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2013 National Radon Awareness Survey Final Report

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Ce rapport est aussi disponible en français sur demande

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Table of contents

Executive summary.....	ii
Sommaire.....	viii
Introduction	1
Indoor air quality concerns	5
Radon knowledge and awareness	9
Previous experience with radon	23
Hypothetical experience with radon	33
Hypothetical radon remediation impacts.....	41
Radon information provision	47
Conclusions and recommendations.....	53
Survey methodology	55

Appendix: Questionnaire (English and French)

Executive summary

Background and objectives

Radon is the second leading cause of lung cancer after smoking. Health Canada (HC) leads an ongoing National Radon Program (NRP) with the goal of reducing the health risks associated with radon exposure. The first phase of the NRP focused on identifying the scope of the problem and communicating the health risks from indoor exposure to radon. The second phase of the program, which began in 2011, is focused on communicating solutions and developing resources for homeowners and key stakeholder groups with the intent of helping Canadians reduce the negative health impacts associated with indoor radon exposure.

Public opinion research was conducted in 2007 to identify a baseline of knowledge and awareness of radon, and its associated risks among Canadians.¹ Health Canada identified the need to conduct follow-on research, to help evaluate and measure the effectiveness of the efforts of the NRP over the last five years. The purpose of this research was to obtain insights into the knowledge, awareness, attitudes and behaviours of Canadians regarding radon. More specifically, the objectives of the research were:

- To collect data that can be compared to the 2007 benchmark for awareness, attitude and behaviour levels, specifically related to radon in the home;
- To measure knowledge levels of Canadians in terms of what radon is, where it is found, the factors that most contribute to its presence (location, entry through cracks in foundation, etc.), health risks and concerns that are associated with radon in the home;
- To assess knowledge levels about how radon is detected or measured, and what can be done to effectively prevent or reduce exposure to radon (prevention and remediation);
- To determine past actions or behaviours in situations where the presence of radon in the home was suspected or detected, including the proportion of respondents who have tested and or remediated their home for radon, and sources of information/assistance sought; home testing and/or remediation and the associated costs;
- To determine potential future actions or behaviours if the presence of radon in the home was suspected or detected, including potential sources of information;
- To measure their opinion on the current availability of radon testing and remediation services and products in Canada, and their perception of the cost (what they think it would cost and what they think of the actual cost);
- To determine if financial barriers impact testing and remediation; and
- To determine perceptions of the federal government's responsibilities regarding education, remediation and current sources of radon information to Canadians.

¹ 2007 National Radon and Indoor Air Quality Survey, conducted by Environics Research Group on behalf of Health Canada. Contract number: H1011-060083/001/CY.

Survey methodology

The survey was conducted by the Environics Research Group and is based on 1,667 telephone interviews conducted from January 29 to February 16, 2013. The sampling method was designed to complete at least 1,650 interviews with the target audience of Canadians 18 years of age and over living in private households, in the 10 provinces and three territories.² Respondents were screened to ensure that they were household decision-makers and the owners of single family dwellings with a ground floor, as these are the primary audience for radon messaging. The base sample of 1,465 was stratified across five designated regions to ensure meaningful data and analysis at the regional level. An additional 202 oversample interviews were conducted with respondents living in identified radon-prone areas.³ The data are statistically weighted to ensure the sample is as representative of this population as possible (region, gender and age of primary household maintainer for private owned households in Canada) according to the most recently available Census information. The margin of error for a sample of 1,667 is +/- 2.4 percentage points, in 19 out of 20 samples (margin of error is greater for subgroups). A more detailed description of the methodology is presented at the back of the report, along with a copy of the questionnaire (see Appendix).

The cost of this research was \$99,977.99 (HST included). The research findings will be used to help guide the future objectives, research and outreach activities of the National Radon Program, to maximize the effectiveness of the program and encourage and enable Canadians to take actions to reduce their radon exposure.

Key findings

The findings of the survey indicate both areas of success for the National Radon Program and areas where additional effort is required. More Canadian homeowners have heard of radon now than in 2007, and the survey indicates increased awareness that radon can enter a home (specifically linked to the basement) and that it poses a health hazard, and there is also increased awareness that it is a public or government concern and that radon detectors are available. The majority of homeowners who are aware that radon levels can be tested say that DIY testing kits can be purchased at home improvement stores. Among homeowners who have had their radon tested, DIY kits are the most frequently cited method of testing (35 percent of homeowners).

However, radon has not emerged as a major top-of-mind health concern since the 2007 survey was conducted, and it is still the case that few Canadians know many specifics about it or about what is involved in reducing radon levels in a home. While most say they would take steps to reduce the radon level in their home if it was found to be high, motivation to conduct the initial test is still lacking.

The following summarizes the key findings from the research:

² Note that the northern territories were not included in the 2007 survey.

³ Throughout this report the term “radon prone” is used. “Radon-prone” refers to areas known to have an above-average percentage of homes with radon levels above the Canadian guideline.

Indoor air quality

- Mould (21%) and dust (20%) are the main top-of-mind indoor air quality health hazards, followed by tobacco/second-hand smoke (15%); radon is mentioned by only 3%, compared to 6% in radon-prone areas.
- One-quarter (24%) of Canadian homeowners are (or have been) concerned about the indoor air quality in their home; radon is the source of that concern for 2%.

Radon knowledge and awareness

- Two-thirds (65%) of Canadian homeowners are aware of radon, up from 52% in 2007. Awareness remains higher in radon-prone areas (76%) than elsewhere (65%). Those who are aware of radon are most likely (63%) to attribute this knowledge to media (TV, newspapers, magazines or radio). Fewer than one in ten recall other individual sources, such as the Internet.
- Self-assessed radon knowledge levels have not increased noticeably since 2007. Homeowners are actually somewhat more likely now (58%) than in 2007 (50%) to say they know almost nothing. Responses to knowledge-testing questions such as “what is radon” or “how does radon enter a home” suggest only limited improvement in substantive knowledge has been achieved.
- Majorities of homeowners think it might be true that radon can be found in most homes and that exposure to radon is the second leading cause of lung cancer after smoking. However, the majority also believes it might be true that radon is hard to remove from a home. There is a need to increase awareness that radon levels are actually not difficult to reduce, and that the price can be considered reasonable.

Radon in homes

- Knowledge about how radon enters dwellings is generally similar to 2007, except that homeowners are more likely than before to mention basement floors, and there has been a notable increase in awareness that detectors are available (from 4% in 2007 to 24% in 2013).
- Two-thirds (65%) are now aware that radon levels can be tested in some manner, compared to under 50 percent in 2007. Most know (or guess) that DIY kits are available for purchase from home improvement stores, but few mention other potential sources.
- Knowledge about how home radon levels can be reduced has not noticeably increased in the past five years; specifically, there has been no increase in mentions of sub-slab depressurization systems (2% in 2013; 1% in 2007), and somewhat more mentions related to improving air circulation or ventilation (20% in 2013; 13% in 2007).

Experience with radon

- There has been no appreciable increase in the proportion of Canadians who report having had the radon levels in their home tested (3% in 2013, 2% in 2007) or in the proportion who would consider having this done (9% 2013, 6% 2007). Lack of concern about radon and lack of information continue to be the main barriers to testing and also to remediation.
- Because few Canadian homeowners report having had their radon tested and almost none of these say that action was recommended as a result of the test, this report does not cover actual remediation experiences. However, most Canadians in theory would be willing to have their

radon level tested (44% definitely, 37% likely) if they had reason to become concerned; four in ten (42%) are willing to spend at least \$50 to do so. As in 2007 (87%), the vast majority (85%) would be likely to act on the results of that test should remediation be recommended.

- Three in ten (29%) homeowners believe that \$2,000 to \$3,000 is a reasonable price to spend to reduce the level of radon in the home; close to half (47%) think this price range is unreasonable. This is not too surprising given that those who are unwilling to test or remediate largely cite as their reason a lack of concern about radon as a health risk. Three in ten (30%) who think that \$2,000 to \$3,000 is unreasonable would be willing to pay up to \$500.
- A majority (83%) say it would be very important to hire a certified radon specialist to reduce radon levels in the home, in a hypothetical situation.

Radon information

- As in the 2007 survey, few (3%) Canadian householders have heard or seen something about radon programs or activities to help people deal with radon in their homes (the few who have heard something largely believe that the federal government is the sponsor), and a similarly low proportion (6%) has ever taken steps to learn about radon.
- The few (6%) homeowners who have sought information about radon chose to do so using the Internet and the media. The Internet is the most widely mentioned source for obtaining radon information in the future (74%). Health Canada is the most cited individual organization that would be approached for radon information by those who have not already sought it out (15%).
- The majority (58%) of Canadians who have not yet had their dwellings tested for radon say they are not motivated by what they learned in the survey to get their radon tested, but notable proportions say they are now motivated to test (15%) or at least want to find out more (15%).

Overview of subgroup differences

The following are brief, descriptive findings from the survey for specific groups of Canadian householders. Please see the full report for specific notable subgroup statistics for each question.

By region

Although the survey findings are generally applicable to all regions of the country, some differences are apparent.

- The **three northern territories** (referred to in the report as **the North**) and the **Atlantic** region (and, to a somewhat lesser extent, **Manitoba and Saskatchewan**) stand out as having absorbed more information about radon than residents of other areas of the country, likely because there are significant areas of these jurisdictions that are known to have elevated indoor radon levels. For example, Atlantic Canadians are the most likely to say it is true that exposure to radon is the second leading cause of lung cancer after smoking, and are the most likely to have considered radon testing. Northerners and Atlantic Canadians are also the most likely to say they would definitely take action if their home radon levels were found to be high.
- **Alberta** stands out as being the province that is least aware of or concerned about radon, having less specific knowledge about it, being the least likely to know about community radon levels, and least willing to test or remediate – and they are the least likely to think that \$2,000 to \$3,000 is a reasonable price to pay to reduce radon levels in a home. **British Columbia** residents

are also less likely than others to have unprompted knowledge of radon, and are the most likely to say they would not be willing to spend anything to remediate, although they are among the most likely to have heard something about their community's radon levels.

- While **Quebec** residents may not be as aware about radon as those in the territories or the Atlantic, they do show signs of concern, and are among the more likely to know testing is available. Like the North and the Atlantic region, they are among the most likely to think the average radon remediation cost is reasonable.
- Because **Ontario** represents a high proportion of the population, its residents' opinion tend to establish the norm. They are among the most likely to know that radon is radioactive, and among the least likely to have heard something about their community's radon levels.

By whether or not the community is radon-prone

An objective of this research is to understand the knowledge, attitudes and behaviours of residents of radon-prone areas and to compare this with the responses of people in areas that are not identified as radon-prone. In general, those living in radon-prone areas are somewhat more familiar with radon and its role as a health issue, but the differences remain less marked than might be expected. The fact that in 2013 certain differences between radon-prone and non-radon-prone areas mentioned in the report are not as large as in 2007 may be in part attributable to the fact that different communities were identified as being radon-prone in the two surveys, or due to Health Canada's promotion of general awareness of radon across the country and emphasis that all Canadians, no matter where they live, should test their homes

Those living in radon-prone areas are more likely to have had previous awareness of radon (76% vs. 65% elsewhere), and also are more likely to have heard or seen something about the radon levels in their community (11% vs. 4%) and are more likely to have had their home radon tested (6% vs. 3%), although all of these gaps are not as pronounced as in 2007. However, they appear no more concerned about indoor air quality, and they are not notably more likely to have knowledge of specifics about radon, such as how it enters a home or how it can be reduced. They are, however, more likely to think it is false that radon is difficult to remove from a home, and that it is true that radon can be found in most homes (both correct views). Reasons for not having a home tested or to be unwilling to remediate if radon levels were found to be high do not vary by radon-proneness, nor is there any difference in the amounts willing to pay for testing or reducing radon.

By community size

Although in 2007 there were a number of rural-urban differences, many of these have either disappeared or are not as large in 2013. Likelihood of testing for radon is higher among those residing in rural communities (51% vs. 43% in urban locations). The small proportion of people who have not had their home radon tested because they do not "believe" in radon (5%) are all located in urban centres, which may be something to note for future messaging.

By household and individual characteristics

Household composition. In 2013 there are fewer differences than in 2007 by household composition factors such as presence of children or length of house tenure. Parents of children under 16 are more likely to be definite about remediation than those with no child of that age in the home, and are more likely than others to name mould as an indoor air quality health concern.

Demographic factors. Although many age differences are not as marked in 2013 as in 2007, awareness of radon remains highest among those aged 60 and over, the age group that research consistently shows to be the largest consumers of traditional media. However, older Canadian homeowners are also somewhat more likely to say they do not know what they would be willing to spend on radon testing, and there is some indication that older people may not be as willing to remediate. Younger homeowners under age 45 are more likely than those aged 45 to 59 to think \$2,000 to \$3,000 is a reasonable price to pay to remediate radon, and those under age 45 are also the most likely to be willing to purchase a remediated home, or to have been encouraged by the information provided in the survey to get their home radon level tested.

As with many surveys covering knowledge of issues, there is a heightened level of radon knowledge among those in higher socio-demographic groups (levels of education and income). They are more likely to be able to name at least one indoor air quality health hazard, more likely to have heard of radon, more likely to be willing to test for radon and to spend more for this testing, to definitely take action if levels are found to be high, and to say it is very important to use a certified radon specialist.

As in 2007, there are some notable gender differences. Men remain more likely to be aware of radon, and are generally more informed about radon than are women. Men are more likely to know certain facts about radon (for example, that it is a gas, that it comes from the ground, and that it is radioactive and can enter a home through the basement or foundation) or to rate their radon knowledge as a lot or some. Mentioning a home improvement store as a place to purchase a DIY radon testing kit is fairly similar by gender, but men are slightly more likely than women to mention a specialty retailer like a gas company or HVAC dealer. Men are also more likely to be able to name at least one way home radon levels can be reduced.

Smoking status. There is scientific evidence to suggest that the combination of smoking and radon exacerbates the already heightened risk of lung cancer of each on its own.⁴ As in 2007, smokers are neither more knowledgeable nor more concerned about radon than other Canadians.

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For more information, contact Health Canada at por-rop@hc-sc.gc.ca

⁴ World Health Organization Radon Handbook – <http://www.nrsb.org/pdf/WHO%20Radon%20Handbook.pdf>

Sommaire

Contexte et objectifs

Le radon est la deuxième cause de cancer du poumon, après le tabagisme. Santé Canada (SC) est à l'origine d'un Programme national sur le radon (PNR) qui a pour but de réduire les risques pour la santé associés à l'exposition au radon. La première phase du PNR avait pour but d'évaluer l'ampleur du problème, et de faire part des risques pour la santé associés à l'exposition au radon à l'intérieur des habitations. La deuxième phase du programme, lancée en 2011, portait pour sa part sur le partage de solutions et le développement de ressources destinées aux propriétaires et aux principaux groupes intéressés, dans le but d'aider les Canadiens à diminuer les effets négatifs pour la santé liés à l'exposition au radon à l'intérieur des habitations.

Une recherche sur l'opinion publique menée en 2007 avait permis de révéler chez les Canadiens une connaissance de base du radon et des risques qui y sont associés⁵. Santé Canada avait par la suite déterminé qu'il était nécessaire de mener une étude de suivi afin de permettre d'évaluer et de mesurer l'efficacité du PNR au cours des cinq dernières années. L'objectif de cette dernière étude était de faire la lumière sur les connaissances, la sensibilisation, les attitudes et les habitudes des Canadiens en ce qui a trait au radon. Plus précisément, les objectifs de cette recherche visaient à :

- Recueillir des données pouvant être comparées aux données de référence de 2007 en ce qui a trait aux niveaux de sensibilisation, aux attitudes et aux habitudes des répondants, surtout en ce qui concerne la présence de radon dans l'habitation;
- Mesurer les niveaux de connaissance des Canadiens pour ce qui est de savoir ce qu'est exactement le radon, où il se trouve, les facteurs qui contribuent tout particulièrement à sa présence (emplacement, entrée par les fissures dans les fondations, etc.), les risques pour la santé et les préoccupations associées à la présence de radon dans l'habitation;
- Évaluer les niveaux de connaissance en ce qui a trait à la façon dont le radon est détecté et mesuré, et à ce qui peut être fait pour prévenir ou réduire efficacement l'exposition au radon (prévention et mesures correctives);
- Mettre en lumière certains gestes ou comportements antérieurs notés lors de situations où la présence de radon dans l'habitation a été suspectée ou détectée, y compris le pourcentage de répondants qui ont procédé à un test ou mis en place des mesures correctives en lien avec le radon dans leur habitation, les sources d'informations ou de soutien utilisées, le dépistage dans l'habitation ou les mesures correctives prises, et les coûts qui leur ont été associés;
- Déterminer les gestes ou comportements futurs potentiels lors de situations où la présence de radon serait suspectée ou détectée, y compris les sources d'informations potentielles;
- Évaluer l'opinion des répondants en ce qui a trait à la disponibilité actuelle de tests de mesure du radon et d'outils correctifs au Canada, et mesurer leur perception des coûts qui y sont reliés (ce que cela coûte à leur avis, et ce qu'ils pensent du prix réel);

⁵ *Sondage national de 2007 sur le radon et la qualité de l'air intérieur*, mené par Environics Research Group pour le compte de Santé Canada. Numéro de contrat : H1011-060083/001/CY.

- Déterminer si des obstacles financiers ont un effet sur le recours aux tests et aux mesures correctives;
- Cerner les perceptions relatives à la responsabilité du gouvernement fédéral envers les Canadiens en matière d'éducation, d'apport de mesures correctives et de sources d'informations en lien avec le radon.

Méthodologie du sondage

Le sondage a été mené par Environics Research Group et est basé sur 1 667 entrevues téléphoniques ayant eu lieu du 29 janvier au 16 février 2013. La méthode d'échantillonnage utilisée a été conçue de manière à mener un minimum de 1 650 entrevues avec des Canadiens (âgés de 18 ans et plus) habitant dans des résidences privées, dans les dix provinces et trois territoires⁶. Les répondants préalablement sélectionnés participaient aux décisions se rapportant à leur résidence et étaient propriétaires d'une habitation individuelle ayant une surface habitable située au rez-de-chaussée, ce type de personnes correspondant au public cible des messages sur le radon. L'échantillon de base de 1 465 répondants a été stratifié parmi cinq régions désignées, afin d'assurer la collecte de données pertinentes et une analyse au niveau régional. Un total de 202 entrevues ont été effectuées auprès d'un suréchantillon de répondants vivant dans des régions identifiées comme étant sujettes à la présence de radon⁷. Les données ont été pondérées afin d'assurer que l'échantillon était le plus représentatif possible de cette population (la région, le sexe et l'âge de la personne principalement responsable de l'entretien de l'habitation, pour les résidences privées au Canada), en fonction des plus récentes informations de recensement disponibles. Un échantillon national de 1 667 répondants donne des résultats présentant une marge d'erreur de 2,4 points de pourcentage, 19 fois sur 20 (la marge d'erreur est plus élevée pour les sous-groupes). Une description plus détaillée de la méthodologie utilisée dans la réalisation de cette étude est présentée à la fin de ce rapport, avec un exemplaire du questionnaire (voir annexe).

En tout, ce projet a coûté 99 977,99 \$ (TVH comprise). Les conclusions de cette recherche serviront à orienter les objectifs, la recherche et les activités de sensibilisation futurs du Programme national sur le radon, à en maximiser l'efficacité et à permettre aux Canadiens de prendre les mesures requises pour réduire leur exposition au radon.

Conclusions principales

Les résultats de ce sondage permettent de distinguer des régions où le Programme national sur le radon est couronné de succès, et d'autres où des efforts supplémentaires seront requis. Plus de propriétaires canadiens ont maintenant entendu parler du radon comparativement à 2007. Le sondage indique également un niveau de connaissance accrue par rapport au fait que le radon peut pénétrer à l'intérieur d'une habitation (précisément en lien avec le sous-sol) et qu'il représente un risque pour la santé. Les répondants se montrent aussi plus sensibles au fait qu'il s'agit là d'une préoccupation publique ou gouvernementale, et que des détecteurs de radon sont offerts. La majorité des propriétaires qui savent

⁶ Il est à noter que les territoires du Nord ne faisaient pas partie du sondage de 2007.

⁷ Les termes « régions sujettes à la présence de radon » seront utilisés tout au long de ce rapport. Ils désignent des zones connues pour avoir un pourcentage supérieur à la moyenne d'habitations présentant des niveaux de radon se situant au-dessus de ceux recommandés par les lignes directrices canadiennes.

que les niveaux de radon peuvent être mesurés affirment également que des trousse d'essai maison peuvent être achetées dans les magasins de rénovation. Les propriétaires ayant procédé à l'évaluation des taux de radon dans leur habitation l'ont majoritairement fait à l'aide de ces trousse maison (35 % des propriétaires).

Le radon ne s'est toutefois pas imposé comme une préoccupation majeure, énoncée spontanément, depuis le sondage de 2007. Peu de Canadiens en connaissent les particularités ou savent ce qui doit être fait pour en réduire les niveaux dans une habitation. Bien que la plupart des répondants affirment qu'ils prendraient les mesures nécessaires pour diminuer les niveaux de radon dans leur résidence si ceux-ci s'avéraient trop élevés, la motivation nécessaire à la conduite du test initial est toujours déficiente.

Les points suivants présentent les constatations principales issues de la recherche :

Qualité de l'air intérieur

- La moisissure (21 %) et la poussière (20 %) sont les principaux risques pour la santé liés à la qualité de l'air intérieur mentionnés de façon spontanée; ils sont suivis du tabac/de la fumée secondaire (15 %). Le radon est mentionné par seulement 3 % des répondants en général, et par 6 % de ceux vivant dans des régions sujettes au radon.
- Un quart (24 %) des propriétaires canadiens sont préoccupés (ou ont déjà été préoccupés) par la qualité de l'air intérieur dans leur habitation; le radon s'avère la source de cette préoccupation pour 2 % des répondants.

Connaissances et sensibilisation relatives au radon

- Les deux tiers (65 %) des propriétaires canadiens ont déjà entendu parler du radon, en hausse par rapport au taux de 52 % observé en 2007. La connaissance du radon demeure plus élevée dans les régions sujettes à la présence de radon (76 %) qu'ailleurs (65 %). Les personnes qui connaissent le radon en ont surtout (63 %) entendu parler par l'entremise des médias (télévision, journaux, magazines ou radio). Moins d'un répondant sur 10 mentionne d'autres sources, comme Internet.
- Les niveaux de connaissance rapportés n'ont pas augmenté de façon significative depuis 2007. Les propriétaires sont en fait aujourd'hui plus susceptibles (58 %) qu'en 2007 (50 %) de dire qu'ils ne connaissent presque rien sur le radon. Les réponses aux questions visant à évaluer les connaissances des répondants, telles que « Qu'est-ce que le radon? » ou « Comment le radon s'infiltre-t-il dans une habitation? », suggèrent qu'une amélioration somme toute limitée du niveau de connaissances est observée.
- La majorité des propriétaires croient qu'il est peut-être vrai de dire que l'on trouve du radon dans la plupart des habitations, et que l'exposition au radon est la deuxième cause de cancer du poumon, après la cigarette. Cependant, la plupart des répondants sont également d'avis qu'il est peut-être vrai de dire qu'il est difficile d'extraire le radon d'une habitation. Il importe donc de sensibiliser les gens au fait qu'il n'est en fait pas difficile de réduire les niveaux de radon, et que le prix pour le faire peut être considéré comme étant raisonnable.

Le radon dans les habitations

- Les connaissances liées à la façon dont le radon s'infiltré dans les habitations sont en général semblables à celles de 2007, mis à part le fait que les propriétaires sont plus susceptibles de mentionner le plancher du sous-sol. On note également une augmentation notable en ce qui a trait au fait de savoir que des détecteurs sont offerts (on passe de 4 % en 2007 à 24 % en 2013).
- Les deux tiers (65 %) des répondants sont maintenant au courant que les niveaux de radon peuvent être mesurés d'une façon ou d'une autre, par rapport à moins de 50 % en 2007. La plupart des propriétaires savent (ou devinent) que des trousseaux maison peuvent être achetées dans les magasins de rénovation. Peu d'entre eux mentionnent cependant d'autres sources potentielles.
- Les connaissances ayant trait à la façon dont les niveaux de radon peuvent être réduits dans une résidence n'ont pas augmenté de façon significative au cours des cinq dernières années; plus précisément, on ne note aucune augmentation du nombre de répondants qui font mention d'un système de dépressurisation sous la dalle de plancher (2 % en 2013 par rapport à 1 % en 2007), mais plutôt davantage de réponses en lien avec l'amélioration de la circulation d'air ou de la ventilation (20 % en 2013 par rapport à 13 % en 2007).

Expérience avec le radon

- On ne note aucune augmentation notable du pourcentage de Canadiens qui rapportent avoir fait mesurer les niveaux de radon dans leur habitation (3 % en 2013, 2 % en 2007) ou du pourcentage de répondants qui envisageraient de le faire (9 % en 2013, 6 % en 2007). Une absence de préoccupation en ce qui a trait au radon et un manque d'informations sur le sujet constituent toujours les principaux obstacles au recours à des tests ou à des mesures correctives.
- Parce que peu de propriétaires canadiens rapportent avoir fait faire le dépistage du radon et que presque aucun d'entre eux affirment que des mesures correctives ont été recommandées à la suite du dépistage, ce rapport n'aborde pas les expériences se rapportant à l'atténuation du radon. Cependant, la plupart des Canadiens seraient théoriquement disposés à faire mesurer les niveaux de radon (44 % certainement, 37 % probablement) s'ils avaient des raisons d'être préoccupés; quatre sur dix (42 %) seraient enclins à dépenser au moins 50 \$ pour ce faire. Tout comme en 2007 (87 %), la vaste majorité (85 %) des répondants affirment qu'il est probable qu'ils prendraient des mesures correctives si les résultats du test étaient assortis d'une recommandation de mesures d'atténuation.
- Trois propriétaires sur dix (29 %) affirment que de 2 000 \$ à 3 000 \$ s'avère un prix raisonnable pour en arriver à une diminution des niveaux de radon dans une habitation; près de la moitié des répondants (47 %) jugent au contraire cette fourchette de prix comme étant déraisonnable. Ces résultats ne sont guère surprenants, puisque les personnes qui ne sont pas disposées à procéder à des tests ou à prendre des mesures correctives expliquent pour la plupart leur réponse en mentionnant qu'ils ne sont pas préoccupés par le fait que le radon constitue un risque pour la santé. Trois répondants sur dix (30 %) qui sont d'avis que de 2 000 \$ à 3 000 \$ constitue un montant déraisonnable seraient disposés à payer jusqu'à 500 \$.
- Une majorité de répondants (83 %) affirment qu'il serait très important d'engager un spécialiste du radon certifié pour réduire les niveaux de radon dans leur habitation, le cas échéant.

