

RADON

ECO-HEALTHY CHILD CARE® HELPS EARLY CHILDHOOD LEARNING ENVIRONMENTS TO BE AS HEALTHY, SAFE AND GREEN AS POSSIBLE BY REDUCING CHILDREN'S EXPOSURE TO TOXIC CHEMICALS.



HEALTH CONCERNS

Radon is the leading cause of lung cancer among non-smokers and it is the cause of approximately 21,000 deaths per year in the U.S. The longer you are exposed to radon, the greater your chance of developing radon-related lung cancer. **There is no known safe level of radon exposure.**

WHAT IS RADON

Radon is an invisible radioactive gas that you can't taste or smell. It can only be detected through testing. It is produced by the natural break-down of uranium in rock, soil, and water. Some areas of the U.S. have higher levels of uranium than others, and thus, there is a greater chance that buildings in those areas may have higher radon levels. Regardless of location, any building can have a radon problem.

Radon enters a building by moving up through the ground and then through cracks and holes in the foundation. Buildings can trap radon, which can lead to harmful indoor levels. It is critical that each child care facility test their building for radon to be sure that children and staff are safe.

RADON AND CHILDREN

Children can be exposed to high levels of radon through the air they breathe indoors. **Children are more vulnerable** because they have smaller lungs and therefore higher breathing rates; they take in more air than adults do; and they spend up to 70% more time indoors than adults on average.

REDUCING YOUR EXPOSURE

The EPA recommends that all buildings (child care facilities and schools) be tested for radon. **Child care facilities should be tested every two years or following a building upgrade.** The EPA recommends taking action to reduce radon when levels are found to be **4 picocuries per liter (pCi/L) or higher.**

Fixing buildings to reduce radon exposure may include sealing cracks in the foundation, ventilating the area or depressurizing the soil. **Contact your state radon office for more information.**

According to the EPA, **1 in 5 schools has at least one classroom with a radon level that exceeds 4 pCi/L.**



Image from EPA.GOV

HOW TO TEST FOR RADON

Common radon test kits are available at larger home improvement stores. **They typically cost about \$15.** Test kits also can be ordered from online retailers, as well as from the National Radon Program Services. Visit sosradon.org or call 1-800-SOS-RADON.

There are different kinds of test kits:

- charcoal canisters are used for short periods (2-7 days);
- “E-perm” can be used for short or long-term periods (2 days to 12 months);
- alpha track detectors measure radon over 3 months to one year;
- charcoal liquid scintillation devices measure radon for short periods (2-7 days).

WHEN USING A RADON TEST KIT:

- Follow the directions of the kits closely since the length of time the kits can remain open varies.
- Always test during normal operating hours.
- Place a the test kit in every frequently occupied space that is in contact with the ground, or above crawl spaces (i.e. the basement or lowest- lived-in level of a child care facility). Do not test bathrooms, kitchens, closets, hallways, or laundry/utility rooms. **See diagram below.**

WHEN USING A RADON TEST KIT:

- **Be careful not to disturb the test kit** until testing is finished.
- After the specified amount of time, **mail the kit to the manufacturer to be analyzed.**
- Since radon levels vary, **a long-term test (90 or more days) provides the best measure of year round radon levels.** If levels need to be determined quickly, short-term tests (usually between 2 and 7 days) can be conducted. It is recommended that two short-term tests be done either at the same time (in different locations in the room) or one after another to obtain an average.

RADON RESOURCES

U.S. Environmental Protection Agency
www.epa.gov/radon

National Radon Safety Board
http://www.nrsb.org/find_a_professional.asp

National Radon Program Services
www.sosradon.org or 1-800-SOS-RADON

Agency for Toxic Substances and Disease Registry
Choose Safe Places Program
www.atsdr.cdc.gov/safeplacesforECE/index.html



Image by CDPHE/State of Colorado

- **Ensure the test kit is placed midlevel**, not too close to the ground or ceiling (place somewhere in your general breathing zone, i.e. on top of a dresser or on a bookshelf), and out of reach of children.

FOR MORE INFORMATION
Call: 202-543-4033, ext. 13
Email: ehcc@cehn.org
Visit: www.cehn.org/ehcc