Indoor Air Quality in Homes

U.S. Environmental Protection Agency

Region 5: Air and Radiation Division

Outline

- Introduction
- Indoor Air Quality Overview
- Radon
- Mold
- Carbon Monoxide
- Lead
- Second-Hand Smoke
- Asthma Triggers
- Resources

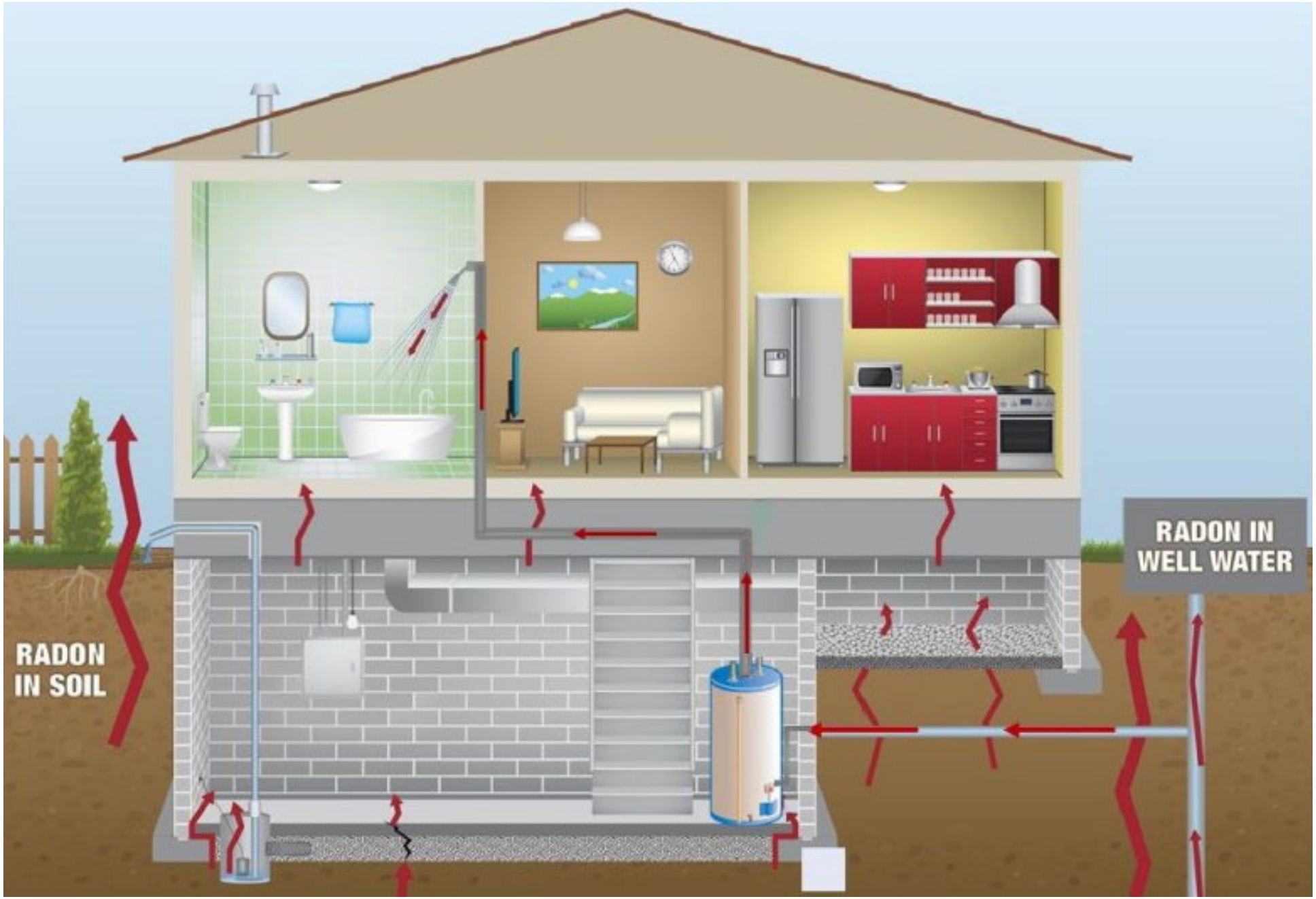
Why is indoor air quality important?

