
RADON

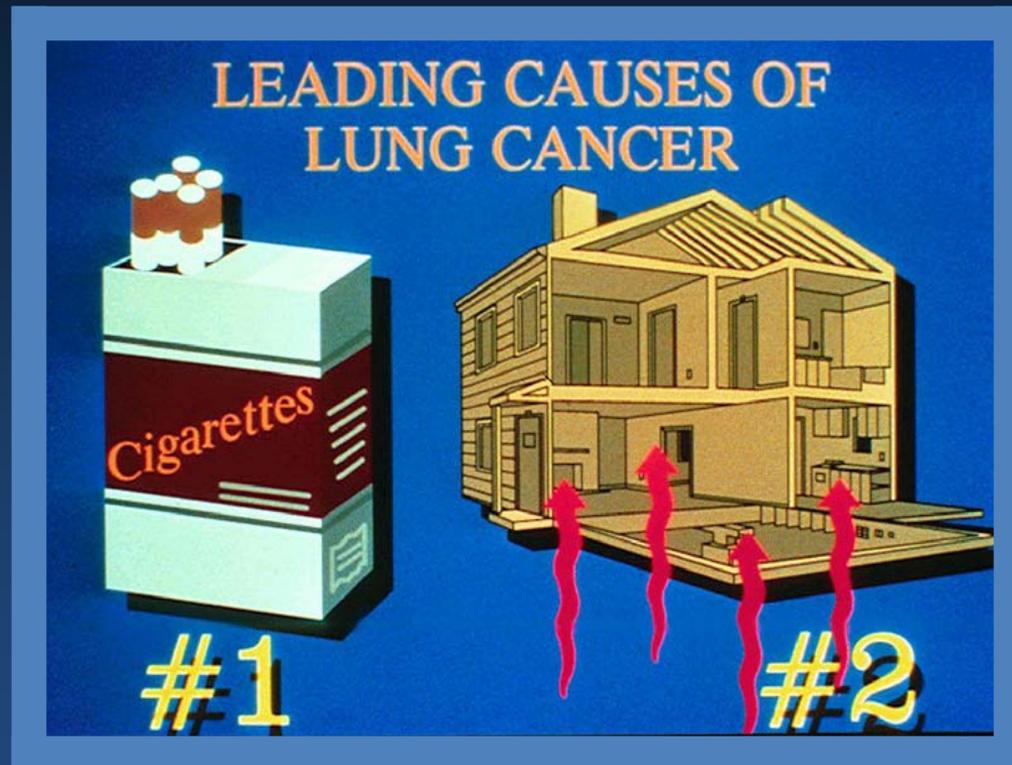
The Health Risks and Solutions



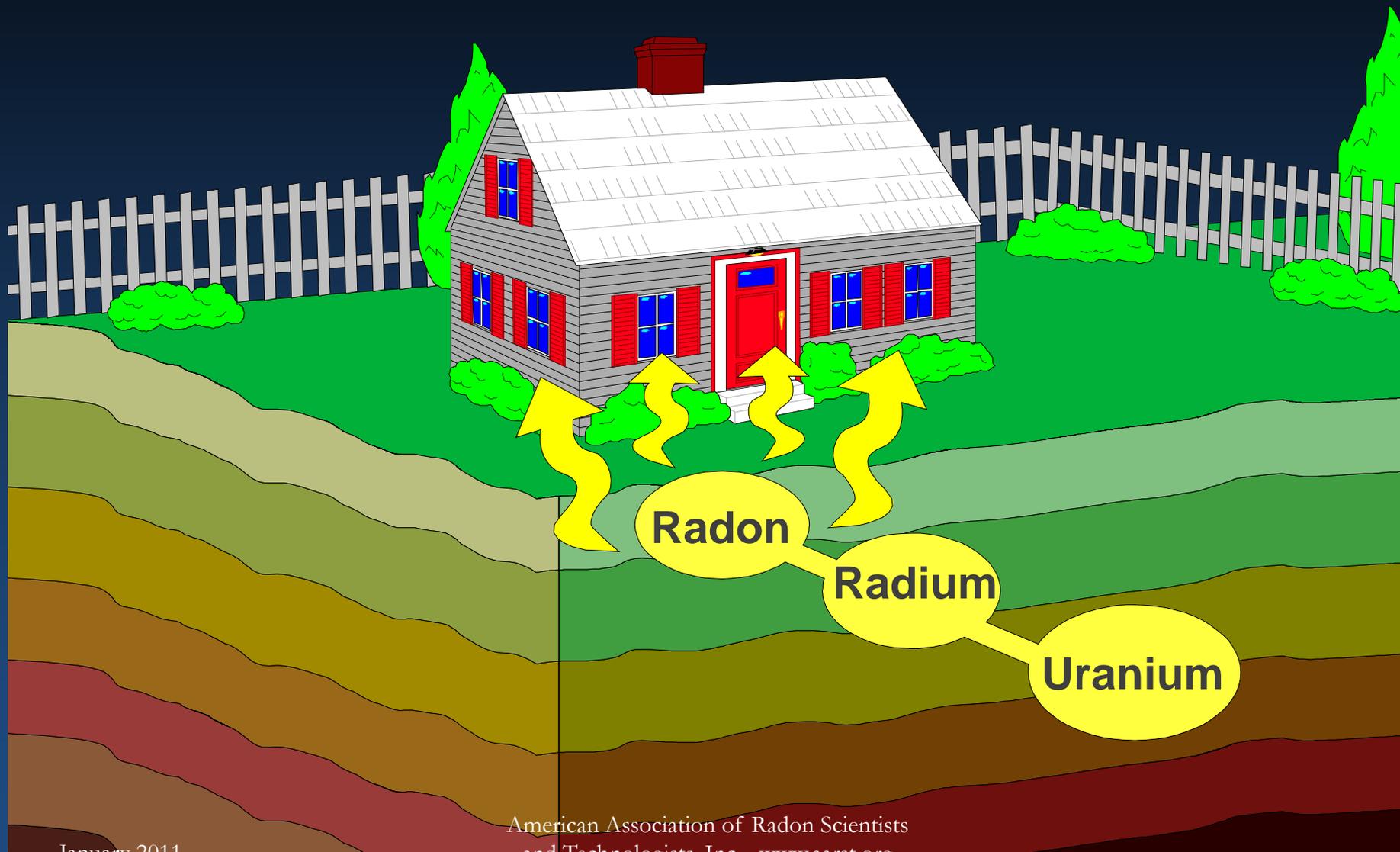
What is Radon?

