

# CUYAHOGA COUNTY

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# BOARD OF HEALTH

YOUR TRUSTED SOURCE FOR PUBLIC HEALTH INFORMATION

5550 Venture Drive Parma, Ohio 44130  
216-201-2000 [www.ccbh.net](http://www.ccbh.net)

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# 7 Steps to a Healthy Home

Eliminating the relationship between poor housing and poor health

CUYAHOGA COUNTY



HEALTHY HOMES  
216-201-2000

# Overview

- What is a Healthy Home?
- Impacts on Health
- 7 Steps to a Healthy Home

# What is a Healthy Home?

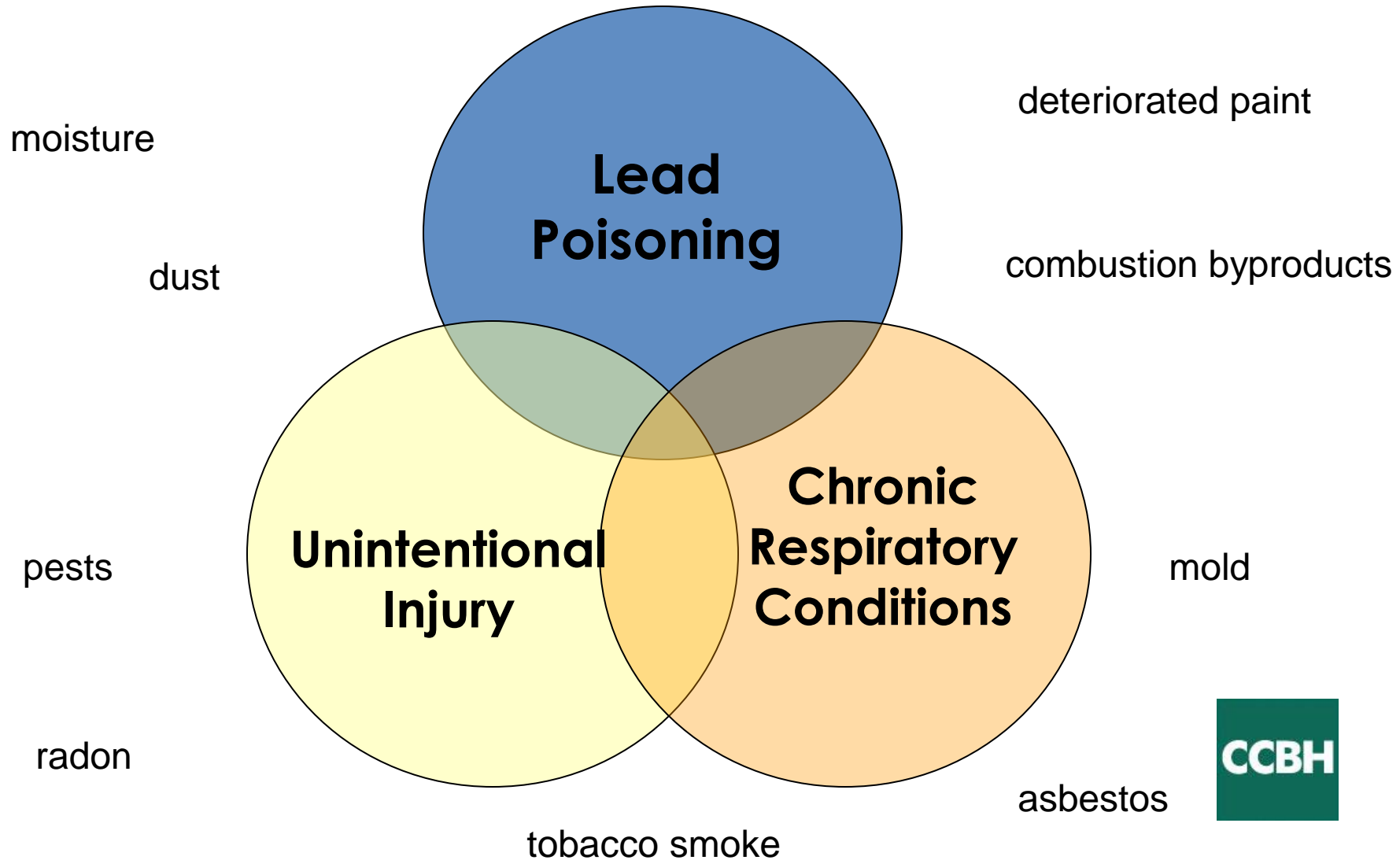
- A healthy home is ***well ventilated; free of pests, toxics, and dangerous gases; dry; clean; comfortable; and affordable.***
- A healthy home does not ***cause or exacerbate disease.***

# Housing & Health: an Old Problem

- ***“The connection between health and the dwelling of the population is one of the most important that exists”***