Informations sur le radon

- Tout comme lors du sondage de 2007, peu (3 %) de propriétaires canadiens sont au courant d'activités ou de programmes destinés à aider les résidents à faire face au problème de radon dans leur habitation (les quelques personnes qui ont entendu parler de quelque chose croient en majorité que le gouvernement fédéral commandite de tels programmes). De façon semblable, un faible pourcentage de répondants (6 %) ont déjà posé des gestes pour se renseigner au sujet du radon.
- Le petit nombre (6 %) de propriétaires qui ont cherché de l'information à propos du radon ont choisi de le faire en utilisant Internet et les médias. Internet est également la source la plus mentionnée lorsqu'il est question d'obtenir de l'information sur le radon dans le futur (74 %). Santé Canada est l'organisme le plus fréquemment mentionné pour ce qui est d'obtenir de l'information sur le radon par ceux qui ne l'ont pas encore fait (15 %).
- La majorité (58 %) des Canadiens qui n'ont toujours pas fait mesurer les niveaux de radon dans leur habitation affirment que ce qu'ils ont appris dans le cadre du sondage ne les a pas davantage incités à le faire. Cependant, des pourcentages significatifs de répondants disent au contraire qu'ils sont désormais motivés à procéder à un test (15 %), ou au moins à en apprendre davantage (15 %).

Survol des différences entre les sous-groupes

Les paragraphes suivants décrivent brièvement les principales conclusions tirées du sondage en ce qui concerne certains groupes précis de propriétaires canadiens. Veuillez vous référer au rapport complet pour les résultats précis relatifs à certains sous-groupes, pour chaque question.

Selon la région

Même si les résultats du sondage s'appliquent habituellement à toutes les régions du pays, certaines différences sont apparentes.

- Les habitants des **trois territoires du Nord** (« le Nord » dans le rapport) et de la région de l'**Atlantique** (et, dans une moindre mesure, **du Manitoba et de la Saskatchewan**) se distinguent comme ayant reçu plus d'informations sur le radon que les résidents des autres régions du pays, probablement parce que l'on y trouve d'importantes zones connues pour présenter des niveaux de radon élevés à l'intérieur des habitations. Ainsi, les propriétaires du Canada atlantique sont les plus susceptibles de dire que l'exposition au radon est la deuxième cause de cancer du poumon après la cigarette, et d'avoir envisagé de faire mesurer les niveaux de radon dans leur habitation. Les résidents du Nord et de l'Atlantique sont également les plus susceptibles d'affirmer qu'ils prendraient des mesures correctives si les niveaux de radon dans leur habitation s'avéraient élevés.
- Les résidents de l'**Alberta** se distinguent en étant ceux qui se montrent les moins informés en ce qui concerne le radon, et les moins préoccupés par ce dernier. Leurs connaissances sur le sujet sont moins étendues, et ils sont les moins susceptibles d'être au courant des niveaux de radon dans leur collectivité. Ils se montrent moins enclins à procéder à des tests ou à appliquer des mesures correctives, et sont les moins susceptibles de croire que de 2 000 \$ à 3 000 \$ s'avère un montant raisonnable pour en arriver à diminuer les niveaux de radon dans une habitation. Les citoyens de la **Colombie-Britannique** sont également moins enclins que les autres à démontrer une connaissance spontanée du radon. Ils sont aussi les plus susceptibles de dire qu'ils ne seraient pas prêts à dépenser quoi que ce soit pour entreprendre des mesures correctives, et ce,

même s'ils figurent parmi les citoyens les plus susceptibles d'avoir entendu quelque chose se rapportant aux niveaux de radon dans leur collectivité.

- Les résidents du **Québec**, même s'ils n'ont pas autant entendu parler du radon que ceux de l'Atlantique ou des territoires, se montrent préoccupés à ce sujet et sont parmi les plus susceptibles de savoir que des tests sont disponibles. Comme les habitants du Nord et de l'Atlantique, ils sont parmi les plus susceptibles de juger que le coût moyen des mesures correctives liées au radon est raisonnable.
- Parce que les habitants de l'**Ontario** composent une grande partie de la population, ils ont tendance à établir la norme. Ils sont parmi les plus susceptibles de savoir que le radon est radioactif, et parmi les moins susceptibles d'avoir entendu quelque chose se rapportant aux niveaux de radon dans leur collectivité.

Selon le fait que la région est sujette à la présence de radon ou non

Un des objectifs de cette recherche était d'être en mesure de comprendre les connaissances, les attitudes et les habitudes des résidents des régions sujettes à la présence de radon et de les comparer avec les réponses des individus résidant dans les régions qui sont non sujettes à la présence de radon. En règle générale, les résidents des régions sujettes à la présence de radon connaissent un peu mieux le radon et le problème de santé qu'il représente, mais les différences ne sont pas aussi prononcées que ce à quoi on pourrait s'attendre. Le fait que les différences notées entre les régions sujettes à la présence de radon et celles qui ne le sont pas sont moins importantes en 2013 qu'elles ne l'étaient en 2007 peut s'expliquer en partie par le fait que des collectivités différentes ont été considérées comme étant sujettes au radon dans les deux sondages, ou être lié à la campagne générale de sensibilisation au radon mise sur pied par Santé Canada partout au pays, qui est venue rappeler que tous les Canadiens, peu importe leur lieu de résidence, devraient faire tester leur habitation.

Les résidents des régions sujettes à la présence de radon sont plus susceptibles d'avoir déjà été sensibilisés au radon (76 % par rapport à 65 % ailleurs), d'avoir déjà vu ou entendu quelque chose se rapportant aux niveaux de radon dans leur collectivité (11 % par rapport à 4 %) et d'avoir fait tester leur habitation pour le radon (6 % par rapport à 3 %). Toutefois, ces différences ne s'avèrent pas aussi prononcées qu'en 2007. Les habitants de ces zones ne semblent toutefois pas plus préoccupés par la qualité de l'air intérieur et ne sont pas significativement plus susceptibles de connaître certaines données particulières à propos du radon, comme la façon dont il s'infiltré dans une habitation ou les moyens d'en diminuer les niveaux. Ils sont, cependant, plus enclins à croire qu'il est faux de prétendre qu'il est difficile d'extraire le radon d'une résidence, et qu'il est vrai de dire que le radon peut être trouvé dans la plupart des habitations (deux avis conformes à la réalité). Les raisons évoquées pour ne pas faire tester sa résidence ou pour ne pas entreprendre de mesures correctives dans une situation où les niveaux de radon s'avèrent élevés ne semblent pas varier selon qu'une région soit sujette à la présence de radon ou non, pas plus que les montants que l'on affirme être prêt à consentir pour la conduite de tests ou le recours à des mesures correctives.

Selon la taille de la collectivité

Certaines différences entre les collectivités rurales et les centres urbains avaient été observées lors du sondage de 2007; plusieurs de ces différences semblent avoir disparu en 2013, ou ne sont du moins plus aussi importantes. La probabilité d'avoir recours à un test de dépistage du radon est plus élevée parmi les résidents des communautés rurales (51 %, par rapport à 43 % pour les habitants des centres urbains). Le faible pourcentage de personnes qui n'ont pas eu recours à un test en raison du fait qu'elles ne « croient » pas au radon (5 %) résident toutes dans des centres urbains, ce qui pourrait être pris en considération dans le cadre de futurs messages.

Selon la composition du ménage et les caractéristiques individuelles

Composition du ménage. Les différences relatives à des facteurs associés à la composition du ménage, comme la présence d'enfants ou le nombre d'années depuis l'achat de la propriété, se font moins nombreuses en 2013 qu'en 2007. Les parents d'enfants de moins de 16 ans sont plus enclins à être convaincus de la valeur d'entreprendre des mesures correctives que ne le sont les personnes qui n'ont pas d'enfants dans cette tranche d'âge à la maison, et sont plus susceptibles de citer la moisissure comme figurant parmi leurs préoccupations en matière de qualité de l'air intérieur.

Facteurs démographiques. Bien que les différences liées à l'âge ne soient pas aussi marquées en 2013 qu'elles ne l'avaient été en 2007, la sensibilisation au radon demeure plus grande parmi les personnes de 60 ans et plus, le groupe d'âge généralement associé dans les études à une plus importante consommation de médias traditionnels. Les propriétaires canadiens plus âgés sont cependant un peu plus susceptibles de dire qu'ils ne savent pas combien ils seraient prêts à dépenser pour des tests sur la présence de radon; certaines réponses indiquent également que les personnes plus âgées ne seraient peut-être pas aussi susceptibles de prendre des mesures correctives à cet effet, par rapport à d'autres groupes. Les propriétaires âgés de moins de 45 ans s'avèrent plus susceptibles que ceux de 45 à 59 ans de juger que de 2 000 \$ à 3 000 \$ est un montant raisonnable pour l'atténuation de la présence de radon. Ils sont également plus susceptibles d'acheter une habitation ayant fait l'objet de mesures correctives et d'affirmer que les renseignements fournis dans le cadre du sondage auront pour effet de les encourager à faire mesurer les niveaux de radon dans leur résidence.

Comme dans le cas de nombreux sondages portant sur la connaissance de certains enjeux, on observe une sensibilisation au radon plus importante parmi les répondants appartenant à des groupes socioéconomiques mieux nantis (en vertu de leurs revenus et de leur éducation). Ceux-ci s'avèrent davantage en mesure de nommer au moins un risque pour la santé lié à la qualité de l'air intérieur, plus susceptibles d'avoir entendu parler du radon et plus enclins à procéder à des tests sur la présence de radon et à dépenser davantage pour de tels tests. Ils sont plus convaincus de la nécessité de prendre des mesures si les niveaux de radon de leur résidence s'avéraient trop élevés et plus susceptibles d'affirmer qu'il est très important d'avoir recours à un spécialiste du radon certifié en cas de besoin.

Tout comme en 2007, des différences notables peuvent être observées entre les sexes. Les hommes demeurent plus susceptibles d'avoir entendu parler du radon, et sont généralement plus renseignés sur ce dernier que ne le sont les femmes. Ils sont plus susceptibles de connaître certaines caractéristiques du radon (par exemple, qu'il s'agit d'un gaz, que le radon provient du sol, qu'il est radioactif et qu'il peut s'infiltrer à l'intérieur d'une habitation par le sous-sol ou les fondations) et de juger qu'ils connaissent

beaucoup de choses, ou certaines choses, sur le sujet. Le fait de mentionner un magasin de rénovation comme un endroit où il est possible d'acheter une trousse maison permettant de tester les niveaux de radon est semblable chez les deux sexes, mais les hommes sont légèrement plus susceptibles de faire mention d'un détaillant spécialisé comme une compagnie gazière ou un vendeur d'équipement de CVCA. Ils sont aussi plus susceptibles d'être en mesure de nommer un moins un moyen de réduire les niveaux de radon dans une habitation.

Tabagisme. Il existe des données scientifiques suggérant que la conjugaison du tabagisme et du radon vient exacerber le risque déjà accru de cancer du poumon causé par chacune des causes prises individuellement⁸. Tout comme en 2007, on observe que les fumeurs ne sont ni mieux informés, ni plus préoccupés, par le radon que les autres Canadiens

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Pour de plus amples renseignements, veuillez communiquer avec Santé Canada à l'adresse suivante :

por-rop@hc-sc.gc.ca

⁸ WHO Handbook on Indoor Radon – <http://www.nrsb.org/pdf/WHO%20Radon%20Handbook.pdf> [en anglais uniquement]

Introduction

Background

Radon is a colourless, odourless, radioactive gas formed by the natural breakdown of uranium in soil, water and rock. It escapes from the ground into the outdoor air, where it becomes diluted and is not a source of concern. However, radon that enters an enclosed space, such as a home, can accumulate and be present at high levels, to which prolonged exposure can be harmful.

Radon exposure is second only to tobacco smoke as the most important cause of lung cancer and, according to estimates by the U.S. Environmental Protection Agency (EPA), it is the leading cause of lung cancer in non-smokers.⁹ Recent research estimates that 16 percent of lung cancer deaths among Canadians are attributable to indoor radon exposure.¹⁰ Radon gas, resulting from the natural breakdown of uranium in soil and rock, typically moves up through the ground into a home through cracks and other openings in a building's foundation. All homes have some level of radon, the only way to know how much and to ensure it is below the Canadian Guideline of 200 becquerels per cubic meter is to measure the level in the home.

Health Canada (HC) leads an ongoing National Radon Program (NRP) with the goal of reducing the health risks associated with radon exposure. A key component of the Program is outreach activities which inform Canadians of the increased risk of developing lung cancer associated with radon exposure, and encourages them to take action to reduce those risks at home and in their workplaces. The NRP is a component of the Clean Air Regulatory Agenda, which received a five-year renewal of its funding in 2011.

The first phase of the NRP focused on identifying the scope of the problem and communicating the health risks from indoor exposure to radon. The second phase of the program, which began in 2011, is focused on communicating solutions and developing resources for homeowners and key stakeholder groups with the intent of helping Canadians reduce the negative health impacts associated with indoor radon exposure.

Building on the progress achieved through activities and programs executed over the last five years of the NRP, an outreach strategy for the next five years has been developed with the following objectives:

- To encourage Canadians to take action to reduce their exposure to radon in indoor air to help them protect their health;
- To create opportunities for key stakeholder groups, such as health care, building and construction industry and NGOs, to develop their own radon outreach activities to inform and educate the Canadian public about radon; and
- To support and encourage the development of provincial or community-based radon programs that incorporate outreach, testing of public buildings and radon potential mapping.

⁹ <http://www.epa.gov/radon/healthrisks.html>

¹⁰ Chen, J., D. Moir and J. Whyte, Radiation Protection Bureau, Health Canada. "Canadian population risk of radon induced lung cancer: a reassessment based on the recent cross-Canada radon survey." *Radiation Protection Dosimetry*, November 2012. <http://www.ncbi.nlm.nih.gov/pubmed/22874897>.

Public opinion research was done in 2007 to identify a baseline of knowledge and awareness of radon, and its associated risks among Canadians. Health Canada identified the need to conduct follow-on research, to help evaluate the effectiveness of the efforts of the NRP to date and to help inform and guide the programs future objectives, research and outreach activities.

Research objectives

As a follow-up to previous public opinion research conducted on the subject of radon, Health Canada identified the need to conduct research into Canadians' knowledge, awareness, attitudes and behaviours surrounding radon, to assess the progress made by the National Radon Strategy to date and to help guide future efforts.

Specific objectives for this research included:

- To collect data that can be compared to the 2007 benchmark for awareness, attitude and behaviour levels, specifically related to radon in the home;
- To measure knowledge levels of Canadians in terms of what radon is, where it is found, the factors that most contribute to its presence (location, entry through cracks in foundation, etc.), health risks and concerns that are associated with radon in the home;
- To assess knowledge levels about how radon is detected or measured, and what can be done to effectively prevent or reduce radon levels (prevention and remediation);
- To determine past actions or behaviours in situations where the presence of radon in the home was suspected or detected, including the proportion of respondents who have tested and or remediated their home for radon, and sources of information/assistance sought; home testing and/or remediation and the associated costs;
- To determine potential future actions or behaviours if the presence of radon in the home was suspected or detected, including potential sources of information;
- To measure their opinion on the current availability of radon testing and remediation services and products in Canada and their perception of the cost (what they think it would cost and what they think of the actual cost);
- To determine if financial barriers impact testing and remediation; and
- To determine perceptions of the federal government's responsibilities regarding education, remediation and current sources of radon information to Canadians.

The research consisted of telephone interviews conducted from January 29 to February 16, 2013 with a representative sample of 1,667 Canadians 18 years of age and older, who are household decision-makers in homes that are owned (not rented) and that have ground floor living space. The sample was designed to obtain a minimum of 1,450 interviews with Canadians nationally (actual n=1,465) and was stratified by region to ensure adequate subsamples for analysis in all regions.

An additional 202 interviews were conducted in the following radon-prone areas identified by Health Canada:

MB - Brandon, Dauphin
BC - Castlegar, Kamloops, Nelson
NB - Bathurst, Edmundston, Miramichi
ON – Smith Falls, Brockville, Chatham
QC - Gaspé, Chelsea, Rimouski
SK - Regina

Some of the national interviews were conducted in communities that were identified by Health Canada as having higher levels of radon, and these are grouped with the oversample interviews as “radon-prone” in the analysis that follows.

For simplicity, locations outside of the identified radon-prone areas are sometimes called “not radon-prone,” but this does not necessarily reflect the actual radon status of each community.

Tracking data

The tracking data shown in this report are from the 2007 National Radon and Indoor Air Quality Survey, conducted by Environics on behalf of Health Canada. The 2007 survey employed the same screening criteria as the 2013 study; however, that survey did not interview in the three northern territories. The sample size was 1,820. The margin of error for a sample of this size is +/- 2.3 percentage points, 19 times in 20. The margin of error is greater for results pertaining to subgroups of the total sample.

Report

This report begins with an executive summary outlining key findings and conclusions, followed by a detailed analysis of the survey data. Provided under a separate cover is a detailed set of “banner tables” presenting the results for all questions by population segments as defined by region and demographics. These tables are referenced by the survey question in the detailed analysis.

In this report, results are expressed as percentages unless otherwise noted. Results may not add to 100% due to rounding or multiple responses. Net results cited in the text may not exactly match individual results shown in the charts due to rounding.

Indoor air quality concerns

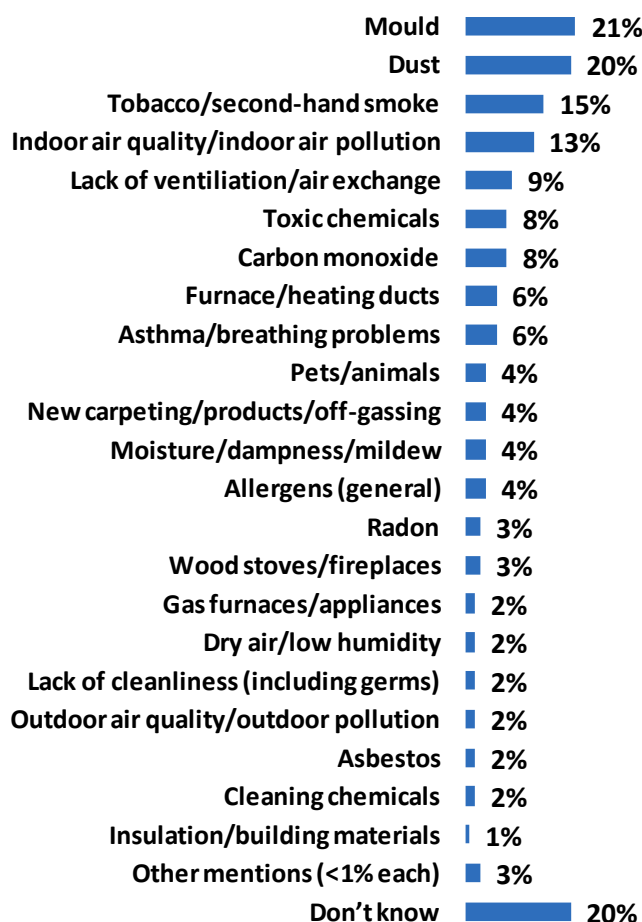
The survey began with questions to assess recognition of indoor air quality health hazards and level of concern about them.

Main indoor air quality hazards

Mould is the main top-of-mind indoor air quality health concern.

Canadian homeowners were asked to think about the air quality in an average Canadian home, and then to identify the major health hazards related to indoor air quality.¹¹ Multiple mentions were permitted. Mould and dust are the most cited hazards, followed by tobacco smoke and indoor air pollution. A range of other hazards is mentioned, each by no more than one in ten. Radon is mentioned by three percent. Two in ten (20%) are unable to name an indoor air quality health hazard.

Main health hazards related to indoor air quality (unprompted)



Q.1 Thinking about the air quality in an average Canadian home, what would you say are the major health hazards related to indoor air quality?

¹¹ In 2007 a more general question was asked about environmental problems or hazards that pose the greatest risk to the health of Canadians, which is not directly comparable.

Responses are generally similar across the country and by whether the residence is in an urban or rural location, or whether the community is identified as radon-prone or not. Mentions of radon are only marginally higher in radon-prone areas (6%) than those that are not (3%).

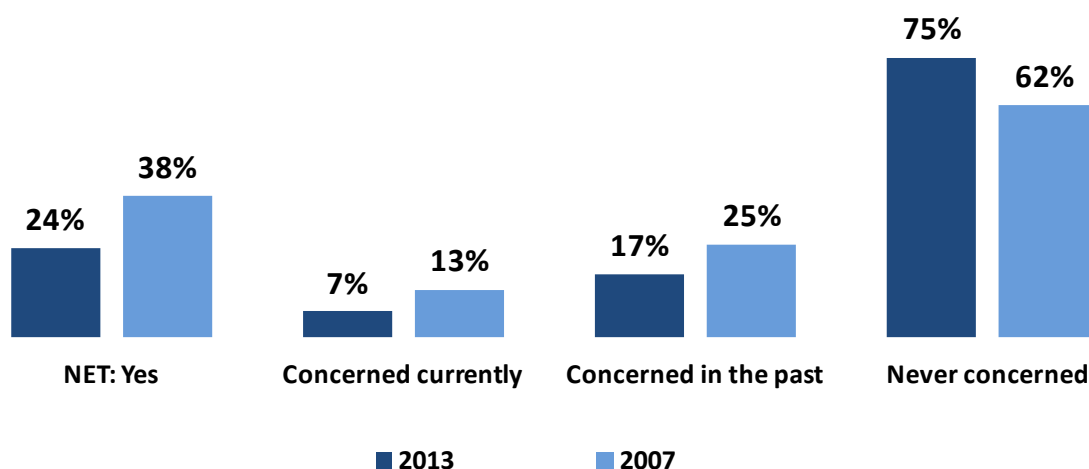
Mentions of mould are highest in Quebec (31%), where residents are also the most likely to mention asthma or breathing problems (14%), or moisture/dampness/mildew (10%). Mould is also mentioned more by those with a child under age 16 in the home (28% vs. 17%). As with many knowledge-based questions, those in higher socio-economic strata (education and household income) are more likely to be able to name at least one indoor air quality health hazard.

Concerns about home indoor air quality

Only one-quarter of Canadian homeowners say they have had concerns, now or in the past, about the indoor air quality of their home; usually about dust or mould.

Concern about indoor air quality. Canadians were asked if they have been concerned about the indoor air quality in their home, currently or at some point in the past. One-quarter (24%) say they are currently (7%) or were previously (17%) concerned about their home's indoor air quality, a reduction from 38 percent in 2007, while three-quarters (75%) have never been concerned.

Concern about indoor air quality in home

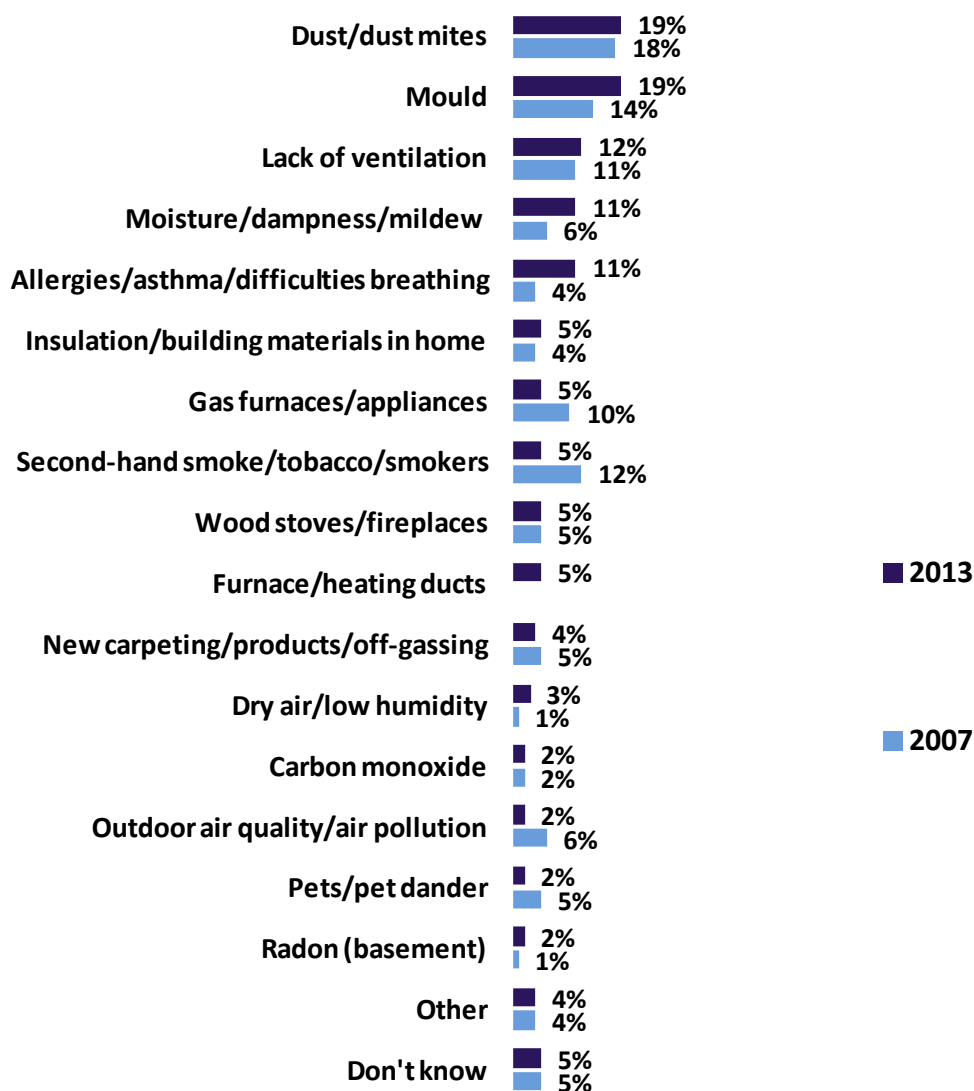


Q.2 Currently, or at some point in the past, have you been concerned about the indoor air quality in your home?

