



Work-Related Asthma



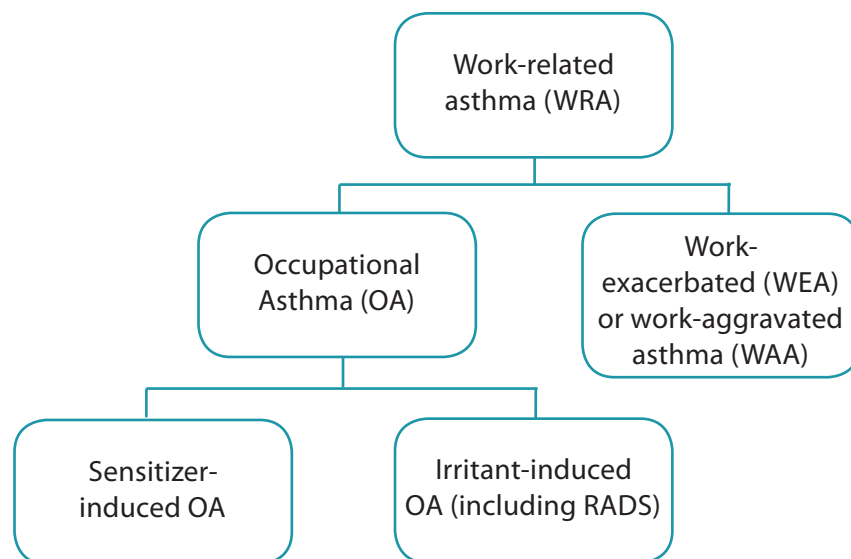
Work-Related Asthma

Work-related asthma is asthma that is caused by, or made worse by, exposures or triggers in the workplace.

Ask employed patients about possible occupational exposures, especially if they have new-onset asthma.

Types of work-related asthma

- **Work-exacerbated asthma (WEA) or work-aggravated asthma (WAA):** *Preexisting* asthma triggered by workplace exposures.
- **Occupational asthma (OA):** Asthma *caused* by workplace exposures.
 - **Irritant-induced:** Asthma caused by irritants at the workplace.
 - **Reactive airway dysfunction syndrome (RADS):** Acute onset of asthma from a single high irritant exposure¹. Frequently associated with an accident².
 - **Sensitizer-induced:** Asthma caused by sensitizing agents at the workplace¹.



Adapted from Tarlo, et al. 2008

Ask employed patients about possible occupational exposures, especially if they have new-onset asthma.

Asthma is work-related when:

- Asthma is diagnosed¹
- Asthma symptoms and work are correlated
- Asthma symptoms improve when away from work for several days³

Early recognition and control of exposures is important. The chance of symptoms resolving decreases with time.³

Ask employed patients with asthma about possible occupational exposures, particularly patients with new-onset asthma.³

- Assess for possible work-related asthma by taking a history and asking key questions.
 - What are your job duties?
 - What agent(s) are you exposed to?
 - What industry do you work in?
 - What protective devices/equipment do you use?
 - Do coworkers have respiratory diseases?¹
 - What previous jobs and work-related exposures have you had?²
 - Review material safety data sheets (MSDSs)¹
- Confirm diagnosis of asthma
- Investigate to determine work-related asthma possibility¹

Information to discuss with all employed patients with new-onset asthma or worsening asthma:

- Do you have fewer symptoms when away from work (e.g., weekends or holidays)?
 - Indicator for occupational asthma and work-exacerbated asthma
- Have you experienced any changes in work processes?
 - Possible exposure to new agent or increased exposure
 - Increased exposure to conditions triggering symptoms
- Was there an unusual exposures at work within 24 hours before symptoms began (e.g., spills)?
 - Exposure to possible irritant, causing irritant-induced asthma (including RADS)
- Do you have allergic rhinitis and/or conjunctivitis symptoms at work?
 - Increased likelihood of sensitizer-induced occupational asthma¹

Remember patient confidentiality

- Involve the patient in decisions to approach management about work exposures as this could lead to adverse effects such as job loss.³