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

Radon is 2nd leading cause of lung cancer



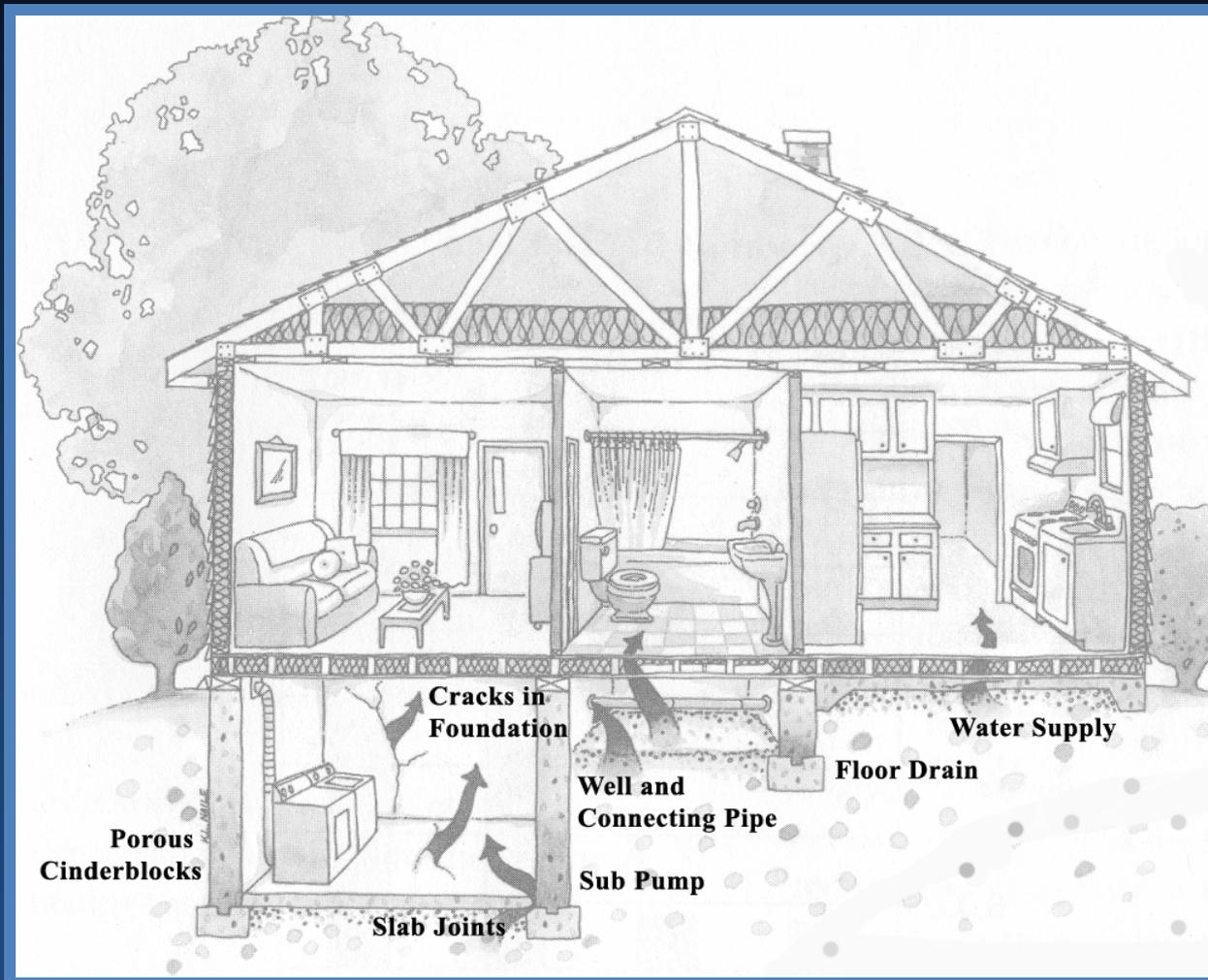
Uranium Decay Chart



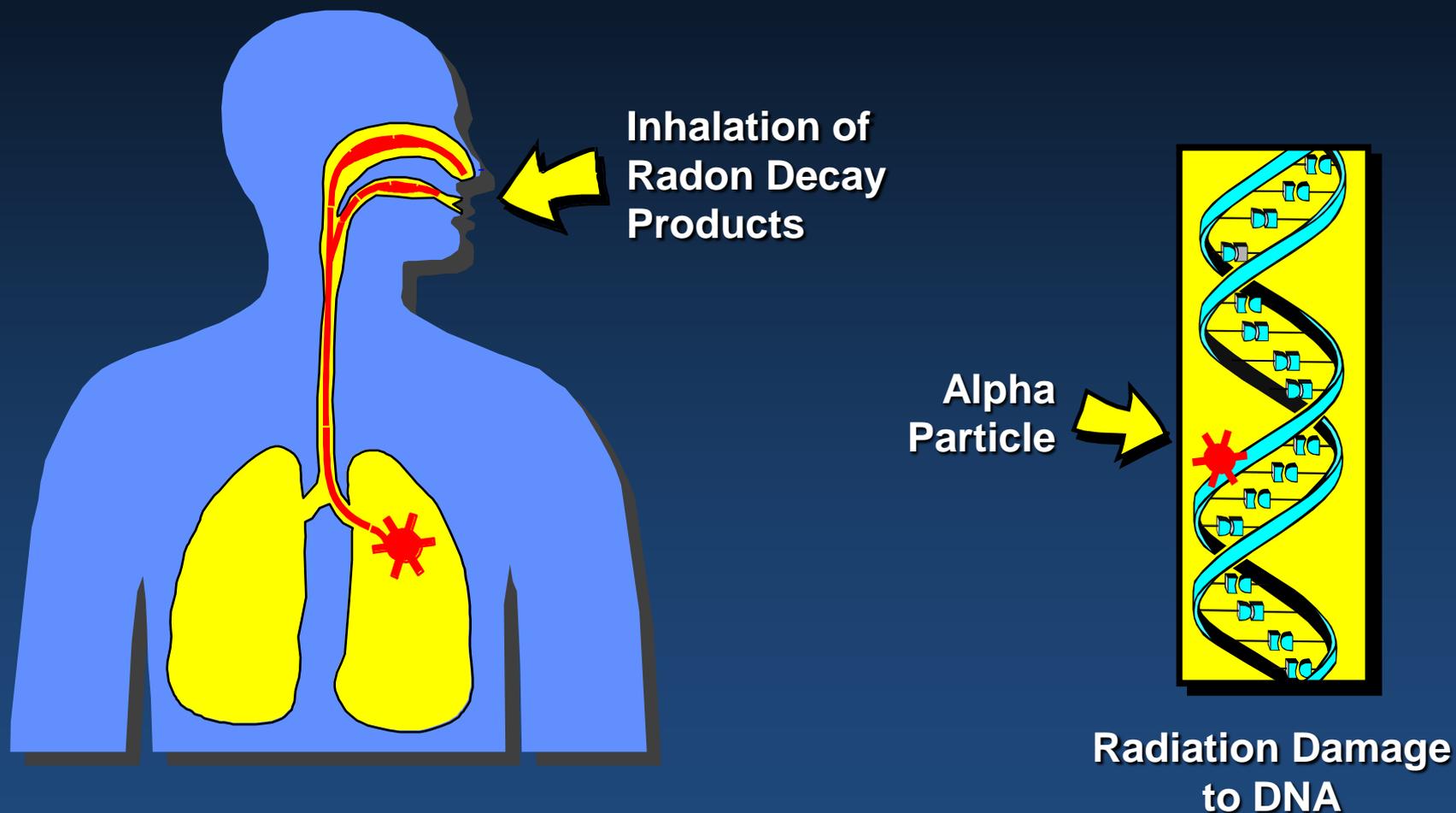
Where Does Radon Come From?

