

# **RADON**

## **The Health Risks and Solutions**

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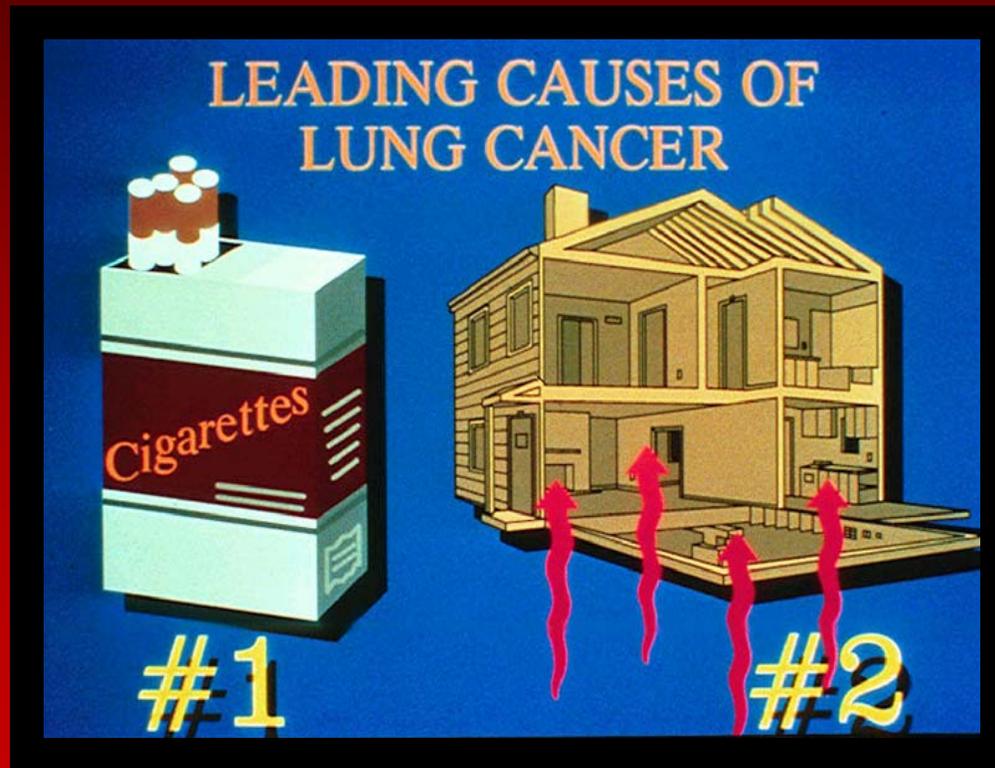