*Florence Nightingale (Lowry, S. BMJ, 1991, 303, 838-840)*

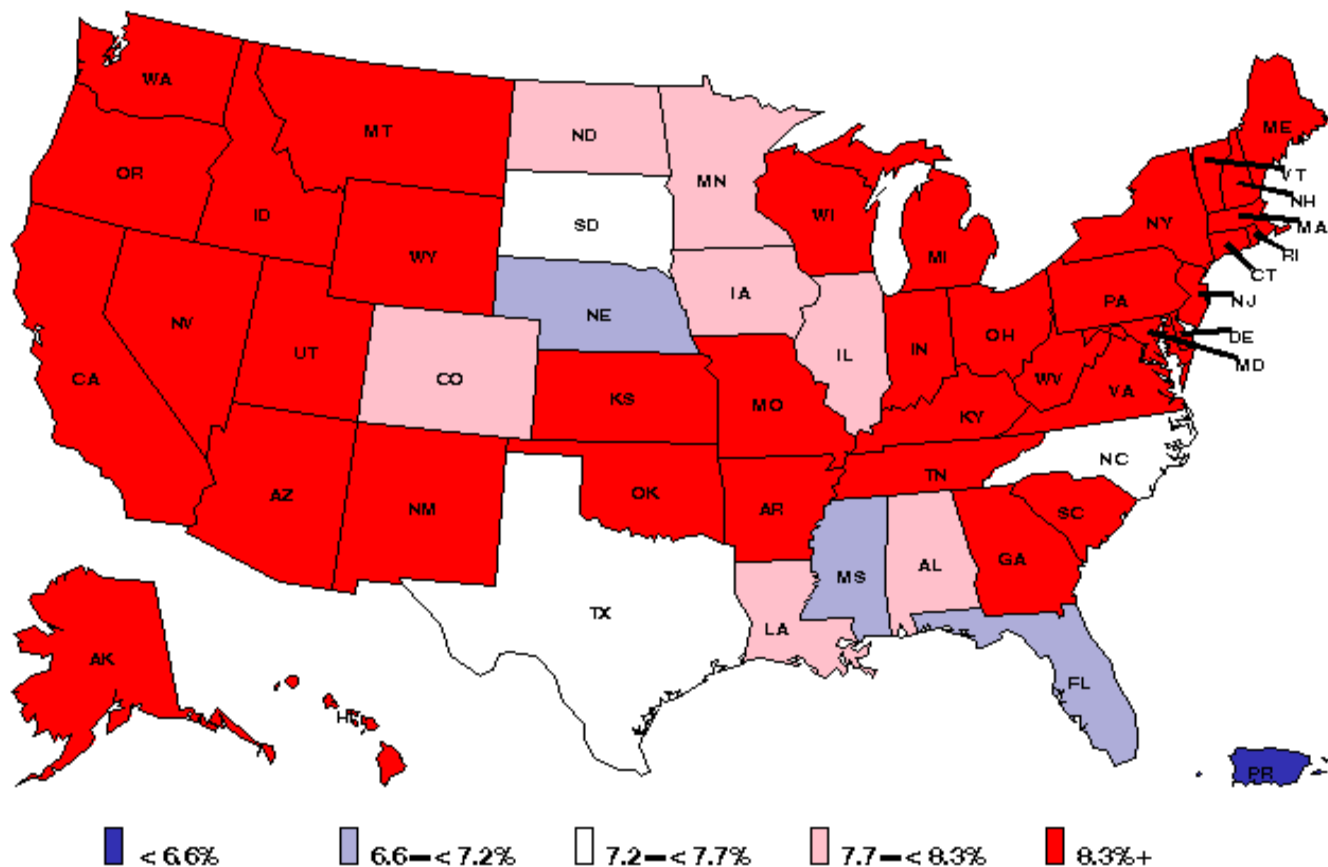
# Home Environment



# Asthma

- Inflammation of airways leading to constriction: wheezing, SOB, chest tightness and coughing<sup>1</sup>
- Preventable, treatable
- Associations with allergies, dust mites, cockroach allergens, tobacco, mold, dander, smoke exposure, pollution, carbon ignition fumes
- 1. NIH

Map C1  
 Adult Self-Reported Current Asthma  
 Prevalence Rate (Percent) by State, BRFSS 2008

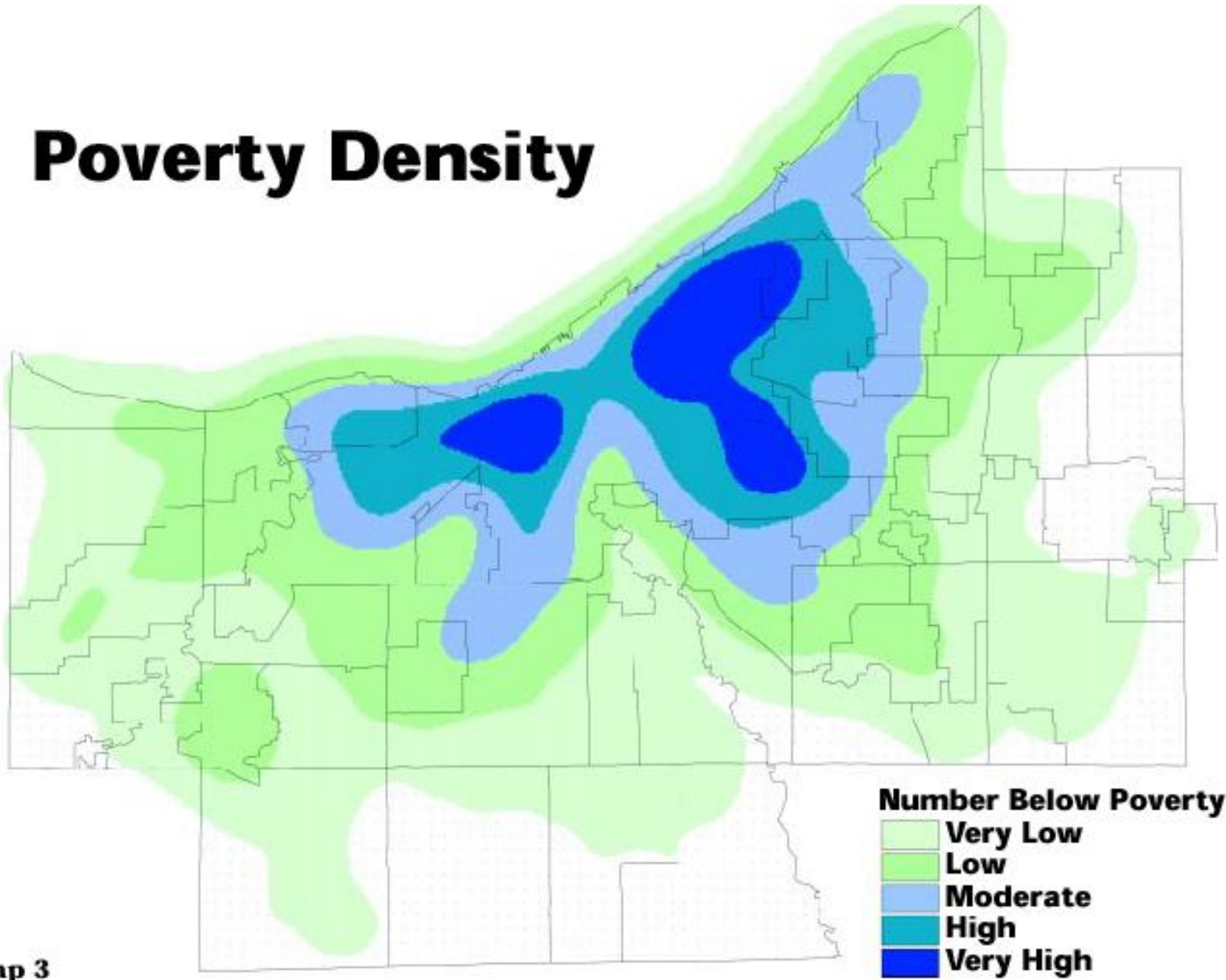


Footnote: Ranges are based on quintiles of the overall prevalence estimates from year 2000 data.