Concern is similar across the country and, as in 2007, is not notably difference by whether the homeowner resides in a radon-prone area or not. Concern does not vary appreciably by age, except that the youngest homeowners are less like to express concern than others (14% of those aged 18 to 29 vs. 22% to 27% in older age cohorts). Concern is highest among those who, later in the survey, rate their personal health as only fair or poor (42%).

Source of concern about indoor air quality. Those expressing current or past concern about their home air quality (n=406) were asked to identify the source of their concern. Multiple mentions were permitted. The most widely mentioned cause is dust/dust mites (19%) or mould (19%), followed by lack of ventilation (12%), moisture/dampness/mildew (11%) and allergies (11). Other causes (cited by one in twenty or fewer) include insulation or building materials (5%), gas furnaces or appliances (5%), second-hand smoke (5%), wood stoves/fireplaces (5%), furnaces or heating ducts (5%) and off-gassing from new carpeting or other products (4%). Radon is cited as the source of concern by two percent of Canadians with indoor air quality concerns, and there are no notable subgroup differences in mentioning it.

Source of concern about indoor air quality in home (unprompted)



Q.3 What [is/was] the source of your concern about the air quality in your home? (UP TO THREE RESPONSES RECORDED)
SUBSAMPLE: Those currently or previously concerned about their indoor air quality (2013 N=406; 2007 N=683)

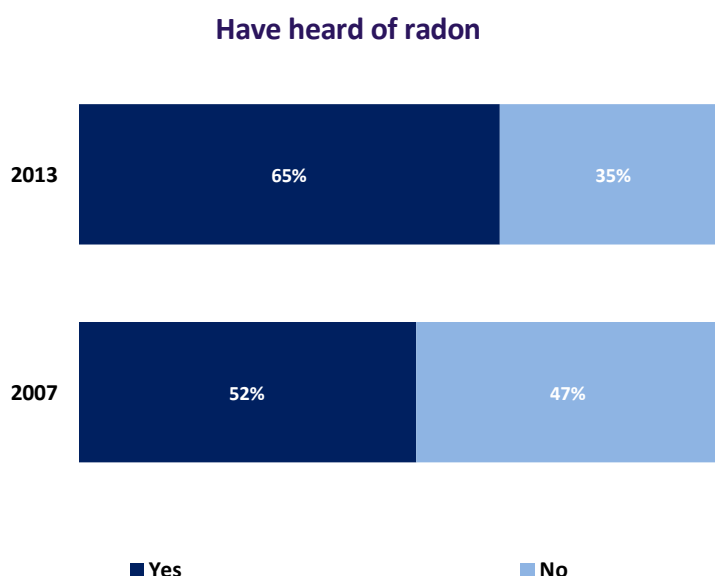
Radon knowledge and awareness

To develop effective policies and communications messages around radon, it is important to assess the current level of knowledge (or lack of it) among Canadian homeowners. Questions were therefore asked about awareness of radon, what had been seen or heard about it, and where this information was obtained. Respondents indicating any awareness of radon were then asked to rate their level of knowledge, following which specific questions probed actual knowledge about radon, about its occurrence in homes and about radon testing kit availability.

General awareness of radon

Two-thirds of Canadian homeowners say they have heard of radon; mostly that it is a gas, comes from the ground, and is a health hazard.

Awareness of radon. Two-thirds of Canadian homeowners (65%) indicate they had heard of radon, up from half in 2007 (note in 2007 respondents were asked specifically about awareness *prior to the survey*). Awareness is highest in the Atlantic region (73%), and in Saskatchewan and Manitoba (72%), two areas where a significant proportion of residents live in radon-prone areas, and is lowest in Alberta (57%), where no radon-prone areas were identified for the survey. Between six and seven in ten of the residents of other regions say they are aware of radon. Awareness of radon is higher in radon-prone areas (76%) than elsewhere (65%), although the difference is less pronounced than in 2007.



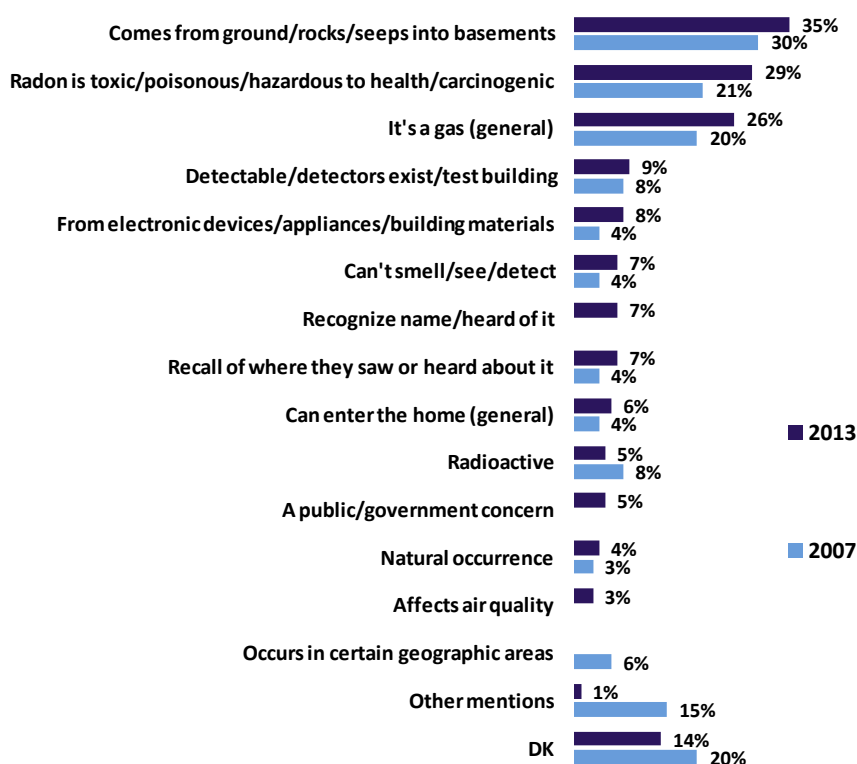
Q.4 Have you ever heard of radon? (2007: Before this survey, had you ever heard of radon?)

Reported awareness of radon is higher among men (72%) than women (58%). Although age differences are not as marked in 2013 as in 2007, awareness is highest among those aged 60 and over (69%), the age group that research consistently shows to be the highest consumers of media. As in 2007, radon awareness increases proportionately with increased education level and household income. It is not noticeably higher among those with children, smokers or those with lower reported levels of health, and differences by length of tenure in the home are not pronounced.

What was seen or heard about radon. Those with any awareness of radon were asked what they recall seeing or hearing about it; multiple mentions were permitted. One-third (35%) say radon comes from the ground/rocks/seeps into basements, an increase of five percentage points from 2007. Three in ten (29%) make some mention of radon being toxic, poisonous or hazardous to health (including it being carcinogenic), an eight percentage point increase from 2007. One-quarter (26%) mention that it is a gas.

One in ten or fewer spontaneously mention any other fact about radon, such as it being detectable in buildings (9%). In 2013, small proportions mention that radon is a public or government concern, or that it can enter the home (means unspecified). Confusion with other toxic substances such as chlorofluorocarbons remains evident: one in ten (8%) think radon comes from electronic devices, appliances or building materials. As was the case in 2007, unprompted knowledge about radon is not substantially different in radon-prone areas than outside of them.

What was heard/seen about radon



Q.5 What do you recall hearing or seeing about radon?

SUBSAMPLE: Those who have heard of radon (2013 N=1,136; 2007 N=1,098)

Comments are generally similar across the country, and in urban or rural areas. Quebec residents aware of radon are the most likely to mention that it is toxic/poisonous/hazardous to health (36%) and that it is a gas (32%); Albertans are the most likely to say they have only heard the name or word (16%) or to say they cannot recall what they heard (18%).

As in 2007, there are some notable gender differences in being able to provide unprompted details about radon. Men are more likely than women to say that radon is a gas (30% vs. 22%), that it comes from the ground (23% vs. 16%), that it can enter the home through the basement or foundation (18% vs.

11%) and that it is radioactive (8% vs. 2%). In 2013, there are fewer differences by level of education than in 2007.

Later in the survey, Canadian homeowners were asked to self-rate their level of knowledge about radon. Echoing 2007, those who say they have a lot or some radon knowledge are more likely to provide details about radon than are those who say they have almost no knowledge. In particular, they are more likely than those claiming almost no knowledge to note radon is radioactive (15%, compared to 1%), or toxic, poisonous, harmful or carcinogenic (37% vs. 21%). It should, however, be noted that those saying they have only a little knowledge are in many cases just as likely as those indicating a higher level of knowledge to state correct facts about radon.

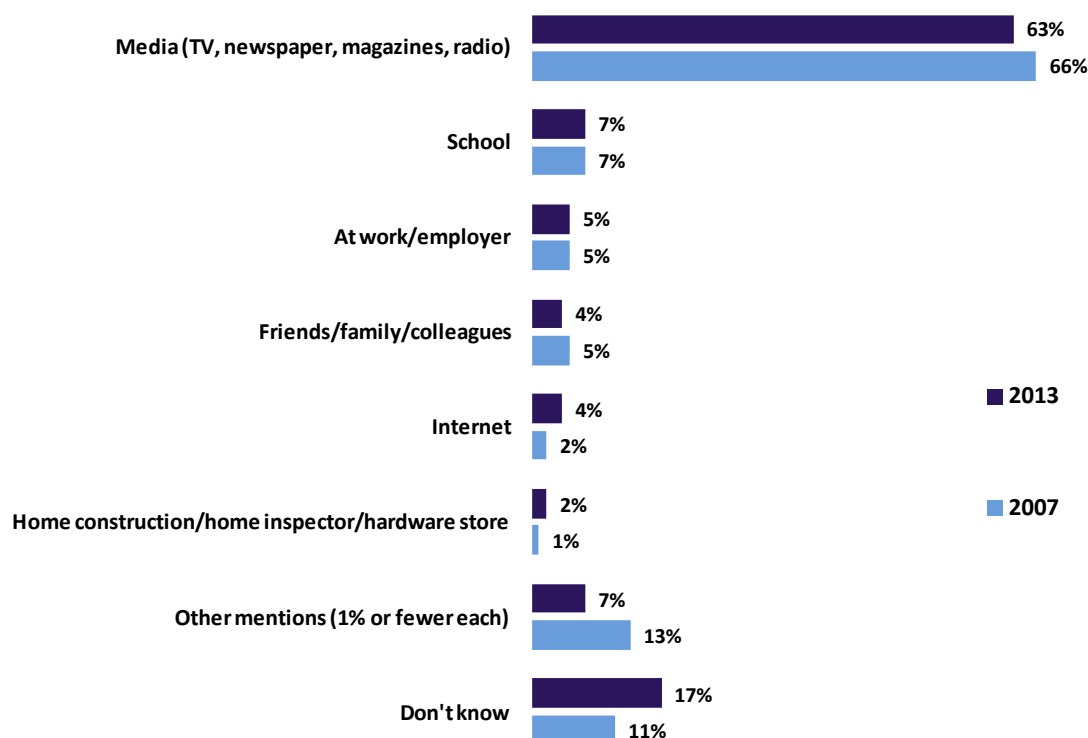
Sources of information about radon

The media remains the most commonly cited source of information about radon.

Those aware of radon were asked where they saw or heard about it. Multiple mentions were permitted. Media is by far the most frequently mentioned source, with about two-thirds (63%) mentioning hearing about radon through TV, newspapers, magazines or radio. Fewer than one in ten mention any other single source, such as school (7%), work (5%), friends or family (4%), or the Internet (4%). Seventeen percent cannot recall where they heard or saw something about radon. These results are very similar to 2007.

Sources for radon information vary little by subgroup. Mentions of the media as the information source are highest in Quebec (74%) and lowest in British Columbia (50%); Northern residents are somewhat more likely than others to mention the Internet (12%). There are no differences in mentions by those living in radon-prone areas vs. non-radon-prone areas. Those who say they have a lot or some knowledge of radon are the most likely to say they heard about radon from when they were at school (15% vs. 6% with less knowledge) or through work (15% vs. 4%).

Where information on radon was heard or seen



Q.6 Where did you hear or see something about radon?

SUBSAMPLE: Those who have heard of radon (2013 N=1,136; 2007 N=1,098)

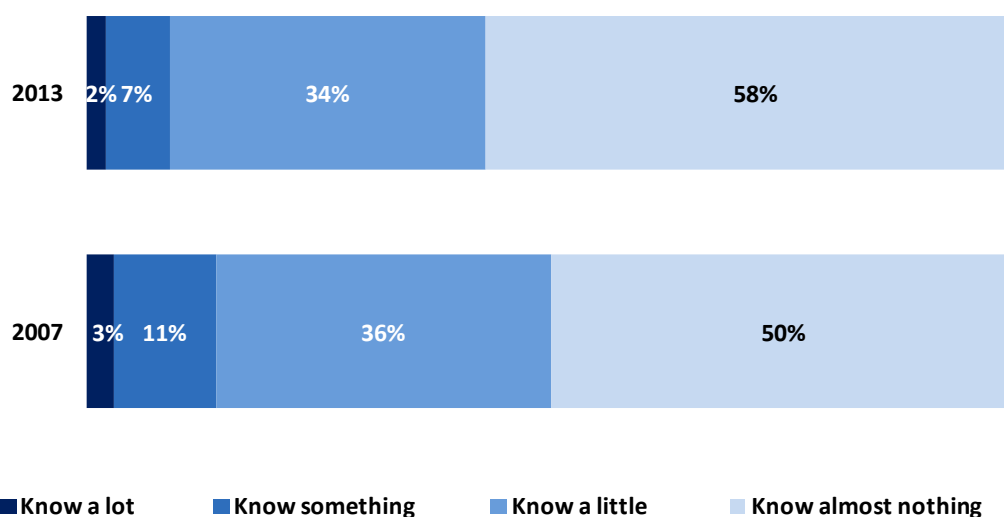
Rating of personal knowledge level

There has been no change in terms of self-assessed knowledge of radon: only one in ten Canadians say they know at least something about radon; six in ten say they know almost nothing about it.

Those saying they were aware of radon were asked to self-rate their level of knowledge about radon using a four-point scale.¹² As in 2007, this question was asked immediately after the open-ended question: “From what you may know or have heard, what is radon?” – so this likely discourages respondents from overstating their knowledge. One in ten say they know a lot (2%) or something (7%) about radon, a marginally lower proportion than in 2007. A third indicate they know “a little” (34%) about it, while six in ten admit they know “almost nothing” (58%). In 2013 there is little difference in self-assessed knowledge by whether someone resides in a radon-prone area (12% with at least some knowledge vs. 9% outside of these areas – compared to 2007, when 21 percent living in the identified radon-prone areas had some knowledge, vs. 14% living elsewhere).

¹² Those who said “don’t know” when asked “what is radon” were skipped over the self-knowledge rating question, but have been included as “know almost nothing” in this analysis.

Rating of personal knowledge about radon



Q.8 Would you say you know a lot, know something, know a little, or know almost nothing at all about radon?

SUBSAMPLE: Those who have heard of radon (2013 N=1,136; 2007 N=1,098)

NOTE: In both years, those saying "Don't know" to the previous question ("What is radon?") were not asked this question, but appear in the tabulation above as part of the proportion saying "know almost nothing."

Knowing at least something about radon is highest in the three northern territories (19%), Quebec (13%) and the Atlantic region (12%) – compared to between five and eight percent (5% - 8%) elsewhere. There are no notable age or socio-economic differences. Those claiming to have at least some knowledge about radon are most likely to be men (12% vs. 6% of women).

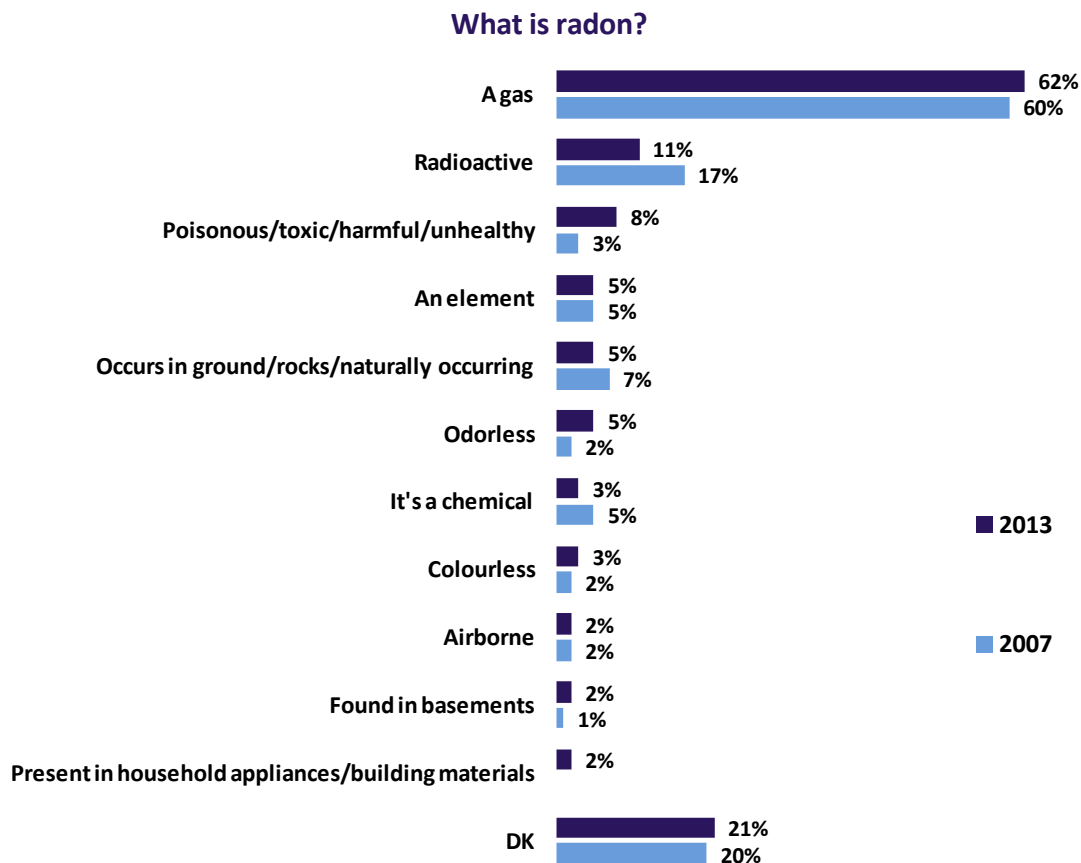
Knowledge about radon

Six in ten who have heard of radon know it is a gas; one in ten know it is radioactive. Most homeowners say it is true that radon can be found in most homes and that exposure to it is the leading cause of lung cancer after smoking. The majority also incorrectly think it is true that radon is difficult to remove from a home.

It is important not only to ask people to self-rate their level of knowledge about radon, but also to verify if the information they have is correct. This required a skill-testing section of the survey, the results of which are reported here.

What is radon? Those who were aware of radon were asked what radon is (unprompted). Multiple mentions were permitted. Six in ten (62%) correctly say it is a gas, a similar proportion to 2007, and one in ten know it is radioactive (11%). Homeowners are somewhat more likely now (8%) than in 2011 (3%) to mention that radon is unhealthy or toxic. Five percent or fewer can indicate any other single facts about it. Two in ten (21%) say they don't know anything about radon. Being able to provide unprompted

information about radon is not noticeably higher among residents of radon-prone areas than those living elsewhere.



Q.7 From what you may know or have heard, what is radon?
SUBSAMPLE: Those who have heard of radon (2013 N=1,136; 2007 N=1,098)

There are a few notable subgroup differences. The areas with the highest proportions of homeowners who are unable to state anything about radon are Alberta (29%) and British Columbia (25%), while residents of Saskatchewan and Manitoba, and the Atlantic are the most able to mention something. Most likely to mention radon is radioactive are residents of the North (15%) and Ontario (14%); residents of Alberta are least likely to mention this fact (4%). That radon comes from the ground as a natural occurrence is most mentioned by Atlantic Canadians (11%), while Quebecers are the most likely to mention it is odourless (10%).

Being able to offer any information about radon is higher among men (83% can cite something, compared to 74% of women). Those with a university degree are the most likely to know that radon is radioactive or an element, but otherwise their observations are fairly similar to those of others with less education.

As in 2007, this question confirms that those who rate their radon knowledge level as “a lot” or “some” are in fact able to give more correct information in an unprompted manner than those who say they have less knowledge: they are the most likely to say it is a gas (85% vs. 78% having only a little

knowledge and 50% with almost none) and that it is radioactive (25% vs. 15% having a little and 6% having almost no knowledge).

Radon knowledge. Following the self-rating question about radon knowledge, all householders, regardless of whether they were aware of radon prior to the survey, were read a short description of radon:

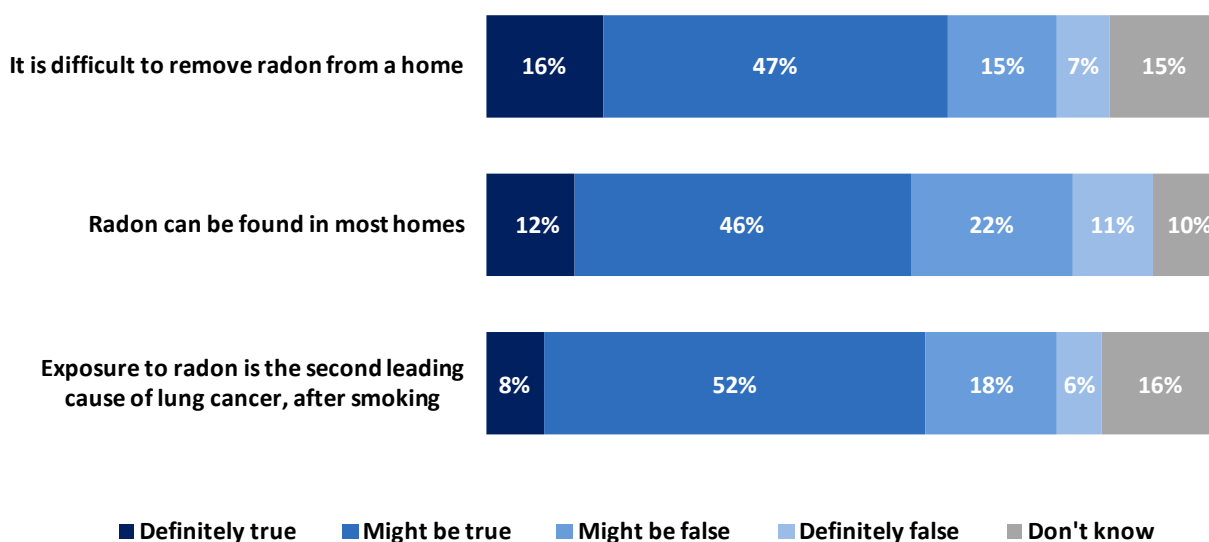
Here are some facts about radon. Radon is a radioactive gas that is colourless, odorless and tasteless. It is formed by the natural breakdown of uranium in soil, rock and water.

All were then read three statements about radon and asked if they thought each of the statements is true or false, and also to indicate their certainty (i.e., definitely true/false or might be true/false); the statements were randomized to prevent order bias. The three statements were:

- It is difficult to remove radon from a home (FALSE);
- Radon can be found in most homes (TRUE); and
- Exposure to radon is the second leading cause of lung cancer, after smoking (TRUE).

Majorities of around six in ten believe that each of these statements at least might be true. In fact, homeowners are most likely to think it is true that “It is difficult to remove radon from a home” (63% net true, with 16% saying it is definitely true), although this statement is false. This indicates a need to increase awareness that radon reduction is quite easy to arrange, and comparable in price to many other home maintenance projects.

Radon knowledge



Q.9 Now I am going to read three statements. For each statement, please tell me if you think it is definitely true, might be true, might be false or is definitely false.

The following are some notable subgroup differences in response to these three statements.

- That it is *difficult to remove radon from a home* is the majority view across the country and most subgroups of the population. However, those residing in radon-prone areas are more likely to think this statement is false (30%) than those in communities not identified as radon-prone (21%). As well, a slim majority of those who say they have a lot or some radon knowledge think this is false (53% false, 45% true).
- That *radon can be found in most homes* is thought to be true by lower proportions of residents of Quebec (50%) and British Columbia (54%) than other Canadian homeowners (between 61% and 67%). Thinking this statement is true is more pronounced among younger homeowners (71% of those aged 18 to 29), and among residents of radon-prone areas (65% vs. 58% not radon-prone) and those who say they have a lot or some radon knowledge (72% vs. 52% with little knowledge and 60% with almost no knowledge).
- Saying that *exposure to radon is the second leading cause of lung cancer after smoking* is true (definitely or might be) is fairly similar across the country, except highest in the Atlantic region (71%) and lowest in British Columbia (49%), where residents are the most likely not to know (25%). There is no notable difference by radon-proneness of community or self-assessed level of radon knowledge, or by most other factors. Those aged 60 and over (21%) are the most likely not to know (21%).

In 2007, education was a notable factor in rating as true or false three different statements about radon and radiation knowledge. In 2013, with new statements, there is little difference by education level.

Radon in homes

About three in ten know radon can enter the home through cracks in the foundation, and a similar proportion mention basement floors. Two-thirds are now aware that radon levels can be detected by some form of testing, but most remain unclear about remediation.

How radon enters homes. Following the radon knowledge questions, all respondents were read the following statement about radon:

Here are some more facts about radon. Radon gas comes up from the ground. When radon escapes outdoors, it is not a concern. However, radon that enters an enclosed space, like a home, can accumulate and become a health hazard. Most homes have some level of radon. Long-term exposure to high levels of radon is the second leading cause of lung cancer after smoking.