# What is Radon?

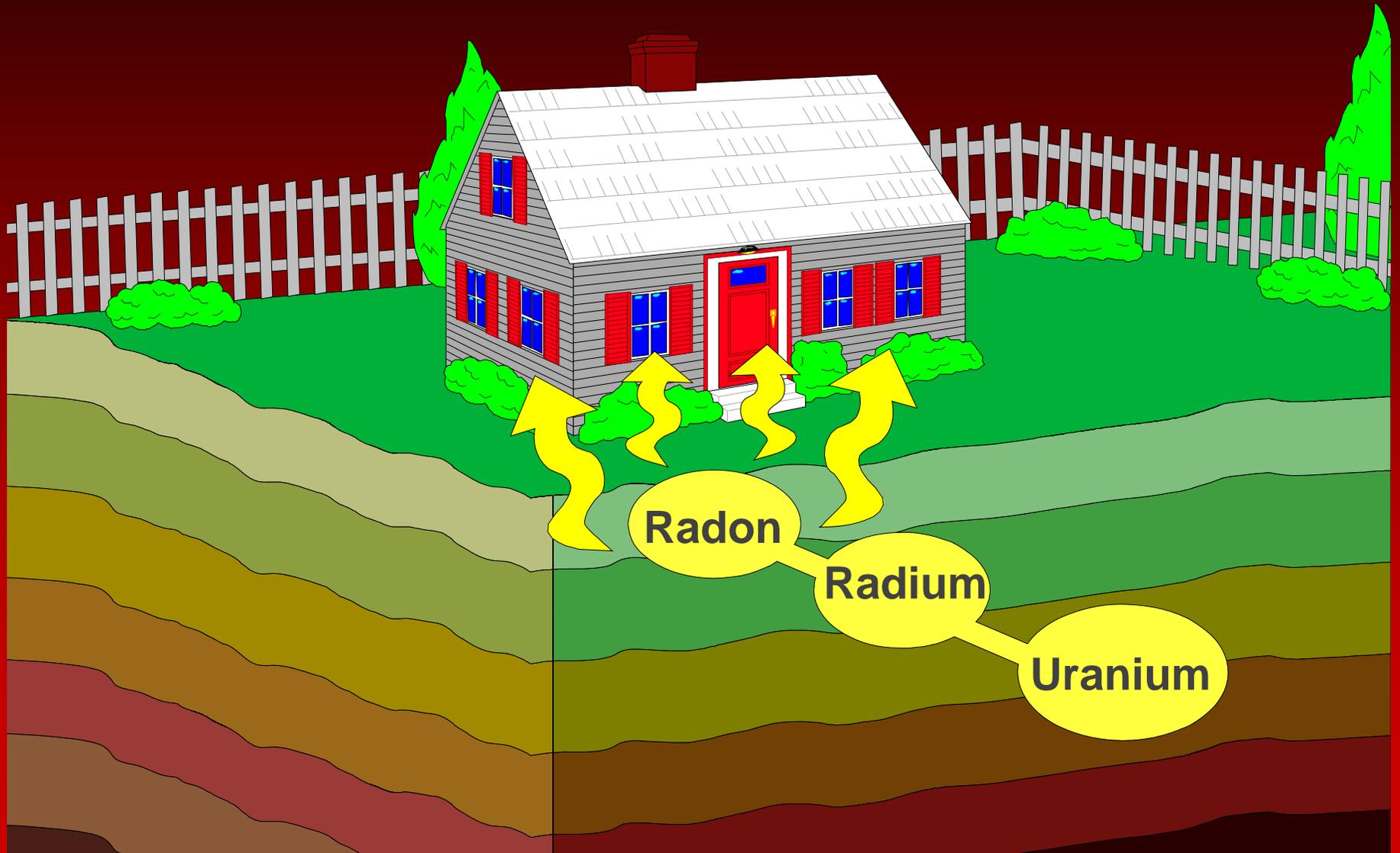
- A naturally occurring **radioactive gas**.
- Colorless, odorless and tasteless.
- Found all over the U.S. in all types of buildings.



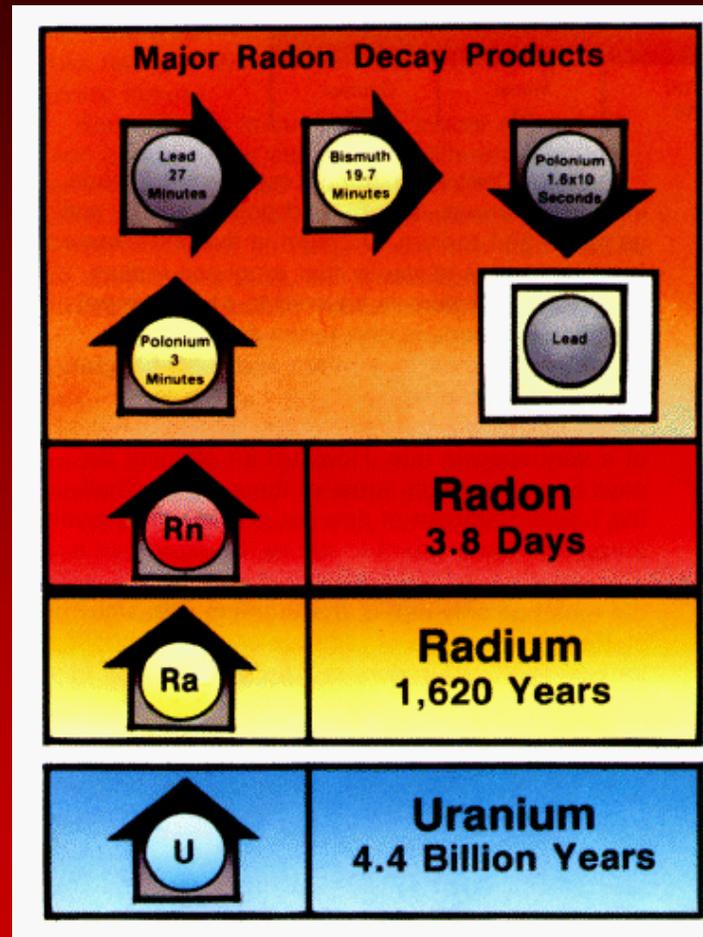
# Radon is 2<sup>nd</sup> leading cause of lung cancer ... and lung cancer death