Air Pollution and Respiratory Health Branch, National Center for Environmental Health  
 Centers for Disease Control and Prevention

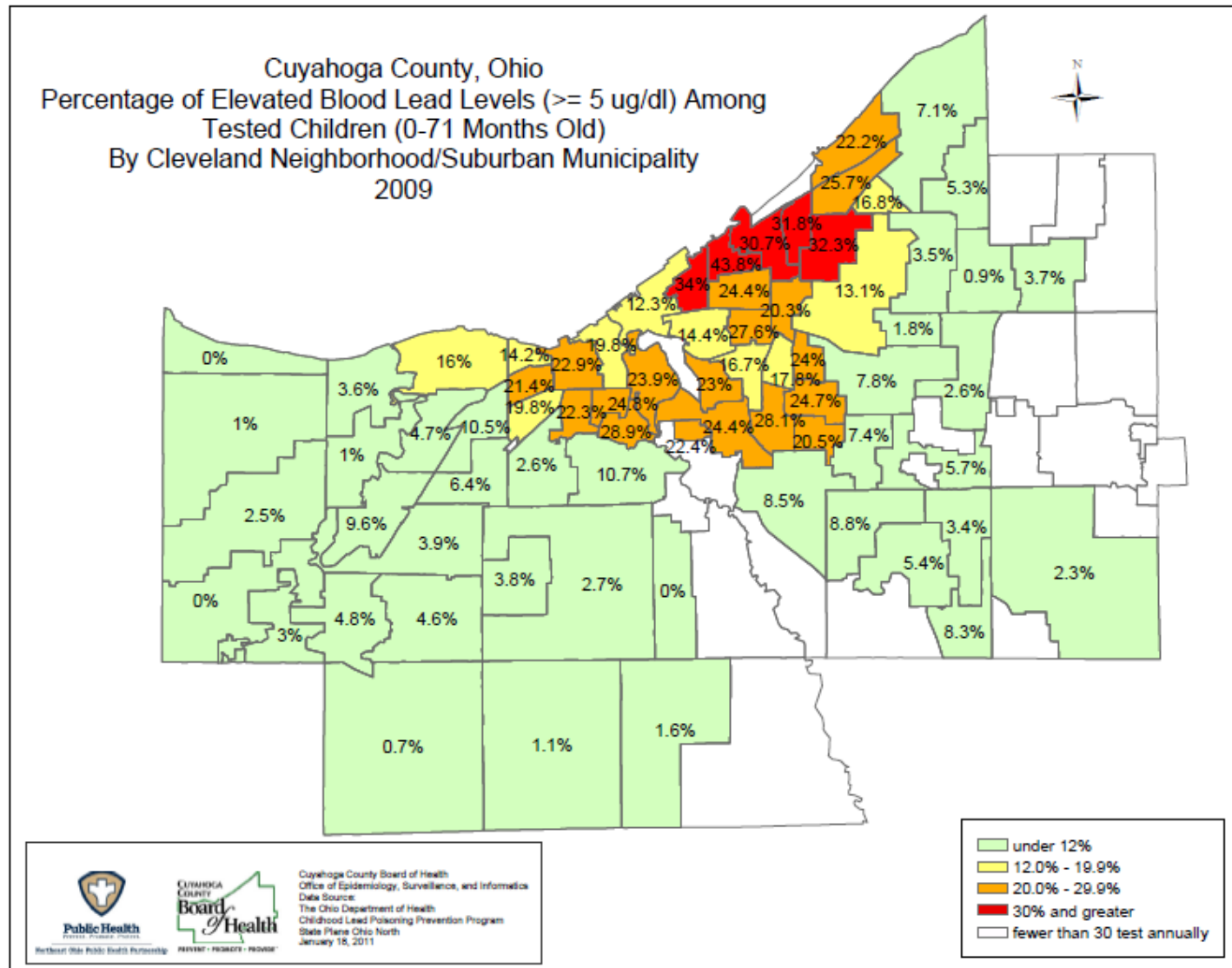


# Poverty Density



Map 3

# Progress – 2009 lead prevalence map ( $\geq 5 \mu\text{g/dL}$ )



# Unintentional Injury:

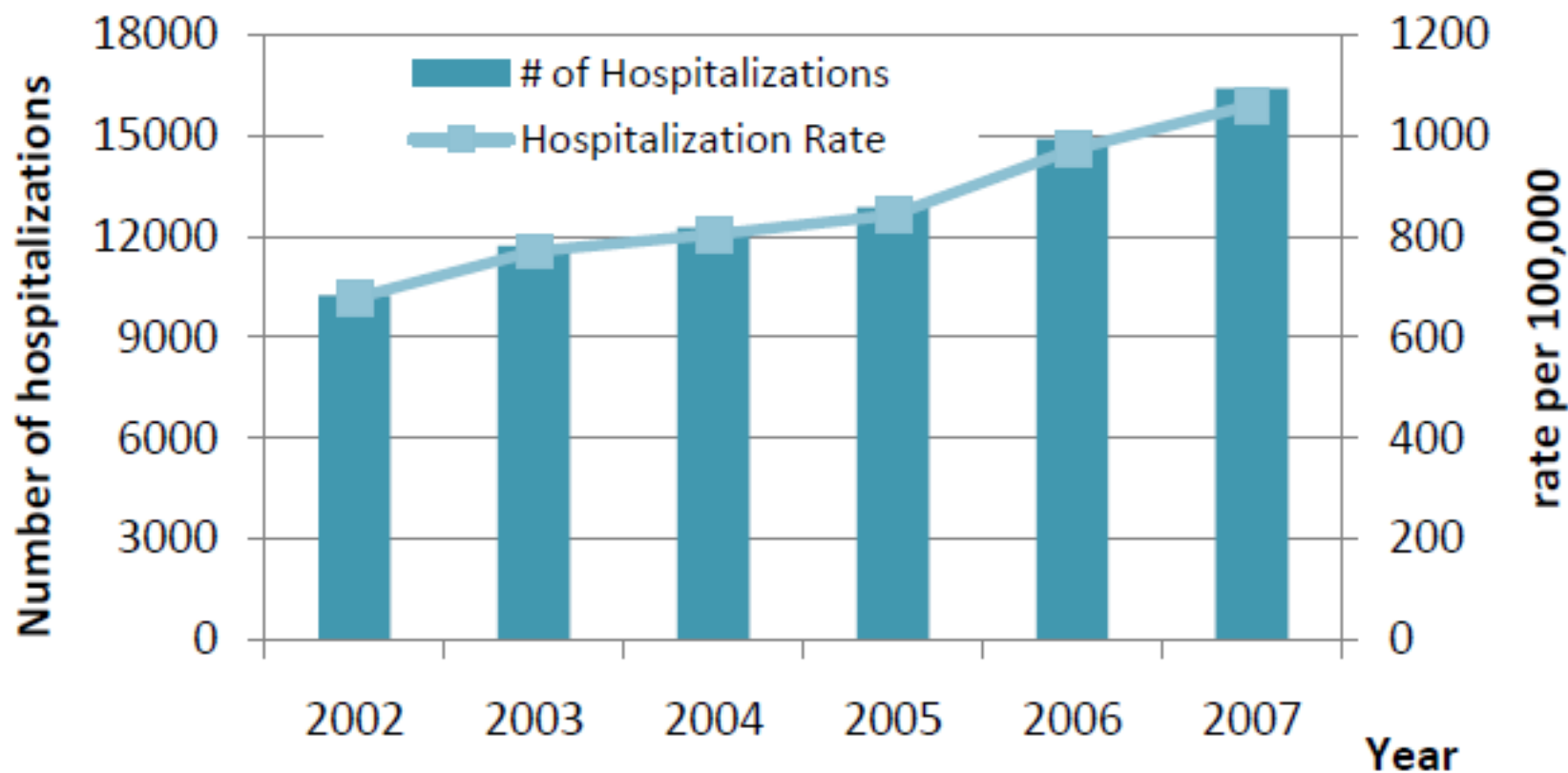
- Falls are the leading cause of injury in adults ages 65 years and older.
- **30 to 40%** of community-dwelling adults older than 65 years of age fall at least **once per year**, and 5 to 10 percent of adults who fall will experience a fracture, laceration, or head injury.