- Occurs naturally by the decay of uranium in rock and soil.
- Uranium is widely found in trace amounts in soil and rocks.
- Radon in soil and rocks under and adjacent to buildings, migrates through foundations, cracks and small openings and concentrates inside buildings.

How Radon Gets into a Home:



How Radon Causes Lung Cancer



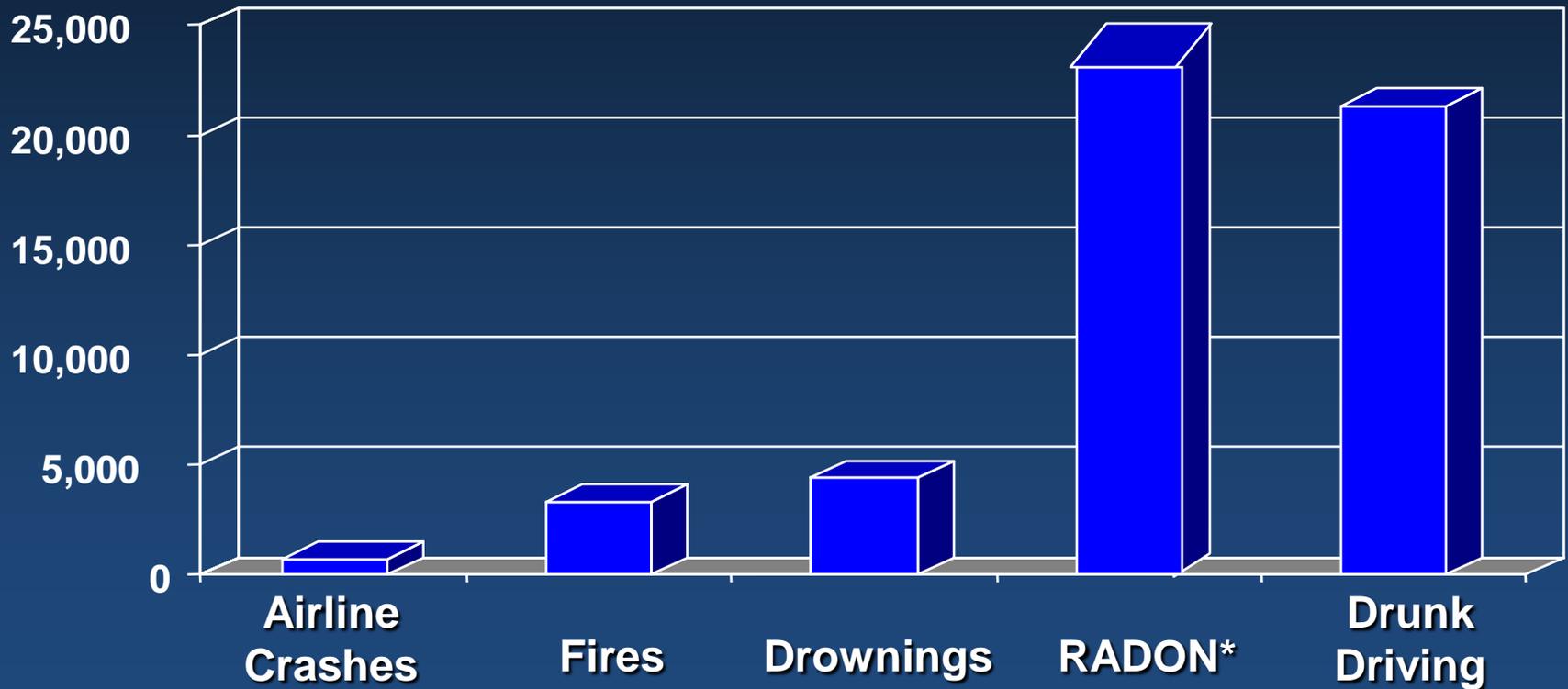


What Are the Health Risks of Radon?

- Breathing air with elevated radon levels over long periods of time is known to increase your risk of lung cancer.
- Radon is a class “A” carcinogen.
- Second leading known cause of lung cancer, with cigarette smoking being number one.

Annual Deaths from Selected Causes

Deaths per Year



American Association of Radon Scientists

† Radon is estimated to cause between 15,000 and 22,000 deaths per year, according to the National Academy of Sciences January 2001 and Technologists, Inc. www.aars.org
1998 data. The number of deaths from other causes are actuarial data taken from 2000 National Safety Council reports.