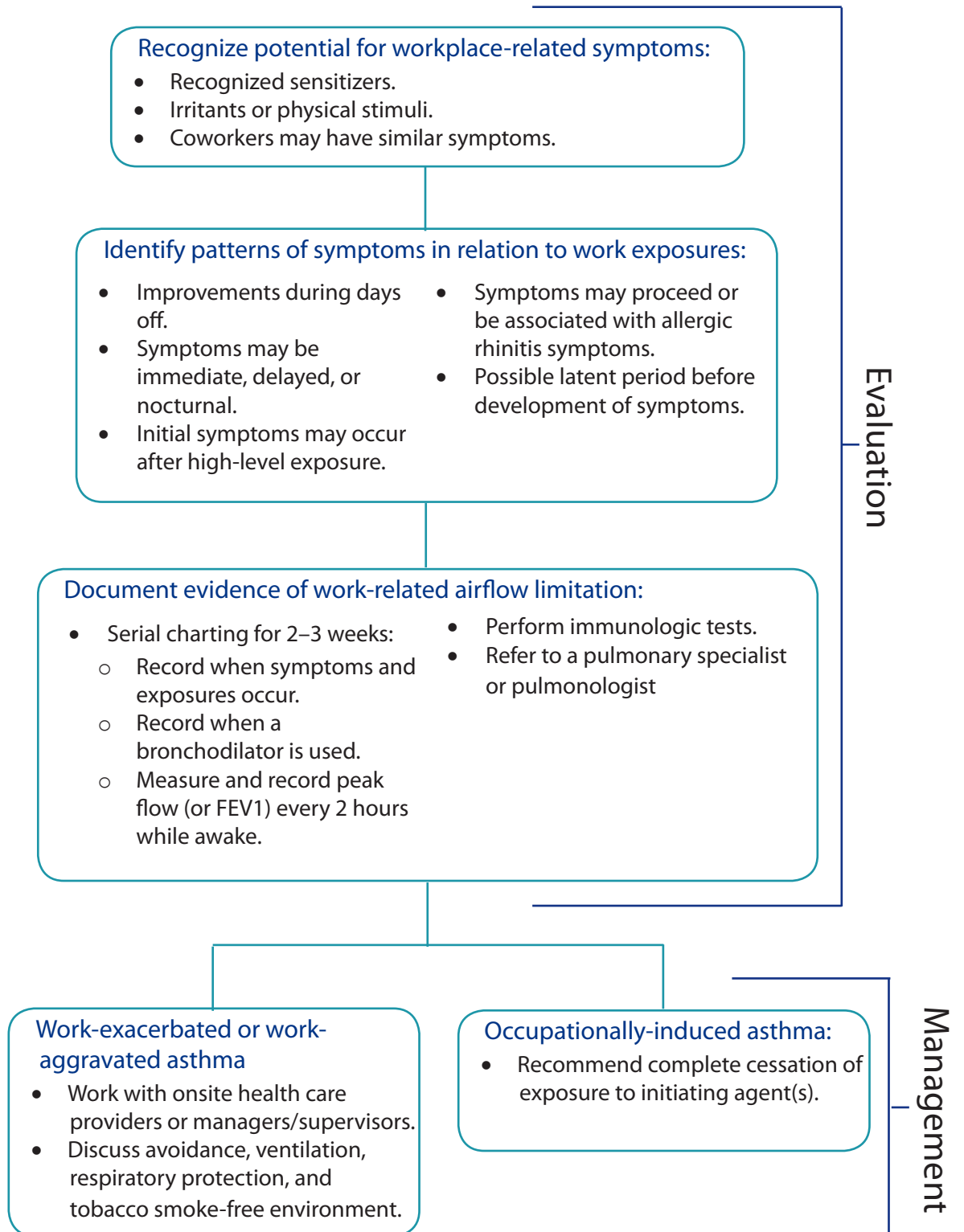
Refer to an occupational asthma specialist³ or pulmonologist if needed

Early recognition and control of exposures is important. The chance of symptoms resolving decreases with time.

Take a history to assess for possible work-related asthma.