1. Michael YL, Lin JS, Whitlock EP, et al. Interventions to Prevent Falls in Older Adults: An Updated Systematic Review. Evidence Synthesis No. 80. AHRQ Publication No. 11-05150-EF1. Rockville, MD: Agency for Healthcare Research and Quality; December 2010.

2. Michael YL, Whitlock EP, Lin JS, et al. Primary care-relevant interventions to prevent falling in older adults: a systematic evidence review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2010;153:815-825.

The logo for CCBH (Centers for Community-Based Health) is a dark green square with the letters "CCBH" in white, bold, sans-serif font.

**Figure 3. Number and rate per 100,000 of fall-related hospitalizations by year, ages 65+, Ohio, 2002-07<sup>2</sup>**



Source: Ohio Hospital Association

**CCBH**

# Healthy Home Approach

- Recognizes the link between health, housing
- Comprehensive, “one-touch” approach that addresses:
  - Lead
  - Chronic Respiratory Health
  - Unintentional Injuries
- Integrated approach to housing interventions



# 7 Steps to a Healthy Home

- Keep it Dry
- Keep it Clean
- Keep it Safe
- Keep it Well-Ventilated
- Keep it Pest-Free
- Keep it Contaminant-Free
- Keep it Well-Maintained

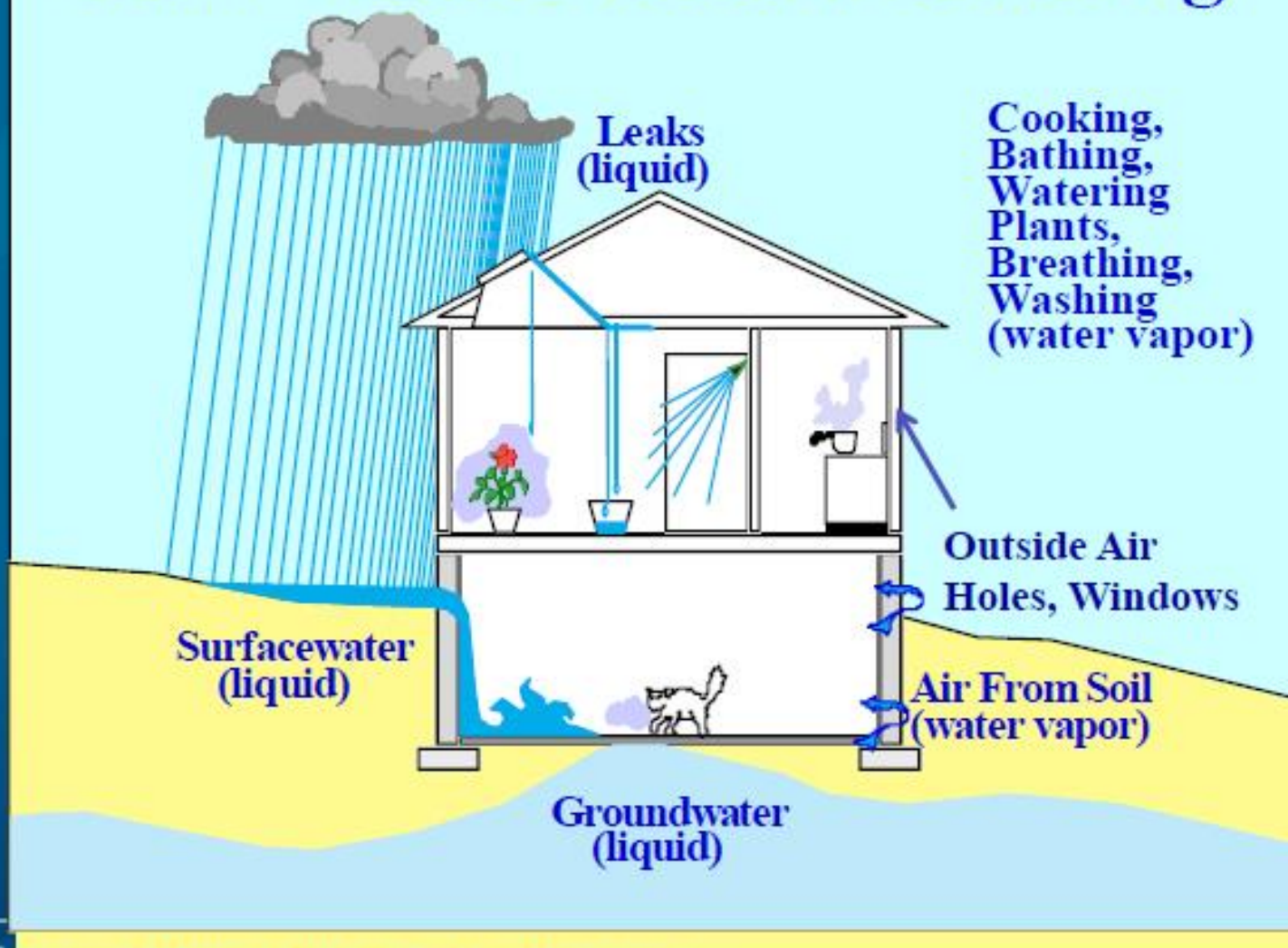
# Mold & Moisture Related Health Effects