Radon is A Serious National Health Problem

- National health experts recommend testing your home for radon: U.S. Surgeon General, American Lung Association, American Medical Association, American Cancer Society, American Public Health Association and others.
- The 1998 report by the National Academy of Sciences 'Health Effects of Exposure to Indoor Radon' reaffirmed the risk from radon and estimated that radon causes between 15,000 and 22,000 lung cancer deaths per year in the U.S. (23,000 revised.)

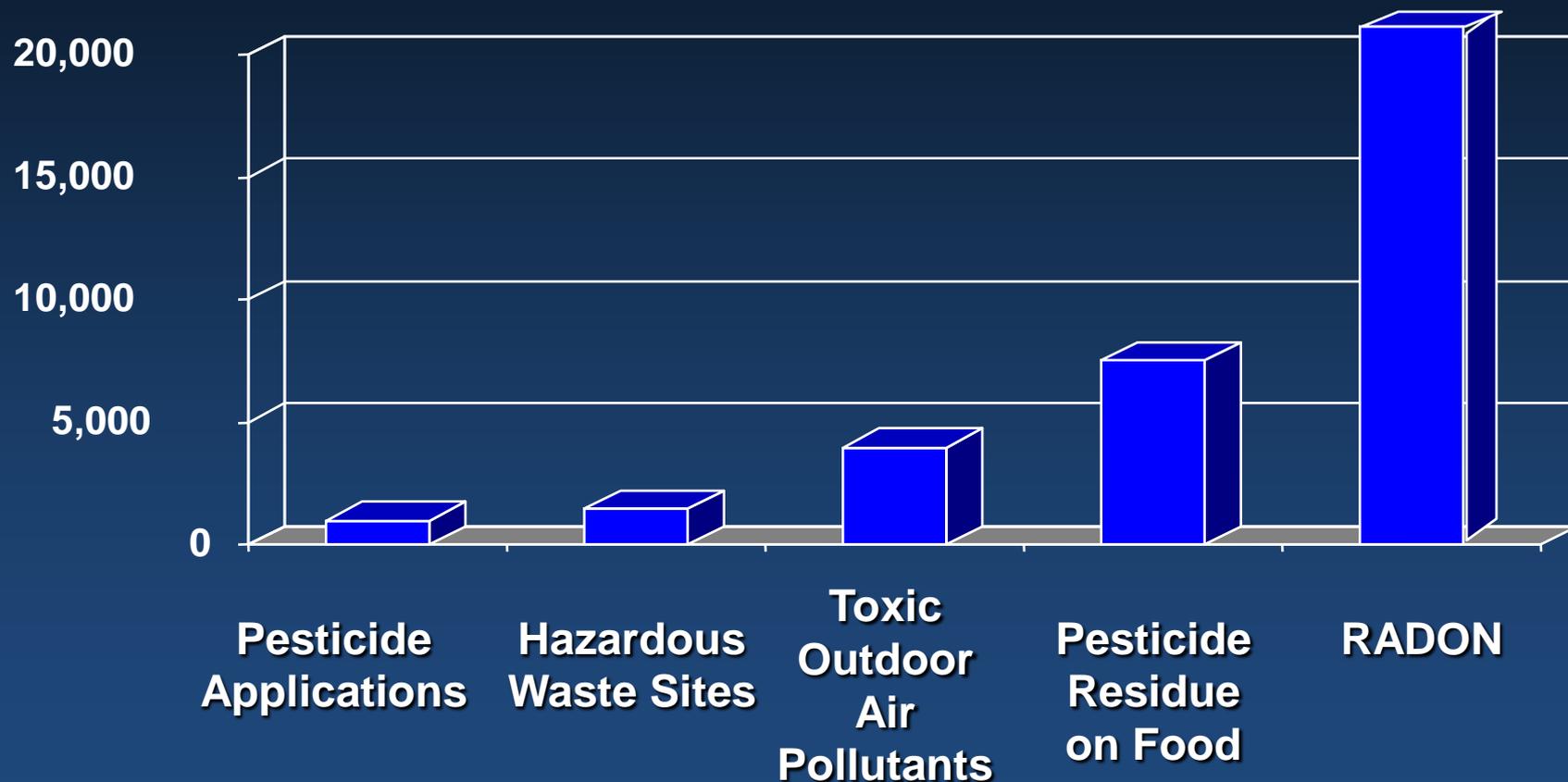
National Radon Health Advisory

Indoor radon gas is a national health problem. Radon causes thousands of deaths each year. Millions of homes have elevated radon levels. Most homes should be tested for radon. When elevated levels are confirmed, the problem should be corrected.

