

Work-related Asthma

How exposure to some chemicals and dust at work can cause or worsen asthma

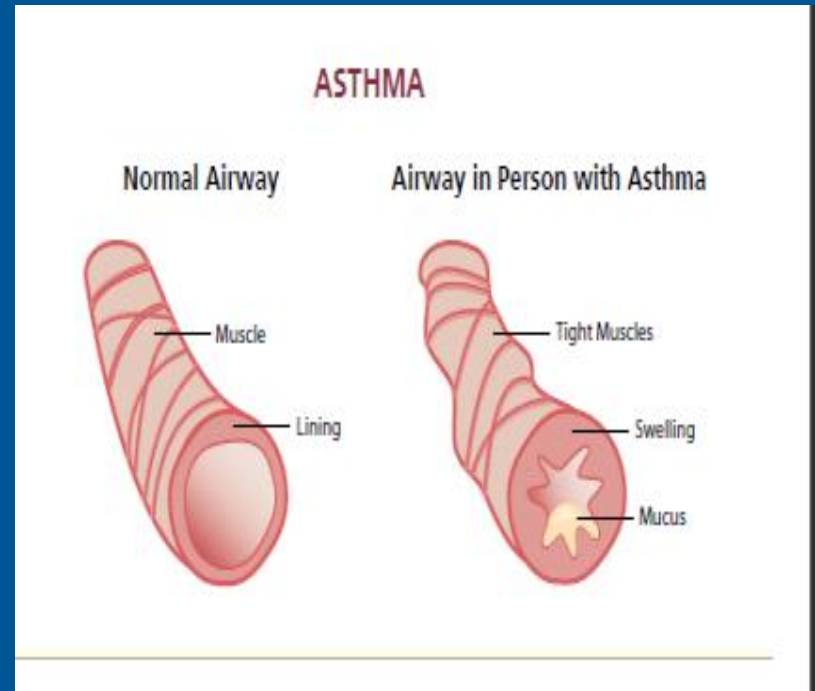


What's Included in this Overview?

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What is work-related asthma?

- Asthma is a lung disease that makes it hard to breathe.
- During an asthma attack, the airways in your lungs become narrow and too much mucus is produced.
- Work-related asthma is a type of asthma. Some workers can develop asthma from chemicals, dusts, or other exposures at work.
- Other workers may already have asthma that is made worse by their work exposures.



What are the symptoms of work-related asthma?

- Wheezing
- Chest Tightness
- Shortness of Breath
- Coughing



Symptoms of work-related asthma

- Symptoms can show up within a few months after you are exposed to a chemical or dust, or they may not appear until you have been exposed for several years.
- You may first notice symptoms after you leave work each day. Often the symptoms clear up before you return to work the next day. They usually worsen during the work week and get better or disappear during weekends and vacations.



What causes work-related asthma?

Some common asthma-inducing products in the workplace include:

- Wood dust, especially cedar
- Chemicals in polyurethane paints
- Isocyanates in spray-on truck bed liners
- Animals and insects
- Grain and flour dust
- Latex gloves
- Cleaning agents



Who gets work-related asthma?

Workers in many different jobs can get work-related asthma. Some examples common in Washington include:

- Sawmill workers
- Healthcare providers
- Spray painters
- Janitors and cleaners
- Manufacturing workers
- Farm laborers
- Animal handlers



Case Study – asthma from spray painting

CASE 1—SPRAY PAINTING (ASTHMA)



A 37-year-old male, self-employed car painter was admitted to the hospital with asthma symptoms. These symptoms had first developed five years earlier and were thought to be related to his occupation. He had been working in the same environment for more than 20 years.

The painter was diagnosed with occupational asthma induced by isocyanates [substances known to cause and exacerbate asthma] and advised to change his job or avoid the use of polyurethane paints. He continued to work as a car painter and treated his asthma with medications such as bronchodilators and steroids.

Six years later, he was wearing a mask and spraying a car with two-component polyurethane paint when he developed severe, prolonged asthma. Despite medication, his symptoms continued, especially at night. He returned to work, sprayed

the polyurethane paint and developed severe asthma requiring emergency treatment. He died in the ambulance en route to the hospital. The manufacturer reported that the paint contained small amounts of isocyanates.¹⁴

Case Study – asthma from spray-on truck bed lining

CASE 2—SPRAY-ON TRUCK BED LINING (ASTHMA)