- Asthma symptoms
- Upper respiratory tract symptoms
- Cough & wheeze
- Hypersensitivity pneumonitis

Source: National Collaborating Centre for Env. Health, 11/09



# How Water Enters a Building









# Mold Growing on Drywall

**Mold Walls -Before**



**Work In Progress - After**



# Mold & Moisture

Mold Growth From Roof Leak- Before



Roof leak repaired & damaged wood replaced - After



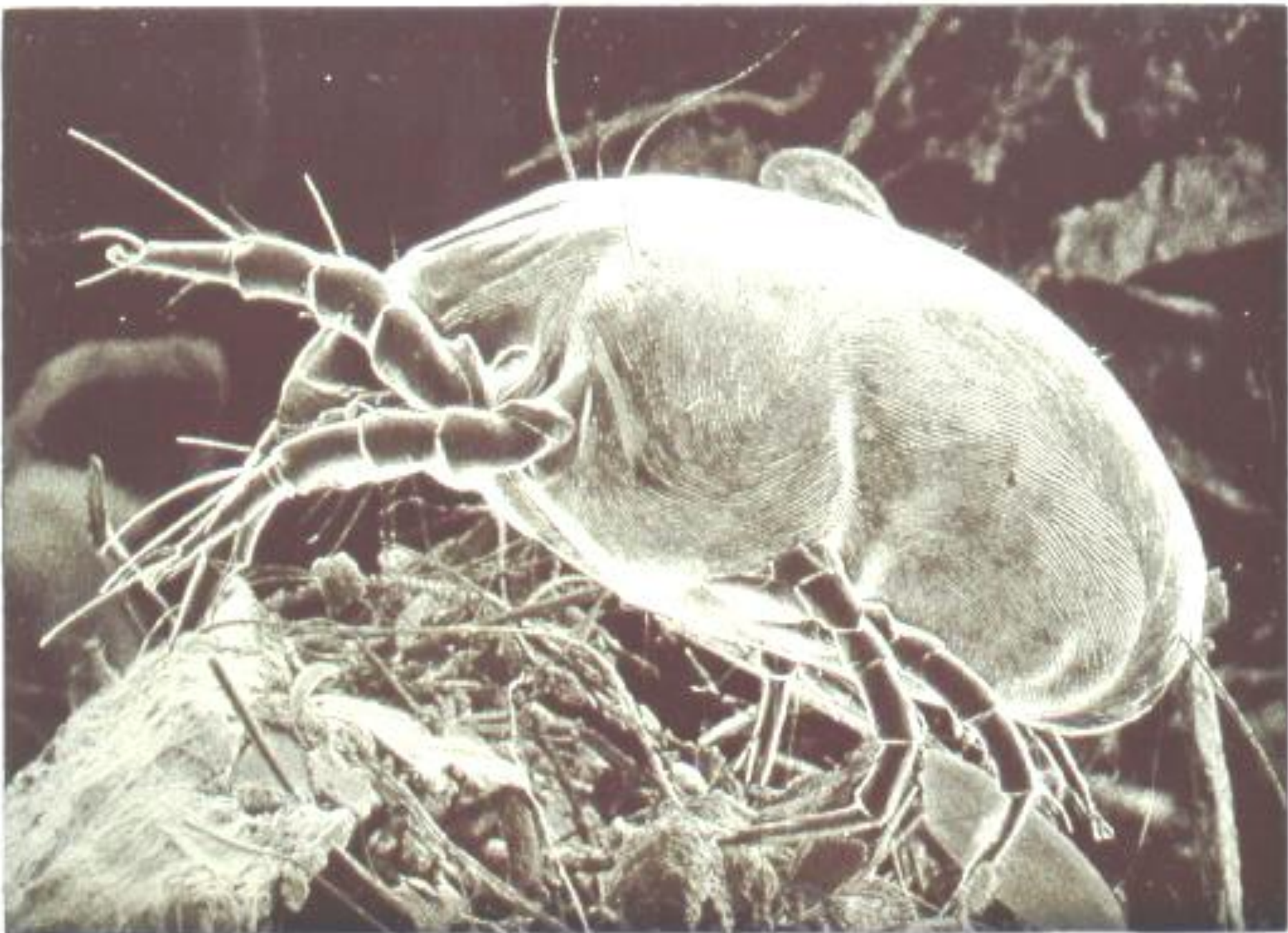
# Mold Contaminated Gear

**Moms Molded Leather Boots**



**Kids Molded Leather Shoes**





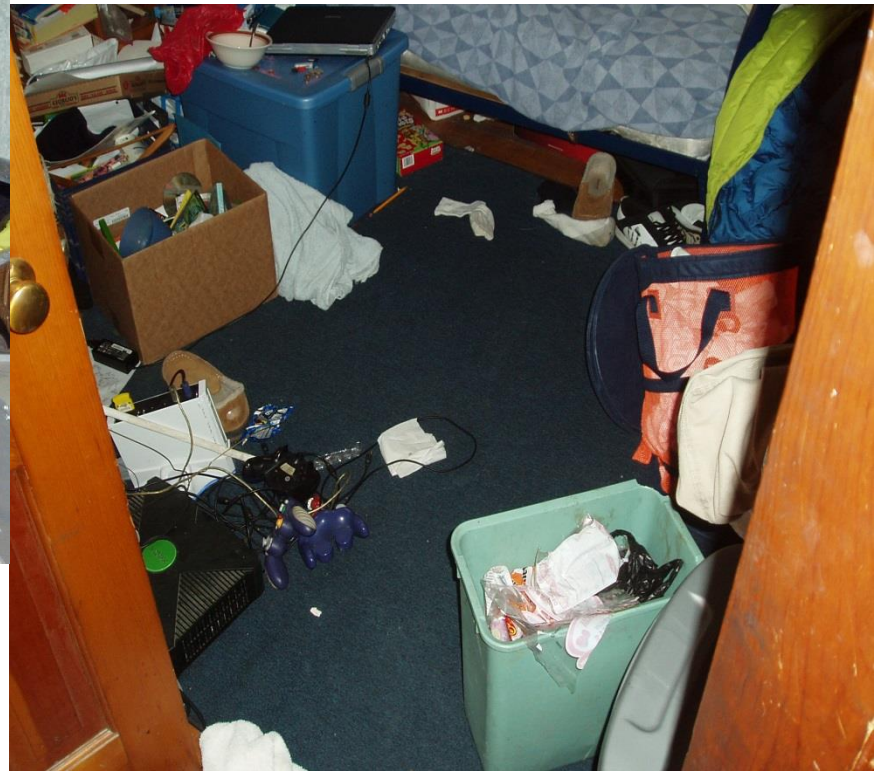
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# Keep it Clean