- Air Quality in homes and buildings impacts the health and comfort of people living and working within
- About 90% of our time is spent indoors
- Poor indoor air quality can have negative health impacts
- Some groups more sensitive

Sources of Indoor Air Pollution

Radon

- Naturally occurring gas that comes from soil
- Radon gas becomes trapped indoors after it enters through cracks and holes in foundation
- Leading cause of lung cancer among non-smokers


RADON
IN SOIL
RADON IN
WELL WATER

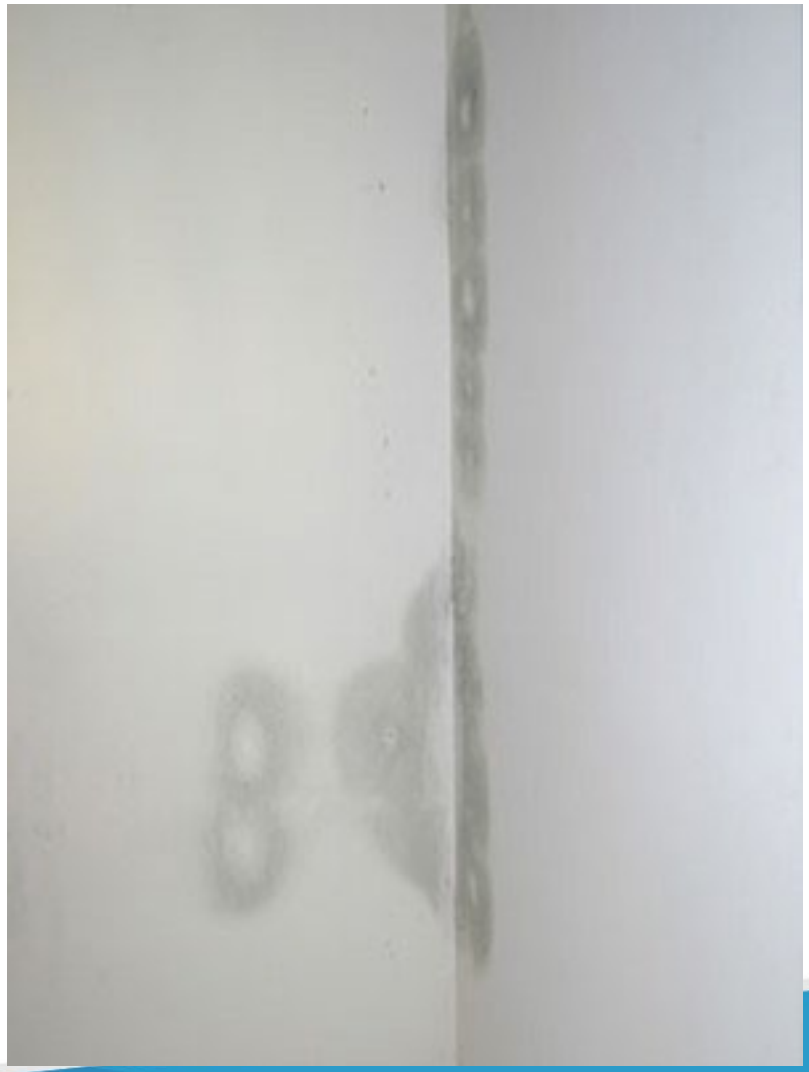
Radon

What to do

- Test for radon before moving into a new living space
- If tests indicated radon levels are high, a qualified radon service professional can install a radon mitigation system