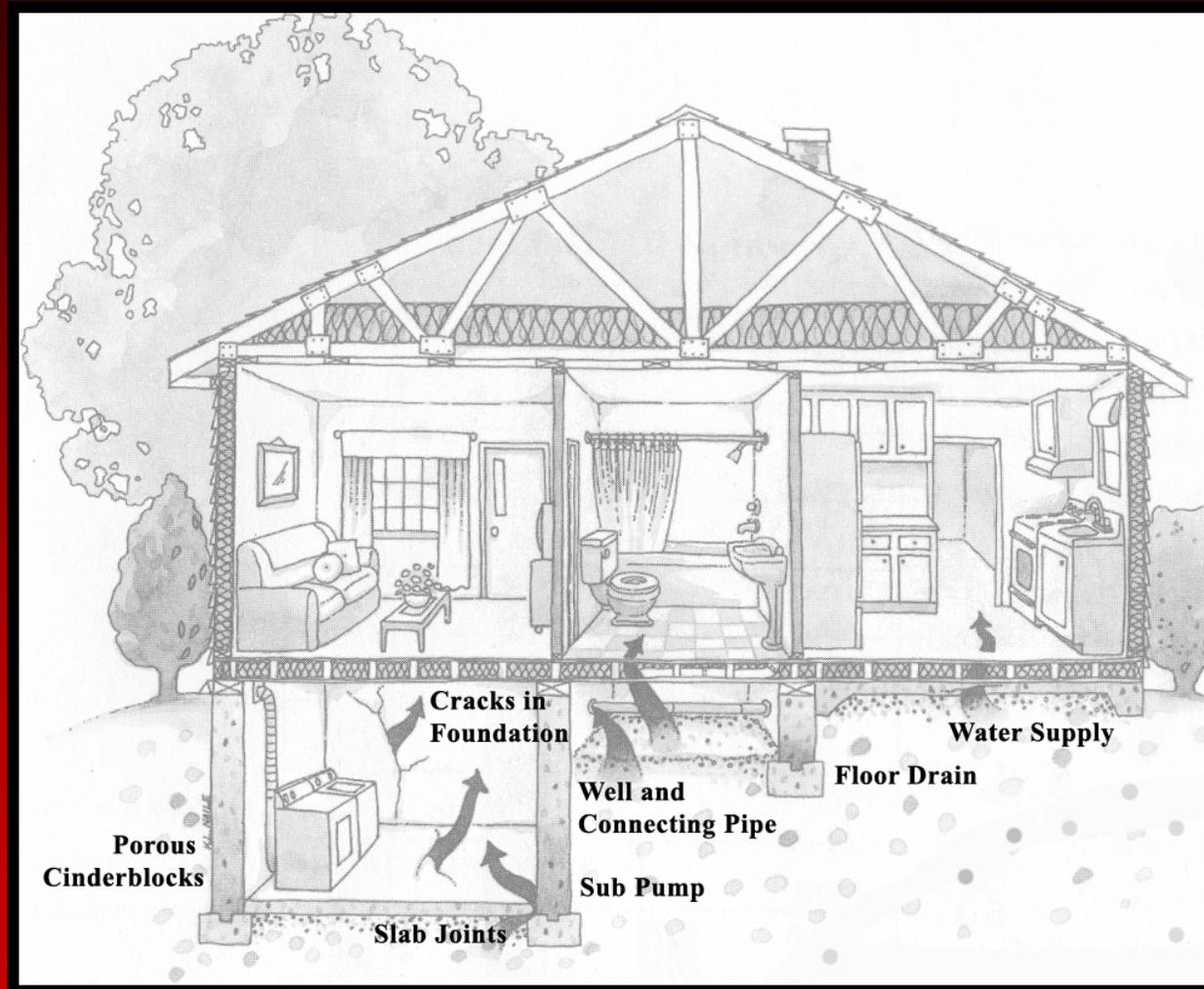
# Uranium Decay Chart



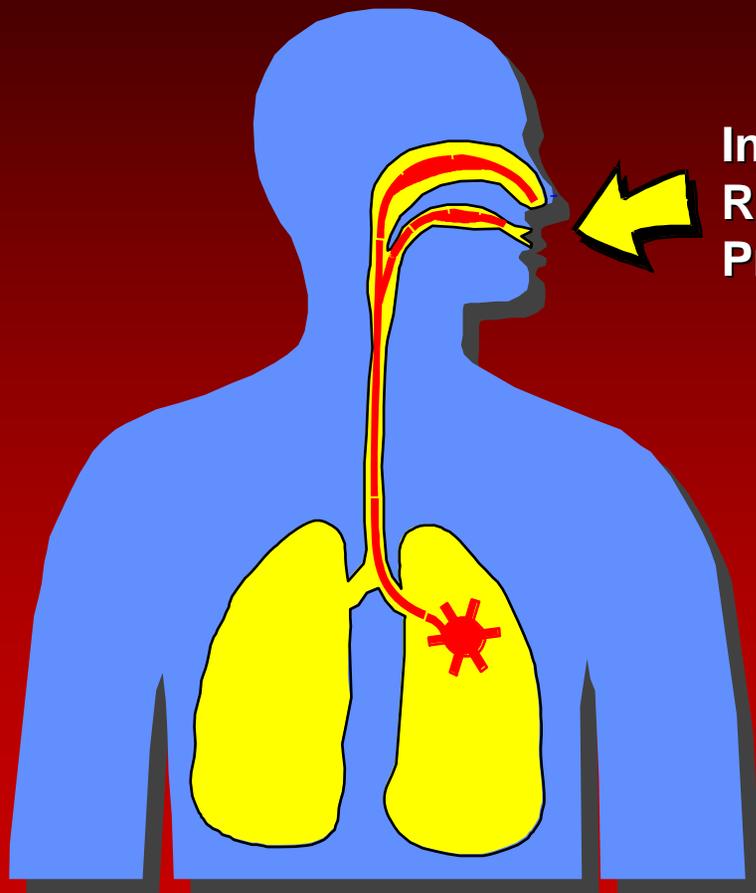
# Uranium Decay Products



# How Radon Gets into a Home:

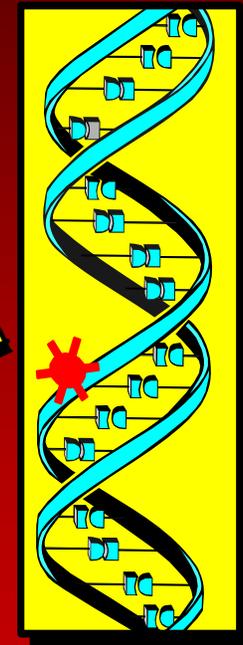


# How Radon Causes Lung Cancer



Inhalation of  