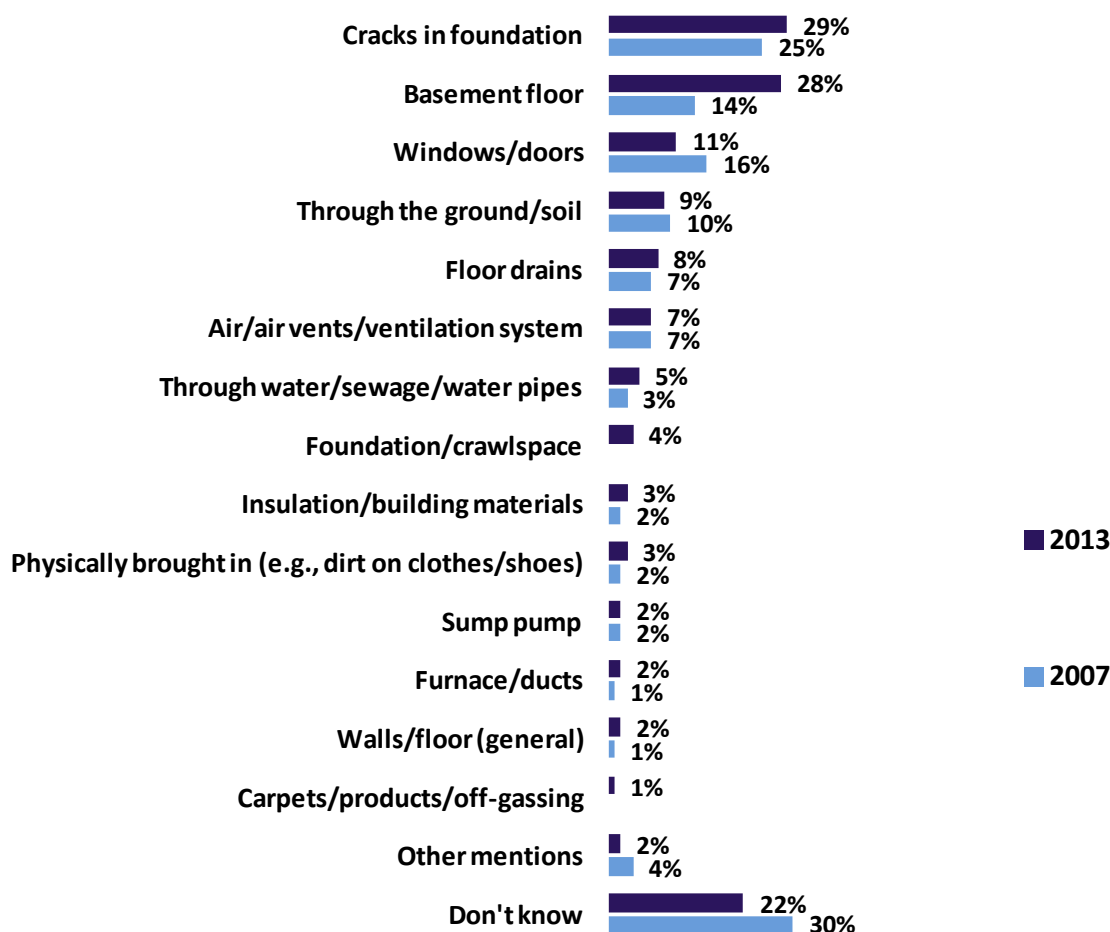
Then all were asked, unprompted, how they believe radon gets into homes (multiple responses were permitted). Various responses are offered, but Canadian homeowners are most likely to say that radon gets in through cracks in the foundation (29%), the basement floor (28%), and that it seeps in from the soil/ground (9%), floor drains (8%), foundation/crawlspace (4%) or sump pumps (2%). Other mentions include saying it enters via windows and doors (11%), through water pipes or via sewage (5%) or via the air or air vents (7%), that it is brought in from outside on shoes or clothes (3%), from building materials or insulation (3%), or carpets/off-gassing (1%). Two in ten (22%) cannot say how radon enters homes.

These results are basically similar to 2007, with twice as many people now mentioning that radon comes in through the basement floor (28% vs. 14%).

That radon enters through cracks in the foundation is mentioned by higher proportions of residents of Saskatchewan and Manitoba (36%), and the Atlantic region (34%) than elsewhere, and these residents are also the most likely to mention the basement floor. Awareness of how radon enters homes is not noticeably different among those in radon-prone areas.

As with some other knowledge questions, knowing how radon enters homes is linked to higher levels of education, and also to having a lot or some knowledge of radon. As in 2007, men are more likely than women to correctly say that radon enters through cracks in the foundation (31% vs. 26%) or through the basement floor (32% vs. 25%).

How radon gets into homes

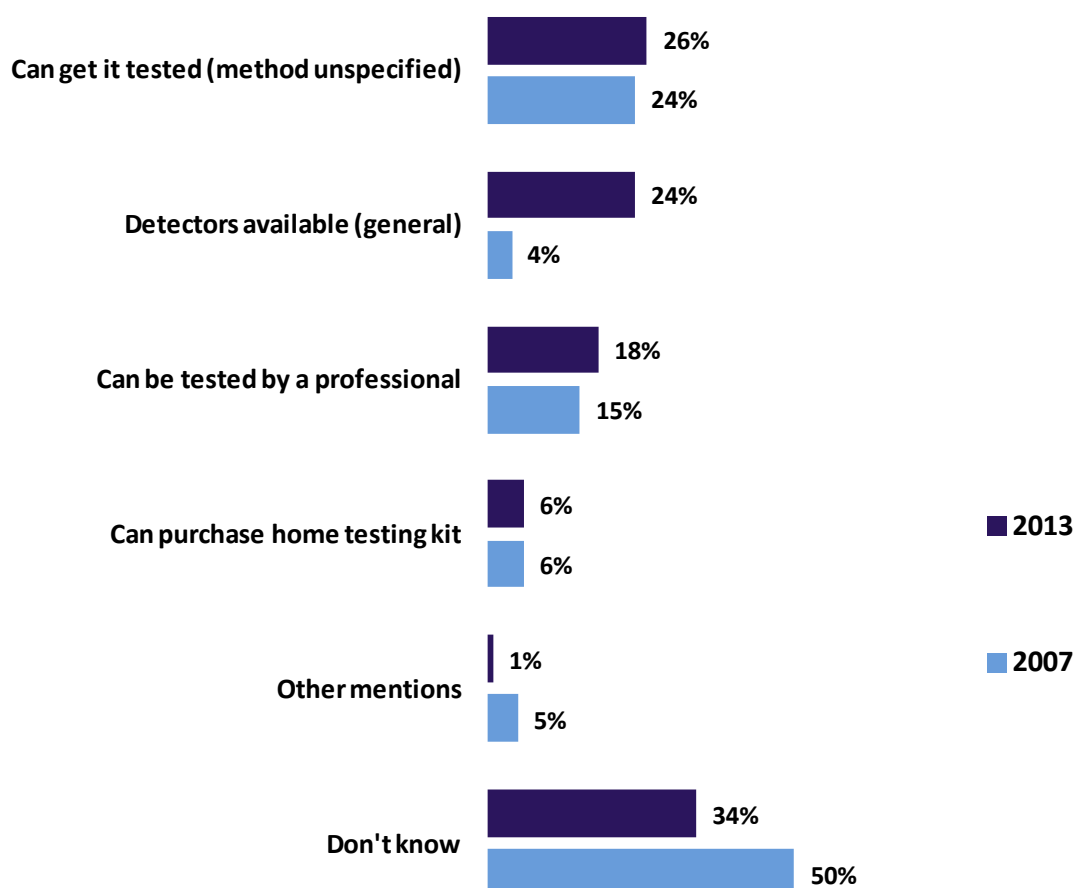


Q.10 How might radon get into a home? (2007: From what you may know or have heard, how does radon get into the home?)

(NOTE: STATEMENT READ PRIOR TO THIS QUESTION CHANGED IN 2013)

How radon can be detected. Awareness that there are radon detectors available is an area where there has been a notable improvement in the past five years. Canadian homeowners were asked (unprompted) if they know how people can find out if there is a high level of radon in their home. Multiple mentions were permitted. Two-thirds (65%) now mention some form of testing is available. One-quarter (26%) say one can test for radon, but do not elaborate. A similar proportion (24%) say that detectors are available, a notable increase from 2007 (4%). Two in ten (18%) mention radon can be tested for by a professional, while six percent specifically mention purchasing a home testing kit. One-third (34%) either do not know or cannot say how people can find out about the level of radon in their homes, down from half in 2007.

How radon can be detected



Q.11 Do you know how people can find out if there is a high level of radon in their home?

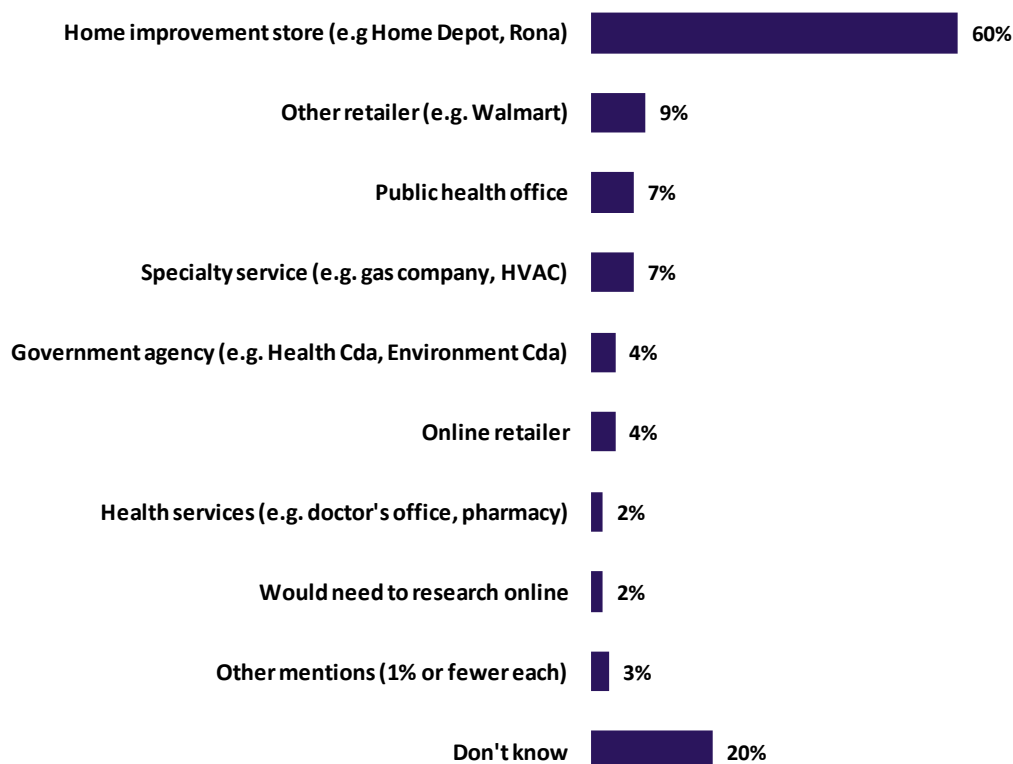
Knowing that some kind of testing is available for radon is similar across the country but is somewhat higher in Quebec (74%) and the Atlantic region (74%) than elsewhere. While residents of radon-prone areas in general are about as likely as those in non-radon-prone areas to mention testing (68% vs. 65%), those residing in the radon-prone communities that were oversampled (71%) are more likely than those identified in the overall national survey (59%) to be aware of testing.

Knowing that testing is available is the top response among most population subgroups, but most marked among those with a lot or some knowledge of radon (94% vs. 70% of those with almost no knowledge), and those with a college diploma or university degree (69% vs. 57% with high school or less).

In 2013, unlike 2007, there is no notable difference by gender or age, or by presence of a child under 16 in the home.

Where DIY radon testing kits can be purchased. Those who mentioned anything about testing for radon were told that DIY radon testing kits are available, and then asked where they would go to purchase one. Multiple mentions were permitted. Six in ten (60%) mention that they are available at home improvement stores, such as Home Depot or Rona. One in ten or fewer mention other sources, such as other retailers, the public health office, speciality services (like gas or HVAC suppliers) or government sources. Lung associations are cited as a source by less than one percent.

Where DIY radon testing kits can be purchased



Q.12 Do-it-yourself radon testing kits are available for purchase. Where would you go to purchase one?

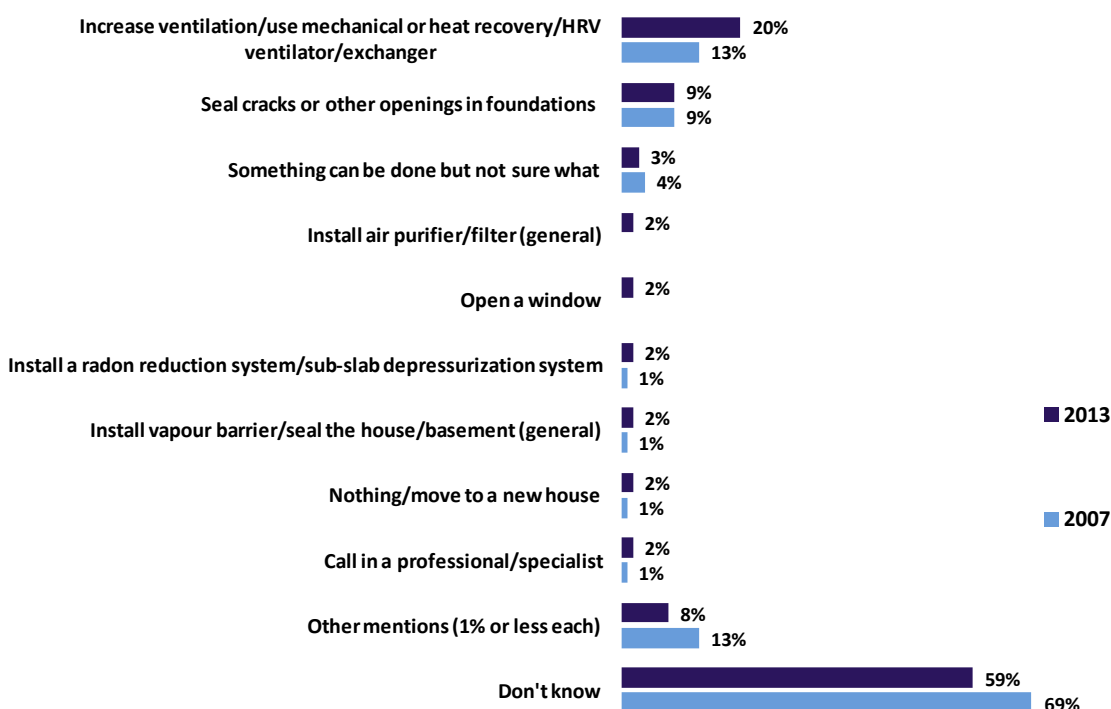
SUBSAMPLE: Those who mentioned radon testing as a way to find out if there is a high level of radon in a home (N=1,104)

That DIY radon tests can be found in home improvement stores is the dominant response across the country and across population subgroups, although only about half of those in Alberta (48%) or the Atlantic region (50%) mention this (these are the two areas where residents are most likely to be unable to name a place to get a DIY radon kit: Alberta 32% and the Atlantic 27%). Quebecers are the most likely to mention some other type of retailer (16%), and Yukon residents are the most likely to mention a government agency (23%).

Mentioning a home improvement store is fairly similar by gender, but men are slightly more likely than women to mention a specialty retailer like a gas company or HVAC dealer (9% vs. 5%). There are no major differences by education or income; those who have a child under 16 living in the home are more likely (66%) than those who do not (57%) to mention a home improvement retailer. Interestingly, those who say they have almost no knowledge of radon are the most likely to mention a home improvement store (66% vs. 49% of those who claim a lot or some knowledge, and 57% with a little knowledge), which may either be a lucky guess or because it is a logical source.

Remediating radon in a home. Homeowners were asked (unprompted) what, if anything, people can do to reduce the amount of radon in a home (multiple mentions were permitted). Four in ten offer some suggestion, a small improvement from 2007, with the most mentioned way being to increase ventilation or by using mechanical or heat recovery/HRV ventilators or exchangers (20%, up from 13% in 2007). One in ten (9%) mention sealing cracks in the foundation. There has been no increase in the proportion mentioning sub-slab depressurization systems (2%). Fewer than five percent each cite anything else. Six in ten (59%) can offer no suggestion about how radon levels can be reduced in homes.

How home radon levels can be reduced



Q.13 And do you know what, if anything, people can do to reduce the amount of radon in a home?

While mentions are generally similar across the country and subgroups, there are a few differences. Albertans are the most likely to be unable to give some method of remediation (70% don't know). In 2013, unlike 2007, residents of radon-prone areas are no more likely than those living elsewhere to cite some way of reducing home radon levels.

As with a number of the radon knowledge questions, being able to name at least one radon remediation option is somewhat higher among men (48% cite at least one method) than among women (35%), and among those with a college diploma (43%) or university degree (46%, compared to 33% of those with less education).

Previous experience with radon

An important objective of this survey is to identify the extent to which Canadians have had previous experience with radon testing or remediation, and to understand the extent to which messages about radon testing have been heard, especially in radon-prone areas. All respondents were asked about whether they have heard about radon levels in their community, and if they have had their home tested or ever considered testing – and, if they have not, why not. Those without experience with radon testing were then skipped to the next section, while those few who have had testing were asked more about this experience.

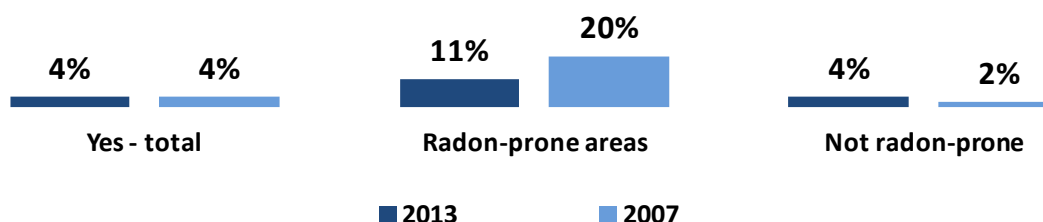
Awareness of radon levels in their community

One in ten Canadians living in a radon-prone area have heard or seen something about radon levels in their community, compared to four percent of those residing elsewhere. As in 2007, a quarter of Canadians who have heard something say it was that local radon levels are high.

Community radon level. Canadians were asked if they recall ever seeing or hearing anything about radon levels in their community. Only four percent report having heard anything, a proportion unchanged since 2007. As in 2007, this is higher in radon-prone areas (11%) than other areas (4%). The awareness in radon-prone areas in 2013 is somewhat lower than in 2007 (20%), when a different list of communities was surveyed and more oversample interviews conducted.

Regionally, levels of awareness are highest in the North (17%), and higher in the Atlantic (6%), Quebec (6%) and British Columbia (6%) than in Ontario (2%), or Alberta (1%).

Heard or saw something about community radon levels



Q.14 Do you recall ever seeing or hearing anything about indoor radon levels in your community? (2007: Do you recall ever seeing or hearing anything about radon levels in your community?)

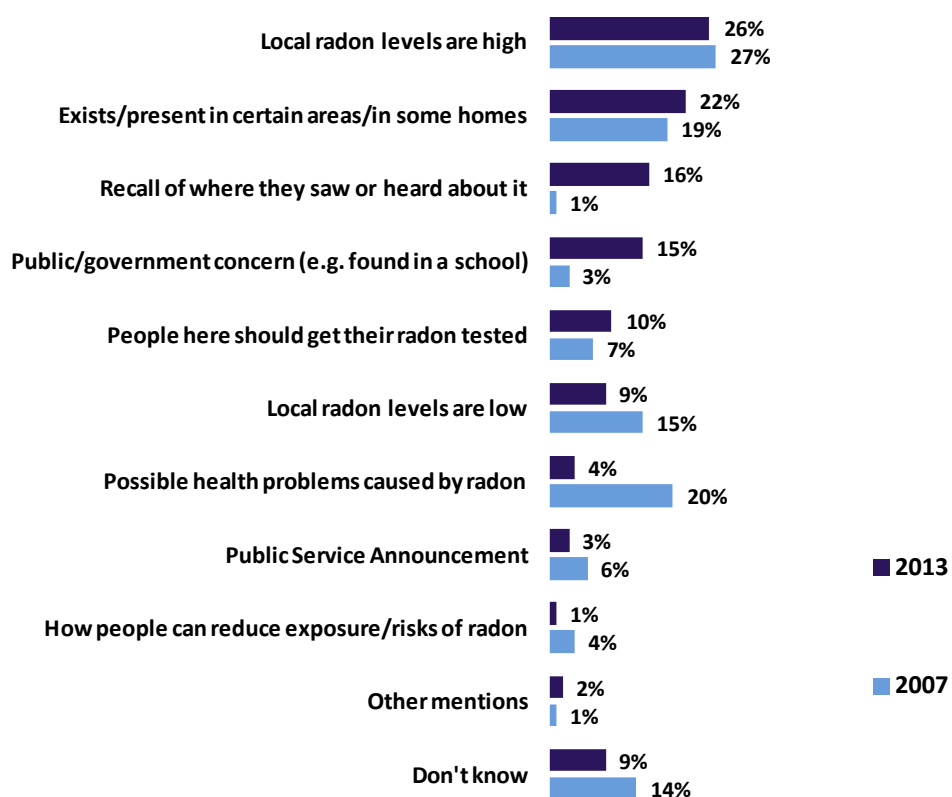
Having heard or seen something about community radon levels is highest among those who were aware of radon (6% vs. 1%) and among those who claim to have a lot or some knowledge of radon (25% vs. 6% of those with little knowledge and 3% of those with almost none). There are few demographic

differences to note, other than to mention that such awareness is higher among those with at least a college education.

What was seen or heard about community radon level. Those who indicated they have heard or seen something about the level of radon in their community (4% of householders) were asked what they recall about this. As a significant proportion of these people reside in radon-prone areas, it is not surprising that the most frequently mentioned message, cited by a quarter (26%), is that local radon levels are high; this is a similar result to 2007. However, it should be noted that householders are more likely now than in 2007 to mention they have heard that radon is a public or government concern, and less likely to have heard something specifically about possible health problems caused by radon. Other mentions are generally similar to 2007.

The base of those recalling a community radon level message is too small to support detailed analysis by subgroups.

What was heard or seen about community radon levels



Q.15 Can you tell me what it was that you recall hearing or seeing (about radon levels in your community)?

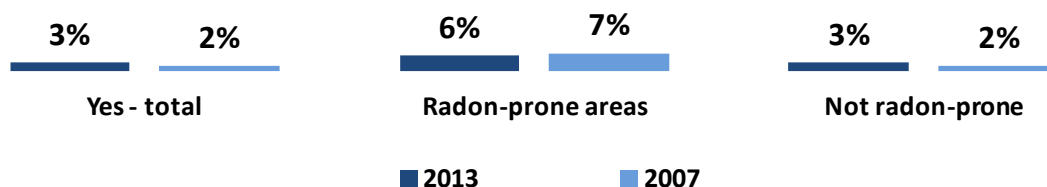
SUBSAMPLE: Those who have ever heard or seen something about community radon levels (2013 N=100; 2007 N=156)

Radon testing

Three percent of Canadians – six percent in radon-prone areas – have had the radon level in their home tested. Among those who have not had testing, slightly more – nine percent nationally, 13 percent in radon-prone areas – have considered radon testing.

All Canadian householders, including those who indicated they were not previously aware of radon, were asked if they have ever had the radon levels in their home tested. Three percent say they have. In radon-prone areas, six percent report having had a radon test. This is a similar result to 2007; however, in 2013 the difference is not calculated to be statistically significant, due to the reduced number of radon-prone area interviews conducted.

Have had radon levels in home tested

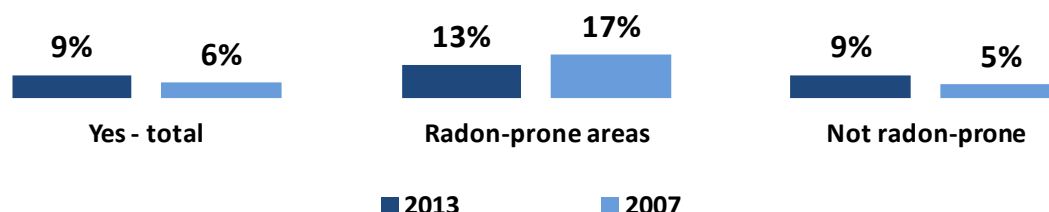


Q.16 Have you ever had the radon levels in your home tested?

The proportion of householders indicating they have had a radon test conducted is higher in the northern territories (11%) than elsewhere (1% to 5%). Having a radon test is linked to having a lot or some knowledge about radon (18% say they have had a radon test, compared to 4% with only a little knowledge and 3% with almost no knowledge).

Those who have not had their home's radon levels tested were asked if they have ever considered radon testing. Nine percent say they have considered this, including 13 percent of those in radon-prone areas. This is a similar result to 2007; however, as with the previous question, the difference between radon-prone and not radon-prone areas is not statistically significant in 2013.

Considered having home tested for radon



Q.17 Have you ever considered having the radon levels in your home tested?

SUBSAMPLE: Those who have not had the radon levels in their home tested (2013 N=1,595; 2007 N=1,747)

Having considered radon testing is highest among Atlantic Canadians (16%), among those who had heard of radon (12%), among those who say they have a lot or some knowledge of radon (32%, up from 16% in 2007) and those with a university degree (12%).

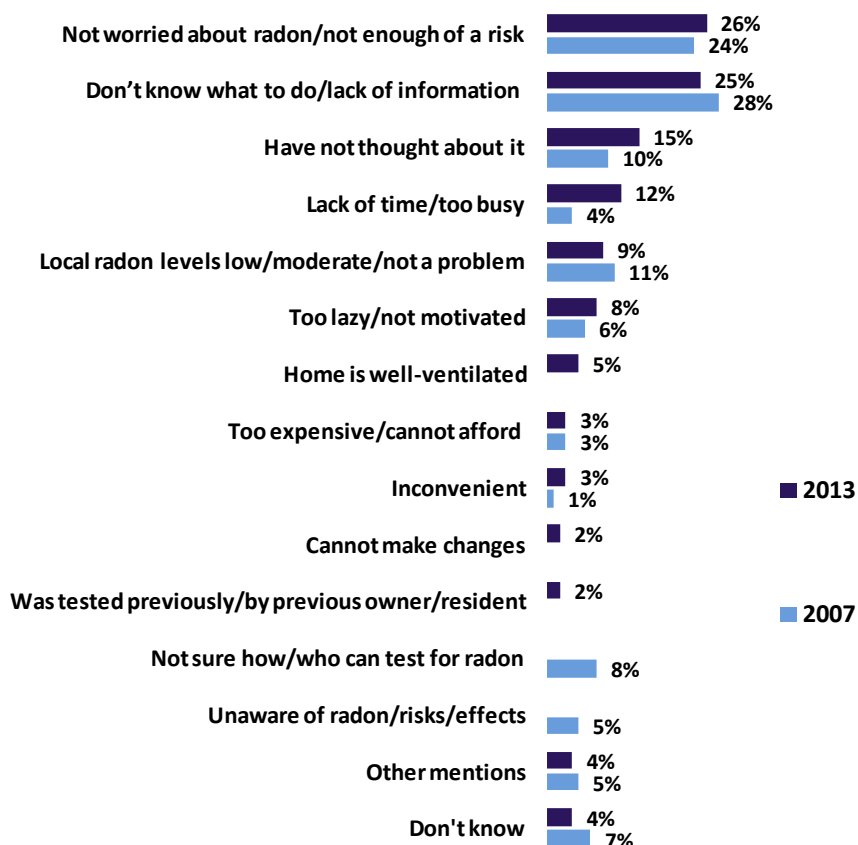
Why radon has not been tested

Lack of concern and lack of information remain the most frequently mentioned reasons for not having homes tested for radon level.