Mold

- Type of fungi that produces tiny spores to reproduce
- When mold spores land on damp spots indoors they begin to grow
- Mold can cause allergic reactions, asthma and other respiratory issues



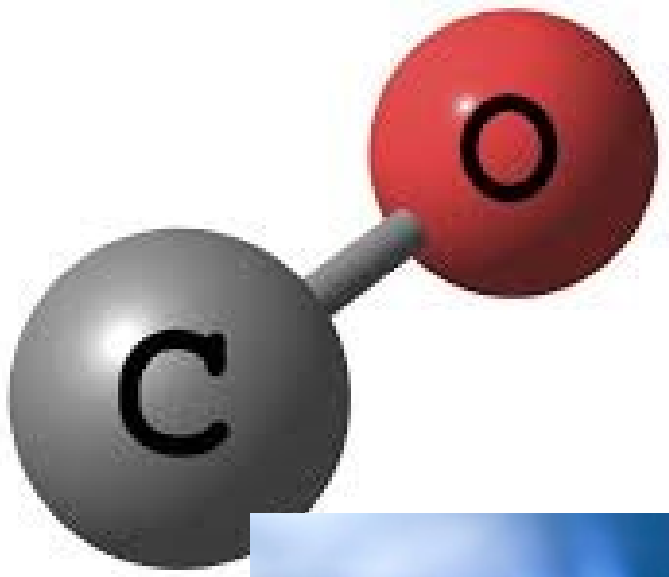
Mold

What to do

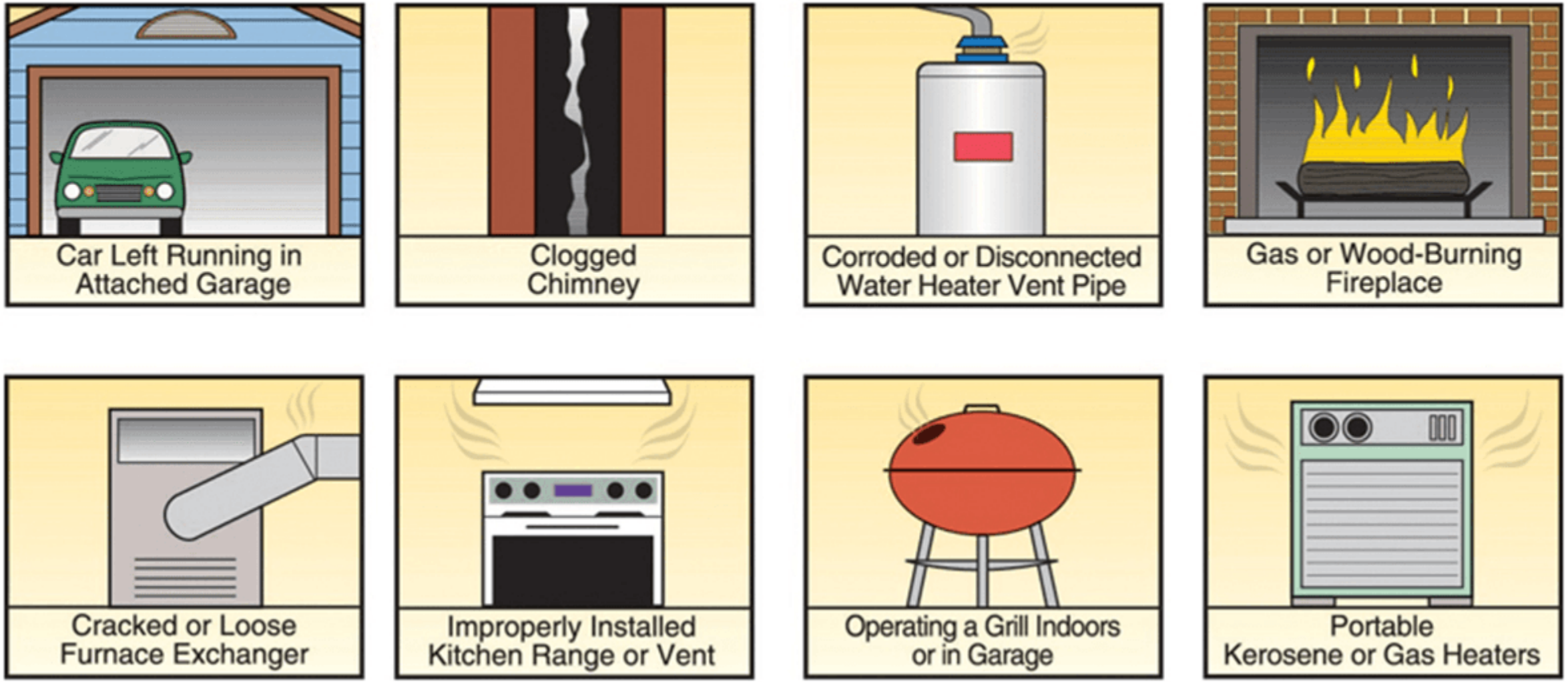
- Address sources of moisture promptly
- Bathrooms and basements are common sources of mold
- Bathrooms should have ventilation fans
- Use properly sized dehumidifier in basements

