Non-Credit Course Outline: Radon Awareness

Time: One hour
For: City of Cleveland, Healthy Homes Initiative
Created by: Cuyahoga Community College

Radon

1. Basic Information on Radioactivity and Radioactive Sources
    a. Naturally occurring and manmade sources (Radium dial painters, medical treatment, background)
    b. Half-life, types of radiation.
2. Properties of radon
    a. Chemistry, noble gas
    b. Physical, vapor density
    c. Natural sources of radon as a decay product of uranium.
    d. Radon distribution in Ohio, geology
3. Radon exposure
    a. How radon gets into homes.
    b. Pathways into the body.
    c. Effects of radon exposure – lung cancer.
4. Measuring radon
    a. Concentration – pCi/l.
    b. Radiation exposure limits, rem.
5. Reducing Exposure –
    a. Structural changes to houses
    b. Time, distance, shielding.

Objectives

At the end of the session on Radon, the student will be able to:

1. Understand the basics of radioactivity and the sources of Radon and other radioactive materials.
2. Understand some physical and chemical properties of Radon.
3. Understand the basics of exposure to indoor Radon.
4. Describe the pathways into the body and biological effects of Radon exposure.
5. Explain the protective actions to minimize exposure to indoor Radon.
6. Understand the basics of occupational radiation protection – time, distance, shielding, and the difference in protection from home exposure.

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