Those who have considered radon testing, and those who heard something about radon in their community but did not have their home tested, were asked why they did not have the radon levels in their home tested (n=219). Two primary reasons are cited: lack of concern and lack of information.

About one-third say they have not had radon levels tested due to lack of concern: because they are not worried about radon or that it is not enough of a risk (26%), or that their local levels are not a problem (9%). One-quarter have not had their radon levels tested because they don't know what to do about radon testing/lack of information (25%). Other personal reasons include not having thought about it, a lack of time (12%, up from 4% in 2007), being lazy/unmotivated, or presumed inconvenience or expense. Five percent say their home is well-ventilated.

Why home radon has not been tested



Q.18 Why have you not had the radon levels in your home tested?

SUBSAMPLE: Those who have not had radon tested but have considered having it tested or have at least heard about radon levels in their community (2013 N=219; 2007 N= 240)

Not knowing what to do about radon testing is cited more by people living outside of radon-prone areas (26% vs. 14% in radon-prone locations). In radon-prone areas, the main stated reason for not getting a home tested is that radon is not enough of a risk (50%). This finding may have important implications for future messaging.

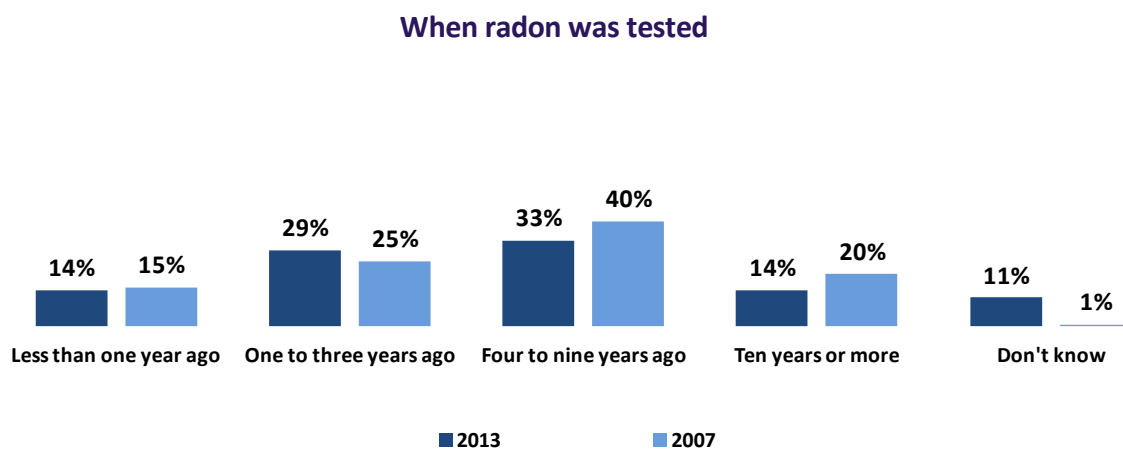
Experience with radon testing

Four in ten reported radon tests occurred in the past three years. DIY testing kits have become the most-cited method of testing. Majorities say the radon level was low and no action was required.

The small number of people (n=72) who indicated they have had the radon level in their home tested were asked a series of questions about their experiences. One-third of these (n=25) reside in radon-prone areas, while the balance (n=47) live outside of the designated radon-prone areas.

Because the sample size is small, detailed analysis of these results by subgroup is not presented.

When radon testing occurred. People who say they have had radon testing were asked how long ago it was first tested. Fourteen percent had their radon tested less than a year ago, and three in ten (29%) say it was tested between one and three years ago. Half report that their radon level was tested between four and nine (33%), or 10 years or more ago (14%). One in ten (11%) cannot recall. These individual results are statistically similar to 2007.

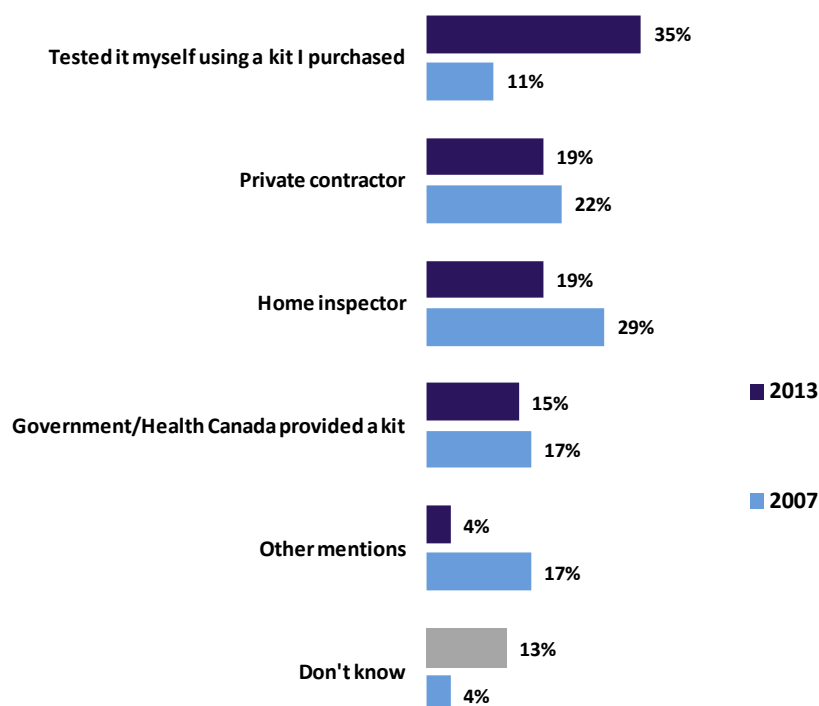


Q.19 In what year did you have the radon level in your home tested?
(IF RESPONDENT INDICATES IT WAS TESTED MORE THAN ONCE: I mean the first time it was tested)

SUBSAMPLE: Those who had their home radon tested (2013 N=72; 2007 N=73) NOTE: SMALL BASES

How radon was tested. Householders who said their home's radon levels have been tested were asked how this testing was done. In 2013 one-third (35%) say they tested it themselves using a home testing kit, a notable increase from 11 percent in 2007. This is noteworthy because it is reasonably clear that these were, in fact, radon tests; in 2007 there was indication from some responses that the supposed radon tests conducted by professionals may have been carbon monoxide or other tests. Two in ten (19%) say their home's radon level was tested by a home inspector (19%), which had been the most mentioned testing method in 2007, and a similar proportion say it was tested by a private contractor (19%). Fifteen percent say it was tested with a kit provided by the government/Health Canada, a similar proportion to 2007 (17%). Fifteen percent say it was tested with a kit provided by the government/Health Canada, a similar proportion to 2007 (17%).

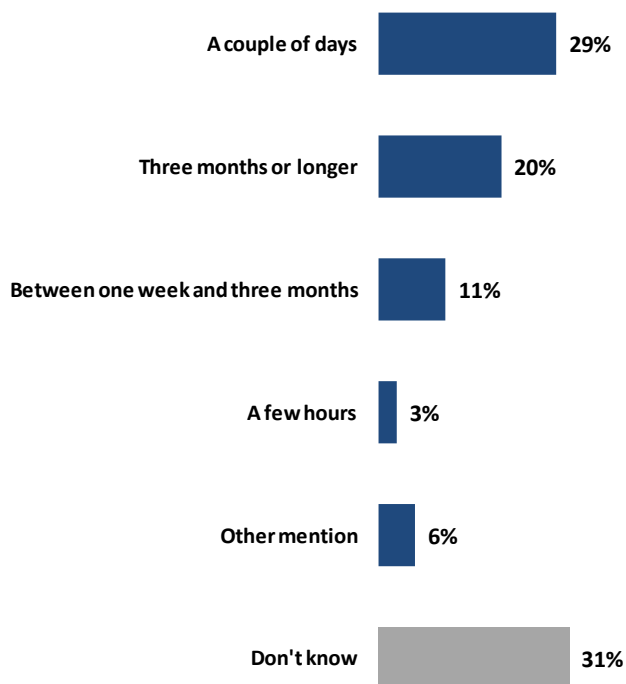
How radon was tested



Q.20 How did you have the radon level in your home tested (IF TESTED MORE THAN ONCE: the first time it was tested)?
SUBSAMPLE: Those who had their home radon tested (2013 N=72; 2007 N=73) NOTE: SMALL BASES

Duration of radon test. A new question was added in 2013 about the duration of the radon test. Half indicate one of the normal testing periods: three in ten (29%) say it was a couple of days, and two in ten (20%) say it was for three months or longer. One in ten (11%) say it was some time period between these two normal options, and one in ten (9%) provide other responses. Three in ten (31%) are unable to indicate the length of the radon test. Subgroup bases of this population are small, but most of the 22 homeowners who say they used a DIY kit indicate one of the two correct responses: five say they tested for a couple of days and nine say the test was three months or longer, while four say between one week and three months and the rest do not know (note that these data are the actual, unweighted counts).

Duration of home radon test

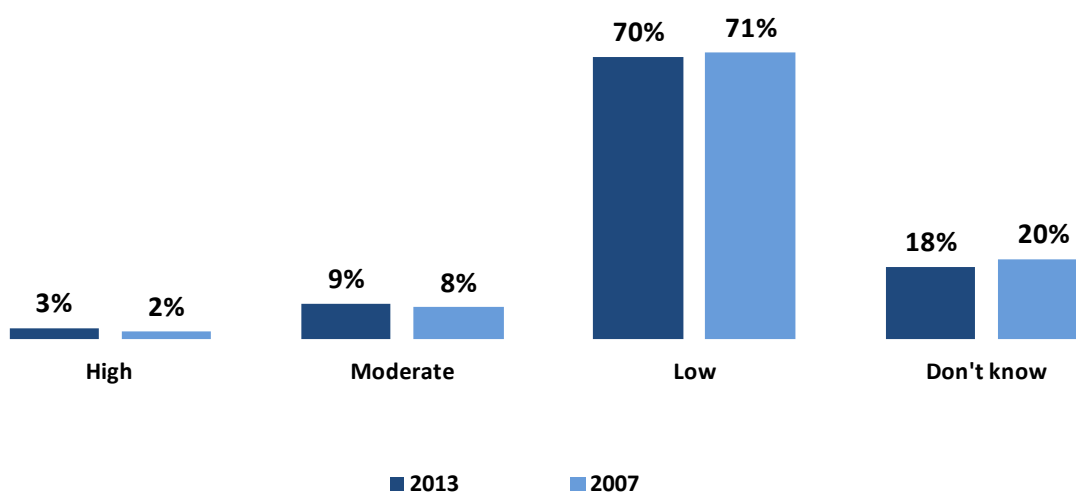


Q.21 For how long a time period was the radon level tested in your home?

SUBSAMPLE: Those who had their home radon tested (N=72) NOTE: SMALL BASE

Reported radon levels. Those reporting radon testing were asked to recall if the level was high, moderate or low. Most (70%) say it was low, and two in ten (18%) cannot recall. Only one in ten say it was moderate (9%) or high (3%). These results echo 2007.

Level of home radon



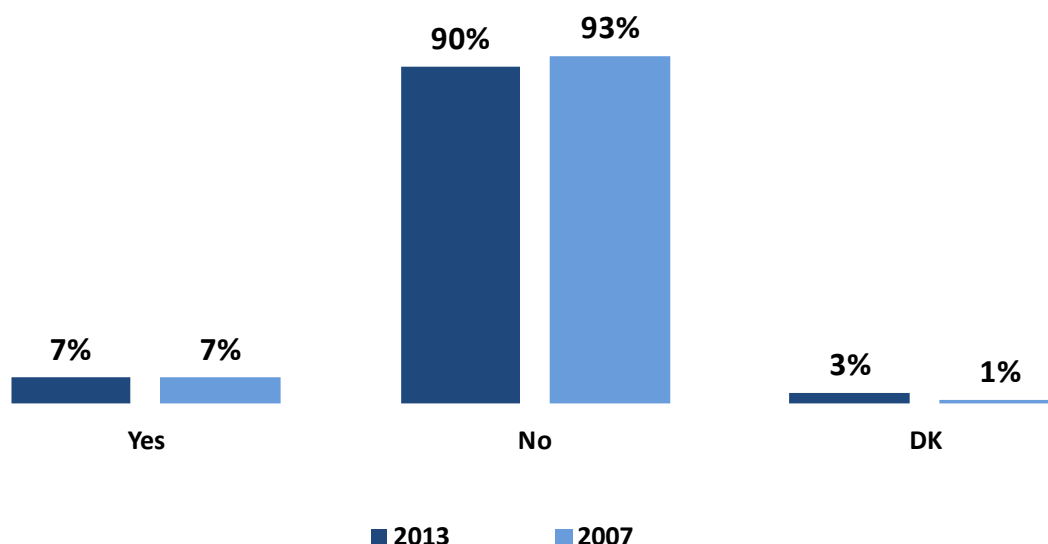
Q.22 Would you say the level of radon was...?

SUBSAMPLE: Those who had their home radon tested (2013 N=72; 2007 N=52) NOTE: SMALL BASES

NOTE: In 2007 this was asked of respondents who could not recall the level of radon in Bq/m³

If remediation action was recommended. All who reported having a radon test conducted were asked if any action was recommended as a result. No action was recommended in almost all (90%) cases; action was suggested for seven percent and three percent cannot recall. This is basically identical to 2007.

If any action was recommended as a result of radon test



Q.23 Was any action recommended as a result of the radon test?

SUBSAMPLE: Those who had their home radon tested (N=72) NOTE: SMALL BASE

Because so few people had remedial action recommended as a result of radon testing (n=8), results cannot be reported for the questions in this survey that dealt with remediation.

Hypothetical experience with radon

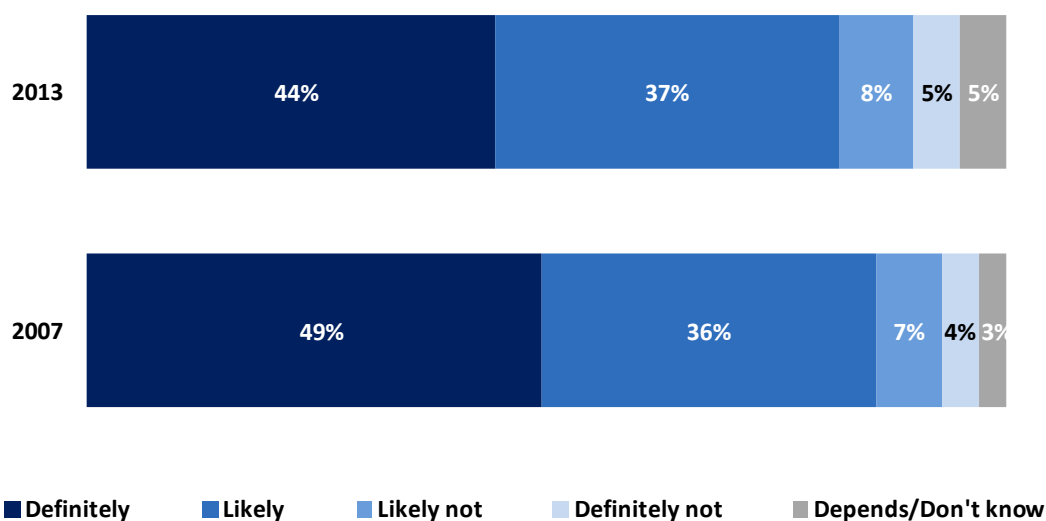
Survey respondents who did not previously have the radon level in their home tested were asked a series of hypothetical questions about their attitudes and expectations regarding radon testing and remediation. Specifically, they were asked about their willingness to test if they were to become concerned about the radon level in their home, and about their willingness to undertake remediation if radon levels were found to be high. Those indicating a lack of willingness to test or remediate were asked why they would not be likely to do so.

Willingness to test for radon

In a hypothetical situation, most Canadians say they would be likely to have their home tested for radon. Not being worried about radon - thinking it is not enough of a risk - remains the single most common reason given by those not willing to test.

Willingness to test. If they had reason to become concerned, how willing would Canadian homeowners be to have their home's radon level tested? Eight in ten (81%) would be likely to get it tested, over four in ten definitely (44%), representing a marginal decrease in certainty from 2007 (49%). Those residing in radon-prone areas remain somewhat more likely (51%) than those living elsewhere (44%) to say they would definitely have their home tested.

Willingness to have radon tested



Q.32 If you became concerned about radon in your home, would you definitely, likely, likely not or definitely not have the radon level tested? IF ASKED HOW THE HOME COULD BE TESTED FOR RADON: You could either buy a kit and test it yourself or hire (2013 - a certified professional /2007 – a private inspection service) to test the radon levels for you.

SUBSAMPLE: Those who have not had their home radon level tested (2013 N=1,595; 2007 N=1,747)

Likelihood of testing for radon is highest in the North (63% definitely would) and the Atlantic region (59% definitely) than in other regions (between 41% and 49%). There is also a higher likelihood of testing among those residing in rural (51%) than urban (43%) communities, which may also have implications for future messaging.

Those most likely to be definite about testing have a university degree (48% vs. 35% of those who have not graduated high school). As well, in 2013, those with household incomes of \$40,000 or more are more likely to be likely to test than those with the lowest incomes. Although both genders are about equally likely to say they would *definitely* test for radon, men are marginally more likely (16%) than women (11%) to say they would *not* test for radon. While those aged 60 and over are less likely to be willing to test than are their younger cohorts, this is mainly because they are the most likely to be unsure.

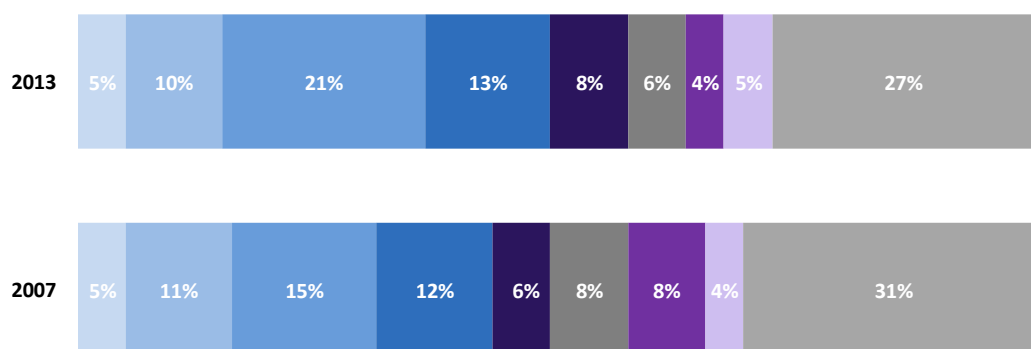
As in 2007, being definitely willing to test for radon is linked to having previous awareness of radon and to higher levels of self-assessed radon knowledge. There is no difference by home tenure or incidence of smoking in the home.

It should be noted that these results likely overstate the likelihood of radon testing, partly because it is hypothetical (saying that one would have testing done costs nothing and requires no effort) and partly because it may be considered socially desirable to indicate a willingness to test. As well, heightened awareness of radon overall may be a contributing factor.

Price willing to pay for radon test. Those indicating they would be likely to have their home tested if concerned about radon were asked how much money they would be willing to spend for the test. Around one-third (36%) are willing to spend less than \$100 to have their home tested, and 18 percent would pay from between \$100 and \$500. Four percent say they would spend \$500 or more and an additional four percent say they would spend “whatever it takes.” Six percent say they would not be willing to spend any money on a radon test, and a small number also indicate they would not pay much or only a minimal amount (1%). A few say either that it would depend on the level of threat (2%) or that they would require more information (2%). Around one-quarter (27%) cannot say what they would be willing to pay. These results are generally similar to 2007, with a modest increase in the proportion that are willing to pay between \$50 and \$99, which is the range of a number of home testing kits.

Subgroup differences are similar to 2007. There are no notable differences in the responses of those in radon-prone areas and others. As well, responses are fairly consistent across demographic subgroups, except that Atlantic Canadians are the most likely to be willing to spend between \$50 and \$99 (31%), and Quebecers are the most likely to say they do not know (34%). As in 2007, those with higher levels of household incomes are willing to spend more on radon testing than those with the lowest incomes. Those most likely not to know what they would be willing to spend on radon testing are 60 years of age or older, and those with household incomes under \$40,000.

Price willing to pay for radon test



■ <\$25
 ■ \$25-\$49
 ■ \$50-\$99
 ■ \$100-\$249
 ■ \$250+
 ■ Not willing to spend any
 ■ Whatever it takes
 ■ Other
 ■ Don't know

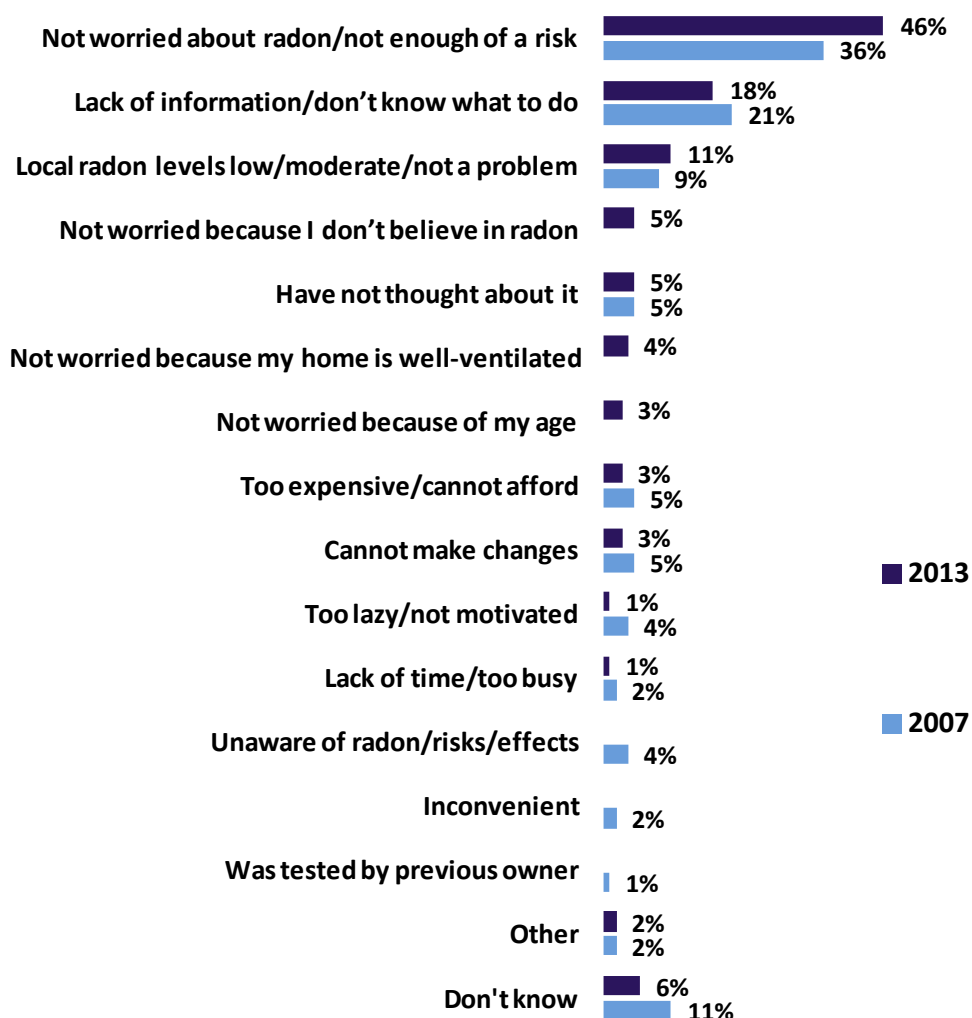
Q.34 How much money would you be willing to spend to have your home tested for radon?

SUBSAMPLE: Those who have not had their home radon level tested and who would definitely/likely have it tested (2013 N=1,326; 2007 N=1,538)

Reasons for not testing for radon. Those who indicated they would likely not or definitely not have their home tested for radon (N=216) were asked why this is the case. The primary reason given is that they are not worried about radon or that they do not consider radon to be enough of a risk (46%), or because they do not know what to do/lack of information (18%). Other reasons are cited by one in ten or fewer each, and include local radon levels being low or moderate, not thinking about it, being too expensive or not being able to make changes. Reasons given by those living in a radon-prone area are not notably different than those of residents of other areas.

In 2013, five percent say they do not *believe* in radon (all located in urban communities and all but one in non-radon-prone areas); four percent mention that their home is well-ventilated; and three percent cite their age (mainly aged 60 and over). While these proportions are low, they may be indicative of emerging issues in radon communications. Due to the small base of respondents, further detailed analysis by subgroup is not advisable.

Why unlikely to test for radon



Q.33 Why would you not be likely to have the radon levels in your home tested?

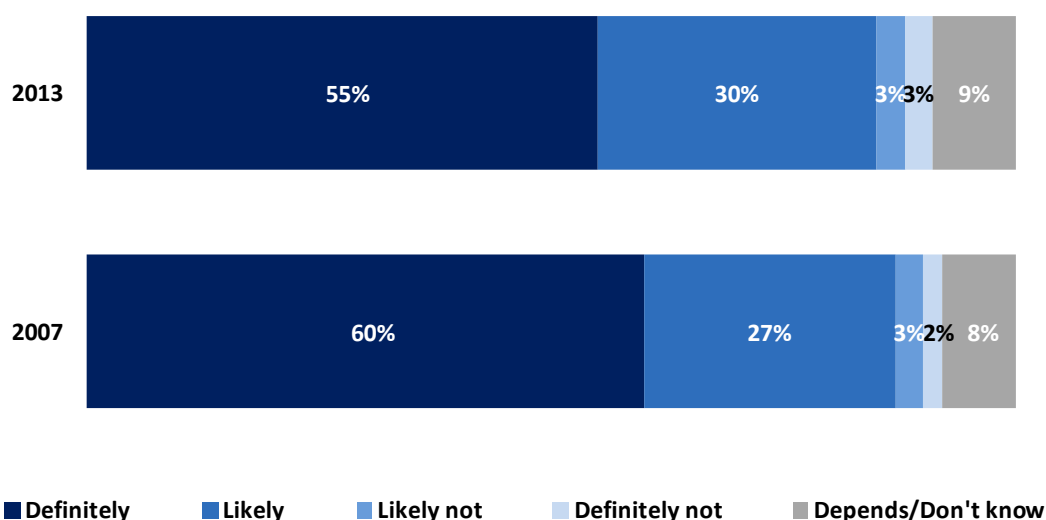
SUBSAMPLE: Those who have not had their home radon level tested and who would likely or definitely not get their radon levels tested (2013 N=216; 2007 N=209)

Willingness to remediate radon

Close to nine in ten Canadians say they would likely or definitely act to reduce radon levels in their home if these were found to be high. Lack of information and lack of concern continue to be identified as primary barriers to remediation.