Carbon Monoxide

- Odorless, colorless, toxic gas formed by incomplete combustion of fuels
- Gas stoves, fireplaces, boilers, furnaces
- Carbon monoxide poisoning can be deadly
  - Symptoms include headache, dizziness, nausea, confusion



SOURCES OF CARBON MONOXIDE IN A HOME



Source: roswell-nm.gov

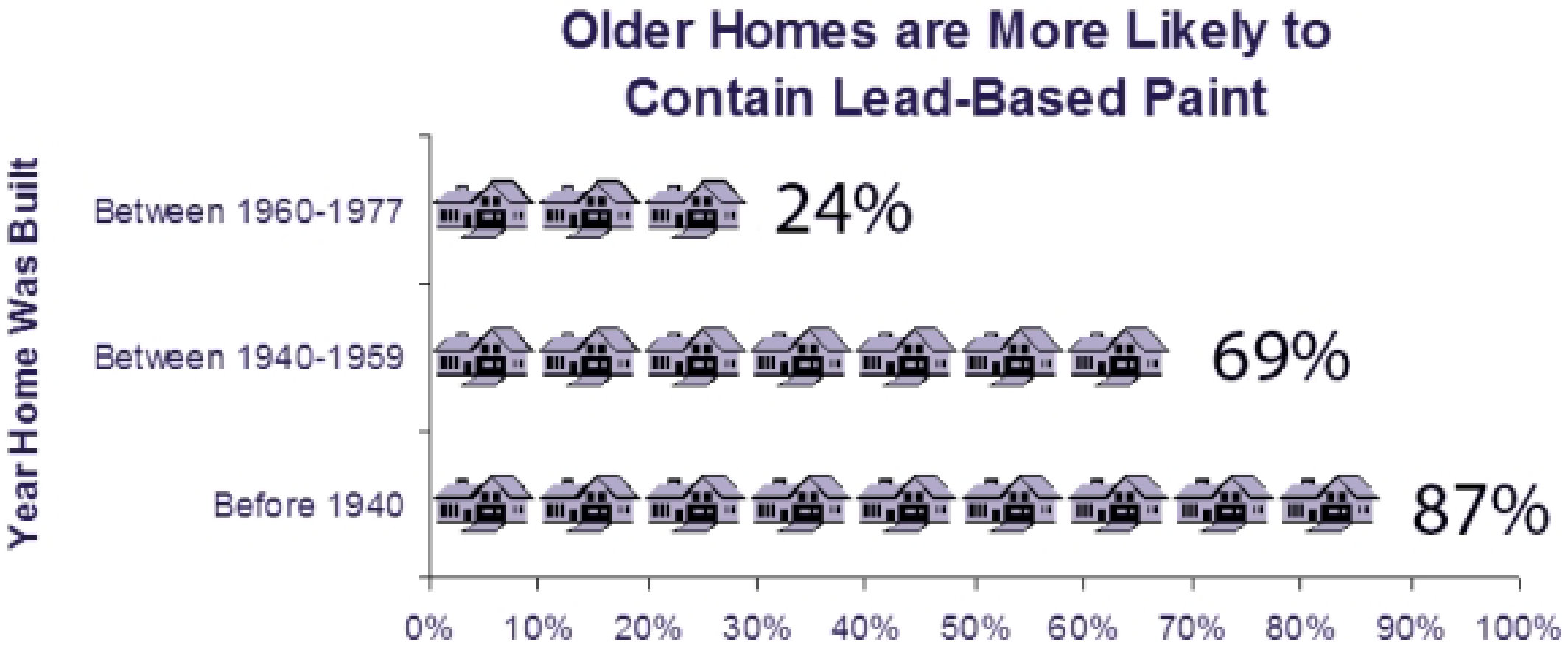
Carbon Monoxide

What to do

- Install carbon monoxide detectors!
- Make sure gas appliances vent outside whenever possible
- Proper installation and maintenance of appliances

Lead

- Naturally occurring element found in old paint and contaminated soil
- Children more susceptible
- High exposures can cause kidney and brain damage


Older Homes are More Likely to Contain Lead-Based Paint
Year Home Was Built
Between 1960-1977
24%
Between 1940-1959
69%
Before 1940
87%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Lead

What to do

- Maintain painted surfaces
  - Lead paint in good shape usually not a problem
- Clean floors, window sills, and other surfaces to remove dust
- Consult a certified lead professional before beginning renovation or repair
- Talk to your landlord about fixing peeling or chipping paint
- Wash children’s hands, bottles, and toys

Secondhand Smoke