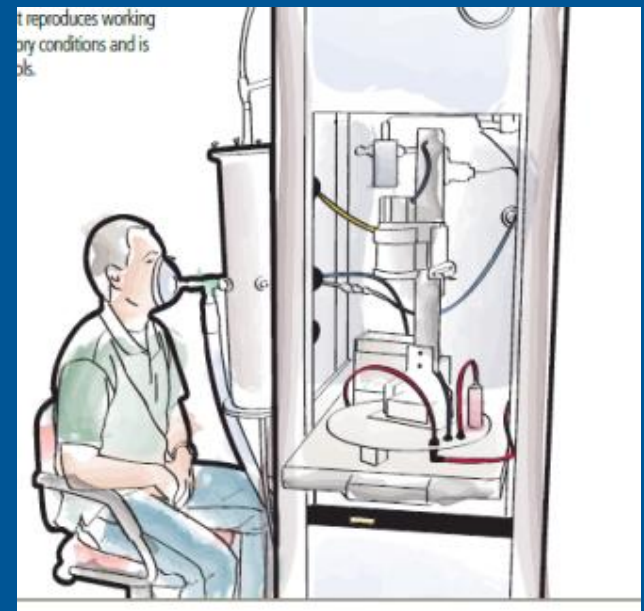
A 30-year-old man developed rhinitis [inflammation of nasal passages], a cough, wheezing and shortness of breath four months after starting work spraying truck bed liners. On one occasion, the worker reported to the emergency room but was not diagnosed with asthma.

Symptoms persisted with daily episodes of shortness of breath, wheezing and nausea. These symptoms occurred at midday after four to five bed liner applications. After four months of symptoms, which culminated in hospitalization for respiratory distress, the worker was diagnosed with work-related asthma from exposure to isocyanates. After hospitalization, the worker was documented with nonspecific bronchial hyperreactivity by methacholine challenge testing.

The worker was removed from the workplace. One year later, the worker was employed elsewhere as a manual laborer. He still had symptomatic asthma and was maintained on bronchodilators and inhaled steroids.¹⁵

How is work-related asthma diagnosed?

- Your doctor can decide if you have work-related asthma.
 - First, your doctor will ask you about your medical history and breathing symptoms.
 - Then tests may be done to determine if you have asthma and not some other kind of lung condition.



How is work-related asthma diagnosed?

These tests may include:

- Physical exam of your chest
- Chest x-ray
- Blood tests
- Breathing tests

If your doctor has confirmed that you do have asthma, then your doctor may do more tests to decide if your asthma is related to your work.



How is work-related asthma diagnosed?

If you have questions or are concerned about your breathing, see your doctor now.

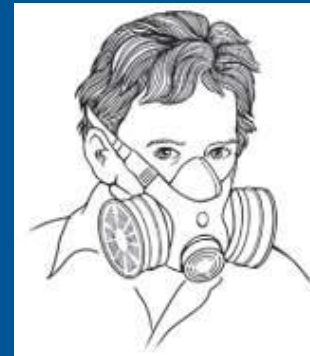
Asthma is a serious disease. If untreated, it may severely affect your health or even cause death.

Work-related asthma can get better if diagnosed early and treated properly.

Can work-related asthma be prevented?

There are steps that your employer can take to make your workplace healthier:

- Change the way work practices to remove or reduce exposures
- Improve the ventilation
- Provide respirators
- Provide training
- Conduct medical monitoring to find workers with symptoms early



[Controlling isocyanate paint vapors in auto spray booths](#)

Can work-related asthma be prevented?

There are steps you can take:

- Identify the substances in your work area that cause or make your asthma worse.
- Use a properly fitted face mask when working around asthma-causing substances.
- Move to a different work area, if possible.
- Don't smoke or stop smoking.



Can work-related asthma be prevented?

Work-related asthma must be diagnosed and treated early or it may become a chronic (lifelong) illness. Therefore, it is important to see your doctor now if you think you may have work-related asthma.

Some workers might have a higher risk because of a family or personal history of allergy or asthma. These workers should talk to their doctor before entering trades with a lot of chemicals or dust.



Further Information

- Washington Dept. of Health – [Work Related Asthma](#)
- L & I – SHARP - [Asthma](#)
- Center for Research on Occupational & Environmental Toxicology (CROET) - [Occupational Asthma](#)
- Oregon OSHA – [Work-related asthma](#)
- Province of Quebec – [Asthma in the workplace – information & prevention](#)
- Great Britain Health & Safety Executive - [Asthma](#)
- NIOSH – [Asthma and Allergies](#)

DOSH Consultation Services

DOSH Consultation staff can conduct a worksite evaluation for possible employee exposure to asthma inducing chemicals or other safety and health hazards. The service is:

- Free
- Confidential
- Results in no citations or penalties
- Includes a letter explaining findings
- Requires follow-up for any serious hazards

For this assistance, you can call one of our consultants. Click below for local L&I office locations and contact phone numbers:

<http://www.lni.wa.gov/Safety/Basics/Assistance/Consultation/consultants.asp>