



6-minute safety talk for plumbing

Instructor Guide

Exposure to airborne material

Topic Overview (why the topic is important to the students)

Some plumbing installation and repair tasks produce airborne materials that can damage the lungs if inhaled. Some materials (like some solvents) are toxic, making workers feel sick immediately, while others cause long term lung damage.

Demonstration and Discussion Topics

- **Distribute** the student handout. Use the student handout as your discussion guide.
- **Discuss** the types of hazards in the shop that may produce airborne materials, such as:
 - vapours from adhesives and solvents
 - fumes from welding
 - dust particles from drywall and other repair work
 - mist from mixing chemicals, and cleaning job sites
- **Explain** that the way to prevent airborne particles from being inhaled is to wear a respirator.
 - There are different respirators for different types of particles. It is important to check that they are using the right respirator for the task at hand.
 - If there is a hazard of airborne material in their workplace, their employer is required by regulation to do a formal risk assessment and if necessary, have a respirator program.
- If their workplace has a respirator program and their job requires the use of a respirator, their employer is required to provide them with training and the appropriate type of respirator for the job they are doing.
- Any task that requires a respirator also requires a written work procedure. Their employer is responsible for ensuring that there is a written work procedure; workers are responsible for following it once they have been trained. Annual fit tests and regular maintenance are also required.
- **Discuss** how materials can be inhaled if respirators aren't used or are used incorrectly.
- **Tour the shop** with the students, pointing out the hazards, and which type of respirator would be required for each.

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- **Mention** what can be done in the workplace to minimize the risk of exposure to airborne materials (e.g., vacuum, fume hood, ventilation).
- **Discuss** the attitude that “it won’t happen to me”. Remind them that an injury can and will happen if they take shortcuts or are careless.
- **Make it real.** Give them two examples from your experience where plumbers suffered ill effects after inhaling airborne material, or use the following examples:
 - A retired plumber recently died following a long battle with a lung disease called emphysema, caused in part by long-term exposure to lead and zinc particles from solder.
 - A young worker was overcome by vapours from a powerful solvent she was using to clean up some spilled adhesives. She was not wearing a respirator.
- **Remind** them of the importance of staying alert and reporting any safety concerns about airborne hazards.
- **Answer** any questions or concerns they might have.
- **Set a good example** by working safely at all times.

Resources

- Breathe Safer
http://www.worksafebc.com/publications/health_and_safety/by_topic/assets/pdf/breathe_safer.pdf
- Solder Fume Risk
<http://www2.worksafebc.com/i/posters/1994/ha9404.html>