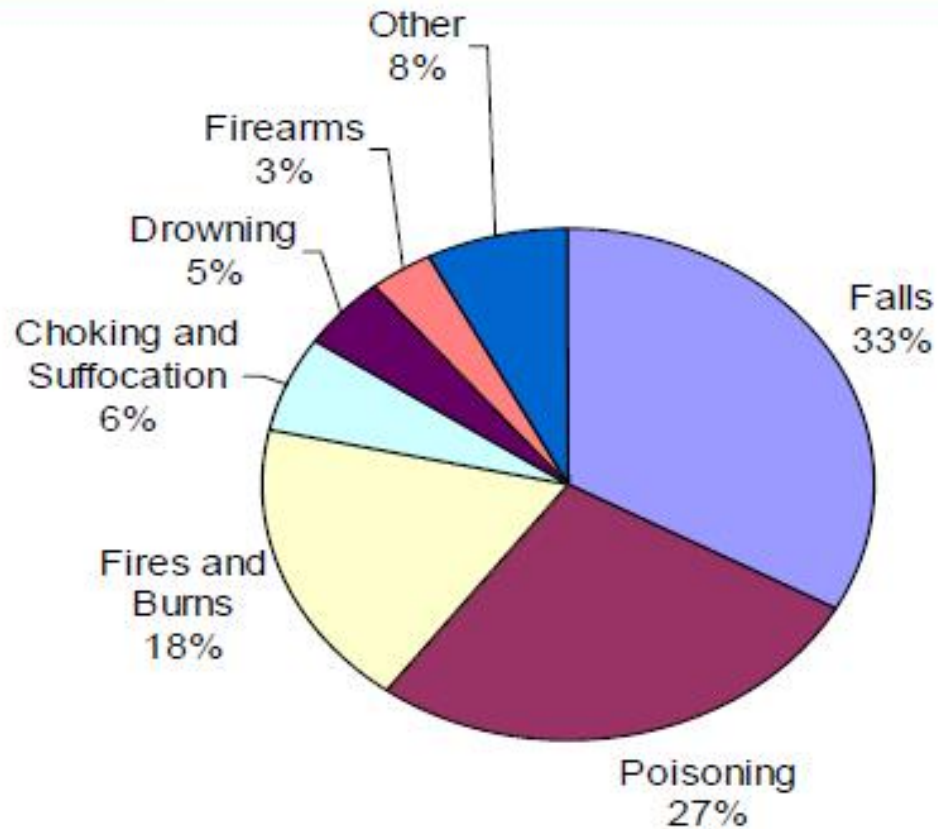
# Keep it Clean; Inside and Out



# 7 Steps to a Healthy Home

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# Keep it Safe



**National Center for Healthy Housing**

Healthy Homes Training Center



# Keep it Safe - Seniors



# Keep it Safe

**Warped Floor**



**Overloaded Circuit**





- Smoke Alarm
- CO Alarm
- Fire Extinguishers





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# Keep it Well-ventilated



# Healthy Homes – Exhausting Vents To Exterior

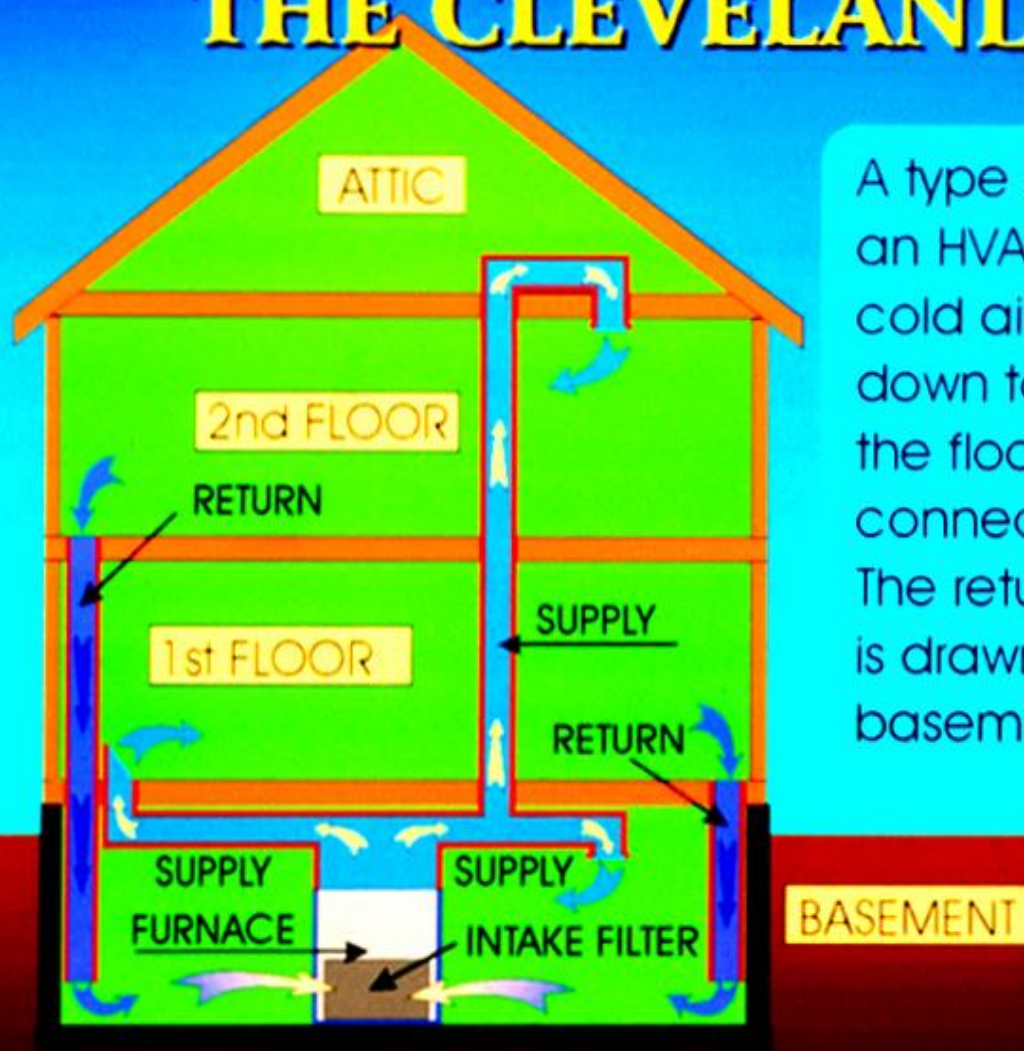
**Dryer Exhaust Disconnected - Before**



**Dryer Vent properly exhausting moisture - After**



# THE CLEVELAND DROP



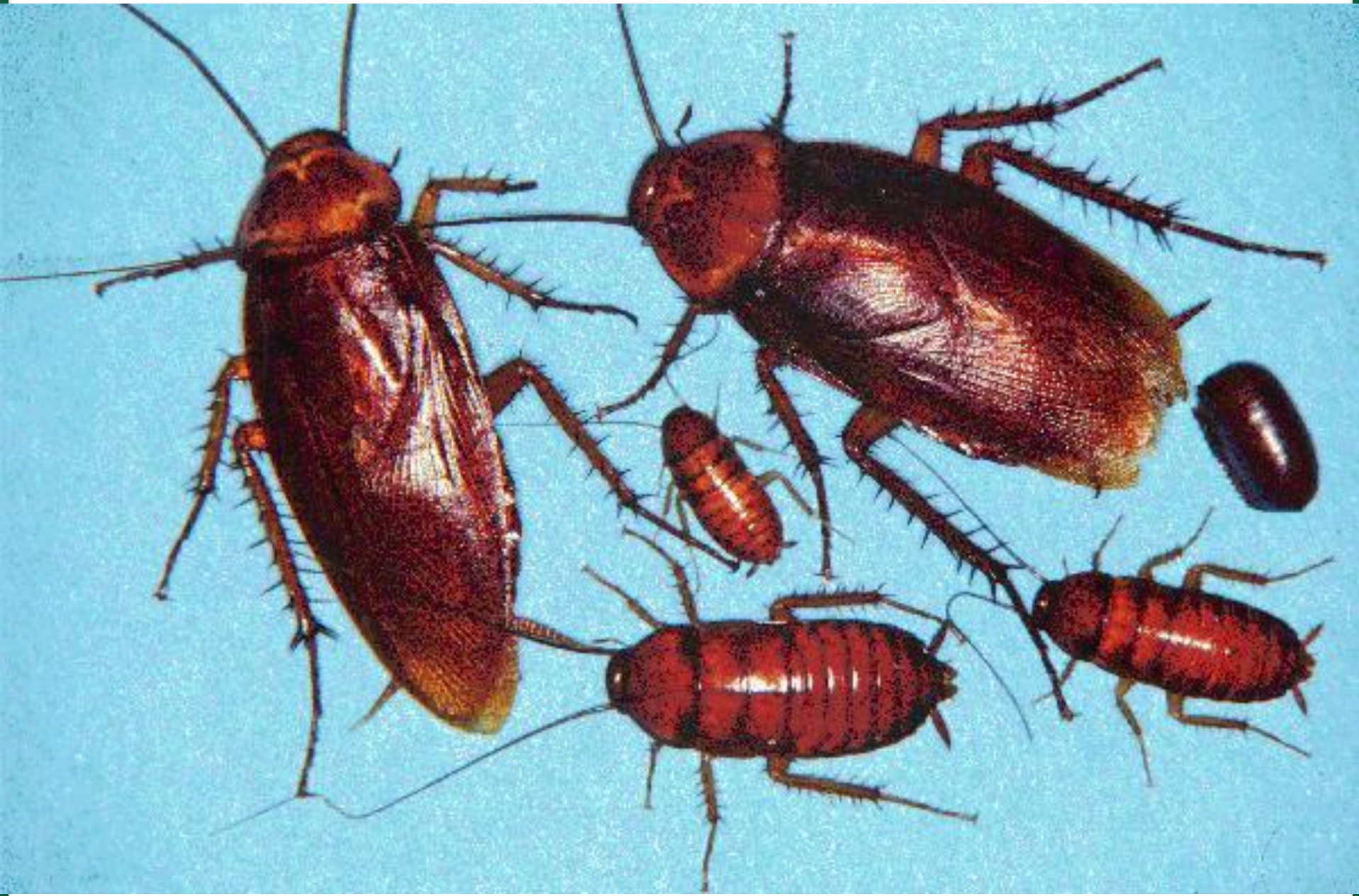