Radon Decay  
Products

Alpha  
Particle



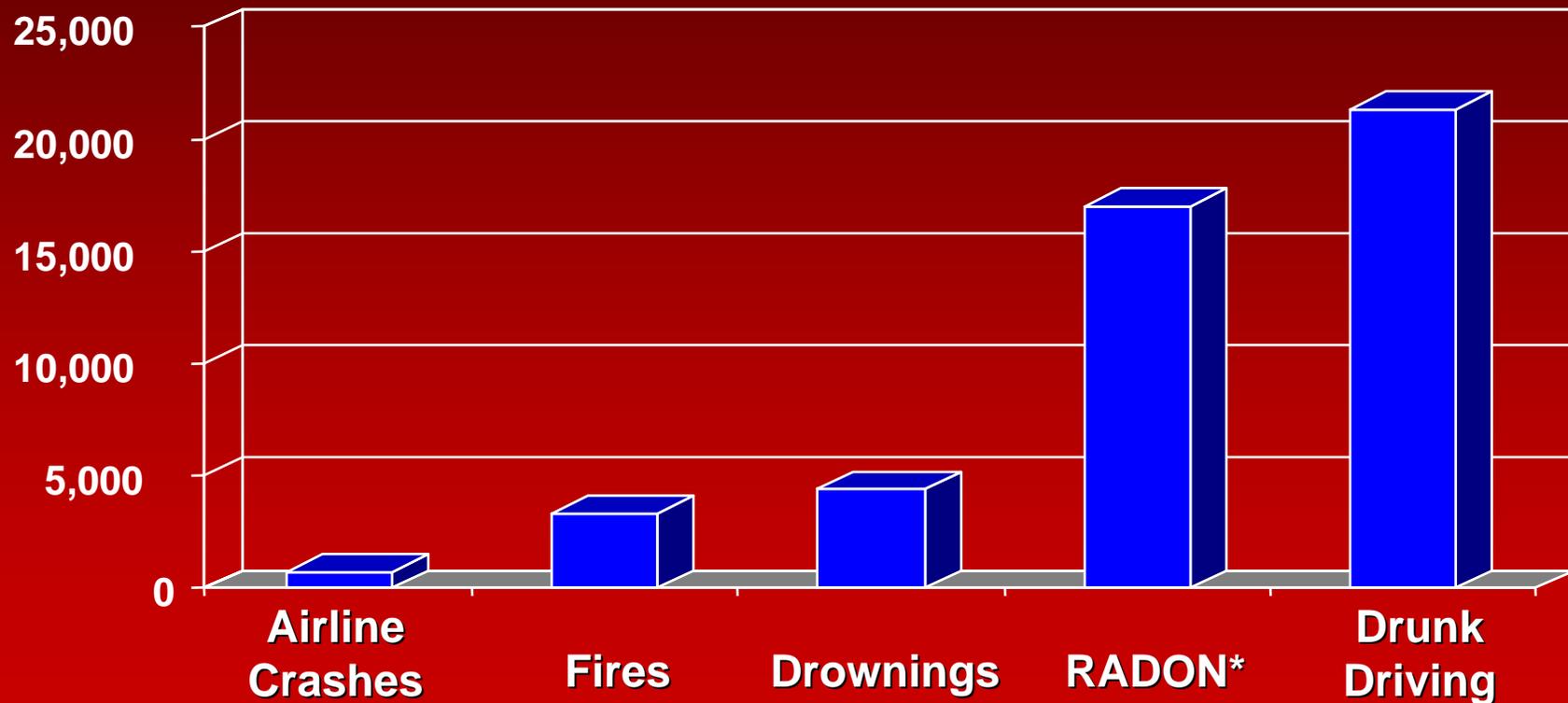
Radiation Damage  
to DNA

# What Are the Health Risks of Radon?

- Breathing air with elevated radon levels over long periods of time is known to increase your risk of lung cancer.
  - Radon is a known human carcinogen.
  - Second leading known cause of lung cancer, with cigarette smoking being number one.
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# Annual Deaths from Selected Causes