Willingness to remediate. Homeowners were asked about another hypothetical situation: If a radon test was done and the radon level in their home was found to be high, how likely would they be to take action to have the radon level reduced? Close to nine in ten say they would definitely (55%) or likely (30%) do so, a similar result to 2007 – and, as in 2007, it is a higher proportion than those who indicated they would likely have their home tested.¹³

Willingness to have radon remediated



Q.35 If a radon test was done and the radon level in your home was found to be high, would you definitely, likely, likely not or definitely not take action to have the radon level reduced?

SUBSAMPLE: Those who have not had their home radon level tested (2013 N=1,595; 2007 N=1,747)

In 2013, those living in radon-prone areas are no more likely (56%) than others (55%) to say they would definitely take action to reduce their home's radon level. Being definite about taking action to reduce radon is higher in the Atlantic (72%) and Northern (71%) regions and Quebec (64%) than elsewhere (47% to 59%).

¹³ It should be recalled that, in common with 2007, the majority are unable to say how radon levels could be reduced in a home, so response to this question is likely being based on a reasonable assumption that a) such remedial action would be possible, and b) would be something they could afford, and that c) such repairs would be important to maintaining family health. It should be noted that these results also likely overstate the intention to remediate radon as it is a socially desirable response.

In 2013, there is no notable difference by age, but parents of children under 16 are more likely to be definite about remediation than those with no child of that age in the home. Those most likely to definitely take action to reduce radon have household incomes of \$75,000 and over, a college diploma or university level education, or have been in their current home for less than five years (65% vs. 53% with five or more years' tenure).

In 2013, people previously indicating a concern with their home's air quality are no more likely to say they would definitely remediate than those who have never been concerned. Being definite about radon remediation is linked to prior awareness of radon, and to knowing a lot or something about it.

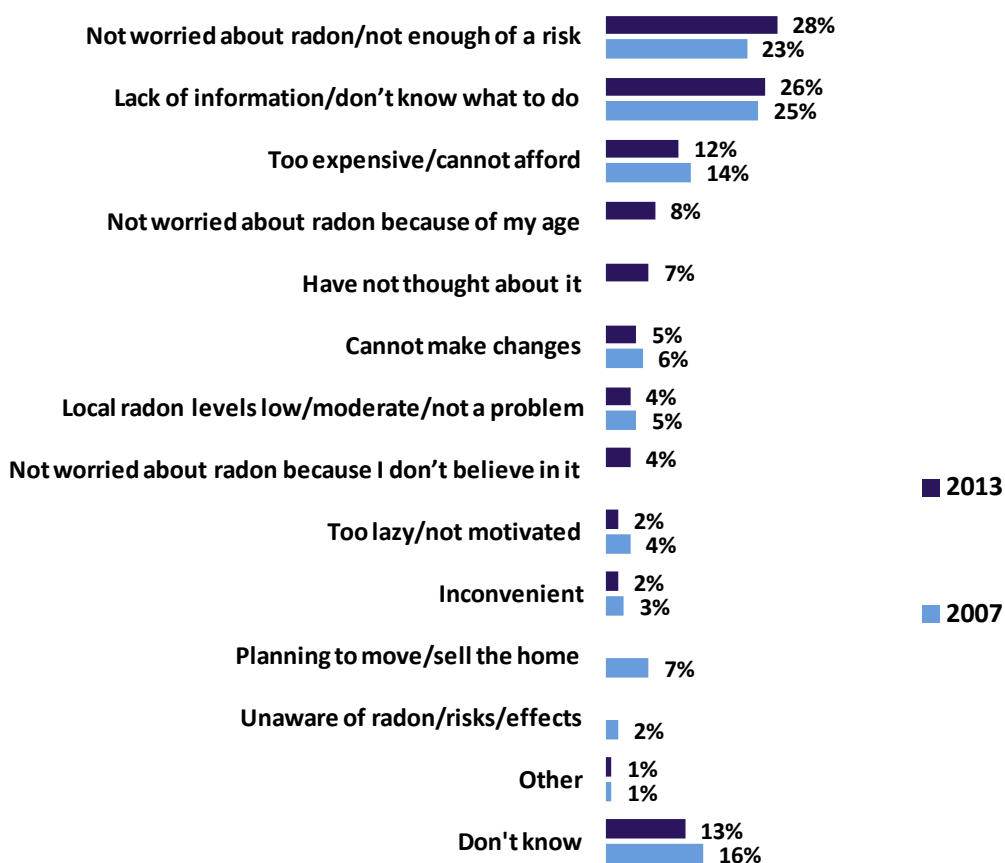
Although the base is very small, there is some indication that those who have been diagnosed with lung cancer may be more likely to remediate than others, but smoking in the home is not a factor in willingness to take action to reduce radon.

Reasons for not remediating radon. Those who indicate they would likely not or definitely not take action to reduce the radon level in their home (N=123) were asked why this is the case. The primary reasons given are that they are not worried about radon or do not consider radon to be enough of a risk (28%), or they do not know what to do/lack of information (26%). One in ten say it is because such actions would be too expensive (12%). These results mirror those of 2007.

Other reasons are cited by fewer than one in ten each, and include not having thought about it, not being able to make changes, not being worried about radon because of their age or because they do not believe in it, and because local radon levels are low or moderate. Thirteen percent do not give a reason for not being willing to remediate.

The base of respondents is small and further analysis by subgroup is not recommended. However, it does not appear that those residing in radon-prone areas differ significantly from others in their responses.

Why unwilling to remediate radon



Q.36 Why would you not be likely to act to reduce radon levels?

SUBSAMPLE: Those who have not had their home radon level tested and who would likely or definitely not get high radon reduced (2013 N=123; 2007 N=117)

Hypothetical radon remediation impacts

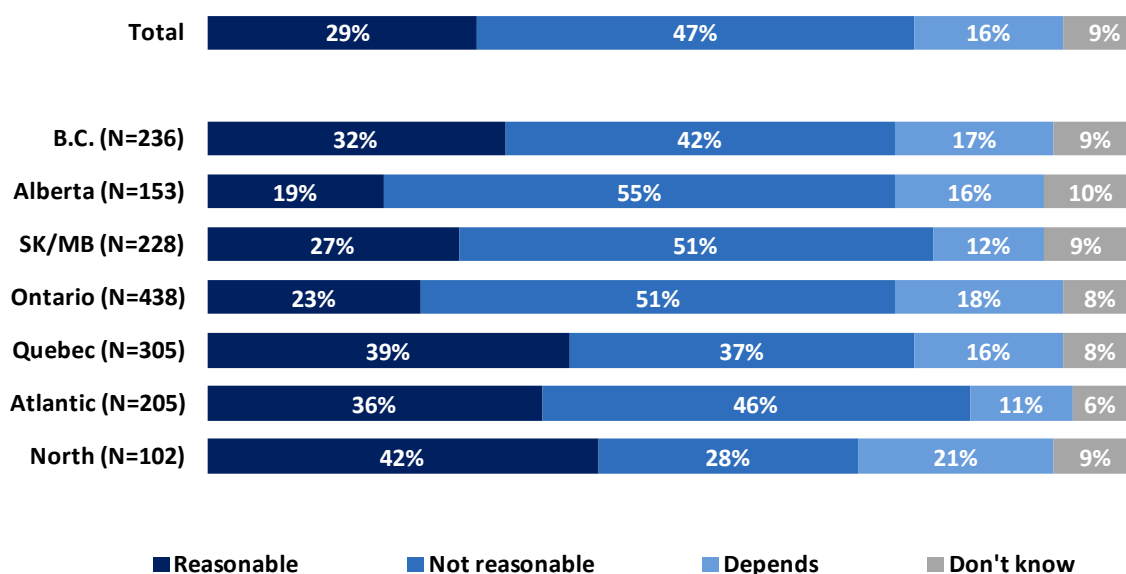
Given the number of interviews being conducted, it was expected that the survey would not be able to identify enough people who have taken action to reduce radon levels in their home. Therefore, the questionnaire included hypothetical questions about radon remediation costs and effects. Because very few homeowners in 2007 were able to cite a price they might be willing to spend for remediation, a different approach was taken in 2013: the price range of a typical radon remediation was presented and homeowners asked to indicate if it was reasonable or not. Those who did not think it was reasonable were asked what they would be willing to spend. The importance of using a radon reduction specialist was examined, and the role of radon in a hypothetical home purchase decision was also explored.

Willingness to pay to remediate radon level

Nearly half of homeowners do not think that \$2,000 to \$3,000 is a reasonable price to pay to reduce radon levels in a home; four in ten of those who think that price is unreasonable would pay up to \$1,000.

Is \$2,000-\$3,000 a reasonable price to reduce radon levels? All homeowners were told that it typically costs \$2,000 to \$3,000 to reduce radon levels in a home. They were then asked if they think this is a reasonable amount to pay, or not. Three in ten (29%) think it is reasonable, while close to half (47%) think it is unreasonable. This is not too surprising given that many do not see radon as being a particular threat. One-quarter (25%) either do not provide an opinion or say it would depend on various factors. The belief that \$2,000 to \$3,000 is a reasonable price to pay to reduce radon in a home is highest in the North, Quebec and the Atlantic region, and lowest in Alberta. Results are similar by radon-proneness.

If \$2,000-\$3,000 is a reasonable price to reduce radon levels

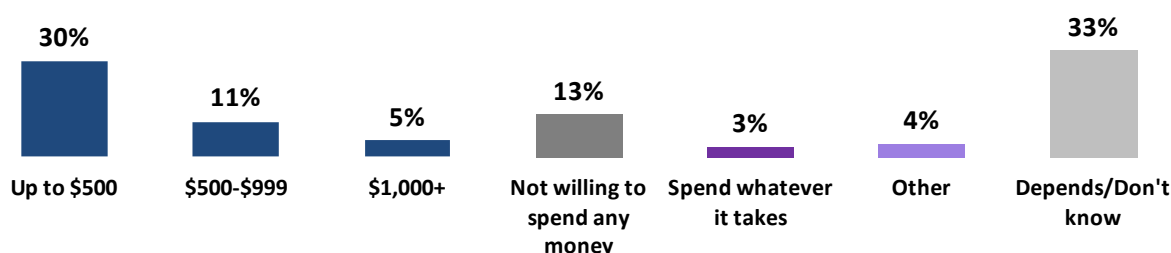


Q.37 It typically costs two to three thousand dollars to reduce radon levels in a home. Do you think that this is a reasonable amount to pay, or not?

The stated price range is considered to be reasonable by somewhat higher proportions of men (32%) than women (26%), and younger homeowners (40% under age 30 and 35% aged 30 to 44; older homeowners are not more likely to think it unreasonable, but are more likely not to know or to say it depends). Opinion also varies by socio-economic factors, with those having household incomes of \$40,000 or more, and those with at least a high school diploma being more likely than those in the lowest income or education brackets to say it is reasonable. As well, people who were aware of radon previously are more likely to think it is a reasonable price to pay than those who were not aware of radon.

Price willing to pay to remediate radon level. Those who did not think \$2,000 to \$3,000 was a reasonable price to pay to reduce home radon levels were asked how much money they *would* be willing to spend for this.¹⁴ Three in ten (30%) would spend up to \$500, and an additional one in ten (11%) would pay from \$500 to \$1,000. Just over one in ten (13%) say they would not be willing to spend anything to reduce radon. One-third (33%) do not know or cannot say how much they would spend.

Price willing to pay for radon remediation



Q.38 How much money would you be willing to spend to reduce the radon level in your home?

SUBSAMPLE: Those who did not say \$2,000 to \$3,000 is reasonable (N=900)

There are no notable differences in the responses of those in radon-prone areas and others. Regionally, residents of the Atlantic provinces and the North are somewhat more likely than others to be willing to pay more than \$500; Albertans are the most likely to be willing to spend up to \$500, and British Columbia residents are the most likely to say they would not be willing to spend anything (23%). As with the previous question, willingness to pay anything is somewhat lower among those in the lowest socio-economic strata.

¹⁴ A similar question was asked in 2007, but in that case it was asked of anyone who said they were likely to take action if their home radon was found to be high; because it was asked of a subgroup in 2013, the results are not comparable.

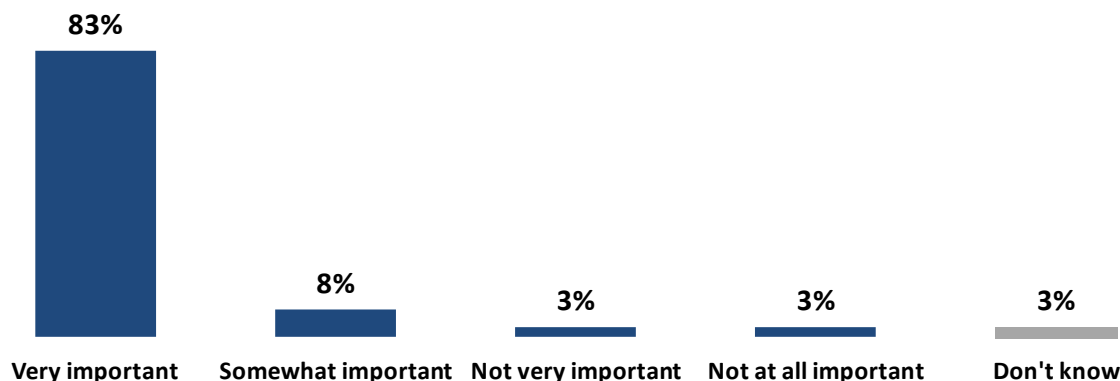
Importance of hiring a certified radon specialist

Just over eight in ten homeowners say it would be very important to hire a certified radon specialist to remove radon, in a hypothetical situation.

A new question in 2013 examined the importance of hiring a certified radon specialist to remove radon. It was asked of all homeowners, even those who did not indicate a willingness to remediate radon. Just over eight in ten (83%) feel it would be very important that the person they hire to reduce the radon in their home is a certified radon specialist.

It is important to note that the process used by professionals to remove radon was not explained (very few respondents expressed top-of-mind knowledge about radon removal methods earlier in the survey) and that alternatives to using a certified professional were not offered, so the results should be interpreted with some caution. Also, with any hypothetical situation, the results in actual practice could be much different.

Importance of hiring a certified radon specialist



Q.39 How important would it be to you that the person you hire to reduce the radon in your home is a certified radon specialist?

Saying that it would be very important to use a certified specialist is the majority response across the country and across population subgroups. It is higher among women (86%) than men (79%), and also higher among those with household incomes of \$75,000 or more, and those with at least a high school diploma than those with less education.

It is interesting to note that close to half of those who say they would not be very or at all likely to remediate if their home radon was found to be high (N=91) say it would be very important to use a certified specialist, along with 78 percent of those who say that \$2,000 to \$3,000 is *not* a reasonable price to pay. This may be an indication of how much people were responding in the context of a *hypothetical* rather than personal situation. It also may be further confirmation that very few people know what is actually involved in radon remediation.

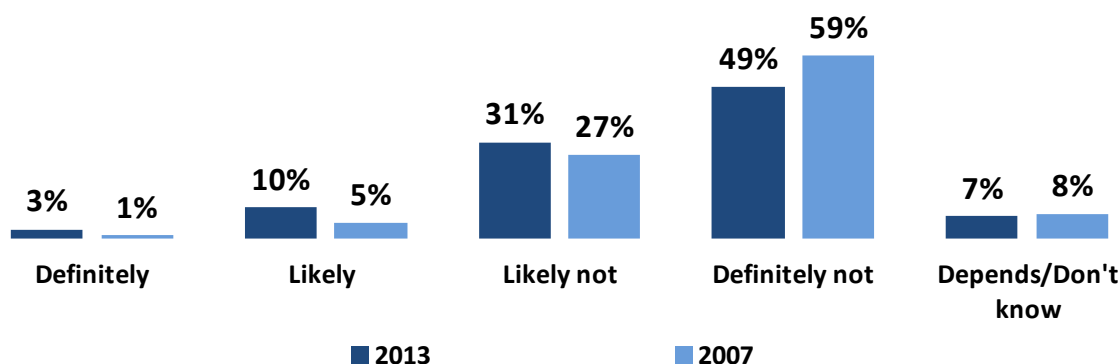
Willingness to buy high radon or remediated radon home

Half of homeowners indicate they would definitely *not* buy a home they liked that was known to have high levels of radon, but a slim majority would be at least likely to buy a home where the owner had paid for radon remediation.

Willingness to buy a home with high radon levels. Canadian homeowners were asked how likely they would be to buy a home they really liked if they thought that radon might be an issue – that is, if radon levels were known to be high in that home. It should be recognized that responses to this question are framed in the context of the survey’s focus on radon as a health hazard of interest to Health Canada.

Half (49%) say they would definitely not buy such a home, down 10 percentage points from 2007, and three in ten (31%) say they would likely not buy it. Few say they would likely (10%) or definitely (3%) buy a home they liked despite high radon levels; four percent say it would depend on other factors and three percent are unable to say. Those living in radon-prone areas give similar responses to those living elsewhere.

Willingness to purchase a high radon home



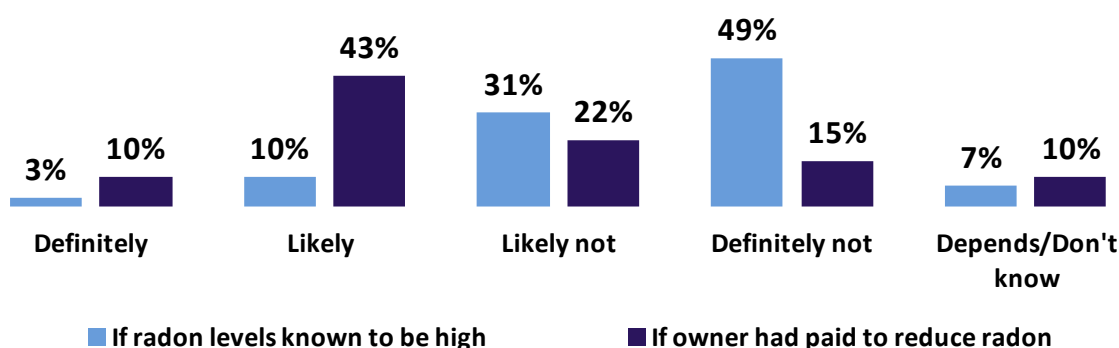
Q.40 How likely would you be to buy a home that you really liked if you thought that radon might be an issue, that is, if radon levels were known to be high in that home? Would you definitely, likely, likely not or definitely not buy such a home?

Being unwilling to buy a home because it has high radon levels is the majority response across the country and across population subgroups, although residents of the territories are somewhat more apt to say they would likely or definitely buy such a home (22%) than others (11% to 17%), which may reflect housing availability issues. Being unwilling to buy a home with elevated radon levels is higher among women than men (85% vs. 75%), and residents aged 45 and over (84% vs. 72%)

Being *willing* to buy such a home is actually higher among those who claim to know a lot or something about radon (23%) than those with less knowledge, perhaps because they are more aware of what is involved in remediation. However, those who say they would definitely or likely remediate if the radon levels were found to be high in their own home are more likely than others to say they would *not* buy a home if it had high radon levels.

Willingness to buy a home with remediated radon. Canadian homeowners were then asked how likely they would be to buy a home they really liked if they learned that the radon levels had been high, but that the owner had paid to have them reduced. In this case, a slim majority (53%) would be likely to buy such a home (a four-fold increase over willingness to buy an unremediated home), while just under four in ten (37%) would not be likely to buy it, and around one in ten (7%) say it depends or cannot say one way or the other.

Difference in willingness to purchase a remediated radon home



Q.40 How likely would you be to buy a home that you really liked if you thought that radon might be an issue, that is, if radon levels were known to be high in that home? Would you definitely, likely, likely not or definitely not buy such a home?

Q.41 How likely would you be to buy a home you really liked if you learned that the radon levels had been high, but the owner had paid to have the radon reduced? Would you definitely, likely, likely not or definitely not buy such a home?

Being willing to purchase a remediated home is similar across the country but is somewhat higher in the Atlantic region (63%) than elsewhere. There is no notable difference in radon-prone areas.

Willingness to buy a remediated home is highest among younger Canadians (69% of those under age 45) and decreases as age increases; those aged 60 and over are about as likely to say they would not (45%) as would (40%) buy such a home. Willingness to buy a home with reduced radon also increases as level of education and household income increases; it is also higher among those who have owned their current home for less than 10 years, which may be linked to age.

Those who would definitely or likely remediate their own home are more likely than others to say they would buy a home with reduced radon, as are those who deem the \$2,000-\$3,000 cost of remediation reasonable.

Radon information provision

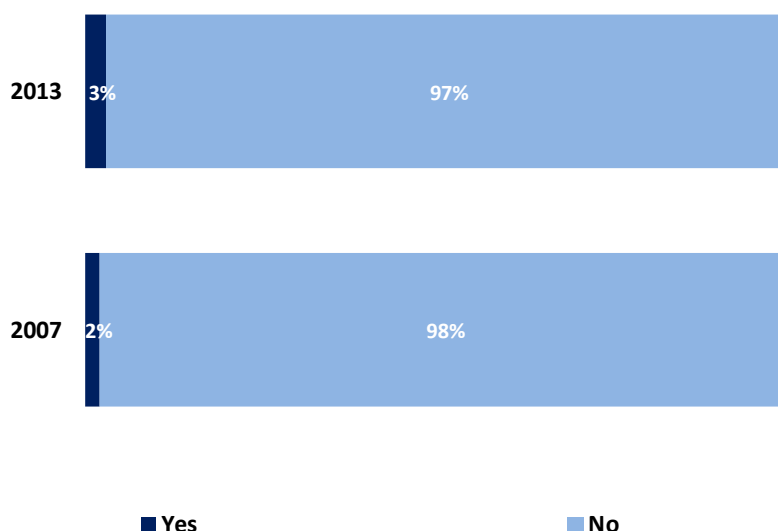
The following section of the report looks at the public's awareness of the various sources of radon information available. The survey also asked about where homeowners would be likely to seek information on radon if they desired it.

Awareness of radon programs or activities

Very few Canadians are aware of any radon programs or activities. Of those aware of such a program, the sponsor is most thought to have been the federal government. Health Canada is the top mentioned single organization that should be responsible for radon information.

When asked if they are aware of any programs or activities to help residents learn about or deal with radon in their homes, only three percent of Canadian homeowners answer yes, while the vast majority (97%) are not aware of these. In 2013, awareness is not higher in radon-prone areas than elsewhere.

Aware of radon programs



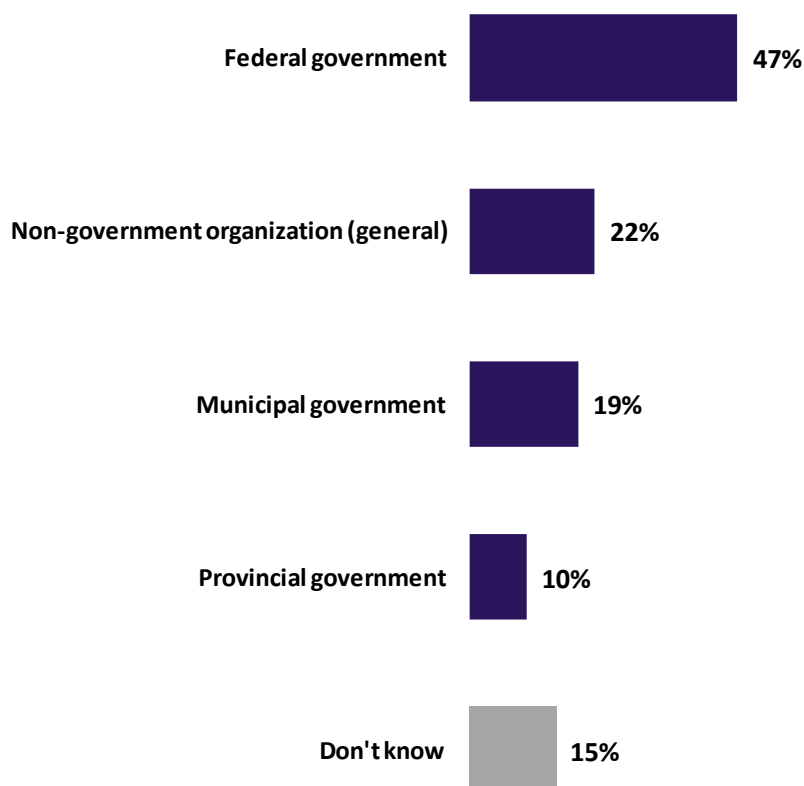
*Q.42 Are you aware of any programs or activities to help residents learn about or deal with radon in their homes?
(2007: Are you aware of any programs to help residents learn about or deal with radon in their homes?)*

Those aware are a small minority across the country and all subgroups. Awareness is modestly higher in the North (9%), the Atlantic region (9%) and Quebec (5%) than elsewhere (1%). As in 2007, awareness is higher among those who report a lot or some knowledge of radon (22%) than those with less knowledge (2%), and is higher among those who have had their home tested for radon (14%) than those who have not (2%). Awareness is also slightly higher among Canadians who have attended university or college, and among men (4% vs. 1% of women).

Who sponsors radon programs? Those few Canadians (n=56) who said they are aware of programs or activities to help residents learn about or deal with radon were asked who sponsors or funds these programs.¹⁵ The most mentioned source is the federal government, by close to half. Around two in ten each mention NGOs (22%) or municipal governments (19%). One in ten (10%) believe it was the provincial government, and the rest are unable to say.

Because the base of those aware of programs or activities is small, further subgroup analysis is not advisable.

Sponsor of radon programs/activities



Q.43 Can you tell me who sponsors or funds these programs or activities?