Refer to an occupational asthma specialist or pulmonologist if needed.

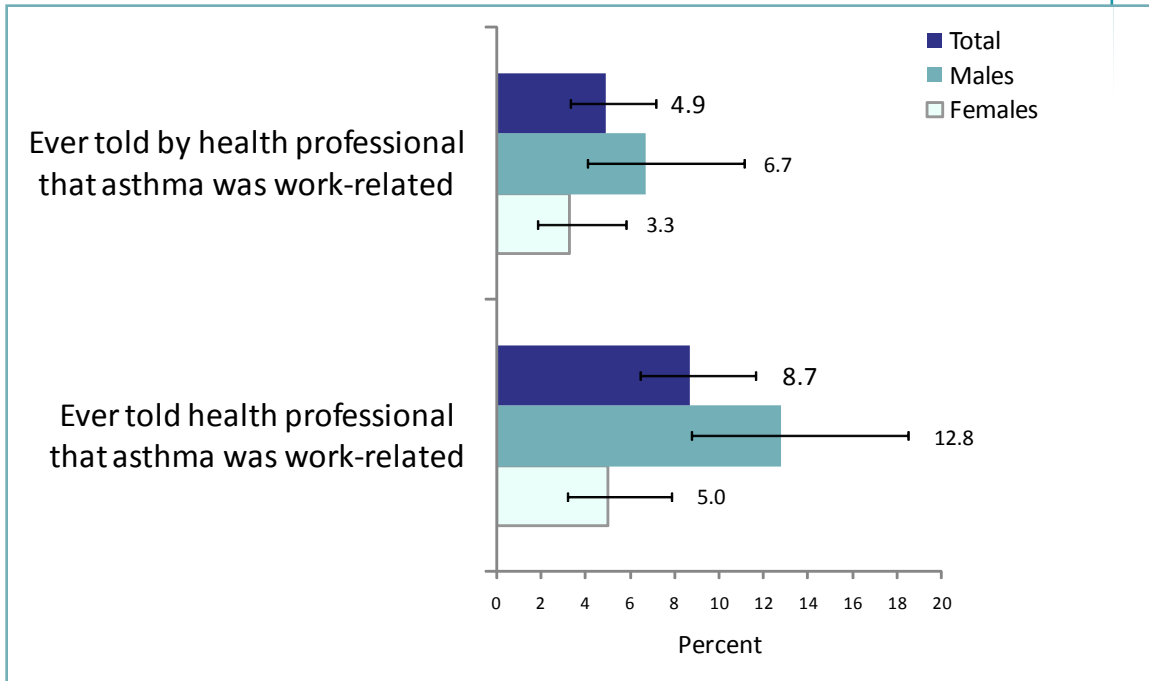
Evaluation and management of work-aggravated asthma and occupational asthma



(Adapted from NAEPP Guidelines 2007, p. 189. For more information see the NAEPP Guidelines 2007)

