

Radon

A Framework for the Future

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Radon, a radioactive gas which is highly prevalent in homes located in certain areas, is carcinogenic and has been shown to cause lung cancer in several studies of uranium miners. Although the doses found within homes are significantly less, radon poses a significant health risk in that the duration of exposure is so lengthy. The EPA estimates that between 5,000 and 20,000 lung cancer deaths per year are caused by radon. There is no one particular type of home which is more likely to develop a radon problem. The main entry routes are groundwater, cracks in the foundation, and, in general, any other routes for soil gas seepage. Methods of remediation generally include a two part process of sealing off these routes with mortar or some other sealant, and of repressurizing the home so that the soil gasses are not sucked in by a low pressure zone which is always found in the basement. These alterations can cost from \$1,500 to \$5,500 per home. The amount of radon exposure found in pre-existing buildings is enormous, yet creating a plan to eliminate this exposure will be very difficult due to the magnitude of the project and the implications of the necessary laws. A screening method would be feasible for the state to mandate: every home owner selling his home would be required to test his home for radon levels. Another option to help reduce public exposure to radon is to alter building codes for new homes. Though changing the way in which a home is built cannot guarantee a radon free building, these alterations can reduce the probability of exposure and insure that future remediation in these homes is significantly less expensive and less difficult. By making these changes in Rhode Island, between 4% and 60% of all those who are predicted to die of lung cancer (including smokers) could be saved. The median cost of these changes for upgrading the housing constructed in Rhode Island in one year would be \$5,700,000. This indicates that the cost to save a life from lung cancer would be about \$37,500. This is a bargain considering that the cost of an education alone at an Ivy league institution is upwards of \$70,000.