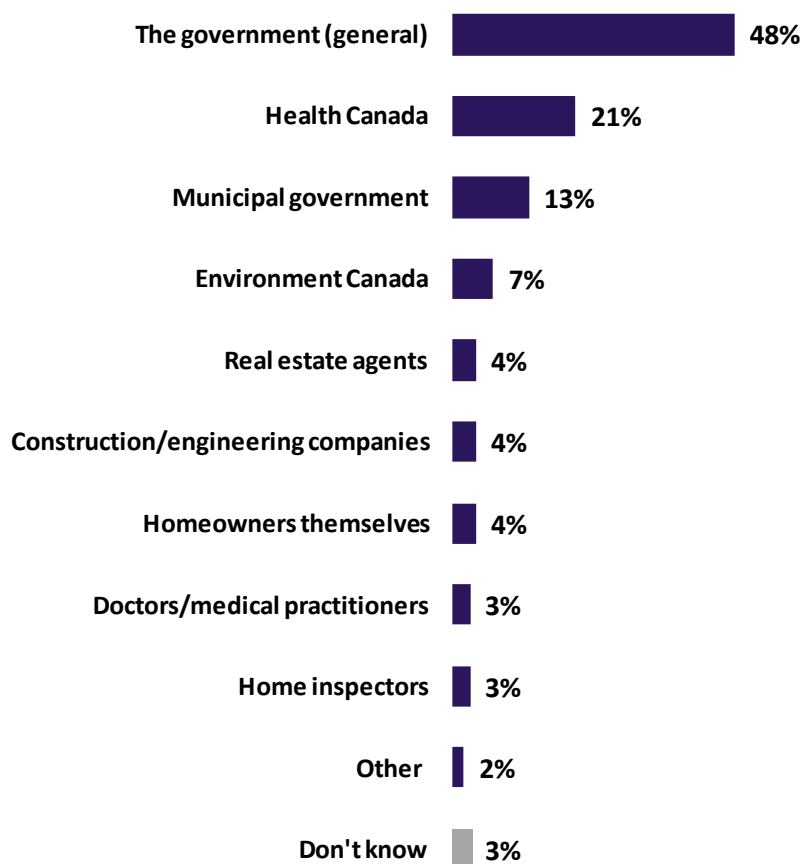
SUBSAMPLE: Those who have heard of radon programs/activities (N=56) NOTE: SMALL BASE

¹⁵ A similar question was asked in 2007, but the (unread) response categories were changed in 2013, making direct comparison challenging. However, in 2007 Health Canada and the federal government were the most cited sources; one-third were unable to recall the sponsor.

Who should be responsible for radon information? Those few Canadians (n=56) who said they are aware of programs or activities to help residents learn about or deal with radon were asked who should be responsible for providing information to homeowners about how to deal with radon. Half think this is a government responsibility, but additional proportions are more specific about which government level or department should take the lead. Two in ten (21%) think it should be Health Canada, just over one in ten (13%) say it is a municipal government responsibility, and just under one in ten (7%) think it is the purview of Environment Canada. Fewer see it as being the responsibility of others, such as real estate agents, medical practitioners or homeowners themselves.

Because the base of those aware of programs or activities is small, further subgroup analysis is not advisable.

Who should be responsible for providing information to homeowners about how to deal with radon



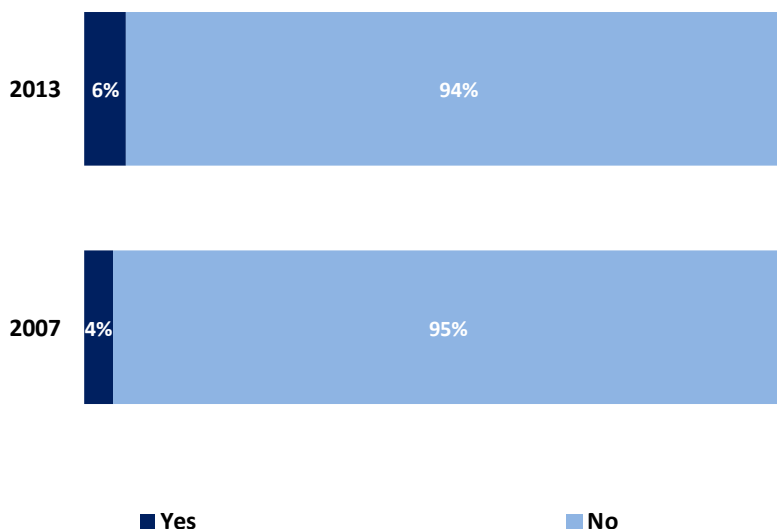
Q.44 Who should be responsible for providing information to homeowners about how to deal with radon?
SUBSAMPLE: Those who have heard of radon programs/activities (N=56) NOTE: SMALL BASE

Radon information sources

Fewer than one in ten homeowners have taken steps to learn about radon.

Steps taken to learn about radon. When asked if they have ever taken steps to learn about radon, only six percent of Canadian homeowners say that they have done so. This proportion has not changed significantly since 2007. In 2013, having taken steps to learn about radon does not vary notably by region and by radon-proneness, although residents of the territories (14%) and the Atlantic region (11%) are marginally more likely than others to have done so.

Have taken steps to learn about radon



Q.45 Have you ever taken steps to learn about radon?

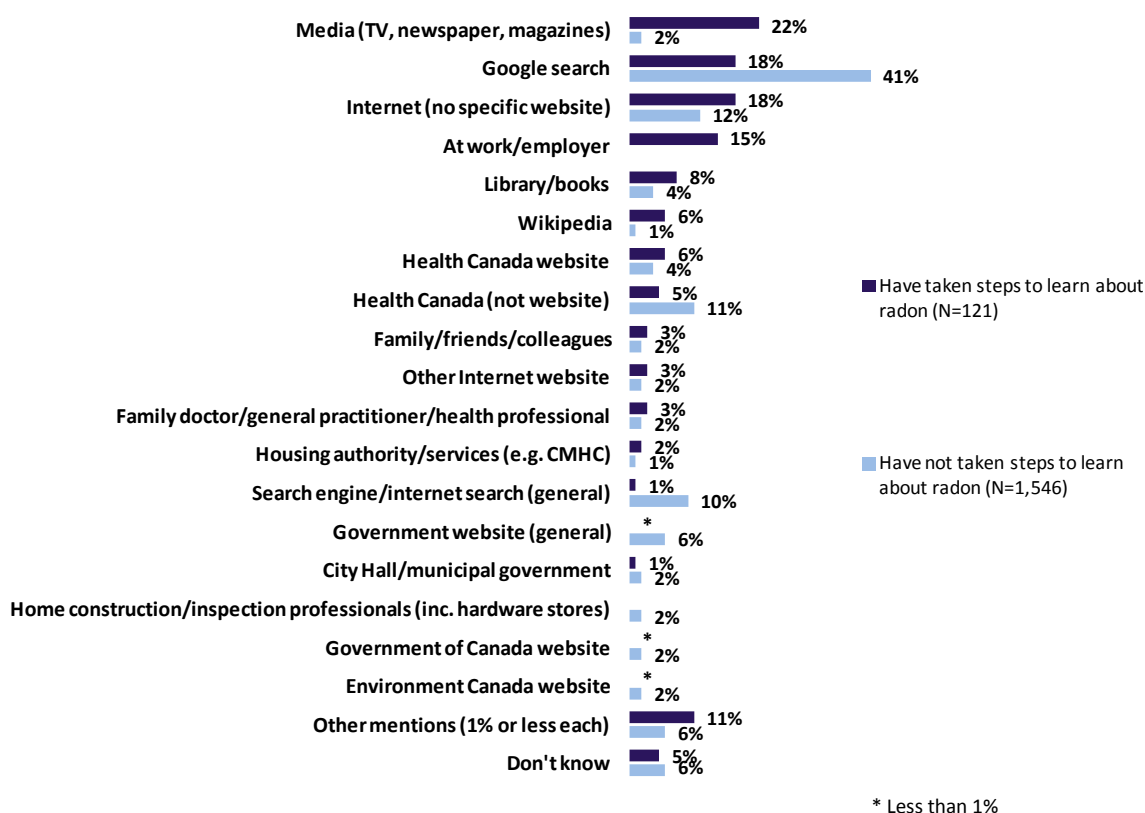
Having taken steps to learn about radon is marginally higher among men (8% vs. 5% of women), those with university degrees (9% vs. 5% of those without), those who knew about radon previously (9% vs. 1% of others), and those who say they know a lot or something about radon (38%, compared to 12% who know a little and 2% who know almost nothing). It is also higher among those who have tested for radon (37% vs. 5% who have not) and those who think that \$2,000 to \$3,000 is a reasonable price for remediation (11% vs. 4% who think it is unreasonable).

Sources of radon information. Health Canada wants to monitor what information sources Canadian homeowners have actually used to seek out more information about radon, as well as potential sources that might be considered by those who have not done so. Those homeowners who said they have taken steps to learn more about radon were asked to name the source(s) they consulted. Those who have never looked for information on radon were asked where they would be likely to look if they wanted to learn more. In both cases, multiple mentions were permitted. Results largely echo 2007.

The Internet (including various search engines and websites) is the main source mentioned, by both those who have already looked for information (net of 48%) and those who have not yet done so (net of 74%). A Google search is the main starting place for those in search of radon information online. Two in ten of those who have sought out information in the past say they used the media (22%), whereas only a handful of those who have not yet sought out information mention this as a top-of-mind source.

Health Canada was the source for about one in ten who have sought information, either the website (6%) or in general (5%); a fairly similar proportion who have not yet sought information say Health Canada would be their source.

Sources of information about radon



Q.46 Where did you look for information about radon?

SUBSAMPLE: Those who have taken steps to learn about radon (N=121)

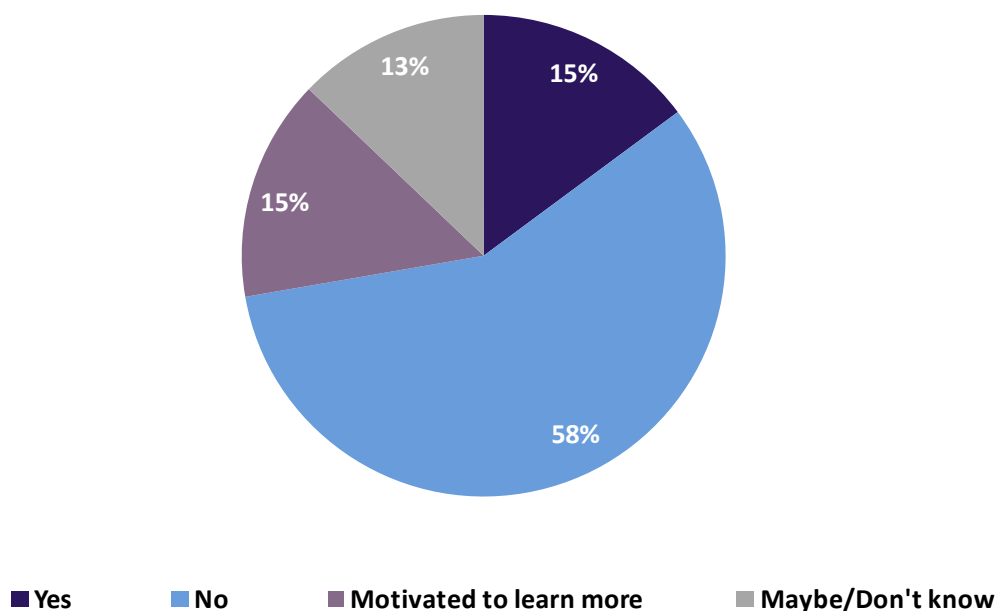
Q.47 If you wanted to get information about radon, where would you be likely to look?

SUBSAMPLE: Those who have not taken steps to learn about radon (N=1,546)

There is no notable difference by community radon-proneness. As with most surveys asking for information sources, mentions of the Internet are higher among younger Canadians and those in higher socio-economic strata. However, the Internet divide is not as wide as it once was: over half of those aged 60 and over who have not yet looked for radon information mention turning to the Internet as a potential source, as do four in ten with less than a high school diploma and over half in households with incomes of under \$40,000.

If now motivated to get home radon level tested. A new question in 2013 asked those who have not had their home tested for radon if what they had learned during the survey had motivated them to get their home radon level tested. Fifteen percent say yes and 58 percent say no. About one-quarter say either maybe or say it has motivated them to learn more about the topic. There is no difference in response by community radon-proneness.

If now motivated to get home radon level tested



Q.48 Has what you have learned about radon today motivated you to get your home radon levels tested?

SUBSAMPLE: Those who have not had their home radon tested (N=1,595)

There are few subgroup differences to note. Those under age 45 are more likely than older homeowners to say they have been encouraged to get their home radon tested, (37% of those under age 30 and 21% of those aged 30 to 44, compared to 12% aged 45 and over). Saying that the information they learned during the survey has motivated them to test for radon is higher among those who definitely would remediate if radon levels were found to be high, those who have been concerned about the air quality in their home, and those who think that \$2,000 to \$3,000 is a reasonable cost to reduce radon.

Conclusions and recommendations

The findings of this survey indicate that there have been some successes in communicating radon information to Canadian homeowners: more people have heard of radon now than in 2007, there is a growing awareness that it can enter a home and that it poses a health hazard, and there is also increased awareness that it is a public/government concern and that radon detectors are available. However, radon has not emerged as a major top-of-mind health concern, and it is still the case that few know much about it or about what is involved in reducing radon levels in a home (remediation). This may be because many people are still turning to the media to get their information about radon, and it is not a hot-button issue in many locations. Important information about radon's health hazards and about testing and remediation has thus far not cut through the clutter of messaging directed at homeowners.

It is still the case that very few Canadians have had any first-hand experience with radon: Only a very small proportion have seen or heard something about radon in their community or have had the level of radon in their home tested, even in radon-prone areas. However, the willingness and potential to take action is there, provided the need for it can be made more apparent and homeowners have access to information to let them know what to do.

The necessity of taking action against radon for health reasons has not yet been accepted. Relatively few homeowners have indoor air quality concerns and, among those who have, the focus continues to be on minor or visible problems, such as dust and mould. The longer-term nature of radon's connection to lung cancer may be a factor in some homeowners failing to recognize their risk. This survey provides continued evidence that some homeowners may be confusing radon with other issues, such as chloro-fluorocarbons, formaldehyde or other toxins. A small proportion of homeowners expresses doubt that radon is even real, or indicate that the science about its potential harm is not convincing.

Messaging is also not reaching higher proportions of at-risk audiences than those not at risk. Those residing in radon-prone areas usually do not exhibit more knowledge or awareness of specifics about radon than others, nor do those in other specific risk groups (i.e. seniors, smokers and those with chronic medical conditions). Indeed, older homeowners may consider their age a reason not to bother with radon testing or remediation. A slim majority of homeowners think that \$2,000 to \$3,000 is not a reasonable price to have to pay to reduce radon, not too surprising if the health risk is not well understood or thought to be remote (smokers are not more concerned about radon than non-smokers).

While the media remains the most likely source of radon information to be actually used, Health Canada is still well positioned to be the national authority on radon, as it is the single most-mentioned organization as a potential source by those who have not yet looked for radon information.

Based on the findings and conclusions of this research, the following recommendations are provided to Health Canada for consideration:

1. There is a continuing need for educational efforts around radon to the general population of homeowners in Canada, both to women (who often have primary responsibility for their family's health and well-being) and men (who often have primary responsibility for home maintenance).

The information should emphasize the ease of testing and what is involved in remediation, including the need to ensure that a certified mitigator is used.

2. There is a need to increase promotion of information about community radon levels, testing and remediation in radon-prone areas. Emphasis should be placed on the fact that remediation is fairly easy to arrange and comparable in price to many other home maintenance projects.
3. Most Canadians consider their health to be reasonably good and likely do not see themselves as being at risk of lung cancer; also, the majority are non-smokers. The radon health message must be strengthened to encourage testing, and to capitalize on Health Canada as a top-of-mind source of health-related information. In particular, as women often assume primary responsibility for their family's health, specific communications directed at women could have significant impact in raising overall awareness of radon specifically as a health issue, as women will likely be highly receptive to these messages.
4. Additional research should be conducted over time, to assess the further effectiveness of education and communications initiatives through the NRP's lifecycle.

Survey methodology

The results of the survey are based on telephone interviews conducted with a representative sample of 1,667 Canadian homeowners between January 29 and February 16, 2013. The margin of error for a sample of 1,667 is +/- 2.4 percentage points, in 19 out of 20 samples (the margin of error is greater for results pertaining to regional or socio-demographic subgroups of this population). A more detailed description of the methodology used to conduct this survey is presented at the back of the report, along with a copy of the questionnaire (see Appendix).

Rationale

A telephone survey was considered to be the best methodology to obtain information from the target audience of Canadians 18 years of age and over living in private households in the 10 provinces and three territories. The telephone methodology offered a chance to identify those who are household decision-makers, in homes that are owned rather than rented, as these are the primary audience for radon messaging. Finally, this methodology is consistent with that used for the baseline Radon Awareness survey conducted in 2007.

Sample design

The sampling method was designed to complete 1,650 interviews with the target audience of Canadians 18 years of age and over living in private households in the 10 provinces and three territories.

For the purposes of this survey, the qualifying population was defined as Canadian residents 18 years and older living in the 10 provinces and three territories, who are homeowners of single family dwellings with a ground floor.¹⁶ From within each household contacted, respondents 18 years of age and older were screened for home decision-making status, and respondents were also screened to ensure they lived in an owned (not rented) home with ground floor living space. The following provides the incidence based on the eligibility requirements of the survey.

- 89% of those asked indicated they are involved in decisions about matters relating to their home, such as moving or doing renovations.
- 86% of such decision-makers said their home is owned rather than rented.
- 92% of those living in owned homes said their home has living space that is on the ground floor.

The base sample of 1,465 was stratified across five designated regions to ensure meaningful data and analysis at the regional level. The additional 202 interviews consisted of oversamples of respondents living in identified radon-prone areas. Environics employed industry-standard random-digit-dialling (RDD) methods as a basis for drawing a national sampling frame for this survey.

It should be noted that in 2007, a larger radon-prone oversample was employed (50% of the size of the national sample), in different locations in some cases. In the final analysis of that survey, 706 interviews

¹⁶ Qualified dwellings include single detached houses, semi-detached houses, lower-floor duplexes, townhouses, condominiums, mobile homes.

were conducted in areas designated by Health Canada as radon-prone, and 1,114 in non radon-prone communities. This caused difficulties in weighing the data, and may have resulted in some overstating of certain measures. In 2013 a less extreme sampling approach was taken. However, it is possible that some of the differences observed in 2013 may in part be attributable to the difference in the size of the oversample and in the different communities selected.

Weighting

The data are statistically weighted to ensure the sample is as representative of this population as possible, according to the most recently available Census information.

In the data analysis, the sample, including the radon-prone area oversamples, was weighted by region based on population data to reflect the actual proportions of each region, using 2011 Census information. The sample was also weighted by gender (2011 Census information) to reflect proportions found in the general population, and by age to reflect the age groups of the primary household maintainer for private households (owned) in Canada (all Statistics Canada, 2006 Census). It was not necessary to restrict the weights in 2013 as the oversample was smaller related to the national survey.

The table below outlines the unweighted and weighted sample distribution and the associated margin of sampling error.

Sample distribution

	Weighted	Unweighted	Margin of Error*
CANADA	1,667	1,667	+/- 2.4%
Atlantic	118	205	+/- 6.8%
Quebec	408	305	+/- 5.6%
Ontario	635	438	+/- 4.7 %
Manitoba/Saskatchewan	106	228	+/- 6.5%
Alberta	179	153	+/- 7.9%
British Columbia	216	236	+/- 6.4%
Territories	5	102	+/- 9.7%
Radon-prone areas	40	320	+/- 5.4%
Not radon-prone	1,627	1,347	+/- 2.7%

*Margin of sampling error at the 95% confidence level

The radon-prone areas oversampled are as follows:

Province	Oversampled areas	Number of interviews conducted	% of province's population living in oversampled areas
British Columbia	Castlegar, Nelson, Kamloops	36	2.9
Saskatchewan	Regina	55	24.4
Manitoba	Brandon, Dauphin	20	5.9
Quebec	Gaspé, Chelsea, Rimouski	25	1.1
Ontario	Smith Falls, Brockville, Chatham	46	1.3
New Brunswick	Bathurst, Edmundston, Miramichi	20	7.6
Total		202	

Questionnaire design and pretesting

The questionnaire used for this survey was based on the earlier Health Canada National Radon and Indoor Air Quality survey, with reduced emphasis on other indoor air quality issues. Once the questionnaire was finalized and approved by Health Canada, it was translated into French using Environics' professional translators. A copy of the English and French language versions of the questionnaire are attached as an appendix.

Pre-test. Prior to finalizing the survey for field, Environics conducted a full pre-test with "live" respondents. This consisted of telephone interviews in the same manner as for the full survey, but with a small sample of respondents. An English telephone pre-test was conducted with 11 qualifying Canadians on January 23, 2013. Recordings of the interviews were audited by Environics' senior research consultant and representatives from Health Canada. At that time, a small number of revisions to the questionnaire were identified and implemented. The average length of the pre-test survey was 16 minutes. Following the pre-test, a small number of refinements were made and then Environics arranged for the final questionnaire to be translated into French using professional, experienced translators. Health Canada approved the French version of the questionnaire prior to conducting any French interviews. A pre-test of the French version of the questionnaire was also conducted with 12 respondents on February 7, 2013.

Fieldwork

The interviewing was conducted by Elemental Data Collection Inc. of Ottawa, ON, between January 29 and February 16, 2013. Field supervisors were present at all times to ensure accurate interviewing and recording of responses. Ten percent of each interviewer's work was unobtrusively monitored for quality control in accordance with the standards set out by the Marketing Research and Intelligence Association (MRIA). The average length of time required to complete an interview was 15 minutes.

Up to eight callbacks were made to reach each household selected in the sample, and such calls were made at different times of the day and days of the week, to maximize the chances of catching someone at home. All surveys were conducted in respondents' official language of choice. This survey was registered with the MRIA's registration system.

Completion results

The effective response rate for the survey is 15 percent. This is calculated as the number of responding participants (completed interviews, disqualifications and over-quota participants – 3,468), divided by unresolved numbers (busy, no answer – 13,636) plus non-responding households or individuals (refusals, language barrier, missed callbacks – 6,214) plus responding participants (3,468) $[R/(U+IS+R)]$. The following table presents the final disposition of all numbers dialled.

Completion results

	Oversample N	National N	Total N
Total sample dialled	2,924	25,685	28,609
UNRESOLVED NUMBERS (U)	1,574	12,062	13,636
Busy	52	882	934
No answer	738	7,282	8,020
Answering machine/voicemail	784	3,898	4,682
RESOLVED NUMBERS (Total minus Unresolved)	1,350	13,623	14,973
OUT OF SCOPE (Invalid/non-eligible)			
Non-residential	6	40	46
Not-in-service	271	4,262	4,533
Fax/modem	15	697	712
IN SCOPE NON-RESPONDING (IS)	691	5,523	6,214
Refusals – household	16	88	104
Refusals – respondent	383	3,926	4,309
Language barrier	13	334	347
Callback missed/respondent not available	230	803	1,033
Break-offs (interview not completed)	49	372	421
IN SCOPE RESPONDING (R)	367	3,101	3,468
Disqualified*	114	1,288	1,402
Quota filled	51	348	399
Completed	202	1,465	1,667
RESPONSE RATE $[R / (U + IS + R)]$	14%	15%	15%

* Disqualifications include age (<18), renters, non-decision-makers and those without ground floor living space.

The final incidence is 48% using the formula **(completes / (quota full + completes + non-qualified))**:
 $1,667 / (399 + 1,667 + 1,402) = 48\%$

Quota full	399
Completed interview	1,667
NQ – Age	9
NQ – Decision-maker	126
NQ – Rented	1,096
NQ – Ground floor	171

Non-response bias analysis

The table below presents a profile of the final sample, compared to the actual population of Canada (2011 Census information unless otherwise noted). The final sample over-represents those with higher levels of education. This is a typical pattern for telephone surveys in Canada (e.g., individuals with more education are more likely to respond to telephone surveys). As well, the survey population is household decision-makers in homes that are owned rather than rented, which would tend to be persons of higher household income, a demographic factor that is linked to education.

Sample profile

	Sample*	Canada
Gender (18+)		
Male	50	48
Female	50	52
Age ‡		
Under 25	1	1
25 – 34	8	11
35 – 44	16	21
45 – 54	22	25
55 – 64	23	19
65 – 74	16	12
75 +	9	10
Refused	4	n/a
Education level ^α		
Less than high school	9	15
High school diploma	20	24
College/some university	32	25
University degree	39	23

* Data are unweighted

‡ Canada age statistics are for primary household maintainer for owned private households (Statistics Canada), an equivalent population to that surveyed. Data are from 2006 Census.

^α Actual Census categories differ from those used in this survey and have been recalculated to correspond. Statistics Canada figures for education are for Canadians aged 25 to 64 years. Data are from 2006 Census. Repercentaged to exclude dk/na responses



Questionnaire

Health Canada
2013 National Radon Awareness Survey

Questionnaire

Introduction

Good morning/afternoon/evening. My name is _____ and I am calling from Environics Research Group, a public opinion research company, on behalf of Health Canada. Today we are conducting a survey of homeowners about health issues in the home.

IF RENT HOME (NOT A HOMEOWNER) THANK AND TERMINATE

CONFIRM WHETHER RESPONDENT PREFERS ENGLISH OR FRENCH

Please be assured that we are not selling or soliciting anything. The survey is voluntary and your responses will be kept entirely confidential and anonymous.

[IF ASKED: The survey should take about 20 minutes to complete]

[IF ASKED: The survey is being sponsored by Health Canada]

[IF ASKED: This survey is registered with the national survey registration system. The registration system has been created by the Canadian survey research industry to allow the public to verify that a survey is legitimate, get information about the survey industry or register a complaint. The registration system's toll-free telephone number is 1-888-602-6742, extension 8728].

IF ASKED ABOUT WHAT ARE HIGH OR SAFE OR UNSAFE RADON LEVELS AT ANY POINT IN THE SURVEY:

Radon levels in homes are considered high when they exceed the Canadian guideline of 200 Becquerels [PRONOUNCED bek-uh-rel; Fr. bek^{uh}-rel] per cubic metre.

