



RADIATION

Introduction

Radiation is a form of energy that travels in the form of waves or particles. There are two types of radiation: non-ionizing and ionizing. Sources of non-ionizing radiation include radio waves and microwaves. Ionizing radiation sources include medical imaging techniques, such as x-rays, CT scans and MRIs.

The largest natural source of radiation is the sun. About 70% of ionizing radiation comes from the earth, rocks, soil, water and air. All living things are exposed to and contain small amounts of radiation. A large percentage of natural radiation comes in the form of radon, an odourless and colourless gas. Produced by the natural breakdown of uranium, radon can escape from the ground and seep into the basements of homes through cracks in the foundation, basement windows, and drains.

Challenges and Considerations

Exposure to radon can be dangerous. For example, radon exposure is the leading cause of lung cancer in non-smokers. Human exposure to radon occurs most commonly when indoor air becomes contaminated with radon. Health risks increase as exposure increases, either through the amount of radon inhaled or the length of time that exposure occurs.

Health Canada has revised its guidelines for acceptable radon levels, lowering it to 200 Bq/m³ from the previous levels of 800 Bq/m³. Homeowners can test for radon in their homes with radon detectors. These devices are placed in the home and exposed to indoor air for a specified period of time, after which they are returned to the manufacturer for analysis.

For More Information

For a list of service providers, please contact the Radiation Protection Bureau at (613) 954-6647 or at radon@hc-sc.gc.ca

Canada Mortgage and Housing Corporation (CMHC) publishes a guide entitled “Radon: A Guide for Canadian Homeowners”. This guide provides information about radon, the risks, how to assess exposure, and which homes are particularly vulnerable. Further details are also provided on preventing radon exposure in the home. Please consult CMHC at 1-800-668-2642 or at www.chmc-schl.gc.ca