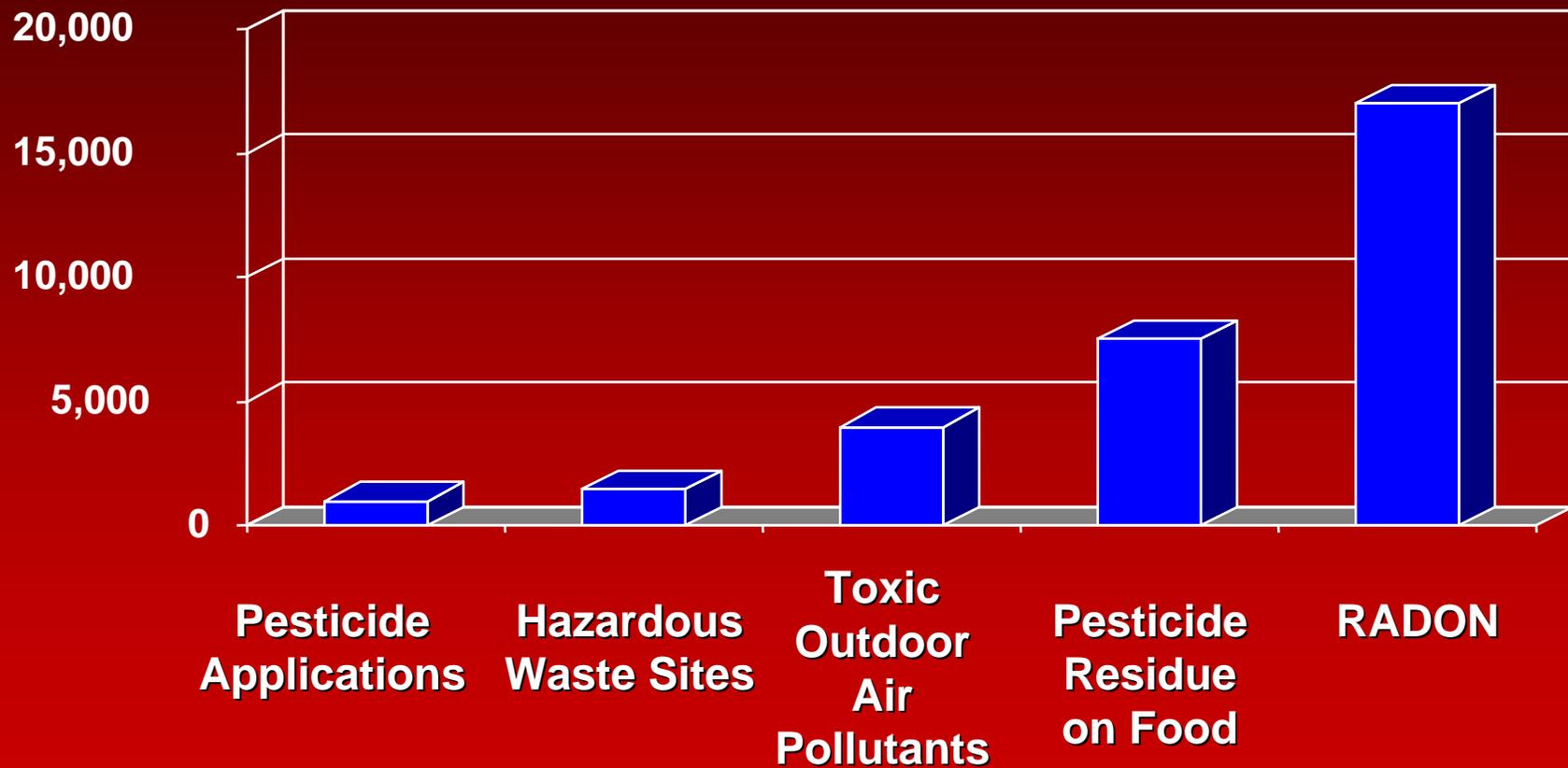
Deaths per Year



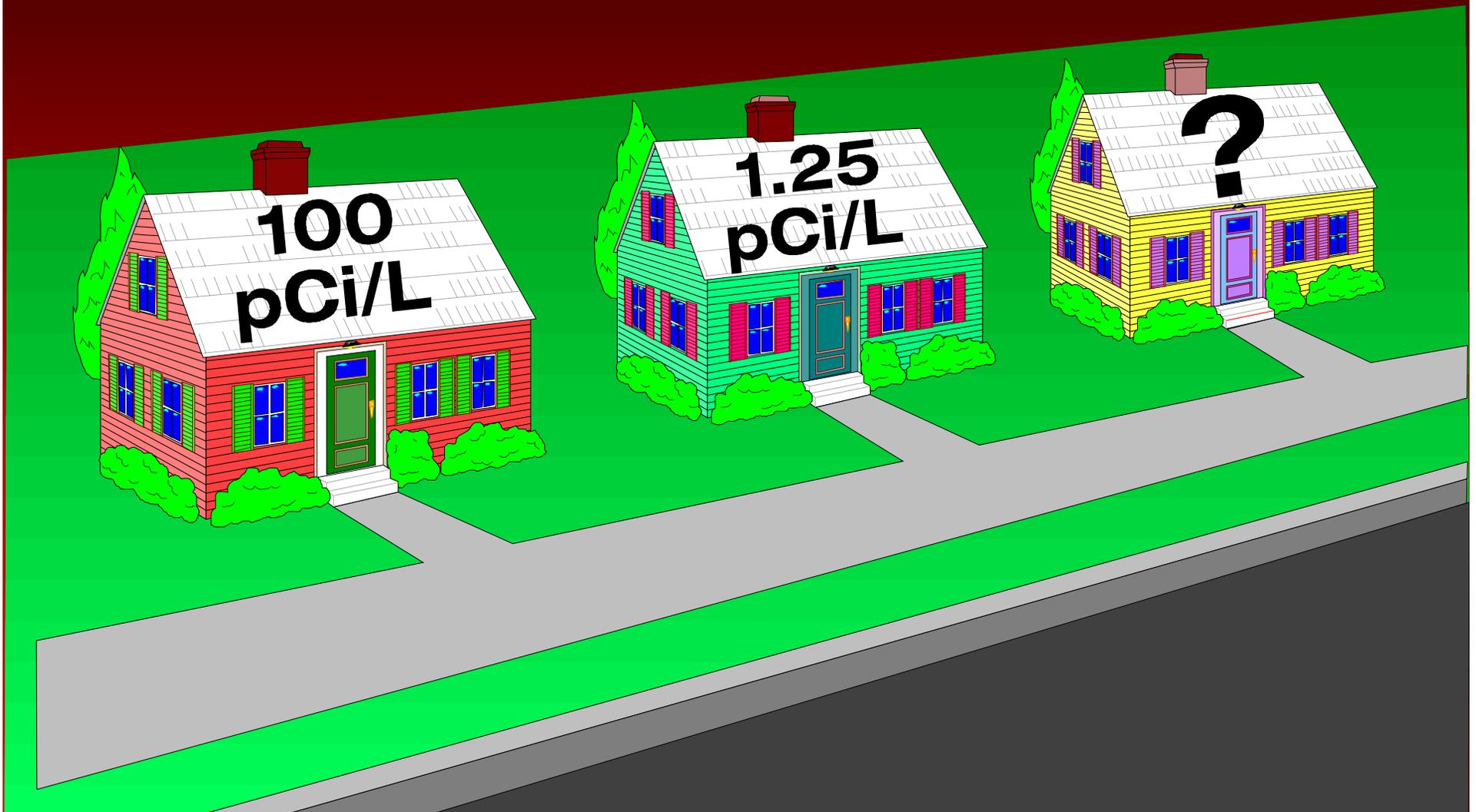
\* Radon is estimated to cause between 15,000 and 22,000 deaths per year, according to the National Academy of Sciences 1998 data. The number of deaths from