A type of configuration for an HVAC system where the cold air return ducts drop down to the basement near the floor, and are not connected to the furnace. The return air for the furnace is drawn directly from the basement via the filter intake.

**PREPARED BY THE CUYAHOGA COUNTY BOARD OF HEALTH**



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# Integrated Pest Management

- Keep them out and give them no place to hide
  - Change surrounding landscape
  - Block pest entries, passages, hiding places
- Reduce food availability
  - Practice proper food storage and disposal
  - No dirty dishes in the sink overnight
  - Clean crumbs, grease etc.
- Knock down population
  - Traps
  - Appropriate pesticides



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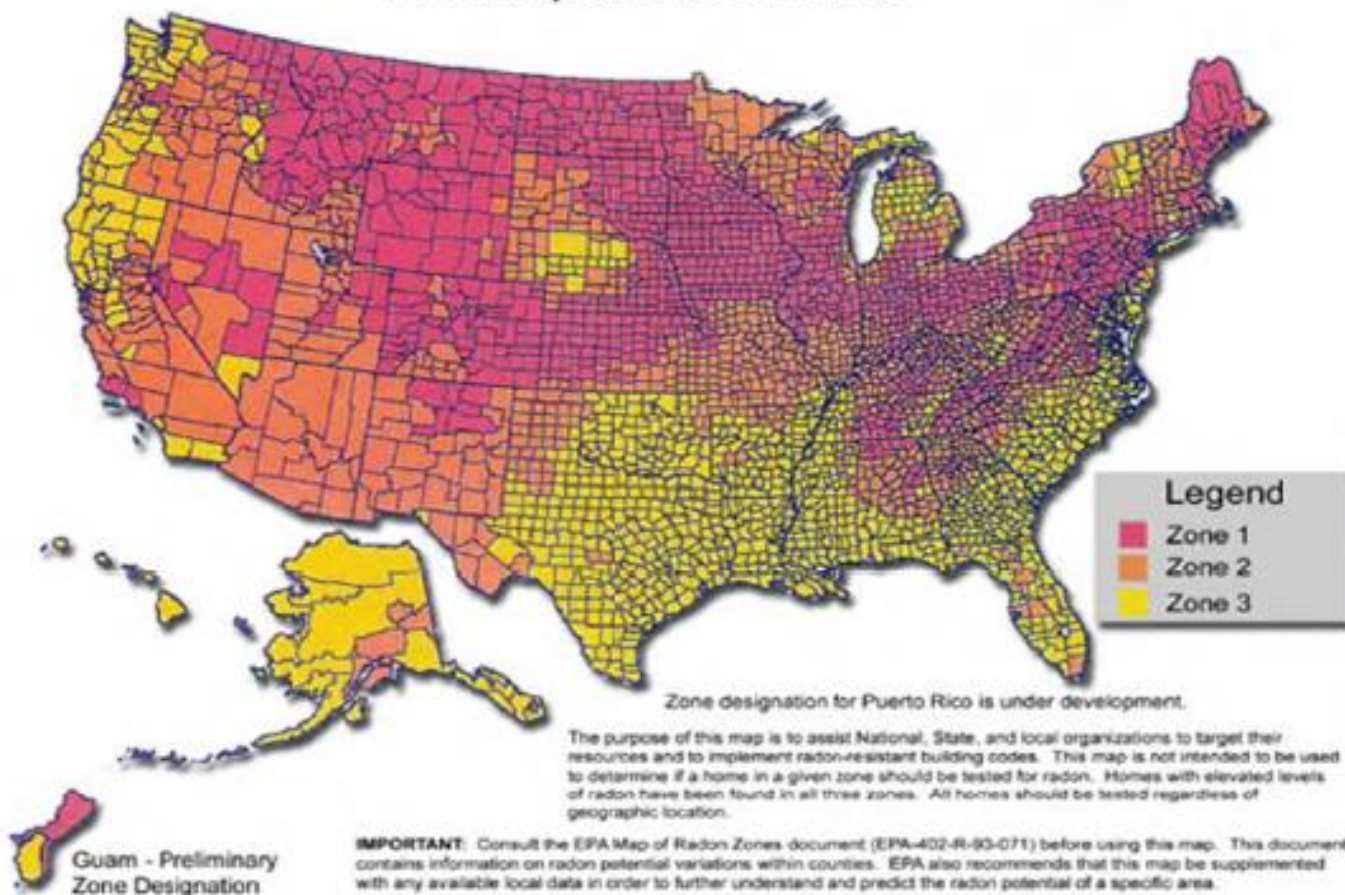
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# Keep it Contaminant-free