U.S. Public Health Service

Environmental Risk Comparison

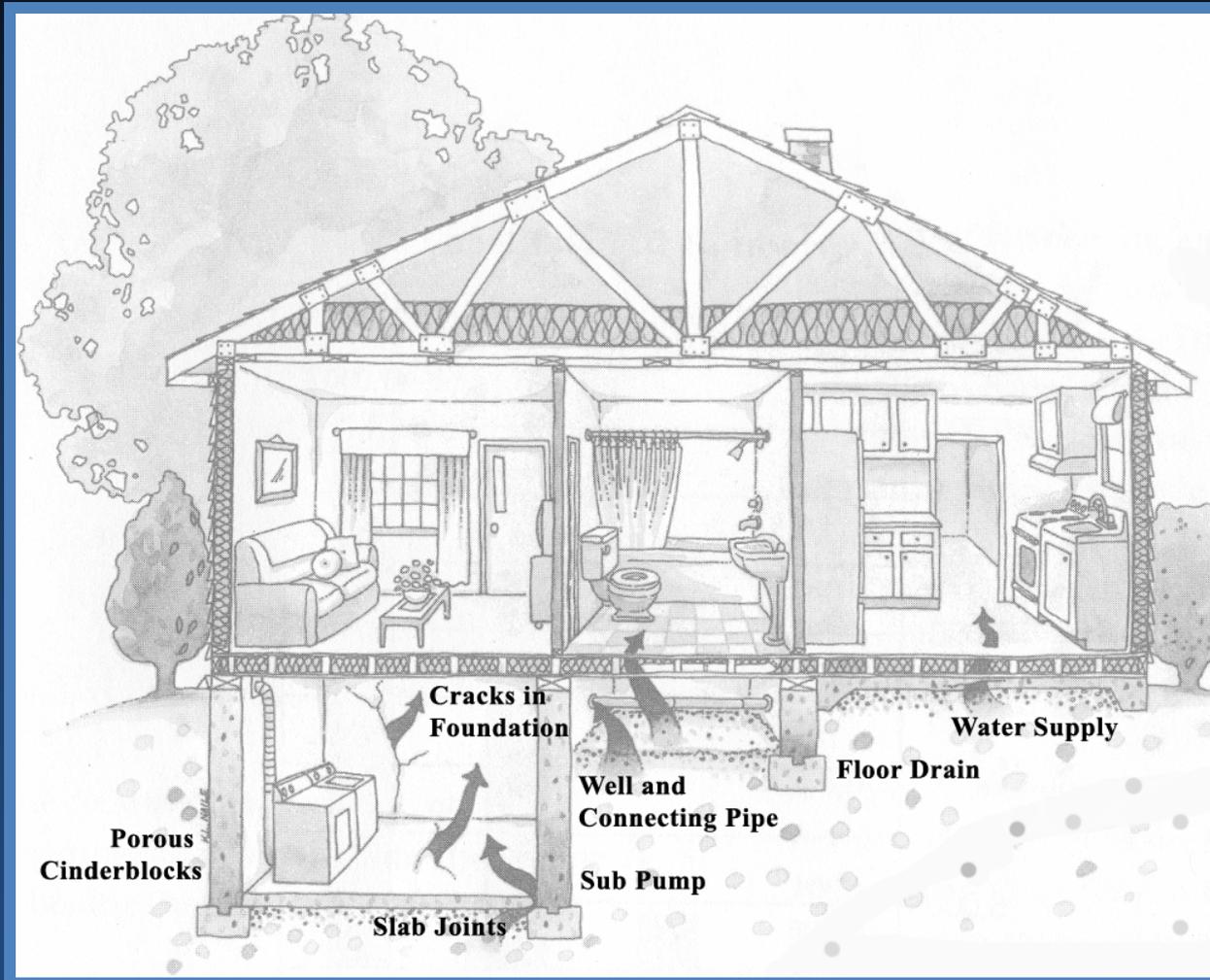
Estimated Annual Cancer Deaths



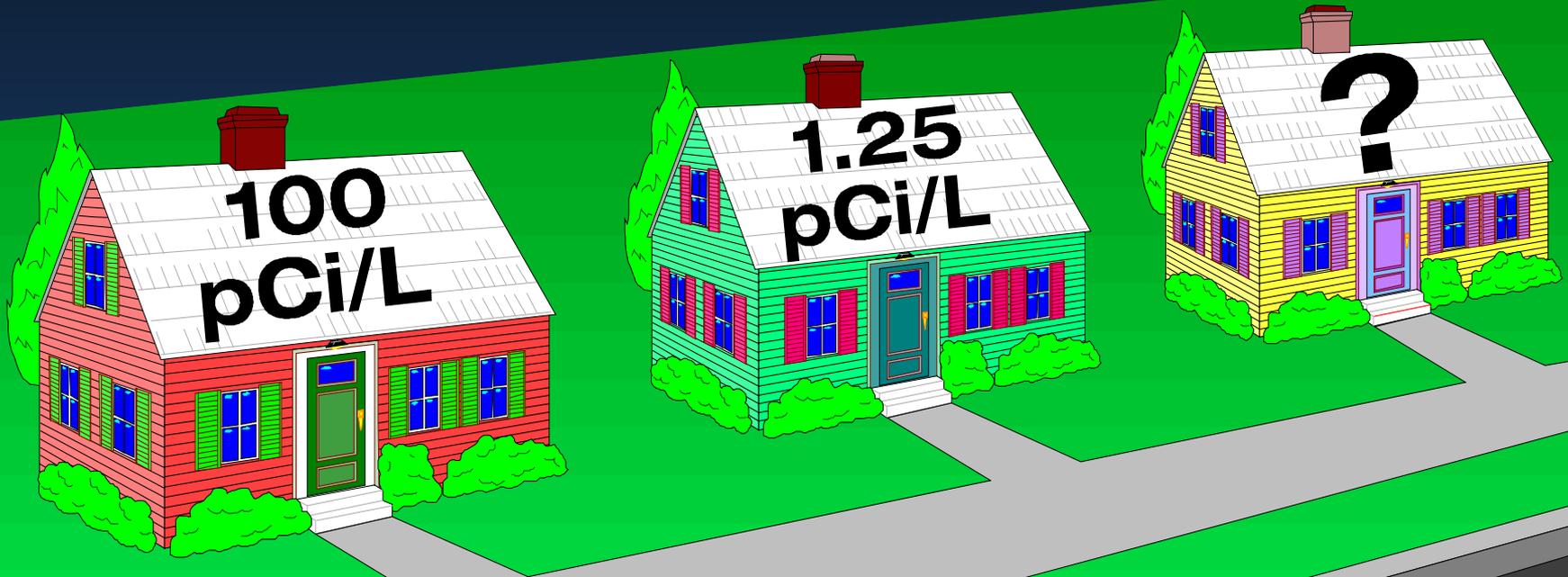
What factors can influence radon levels in my home?

- The strength of the source; how much uranium/radium is in the soil.
- Porosity of the soil.
- House construction including foundation type: Basement, Crawlspace, Slab-on-grade.
- Weather conditions: Wind, temperature, barometric pressure.
- Occupant activity.

How Radon Gets into a Home:



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



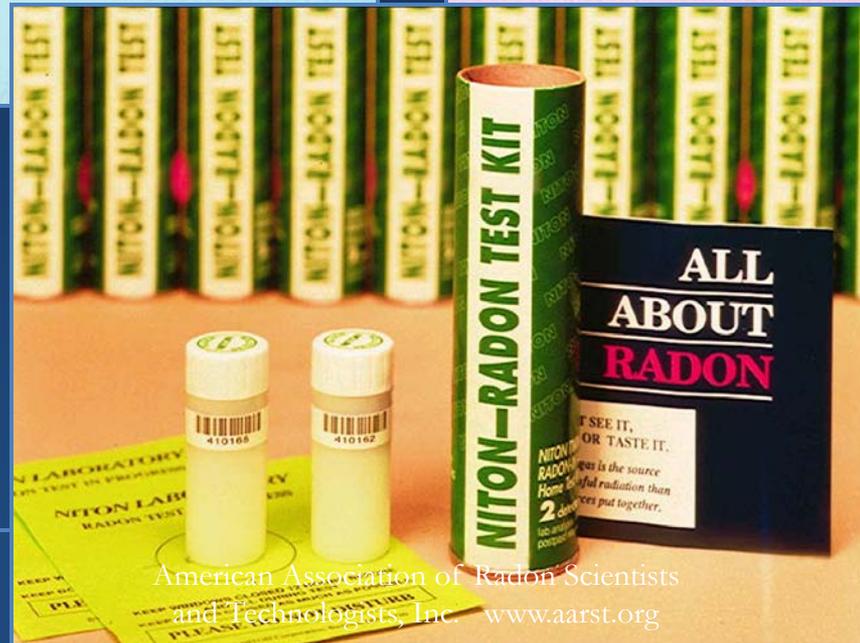
How do you know if you have a
radon problem?

TEST



TESTING IS EASY AND INEXPENSIVE

Radon Test Kits



How Is Radon Measured?

- Radon is measured in picoCuries per liter of air (pCi/L). While no level of radon exposure is considered safe, EPA has set an action level at 4 pCi/L.
- If radon test in a home shows levels at or above 4 pCi/L, the home should be fixed.
- The World Health Organization has set a reference level established at 2.7 pCi/L.

TEST NOW AND BE SURE

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American Association of Radon Scientists
and Technologists, Inc. www.aarst.org

What Should I Do If My House Has Elevated Radon Levels?