other causes are actuarial data taken from 2000 National Safety Council reports.

# Environmental Risk Comparison

Estimated Annual Cancer Deaths



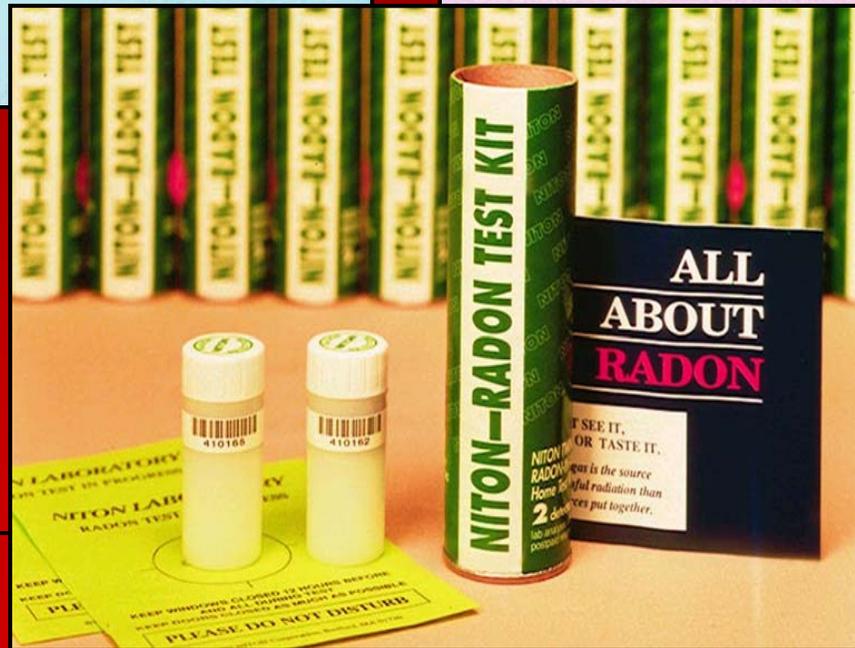
Testing is the only way to know if  
you and your family are at risk