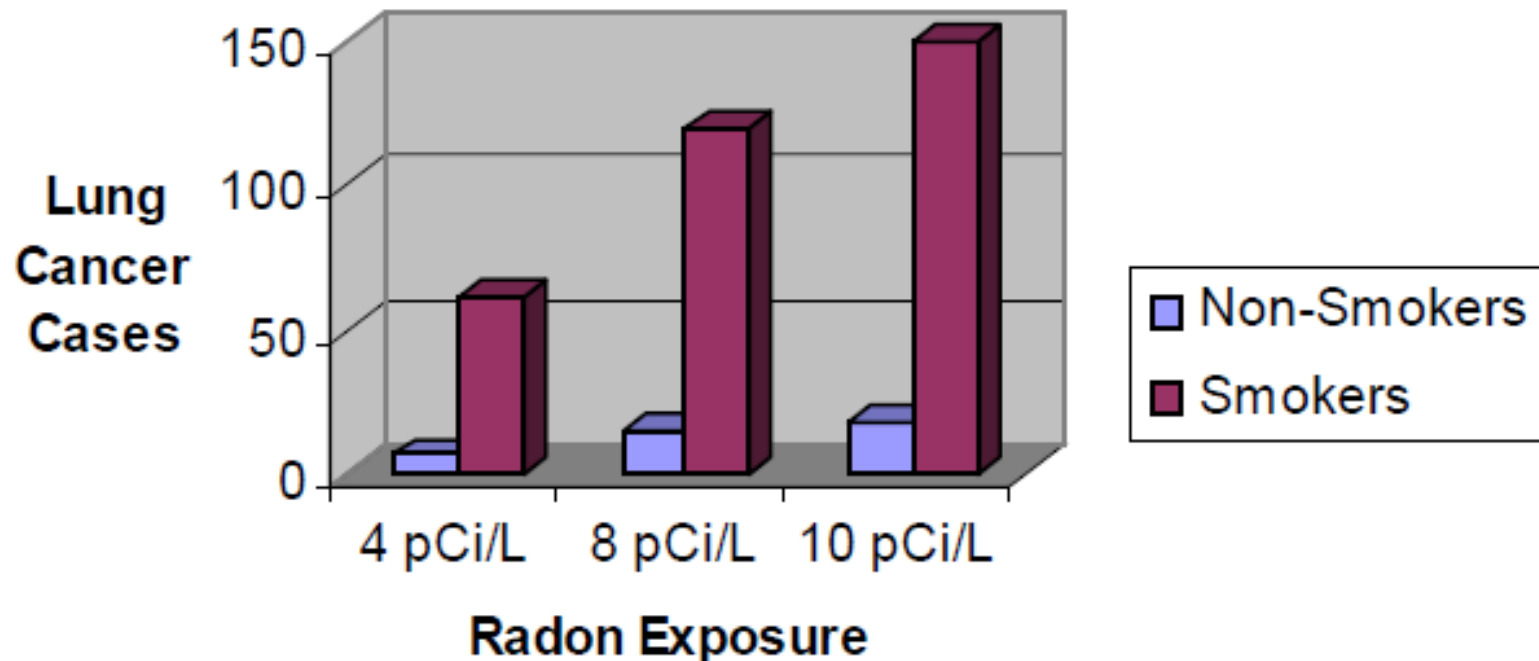


# EPA Radon Zones

EPA Map of Radon Zones



## Estimated Lung Cancer Cases In a Population of 1,000 (US EPA, 2005)



✓ 1/15 homes may have an elevated radon level (above EPA action level of 4 pCi/L).



**National Center for Healthy Housing**

Healthy Homes Training Center

# Asbestos Uses



# Volatile Organic Compounds

- Air Fresheners
- Cleaning Products
- Sprays & Coatings
- Wood Products
- Carpets
- Vinyl Floors
- Hobbies
- Home Maintenance



# Why Avoid VOCs?

## Potential health effects:

- Eye, nose, throat irritation
- Headaches, nausea, coordination
- Liver, kidney, and brain damage
- Some can cause cancers
- Child development





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# Keep it Well-maintained



# MERV Ratings

MERV	PARTICLE SIZE ( $\mu\text{m}$ )	TYPICAL CONTROLLED CONTAMINANT
1 – 4	>10.0	Pollen, sanding dust, textile and carpet fibers
5 – 8	3.0 – 10.0	Mold, spores, hair spray, cement dust
9 – 12	1.0 – 3.0	Legionella, lead dust, welding fumes
13 – 16	0.3 – 1.0	Bacteria, most tobacco smoke, insecticide dust, copier toner
17 - 20	$\leq 0.3$	Virus, combustion particles, radon progeny





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