

## Do You Have Work-Related Asthma?

### A Guide for YOU and YOUR DOCTOR

Do you have any of these symptoms: cough, wheezing, difficulty breathing, shortness of breath, or chest tightness? If the answer is YES, you may have work-related asthma.

#### What Is Work-Related Asthma?

Work-related asthma is a lung disease caused or made worse by exposures to substances in the workplace. Common exposures include chemicals, dust, mold, animals, and plants. Exposure can occur from both inhalation (breathing) and skin contact. Asthma symptoms may start at work or within several hours after leaving work and may occur with no clear pattern. People who never had asthma can develop asthma due to workplace exposures. People who have had asthma for years may find that their condition worsens due to workplace exposures. Both of these situations are considered work-related asthma.

A group of chemicals called **isocyanates** are one of the most common chemical causes of work-related asthma. OSHA is working to reduce exposures to isocyanates and has identified their use in numerous workplaces. See table below for common products (both at home and work) and common jobs where exposure to isocyanates may occur.

#### Why You Should Care About Work-Related Asthma

Work-related asthma may result in long-term lung damage, loss of work days, disability, or even death. The good news is that early diagnosis and treatment of work-related asthma can lead to a better health outcome.

#### What To Do If You Think You Have Work-Related Asthma

If you think that you may have work-related asthma, see your doctor as soon as possible. **Take this information and a copy of the safety data sheet with you.**

#### Work-Related Asthma Quick Facts

- Work-related asthma can develop over ANY period of time (days to years).
- Work-related asthma may occur with changes in work exposures, jobs, or processes.
- It is possible to develop work-related asthma even if your workplace has protective equipment, such as exhaust ventilation or respirators.
- Work-related asthma can continue to cause symptoms even when the exposure stops.
- Before working with isocyanates or any other asthma-causing substances, ask your employer for training, as required under OSHA's Hazard Communication standard.

#### Helpful Resources for Workers

- If you have a workplace health and safety question contact the Occupational Safety and Health Administration (OSHA) at 1-800-321-OSHA (6742) or go to OSHA's Workers web page at [www.osha.gov/workers.html](http://www.osha.gov/workers.html).
- Additional information on worker protection from isocyanates can be found on OSHA's Isocyanates Safety and Health Topics page: [www.osha.gov/SLTC/isocyanates](http://www.osha.gov/SLTC/isocyanates).

#### Products and Jobs Where Exposure to Isocyanates May Occur

Common Products*	Common Jobs and Job Processes*
<ul style="list-style-type: none"><li>• Polyurethane foam</li><li>• Paints, lacquers, ink, varnishes, sealants, finishes</li><li>• Insulation materials</li><li>• Polyurethane rubber</li><li>• Glues and adhesives</li></ul>	<ul style="list-style-type: none"><li>• Car manufacture and repair</li><li>• Building construction (plaster, insulation)</li><li>• Foam blowing and cutting</li><li>• Painting</li><li>• Truck bed liner application</li><li>• Foundry work (casting)</li><li>• Textile, rubber and plastic manufacturing</li><li>• Printing</li><li>• Furniture manufacturing</li><li>• Electric cable insulation</li></ul>

\*Many more jobs and products may also cause work-related asthma.

## Diagnosis of Work-Related Asthma: A Guide for Clinicians

1. Consider work-related asthma in ALL adults with new-onset asthma or aggravation of previously controlled asthma.
2. Obtain a detailed medical history that documents the patient's asthma symptoms, allergies, and the relationship of the symptoms to work (onset, timing, severity).

### Key Questions:

- Do your symptoms change when you are away from work (evenings, weekends, vacation)?
- Did you have any unusual exposures or changes in your job processes prior to the onset of symptoms?
- Do you have any allergy symptoms, such as runny nose, nasal congestion, or itchy, watery eyes? Are these symptoms worse at work?

3. Document a history of occupational exposures.
  - An electronic occupational history exposure form can be found at: [www.atsdr.cdc.gov/csem/exp-history/docs/CSEMExposHist-26-29.pdf](http://www.atsdr.cdc.gov/csem/exp-history/docs/CSEMExposHist-26-29.pdf).
  - An occupational exposures database can be found at: [www.aocedata.org/Default.aspx](http://www.aocedata.org/Default.aspx).
  - You or your patient may also request a safety data sheet (SDS, formerly MSDS) for chemicals in the workplace from your patient's employer, as per the OSHA Hazard Communication standard, 29 CFR 1910.1200: [www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10099](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10099).
4. Perform pulmonary function testing (PFT) in accord with American Thoracic Society Standards.
  - Spirometry AND peak expiratory flow rates (PEFRs) may assist with diagnosis.
  - For strategies on using spirometry or peak flow to diagnose work-related asthma, consult 2008 American College of Chest Physicians (ACCP) Consensus Statement (referenced below).
  - A normal spirometry result does NOT exclude the possibility of work-related asthma.
  - OSHA publications and guidance for healthcare professionals on spirometry: [www.osha.gov/pls/publications/publication.athruz?pType=Industry&pID=278](http://www.osha.gov/pls/publications/publication.athruz?pType=Industry&pID=278).

5. Consider referral to an occupational medicine, pulmonary and/or allergy specialist for supplemental testing and assistance with determining work-relatedness, reducing exposures and protecting the worker's employment status.
  - To find an occupational and environmental medicine physician or clinic, visit:
    - American College of Occupational and Environmental Medicine: [www.acoem.org](http://www.acoem.org)
    - Association of Occupational and Environmental Clinics: [www.aoec.org](http://www.aoec.org)

### Helpful Resources for Clinicians

- Tarlo, Susan M., et al. "Diagnosis and Management of Work-Related Asthma: American College of Chest Physicians' Consensus Statement." CHEST Journal 134.3 suppl (2008):1S-41S. (includes a work-related asthma diagnosis and management algorithm)
- OSHA Clinicians' web page: [www.osha.gov/dts/oom/clinicians](http://www.osha.gov/dts/oom/clinicians)
- OSHA Occupational Asthma web page: [www.osha.gov/SLTC/occupationalasthma](http://www.osha.gov/SLTC/occupationalasthma)
- NIOSH Occupational Respiratory Disease Surveillance – State-Based Surveillance Programs for CA, CT, MA, MI, NJ, NM, NY, OR, TX, WA, WI: [www.cdc.gov/niosh/topics/surveillance/ords/StateBasedSurveillance/stateprograms.html](http://www.cdc.gov/niosh/topics/surveillance/ords/StateBasedSurveillance/stateprograms.html) (For work-related asthma reporting in other states, contact your local health or labor department.)
- NIOSH Asthma and Allergies web page: [www.cdc.gov/niosh/topics/asthma](http://www.cdc.gov/niosh/topics/asthma)

This guidance document is advisory in nature and informational in content. It is not a standard or regulation, and it neither creates new legal obligations nor alters existing obligations created by OSHA standards or the *Occupational Safety and Health Act* (OSH Act). Pursuant to the OSH Act, employers must comply with safety and health standards and regulations issued and enforced either by OSHA or by an OSHA-approved State Plan (a list of State Plans is available at [www.osha.gov/dcsp/osp](http://www.osha.gov/dcsp/osp)). In addition, the Act's General Duty Clause, Section 5(a)(1), requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. The mention of any nongovernmental organization or link to its web site in this guidance document does not constitute an endorsement by OSHA of that organization or its products, services, or web site.

**This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.**

**For assistance, contact us. We can help. It's confidential.**



**[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)**



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