- Contact your state radon program office.
- EPA's booklet, *A Citizens Guide to Radon*, can help you interpret your results and determine next steps.
- Visit EPA's website at www.epa.gov/radon.
- If the levels in your home are high, take steps to reduce the levels in your home.

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

- Mitigate Your Home for Radon. A 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's booklet *A Consumers Guide to Radon* will be helpful in understanding radon mitigation in your home.

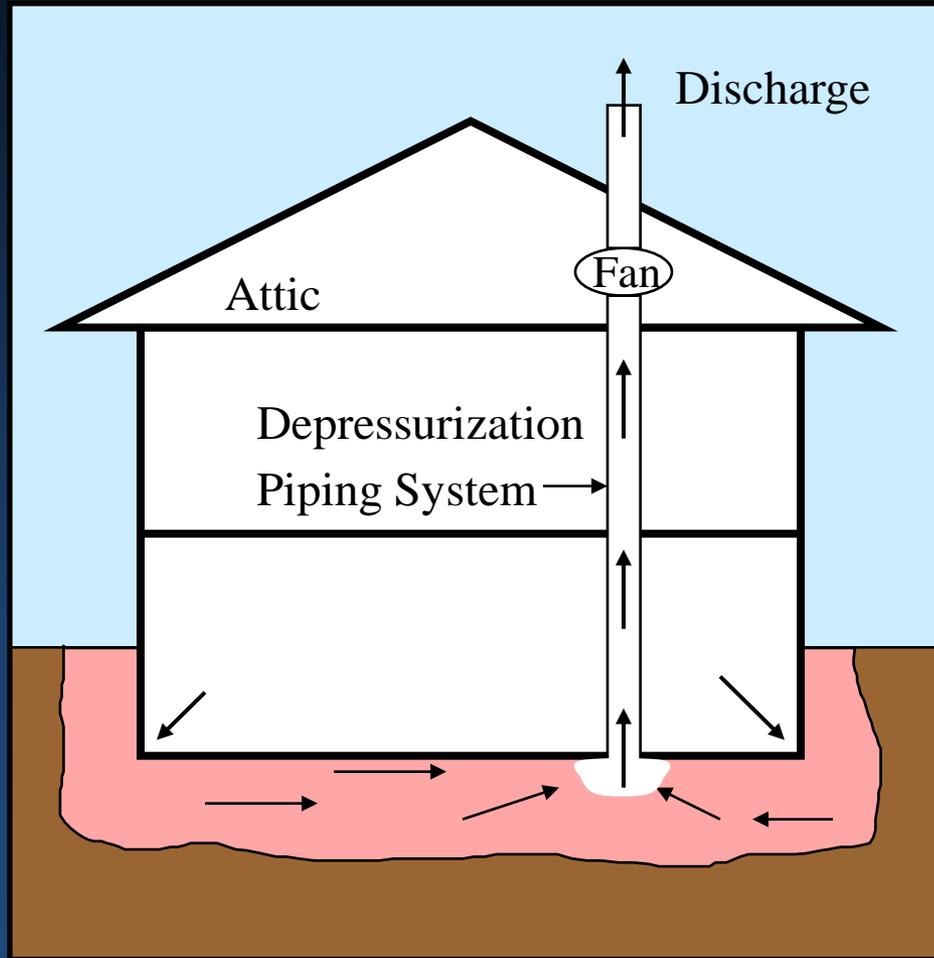
Can't I Just Seal Cracks in the Floor or Open Windows?

- 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.

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.

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

What If I am buying or selling a house?

- Radon tests are often a part of a real estate transaction.
- Requirements for radon testing and/or disclosure of radon levels may be required by law in your area.
- Contact your state radon office for more information.
- EPA's booklet *Homebuyers and Sellers Guide to Radon* can help identify and address buyer, seller and real estate agent concerns.

What If I Am Building A New Home?

- Homes can be built to prevent radon entry.
- Radon-resistant construction includes common building practices and a few added steps.
- Having your builder incorporate radon-resistant features into your new home adds very little cost.
- Homes with radon-resistant new construction features should be tested for radon after occupancy.
- To learn more about these features, obtain and provide your builder with EPA's booklet, *Building Radon Out*.

For More Information

- Contact your state radon office. Visit www.epa.gov/iaq/contacts.html for a listing.
- Call the National Radon Program Services at:
 - 1-800-SOS-RADON for an informational recording and to order a brochure.
 - 1-800-55-RADON to speak to a radon specialist.
- Call the National Alliance for Hispanic Health at
 - 1-800-725-8312, a Spanish language hotline for help with radon testing and mitigation questions.
- Visit Radon Web Sites: www.aarst.org
www.epa.gov/radon
www.sosradon.org

Protect Your Family: TEST FOR RADON TODAY
