Take-Home Workplace Exposures

Guidance from the Western States Pediatric Environmental Health Specialty Unit

WESTERN STATES PEHSU Pediatric Environmental Health Specialty Unit
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Take-home exposures occur when a worker contaminates a shared family space with toxic substances that have been brought home from the workplace.

Why is this important?

- Exposures to toxic substances can affect everyone in the family, but children are more vulnerable than adults.
- Most at risk:
  - Babies, toddlers and children
  - Pregnant family members
- Children are exposed more during the early years when they spend more time on the floor and put things into their mouths.

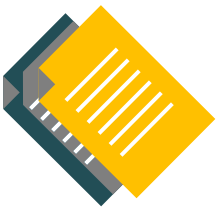
How are these chemicals brought home?

- The most common way is on the clothing and shoes of the worker.
- Exposures also occur when workers bring tools, materials, liquids or work vehicles home.
- Further exposure occurs during laundering of clothes, vacuuming the home, or at meals.
- For example, lead, pesticides, and allergens have been found in the carpeting, cars, clothing, and vacuums in worker's homes.

How do you know if you are exposed to a toxic substance at work?

- The Occupational Safety and Health Act (1970) requires that workers are provided a safe work environment and information about toxic chemicals in their workplace.
- If you don't know the chemicals that you are working with, ask your employer for safety data sheets (SDS). They are required by law to provide this to you in a language you understand.
- The SDSs include information like chemical names, chemical properties, health hazards, possible routes of exposure, exposure limits, handling precautions, and emergency procedures.
- Your health care provider can help explain the SDSs health effects to you if you have questions your employer can't answer. Your provider can reach out to your local university occupational medicine department for more help if needed.

How do you prevent take-home of toxic substances?



- If possible, advocate for reduction in exposure and safer protective equipment
- Keep work clothes and shoes separate from your home as much as possible:
  - If you can, change clothing before leaving work and leave clothing at work
  - Remove shoes and clothes before entering your home (ie. in a garage)
  - Launder work clothes separately
- Do not bring tools or toxic substances home. If necessary, ensure they are stored in a safe and locked location and not in food containers.

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If you are concerned that your family member has been exposed to a toxic substance contact your primary care provider for resources.

Here are some examples of common take-home exposures grouped by industry.
There are many exposures not listed.

Exposure	Health Effects	Workers
Heavy Metals		
Lead	intellectual disability, neurologic symptoms, anemia	battery factory, scrap recycling, construction, foundry, welding, firing ranges, auto repair, painting
Arsenic	Acute: vomiting, confusion Chronic: cognitive development, cancers, heart and kidney issues	processing of glass, pigments, textiles, paper, metal adhesives, wood preservatives, ammunition recycling
Mercury	gastrointestinal and neurological	gold mining, fluorescent bulb recycling, automotive and electronic manufacturing, dentistry, chemical processing
Things that Cause Allergies and Asthma		
Wheat flour	asthma, eczema	bakers, food processing
Di-isocyanates	asthma, shortness of breath	spray-on sealants in the automobile, autobody repair and building insulation industries, epoxy-based paints, roofing
Dusts/Construction Materials		
Silica	lung disease, autoimmune disease	construction, stone cutters, sand blasting
Asbestos	lung cancers	renovation/remodeling, plumbing, shipyards, insulation
Coal dust	lung disease	coal miners
Agricultural and Pest Control		
Pesticides	wide range from respiratory, skin, and neurological symptoms	farm workers, pesticide applicators
Caustic Farm Products ex: dehorning products, drain cleaners, dairy pipe cleaners	ingestion causes mouth and esophageal burns	dairy and livestock farm workers
Healthcare/Biomedical Research		
Infectious Agents	symptoms associated with infection	healthcare providers, laboratory workers, hospital and laboratory cleaning staff
Chemicals and Solvents (Ethylene oxide, formaldehyde, etc.)	Eye, skin and respiratory irritation, cancers, reproductive effects	medical or pathology laboratory workers, surgical teams, hospital and laboratory cleaning staff

Resources:

- **OSHA website: Agricultural Hazards**
  https://www.osha.gov/dsg/topics/agriculturaloperations/hazards_controls.html
- **Understanding SDS:**
  https://www.osha.gov/Publications/OSHA3514.html
  https://www.osha.gov/Publications/HazComm_QuickCard_SafetyData.html
- **Workers' Rights:** https://www.osha.gov/Publications/osha3021.pdf
  - **Derechos de los trabajadores**: https://www.osha.gov/Publications/3473workers-rights-spanish.pdf
- **Local Resources for Lead Exposure:** https://www.cdc.gov/nceh/lead/programs/default.htm
- **Infertility and Take-Home Exposures**: https://www.cdc.gov/niosh/topics/repro/takehome.html

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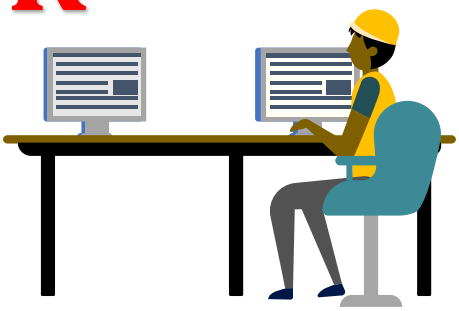

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For more technical information: NIOSH Report to Congress. Contains detailed information on particular exposures and decontamination: https://www.cdc.gov/niosh/docs/95-123/default.html

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