconiosis are being seen more often now. Reasons occupational lung diseases still occur include:

- Inadequate regulations or inadequate enforcement of regulations fail to assure that workplaces are safe,
- New technologies and work exposures,
- Greater exposures for people working in indoor environments such as schools and hospitals.

Which jobs are at high risk? Who is most likely to get work-related lung disease?

Almost anyone who works outside the home can develop work-related lung disease. For example, the most common setting for work-related asthma in the US are non-industrial workplaces such as schools, hospitals and office buildings, likely due to exposures such as cleaning agents, mold and construction dusts.

How would I know if I have work-related lung disease?

You may have work-related lung disease if:

- You have been diagnosed with a lung disease, such as asthma, COPD, interstitial lung disease or lung cancer, or if you have symptoms such as cough, wheeze or shortness of breath.
- You work or have been employed in the past.

What should I do if I think I may have an occupational lung disease?

Tell your health care provider (HCP) about your symptoms, what type of job you do, and what substances you are exposed to at your current workplace or prior jobs. If you know a specific material you have been exposed to, bring any available Safety Data Sheets (SDS) (https://www.osha.gov/Publications/OSHA3514.html) and other work exposure information to your health care provider. Ask your Human Resources Manager or Safety Officer for the SDS (previously called MSDS) and further exposure information.

If a work-related lung disease is suspected, you should be referred to a health care provider who specializes in pulmonary and/or occupational medicine. The Association of Occupational and Environmental Clinics (AOEC) provides a list of occupational medicine providers http://www.aoec.org/directory.htm.

You may report unsafe conditions to the Occupational Safety and Health Administration (OSHA) https://www.osha.gov/. If you and other workers are concerned about a health problem at work, you can also request a Health Hazard Evaluation (HHE) from the National Institute for Occupational Safety and Health (NIOSH). http://www.cdc.gov/niosh/hhe/request.html

If your breathing problems are determined to be due to work, you may file a workers' compensation claim. In the U.S. workers' compensation is a state-based program for workers with work-related injuries or illnesses. It can pay for medical care and provide salary support if you are unable to work. You should contact the workers' compensation office in your own state to file a claim.

How can work-related lung diseases be prevented?

Most work-related lung diseases can be prevented by reducing or eliminating exposures to substances at your workplace that may be causing disease or making your disease worse. Examples of things that can be done to control exposures include:

- Reducing work exposures, such as making sure the exhaust ventilation system pulls fumes away from you and provides good air exchange,
- Replacing dangerous materials being used with safer ones,
- Wearing a respirator (protective mask) whenever you may be at risk of exposure, see ATS Patient Series http://patients.thoracic.org/information-series/en/resources/disposable-respirators.pdf).

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Resources:

American Lung Association
http://www.lung.org/assets/documents/publications/solddc-chapters/occupational.pdf

Centers for Disease Control, National Institute for Occupational Safety and Health
http://www.cdc.gov/niosh/topics/surveillance/ords/