- Smoke given off by burning tobacco products such as cigarettes, pipes, or cigars
- Cardiovascular disease, lung cancer, asthma

Secondhand Smoke

What to do

- Inquire about the smoking status of your building
- Enforce a no-smoking/vaping rule within your living space

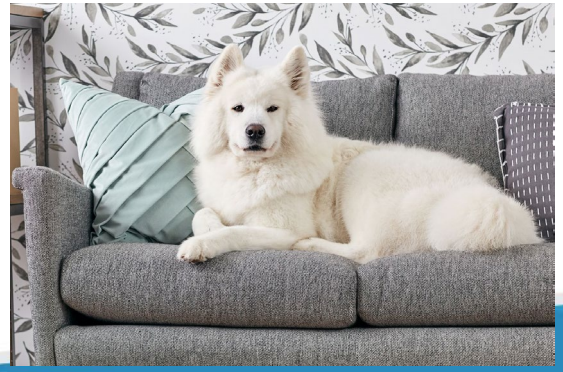
Asthma Triggers

Pests

- Examine new home for droppings
- Seal cracks and openings
- Reduce food sources and regularly clean

House Dust and Pet Dander

- Wipe down new living space and household items
- Dust and vacuum regularly
- Don’t allow pets onto fabrics



Resources in Flint

Lead-Based Paint Hazard Control

- HUD-funded, operated through the City of Flint
- Residents can have lead-based paint hazards remediated from their homes
- Up to $15,000 worth of lead-based paint remediation
- Request an Application

Radon Test Kits

- Contact Genesee County Health Department
- 630 S. Saginaw St., Suite 4, Flint
- 810-257-3612

Michigan Radon Program

Additional Resources

- https://www.epa.gov/indoor-air-quality-iaq/introduction-indoor-air-quality
- https://www.epa.gov/radon
- https://www.epa.gov/asthma
- https://www.epa.gov/indoor-air-quality-iaq/text-version-indoor-air-quality-house-tour