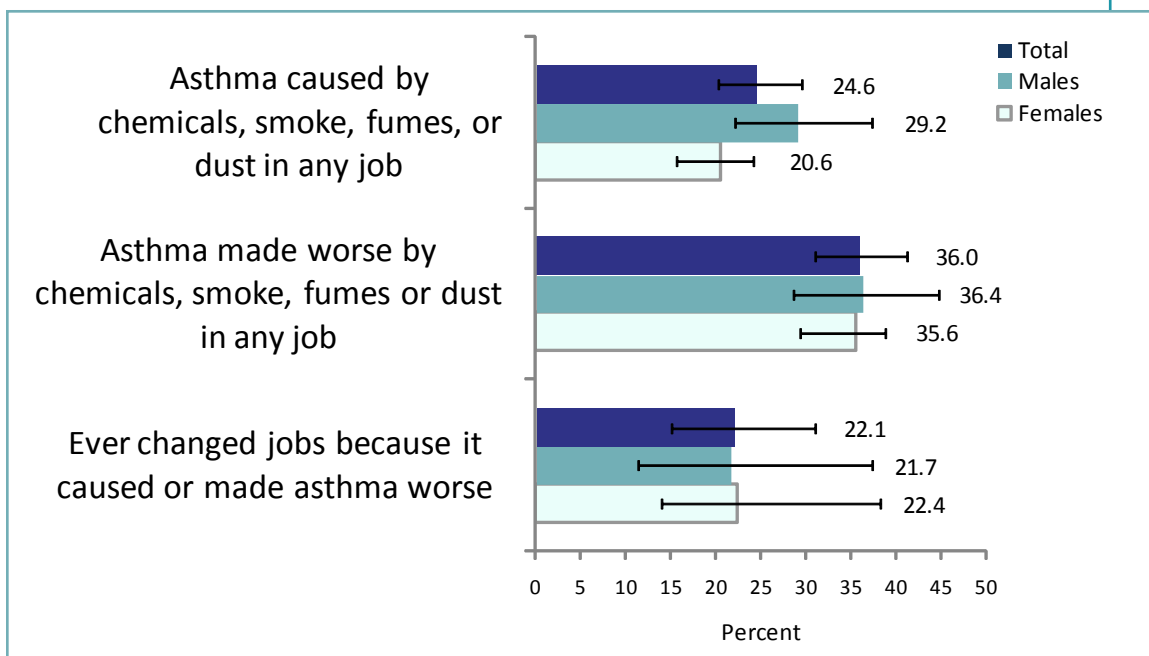
Work-related asthma in Utah

Prevalence of Work-Related Asthma Among Adults with Lifetime Asthma, Utah, 2007-2008



Source: 2007-2008 BRFSS Call-back Survey combined. Crude prevalence.

Prevalence of Work-Related Aggravated Asthma Among Adults with Lifetime Asthma, Utah, 2007-2008



Source: 2007-2008 BRFSS Call-back Survey combined. Crude prevalence.

More than 350 workplace agents have been associated with work-related asthma.

Occupations at risk of work-related asthma include:

- Health care workers
- Teachers
- Janitors
- Bakers
- Farmers
- Carpenters
- Laboratory workers⁴

This list contains only a few examples of the occupations at risk for work-related asthma.

Work-related asthma triggers

More than 350 workplace agents are associated with work-related asthma. A current list of asthmagens is kept by the Association of Occupational and Environmental Clinics located at: www.aoec.org/aoeccode.htm.

Examples of possible work-related asthma triggers

Type of Substance	Examples
Air pollutants	Tobacco smoke, diesel exhaust, aerosol agents, dusts, gases and vapors
Dust (organic/inorganic)	Wood, rock, coal, protein dust, silica, asbestos, latex
Fumes and vapors	Chemicals, cleaning materials, welding, solvents, isocyanates, anhydride from heating and cooling metals quickly, perfumes
Molds	All varieties
Pollens	Trees, flowers, weeds
Gases	Formaldehyde, ammonia, chlorine, sulfur dioxide, ozone, nitrogen oxides
Mists	Paints, lacquers, varnishes, hair sprays, pesticides, cleaning products, acids, etc.

Additional Resources

- NAEP Guidelines Section 3, Component 3: Control of Environmental Factors and Comorbid Conditions That Affect Asthma : www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm
- Association of Occupational and Environmental Clinics: www.aoec.org/aoeccode.htm
- United States Department of Labor: Occupational Safety and Health Administration (OSHA): www.osha.gov/SLTC/occupationalasthma/
- National Institute for Occupational Safety and Health (NIOSH): www.cdc.gov/niosh/topics/asthma/
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- Youakim S. Work-related asthma. *American Family Physician* 2001;64(11).
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Sources

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2. Youakim S. Work-related asthma. *American Family Physician* 2001;64(11).
3. NAEP Guidelines Section 3, Component 3: Control of Environmental Factors and Comorbid Conditions That Affect Asthma
4. Chan-Yeung M, Malo JL. Occupational Asthma. *The New England Journal of Medicine* 333:107112, 1995. 333: 107-112, 1995. Venables KM, Chan-Yeung M. Occupational Asthma. *Lancet* 349: 1465-1469, 1997.

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