# How Is Radon Measured?

- Radon is collected in a sampling kit placed in a building. The amount of radon collected is determined by a laboratory.
  - While no level of radon exposure is considered safe, EPA has set an action level at 4 picoCuries per liter of air (pCi/L).
  - If a radon test in a home shows levels at or above 4 pCi/L, the home should be fixed.
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# Radon Test Kits



# How Can I Fix My House If It Has Elevated Levels?

- Mitigate Your Home for Radon.  
A Radon Contractor can:
    - Install a system to reduce radon levels.
    - Prevent it from ever entering the living space.
  - Contact your state's radon program office for a list of qualified radon mitigators.
  - EPA and DHSS documents will be helpful in understanding radon mitigation in your home.
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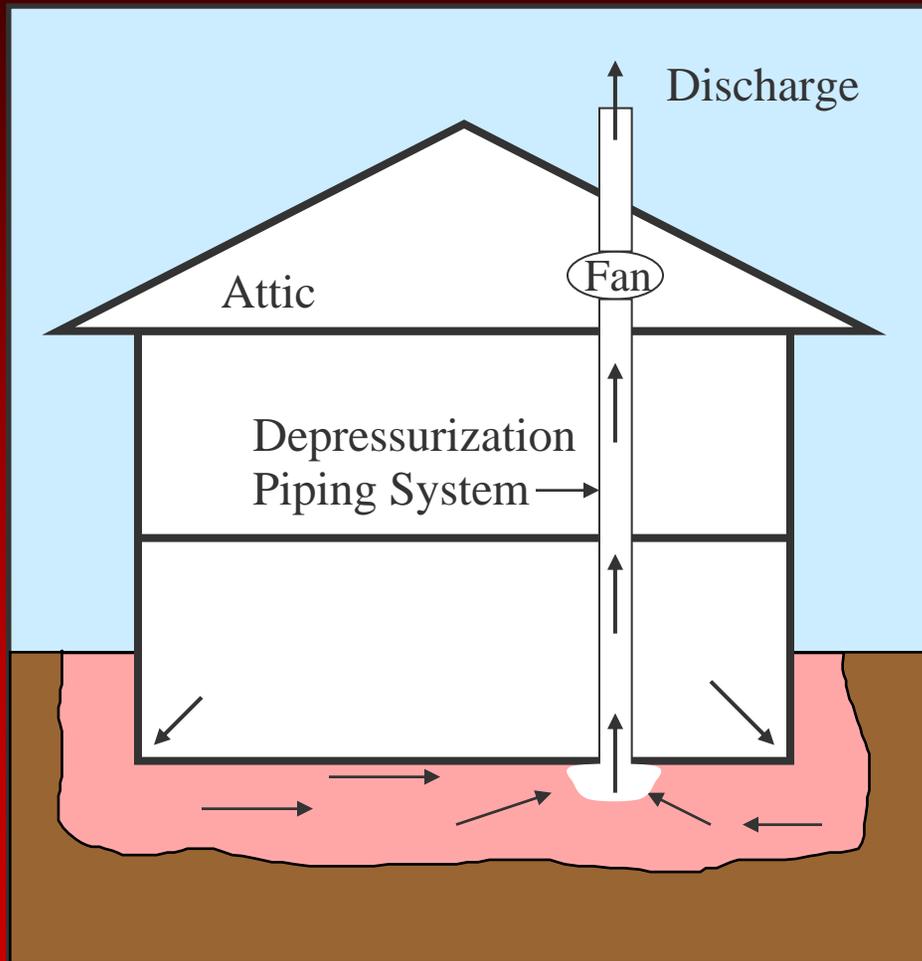
# Can't I Just Seal Cracks in the Floor or Open Windows?

- Sealing visible cracks is a basic part of most radon mitigation approaches, but sealing alone is NOT enough.
  - Opening doors and windows to dilute the radon may sometimes be effective, but it is NOT a practical long-term solution.
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# Radon Mitigation in a Home

- Most commonly installed system is called “sub-slab depressurization”.
  - System is simple, effective and energy-efficient.
  - Uses plumbing-type PVC pipe and a small fan to remove radon.
  - In most cases levels can be reduced below 2 pCi/L.
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# How Sub-slab Depressurization Works in a Home



- Suction created by fan draws radon from beneath the concrete slab and safely vents radon outdoors
- Most common type of radon mitigation system

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**Protect Your Family:**

**TEST FOR RADON**

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