

RADON - FREQUENTLY ASKED QUESTIONS

1. What is radon?

Radon is a naturally occurring radioactive gas. It is produced by the decay of uranium that is present in all rocks and soils. In open air, it disperses very quickly, but can accumulate to high levels in buildings. The amount in the indoor air depends on the local geology and the building design, heating, ventilation and use. Radon is present in all buildings, including homes, so we all breathe it in throughout our lives. For most UK residents, radon accounts for about half of their total annual radiation dose. The average level in UK homes is 20 becquerels per cubic metre of indoor air (Bq/m³).

2. What are the health effects of radon?

Radon is present in all air. Everyone breathes radon in every day, usually at very low levels. However, exposure to high levels of radon increases the risk of developing lung cancer. There is no evidence that exposure to radon increases the risk of other cancers and exposure to radon does not cause short term health effects such as shortness of breath, coughing, headaches or fever, or long term chest conditions such as asthma, emphysema or chronic obstructive lung disease.

Significant long term exposure to high levels of radon can increase the risk of lung cancer. Of the 33,000 deaths from lung cancer every year in the UK, between 1,000 and 2,000 deaths are related to radon; however the majority of these are in smokers and ex-smokers. The risk of lung cancer is highest for people who smoke tobacco and have high radon exposures. If you smoke tobacco, quitting is the most effective way of reducing the risk of lung cancer. The risk of lung cancer from exposure to radon in lifetime non-smokers is small and many times lower than the risk of lung cancer if you smoke tobacco.

3. What is the definition of 'significant long-term exposure' to radon?

Everyone is exposed to radon throughout their lifetime – it is unavoidable (exposure is the combination of the radon level and the duration). With radon we think of exposure duration in terms of many years, usually decades. Hence the action levels are set at radon concentrations where measures are justified to control radon exposure and reduce the risk of adverse health effects, assuming that people would be exposed to it over the long term.

4. What are radon 'action' levels?

Radiation protection standards in workplaces are set by the Ionising Radiations Regulations 1999, which apply if radon levels are above 400 Bq/m³. If levels exceed this concentration, action should be taken to reduce radiation exposure to staff and other occupants. Usually this is done by lowering the radon level. There is no way to eliminate all radon from the world. However, by putting in place some minor building work the levels can be reduced below the action level so that the risk becomes very small.

5. Are children more at risk from radon than adults?

There is no evidence that radon exposure during childhood causes a greater risk than that during adulthood. Action levels for radon in homes, and also for workplaces (including schools), take into account that exposure could take place over many years. The action levels are set accordingly.

6. How do you know where to test for radon?

The UK's primary experts on radiation protection, Public Health England (PHE) publish radon maps for the UK. These identify areas with a higher probability of radon concentration exceeding the radon action level. The maps for England are available here <http://www.ukradon.org/information/ukmaps/englandwales>

7. Why is my school being monitored for radon?

Your school has been identified as being in a radon-affected area. The Council, like other employers, is required to monitor its premises for radon where necessary and act accordingly if levels are found to be above the action level. The Council has developed a monitoring programme for your site. The results will be analysed and remedial works will be carried out if necessary.

Radon levels can vary between adjacent buildings and even in a room, radon levels can vary from day to day and hour to hour. Because of these fluctuations, radon levels are normally measured over a three month period with the use of small plastic detectors.

8. I have worked in one of these schools for many years, am I at risk of getting lung cancer?

The risk of staff members developing lung cancer from radon exposure during the time they have worked at a school is very small. The risk is higher in those who also smoke, so for smokers the most effective way of reducing the risk further is by stopping smoking.

9. When will the next update be issued?

An update will be issued to the affected schools once the monitoring results are received.

10. Who can I contact at the Council to discuss issues with schools?

Please contact London Borough of Waltham Forest Compliance team

11. Who can I contact if I want further information on radon or to discuss risks?

Public Health England can be contacted directly if you wish to discuss any of the items further. Public Health England can be contacted on 01235 822622, or email through the website <http://www.ukradon.org/contactform>

General information about radon and health risks can be found at <http://www.ukradon.org/>

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