A. May I confirm that you are over 18?

01 – Yes CONTINUE

02 – No This survey must be completed by someone who is over 18. Would there be someone in your household who is over 18 and who is responsible for making decisions regarding your home? IF YES ASK TO SPEAK TO THAT PERSON AND RE-INTRODUCE THE SURVEY

B. Are you involved in making decisions about matters relating to your home, such as moving or doing renovations?

01 – Yes CONTINUE

02 – No Would there be someone else in your household who is over 18 who is involved in making decisions regarding your home? IF YES ASK TO SPEAK TO THAT PERSON AND RE-INTRODUCE THE SURVEY

VOLUNTEERED

03 – Home is rented, not owned THANK AND TERMINATE

IF PERSON SELECTED IS NOT AVAILABLE, ARRANGE FOR CALL-BACK

CONFIRM WHETHER RESPONDENT WOULD LIKE TO BE INTERVIEWED IN ENGLISH OR FRENCH

Respondent Selection

Before we begin . . .

C. Do you own your home, or is it rented?

01 – Owned

02 – Rented

99 – DK/NA

THANK AND TERMINATE

THANK AND TERMINATE

D. We are speaking today to people who live in certain types of homes. Do you live in a home with living space that is on the ground floor?

DO NOT READ LIST

INTERVIEWER: RESPONDENT CAN LIVE IN AN APARTMENT, DUPLEX OR CONDO AS LONG AS THE UNIT THEY LIVE IN IS ON THE GROUND FLOOR – THEY MUST HAVE LIVING SPACE THAT COMES IN CONTACT WITH THE GROUND, NOT JUST A LOBBY, SERVICE AREA OR EXIT. MOBILE HOME/TRAILER IS OKAY.

01 – Yes, home has ground floor living space

02 – No, live in an upper level residence

03 – DK/NA

THANK AND TERMINATE

THANK AND TERMINATE

A. General environment questions

I would like to start off by asking you about health issues . . .

NEW

1. Thinking about the air quality in an average Canadian home, what would you say are the major health hazards related to indoor air quality?

DO NOT READ – CODE FIRST AND OTHER MENTIONS SEPARATELY, UP TO THREE

01 – Tobacco/second hand smoke

02 – Toxic chemicals

03 – Indoor air quality/Indoor air pollution

04 – Mould

05 – Formaldehyde

06 – Asbestos

07 – Radon

08 – Carbon monoxide

98 – Other (SPECIFY _____)

99 – DK/NA

B. Indoor Air Quality

2007 Radon-Q5

2. Currently or at some point in the past have you been concerned about the indoor air quality in your home?
IF CONCERNED CONFIRM IF CURRENTLY OR IN PAST
INTERVIEWER: IF BOTH CURRENT AND PAST, CODE AS CURRENT

01 – Yes, concerned currently

02 – Yes, concerned in the past

03 – Never concerned

VOLUNTEERED

99 – DK/NA

2007 Radon-Q6 VARIATION

3. (IF 01 OR 02 AT Q.2) What [is/was] the source of your concern about the air quality in your home?
DO NOT READ – CODE ALL THAT APPLY

01 – Dust/dust mites
02 – Mould
03 – Second-hand smoke/tobacco/smokers in the home
04 – Lack of ventilation
05 – Gas furnaces/appliances
06 – Moisture/dampness/mildew (NOT MOULD)
07 – Wood stoves/fireplaces
08 – Pets/pet dander
09 – New carpeting/products/off-gassing
10 – Allergies/asthma/difficulties breathing
11 – Insulation/building materials in home
12 – Radon (basement)
98 – Other (SPECIFY _____)
99 – DK/NA

C. Radon knowledge and awareness**2007 Radon-Q9**

4. Have you heard of radon?

01 – Yes
02 – No SKIP TO STATEMENT BEFORE Q.9
99 – DK/NA SKIP TO STATEMENT BEFORE Q.9

2007 Radon-Q10

5. What do you recall hearing or seeing about radon?

RECORD VERBATIM
97 – Don't know SKIP TO STATEMENT BEFORE Q.9
99 – REFUSE/NA

2007 Radon-Q11 – shortened precode list

6. Where did you hear or see something about radon?
DO NOT READ – CODE ALL THAT APPLY

01 – Family doctor/general practitioner
02 – Media (TV, newspaper, magazines)
03 – Internet – PROBE FOR SPECIFICS
04 – Health Canada
05 – Provincial government/provincial ministry of health
06 – Real estate agent
07 – Local lung association
08 – Other lung association (e.g. national)
98 – Other (SPECIFY _____)
99 – DK/NA

2007 Radon-Q12

7. From what you may know or have heard, what is radon?
DO NOT READ – CODE ALL THAT APPLY

01 – An element
02 – A gas
03 – Radioactive
04 – Colourless
05 – Odorless
98 – Other (SPECIFY _____)
99 – DK/NA SKIP TO AFTER Q.8

2007 Radon-Q13

8. Would you say you know a lot, know something, know a little, or know almost nothing at all about radon?

01 – Know a lot
02 – Know something
03 – Know a little
04 – Know almost nothing
VOLUNTEERED
99 – DK/NA

READ TO ALL: Here are some facts about radon. Radon is a radioactive gas that is colourless, odorless and tasteless. It is formed by the natural breakdown of uranium in soil, rock and water.

NEW

9. Now I am going to read three statements. For each statement please tell me if you think it is definitely true, might be true, might be false or is definitely false.
READ AND RANDOMIZE

- a) Exposure to radon is the second leading cause of lung cancer, after smoking
b) Radon can be found in most homes.
c) It is difficult to remove radon from a home.

01 – Definitely true
02 – Might be true
03 – Might be false
04 – Definitely false
VOLUNTEERED
99 – DK/NA

READ TO ALL: Here are some more facts about radon. Radon gas comes up from the ground. When radon escapes outdoors, it is not a concern. However, radon that enters an enclosed space, like a home, can accumulate and become a health hazard. Most homes have some level of radon. Long term exposure to high levels of radon is the second leading cause of lung cancer after smoking.

2007 Radon-Q16 VARIATION

10. How might radon get into a home?
DO NOT READ – CODE ALL THAT APPLY

01 – Cracks in foundation
02 – Windows/doors
03 – Floor drains
04 – Sump pump
05 – Basement floor
98 – Other (SPECIFY _____)
99 – Don't know

2007 Radon-Q17 VARIATION

11. Do you know how people can find out if there is a high level of radon in their home?
DO NOT READ – DO NOT PROBE FOR TYPE OF TEST– CODE ALL THAT APPLY

01 – Can be tested by a professional
02 – Can purchase home testing kit
03 – Can get it tested (method unspecified)
04 – Detectors available (general)
98 – Other (SPECIFY _____) SKIP TO Q13
99 – Don't know SKIP TO Q13

NEW

12. (IF 01, 02 OR 03 OR 04 AT Q11) Do-it-yourself radon testing kits are available for purchase. Where would you go to purchase one?
DO NOT READ – CODE ALL THAT APPLY

01 – Home improvement store (e.g. Home Depot, Rona)
02 – Public health office
03 – Lung association
04 – Other retailer (e.g. Walmart)
05 – Online retailer
98 – Other (SPECIFY _____)
99 – Don't know

2007 Radon-Q18

13. And do you know what, if anything, people can do to reduce the amount of radon in a home?
DO NOT READ – CODE ALL THAT APPLY; PROBE IN DETAIL: Anything else?

01 – Seal cracks or other openings in foundations
02 – Install a radon reduction system/sub-slab depressurization system
03 – Cover or seal sump holes
04 – Cover exposed soil in crawlspaces with sealed barriers
05 – Increase ventilation/use mechanical or heat recovery/HRV ventilator/exchanger
06 – Something can be done but not sure what
98 – Other (SPECIFY _____)
99 – DK/NA

D. Previous experience with radon**2007 Radon-Q19 VARIATION**

14. Do you recall ever seeing or hearing anything about indoor radon levels in your community?

- 01 – Yes
- 02 – No SKIP TO Q.16
- 99 – DK/NA SKIP TO Q.16

2007 Radon-Q20 VARIATION

15. (IF YES TO Q.14) Can you tell me what it was that you recall hearing or seeing (about radon levels in your community)?

DO NOT READ – CODE ALL THAT APPLY; PROBE IN DETAIL: Anything else?

- 01 – Local radon levels are high
- 02 – Local radon levels are low
- 03 – Local radon levels are moderate
- 04 – People here should get their radon tested
- 05 – Possible health problems caused by radon
- 06 – How people can reduce exposure/risks of radon – PROBE FOR SPECIFICS
- 07 – Public Service Announcement – PROBE FOR SPECIFICS
- 98 – Other (SPECIFY _____)
- 99 – DK/NA

2007 Radon-Q21

ASK ALL

16. Have you ever had the radon levels in your home tested?

- 01 – Yes SKIP TO Q.19
- 02 – No
- 99 – DK/NA

2007 Radon-Q22

17. (IF NO/DK TO Q.16) Have you ever considered having the radon levels in your home tested?

- 01 – Yes
- 02 – No
- 99 – DK/NA

2007 Radon-Q23

18. (IF YES IN Q.17 OR HEARD ABOUT RADON LEVELS IN COMMUNITY IN Q.14 BUT NOT YES AT Q.17) Why have you not had the radon levels in your home tested?

DO NOT READ – CODE ALL THAT APPLY

- 01 – Local radon levels low/moderate/not a problem
- 02 – Was tested previously/by previous owner/resident
- 03 – Not worried about radon/not enough of a risk
- 04 – Lack of time/too busy
- 05 – Don't know what to do/lack of information
- 06 – Have not thought about it
- 07 – Too expensive/cannot afford
- 08 – Inconvenient
- 09 – Too lazy/not motivated
- 10 – Cannot make changes
- 98 – Other (SPECIFY _____)
- 99 – Don't know/No answer

ALL NO/DK AT Q.16 (NEVER HAD RADON TESTING) SKIP TO SECTION E

2007 Radon-Q24

19. In what year did you have the radon level in your home tested?
(IF RESPONDENT INDICATES IT WAS TESTED MORE THAN ONCE: I mean the first time it was tested)

_____ INDICATE YEAR

99 – DK/NA

2007 Radon-Q25 VARIATION

20. How did you have the radon level in your home tested (IF TESTED MORE THAN ONCE: the first time it was tested)?

DO NOT READ – CODE ALL THAT APPLY

01 – Home inspector

02 – Private contractor

03 – Government/Health Canada provided a kit

04 – Tested it myself using a kit I purchased

98 – Other (SPECIFY _____)

99 – DK/NA

NEW

21. For how long a time period was the radon level tested in your home?

READ IF NECESSARY.

IF NECESSARY, TELL RESPONDENT THAT THE TIME PERIOD SHOULD NOT INCLUDE ANY SHIPPING OR ANALYSIS TIME BEFORE THE RESULTS BECAME AVAILABLE

(IF RESPONDENT INDICATES IT WAS TESTED MORE THAN ONCE: I mean the first time it was tested)

01 – A couple of days

02 – Three months or longer

VOLUNTEERED

98 – Other (SPECIFY _____)

99 – Don't know/No answer

2007 Radon-Q27B

22. Would you say the level of radon was...?

01 – High

02 – Moderate

03 – Low

VOLUNTEERED

99 – DK/NA

2007 Radon-Q28

23. Was any action recommended as a result of the radon test?

01 – Yes

02 – No

SKIP TO SECTION F

VOLUNTEERED

99 – DK/NA

2007 Radon-Q29

24. Did you take any action to reduce the radon level?

01 – Yes

SKIP TO Q.26

02 – No

VOLUNTEERED

97 – Tested recently – not yet acted

SKIP TO Q.26

99 – DK/NA

2007 Radon-Q30

25. (ASK IF NO/DK TO Q24) Why have you not taken any action to reduce the level of radon?
DO NOT READ – CODE ALL THAT APPLY

01 – Radon level was low/moderate/not a problem
02 – Tested recently – have not had time to fix it IF ONLY CODE 02 ASK Q26-28
03 – Not worried about radon/not enough of a risk
04 – Lack of time/too busy
05 – Lack of information/don't know what to do
06 – Have not thought about it
07 – Too expensive/cannot afford
08 – Inconvenient
09 – Too lazy/not motivated
10 – Cannot make changes
98 – Other (SPECIFY _____)
99 – Don't know/No answer

SKIP TO SECTION F

IF CODE 01 AT Q24 – TOOK ACTION – ASK Q26-28 IN PAST TENSE

IF CODE 97 AT Q24 OR 02 AT Q25, ASK Q26-28 IN FUTURE TENSE

2007 Radon-Q31

26. [How much did it cost/What do you think it will cost] to reduce the radon level in your home?

_____ RECORD DOLLAR AMOUNT (ROUND TO NEAREST DOLLAR) OR

01 – It was/will be free/no charge
02 – Not planning to remediate home SKIP TO SECTION F
98 – Other (SPECIFY _____)
99 – DK/NA

2007 Radon-Q32 VARIATION

27. [What will you do/ What was done] to reduce the radon level in your home?
DO NOT READ – CODE ALL THAT APPLY; PROBE IN DETAIL: Anything else?

01 – Sealed cracks or other openings in foundations
02 – Install a radon reduction system/sub-slab depressurization system
03 – Covered or seal sump pumps
04 – Covered exposed soil in crawlspaces with sealed barriers
05 – Increased ventilation/use mechanical or heat recover/HRV ventilator
97 – Not planning to remediate home SKIP TO SECTION F
98 – Other (SPECIFY _____)
99 – DK/NA

2007 Radon-Q33 VARIATION

28. [Did you/Will you] make changes related to radon to your home yourself or [did/will] someone else do it?
DO NOT READ – CODE ALL THAT APPLY / IF NOT SELF PROBE FOR WHO

- 01 – Self
- 02 – Friend or family member
- 03 – Certified radon specialist/professional
- 04 – Private contractor
- 97 – Not planning to remediate home SKIP TO SECTION F
- 98 – Other (SPECIFY _____)
- 99 – Don't know/No answer

IF CODE 97 AT Q.24 OR CODE 02 AT Q25 SKIP TO SECTION F

2007 Radon-Q34 VARIATION

29. [IF CODE 01 AT Q24] Have you had the level of radon tested again since this work was completed?

- 01 – Yes
- 02 – No SKIP TO SECTION F
- 99 – DK/NA SKIP TO SECTION F

2007 Radon-Q35A

30. (IF YES AT Q29): What was the level of radon after the changes were made?

_____ Bequerels per cubic metre (Bq/m^3) [PRONOUNCED bek-uh-rel; Fr. bek^{uh}-rel]

OR

_____ Picocuries per litre (pCi/L) [PRONOUNCED pee-co-cure-ee]
PROGRAMMER –CONVERT TO (Bq/m^3) BY MULTIPLYING BY 37

99 – DK/NA

2007 Radon-Q35B

31. (ASK IF DON'T KNOW IN Q30) Would you say the level of radon was...?

- 01 – High
- 02 – Moderate
- 03 – Low
- VOLUNTEERED
- 99 – DK/NA

IF YES AT Q.16 SKIP TO SECTION F

E. Hypothetical experience with radon

2007 Radon-Q36 VARIATION

32. If you became concerned about radon in your home, would you definitely, likely, likely not or definitely not have the radon level tested?

IF ASKED HOW THE HOME COULD BE TESTED FOR RADON: You could either buy a kit and test it yourself or hire a certified professional to test the radon levels for you.

- 01 – Definitely
- 02 – Likely
- 03 – Likely not
- 04 – Definitely not
- VOLUNTEERED
- 05 – Depends
- 99 – DK/NA

2007 Radon-Q37

33. (IF LIKELY NOT/DEFINITELY NOT/DK TO Q.32) Why would you not be likely to have the radon levels in your home tested?

DO NOT READ – CODE ALL THAT APPLY

- 01 – Local radon levels low/moderate/not a problem
- 02 – Was tested previously/by previous owner/resident
- 03 – Not worried about radon/not enough of a risk
- 04 – Lack of time/too busy
- 05 – Lack of information/don't know what to do
- 06 – Have not thought about it
- 07 – Too expensive/cannot afford
- 08 – Inconvenient
- 09 – Too lazy/not motivated
- 10 – Cannot make changes
- 98 – Other (SPECIFY _____)
- 99 – Don't know/No answer

2007 Radon-Q38 minor variation

34. (IF DEFINITELY/LIKELY TO Q.32): How much money would you be willing to spend to have your home tested for radon?

DO NOT READ – CODE ONE ONLY

- 01 – Up to \$25
- 02 – \$25 to just under \$50
- 03 – \$50 to just under \$100
- 04 – \$100 to just under \$250
- 05 – \$250 to just under \$500
- 06 – \$500 or more
- 07 – Not willing to spend any money on a radon test
- 08 – Would spend whatever it takes
- 98 – Other (SPECIFY _____)
- 99 – DK/NA

2007 Radon-Q39

35. If a radon test was done and the radon level in your home was found to be high, would you definitely, likely, likely not or definitely not take action to have the radon level reduced?

01 – Definitely
02 – Likely
03 – Likely not
04 – Definitely not
VOLUNTEERED
05 – Depends
99 – DK/NA

SKIP TO Q.37
SKIP TO Q.37
SKIP TO Q.37

2007 Radon-Q41

36. (ASK IF LIKELY NOT/DEFINITELYNOT/DK AT Q.35) Why would you not be likely to act to reduce radon levels?

DO NOT READ – CODE ALL THAT APPLY

01 – Local radon levels low/moderate/not a problem
02 – Was tested previously/by previous owner/resident
03 – Not worried about radon/not enough of a risk
04 – Lack of time/too busy
05 – Lack of information/don't know what to do
06 – Have not thought about it
07 – Too expensive/cannot afford
08 – Inconvenient
09 – Too lazy/not motivated
10 – Cannot make changes
98 – Other (SPECIFY _____)
99 – DK/NA

F. Hypothetical radon remediation impacts**NEW - ASK ALL**

37. It typically costs two to three thousand dollars to reduce radon levels in a home. Do you think that this is a reasonable amount to pay, or not?

DO NOT READ – CODE ONE ONLY

01 – Reasonable
02 – Not reasonable
VOLUNTEERED
05 – Depends
99 – DK/NA

SKIP TO Q39

2007 Radon-Q40

38. (IF NOT REASONABLE OR DON'T KNOW AT Q37) How much money would you be willing to spend to reduce the radon level in your home?

DO NOT READ LIST

- 01 – Up to \$500
- 02 – \$500 up to \$1,000
- 03 – \$1,000 up to \$2,000
- 04 – \$2,000 up to \$3,000
- 05 – \$3,000 up to \$5,000
- 06 – \$5,000 or more
- 07 – Not willing to spend any money
- 08 – Would spend whatever it takes
- 09 – Depends
- 98 – Other (SPECIFY _____)
- 99 – DK/NA

NEW

39. How important would it be to you that the person you hire to reduce the radon in your home is a certified radon specialist?

- 01 – Very important
- 02 – Somewhat important
- 03 – Not very important
- 04 – Not at all important
- 99 – DK/NA

2007 Radon-Q42 – POSSIBLY CUT FOR LENGTH

40. How likely would you be to buy a home that you really liked if you thought that radon might be an issue, that is, if radon levels were known to be high in that home? Would you definitely, likely, likely not or definitely not buy such a home?

- 01 – Definitely
- 02 – Likely
- 03 – Likely not
- 04 – Definitely not
- VOLUNTEERED
- 05 – Depends
- 99 – DK/NA

NEW

41. How likely would you be to buy a home you really liked if you learned that the radon levels had been high, but the owner had paid to have the radon reduced? Would you definitely, likely, likely not or definitely not buy such a home?

- 01 – Definitely
- 02 – Likely
- 03 – Likely not
- 04 – Definitely not
- VOLUNTEERED
- 05 – Depends
- 99 – DK/NA

G. Information about radon**2007 Radon-Q45 VARIATION**

42. Are you aware of any programs or activities to help residents learn about or deal with radon in their homes?

- 01 – Yes
- 02 – No SKIP TO Q.45
- 99 – DK/NA SKIP TO Q.45

2007 Radon-Q46 VARIATION

43. (IF YES TO Q.42) Can you tell me who sponsors or funds these programs or activities?
DO NOT READ – CODE ALL THAT APPLY

- 01 – Federal government
- 02 – Provincial government
- 03 – Municipal government
- 98 – Other (SPECIFY _____)
- 99 – DK/NA

NEW

44. Who should be responsible for providing information to homeowners about how to deal with radon?
DO NOT READ – CODE ANY THAT APPLY

- 01 – The media
- 02 – Health Canada
- 03 – The government (general)
- 04 – Home inspectors
- 05 – Real estate agents
- 06 – Doctors/medical practitioners
- 07 – Local lung association
- 08 – Other lung association (e.g. national)
- 98 – Other (SPECIFY _____)
- 99 – DK/NA

2007 Radon-Q47

45. Have you ever taken steps to learn about radon?

- 01 – Yes
- 02 – No
- 99 – DK/NA

2007 Radon-Q48A – shortened precode list

46. (IF YES TO Q.45) Where did you look for information about radon?
DO NOT READ – CODE ALL THAT APPLY

- 01 – Family doctor/general practitioner
- 02 – Media (TV, newspaper, magazines)
- 03 – Internet – PROBE FOR SPECIFICS
- 04 – Health Canada
- 05 – Provincial government/provincial ministry of health
- 06 – Real estate agent
- 07 – Local lung association
- 08 – Other lung association (e.g. national)
- 98 – Other (SPECIFY _____)
- 99 – DK/NA

2007 Radon-Q48B – shortened precode list

47. (IF NO/DK TO Q.45) If you wanted to get information about radon, where would you be likely to look?
DO NOT READ – CODE ALL THAT APPLY

- 01 – Family doctor/general practitioner
- 02 – Media (TV, newspaper, magazines)
- 03 – Internet – PROBE FOR SPECIFICS
- 04 – Health Canada
- 05 – Provincial government/provincial ministry of health
- 06 – Real estate agent
- 07 – Local lung association
- 08 – Other lung association (e.g. national)
- 98 – Other (SPECIFY _____)
- 99 – DK/NA

NEW – ASK Q48 IF NO OR DK AT Q16

48. Has what you have learned about radon today motivated you to get your home radon levels tested?

- 01 – Yes
- 02 – No
- VOLUNTEERED
- 03 – Maybe
- 04 – Motivated to learn more
- 99 – DK/NA

H. Health Status

Now I'd like to ask you a few questions about your health and the health of others in your household. . .

2005 IAQ-Q49/2007 Radon-Q49

49. Compared to other people your age, would you say your health is generally:
READ

- 01 – Excellent
- 02 – Very good
- 03 – Good
- 04 – Only fair
- 05 – Poor
- VOLUNTEERED
- 99 – REFUSE/NA

2005 IAQ-Q47 VARIATION/2007 Radon-Q53A

50. Do you, or someone else in your household, smoke?
IF YES PROBE IF SELF, OTHER OR BOTH

- 01 – Yes, self
 - 02 – Yes, someone else in household
 - 03 – Yes, both self and other
 - 04 – No, no one
 - 99 – DK/NA
- SKIP TO Q52
SKIP TO Q52

2007 Radon-Q53B

51. (IF YES – SELF OR BOTH: Do you/IF YES-OTHER: Does that person) smoke in your home?

- 01 – Yes
- 02 – No
- 99 – DK/NA

NEW

52. Have you or anyone else in your household ever been diagnosed with lung cancer?

INTERVIEWER – INCLUDE OTHER EVEN IF NOW DECEASED

- 01 – Yes – self
 - 02 – Yes – other
 - 03 – No
 - 99 – DK/NA
- ASK Q53

NEW

53. [IF YES OTHER IN Q52] (Is/Was) that other person a smoker?

- 01 – Yes
- 02 – Former smoker but quit
- 03 – No
- 99 – DK/NA

I. Respondent Demographics

Finally, I'd like to ask you a few questions about yourself that will help us analyze the results of this survey. . .

2007 Radon-Q57 VARIATION

54. How long have you lived in your current home?

- SPECIFY
____ YEARS OR
01 – Less than six months
02 – Between six months and one year
999 – DK/NA

2005 IAQ-Q58/2007 Radon-Q63

55. How many individuals, including yourself, currently live in your household?

- ____
99 – NA/REFUSE

IF Q55=1 SKIP TO Q57

2005 IAQ-Q59/2007 Radon-Q64

56. Does your household currently include any children under 16 years of age?

- 01 – Yes
- 02 – No
- 99 – DK/NA

2005 IAQ-Q56/2007 Radon-Q61

57. What is the highest level of education you have completed?

READ IF NECESSARY – CODE ONE ONLY

- 01 – Elementary school
- 02 – Some high school
- 03 – Completed high school
- 04 – Some community college/technical college/CEGEP
- 05 – Completed community college/technical college/CEGEP
- 06 – Some university
- 07 – Completed university
- 08 – Post-graduate degree
- 09 – No schooling
- VOLUNTEERED
- 97 – No Response/Refused

2005 IAQ-Q57/2007 Radon-Q62/POR STANDARD

58. In what year were you born?

_____ Year born

9999 – REFUSE/NA

2005 IAQ-Q61/2007 Radon-Q65 minor variation

59. For statistical purposes only, we need information about your household income. Please tell me which of the following categories applies to your total household income for the year 2012?

READ – CODE ONE ONLY – STOP AS SOON AS CATEGORY IS IDENTIFIED

- 01 – Less than \$40,000
- 02 – \$40,000 to just under \$75,000
- 03 – \$75,000 to just under \$100,000
- 04 – \$100,000 to just under \$150,000
- 05 – \$150,000 and over
- VOLUNTEERED
- 99 – DK/NA

2005 IAQ-Q62

60. And finally, to better understand how results vary by region, may I have your 6-digit postal code?

ACCEPT FIRST THREE DIGITS IF THAT IS ALL RESPONDENT IS WILLING TO GIVE

999999 – DK/NA

This completes the survey. In case my supervisor would like to verify that I conducted this interview, may I have your first name?

First Name: _____

This survey was conducted on behalf of Health Canada, and is registered under the Federal Access to Information Act. Thank you very much for your participation.

IF ASKED WHERE TO OBTAIN MORE INFORMATION ABOUT RADON OR RADON TESTING: For more information you can go to the Health Canada web site at <http://www.hc-sc.gc.ca/> or you can obtain material about radon by calling the Radiation Protection Bureau at (613) 954-6647.

RECORD:

61. Gender

- 01 Male
- 02 Female

62. Language of interview

- 01 English
- 02 French

63. Province/Territory

- 01 - British Columbia
- 02 - Alberta
- 03 - Saskatchewan
- 04 - Manitoba
- 05 - Ontario
- 06 - Quebec
- 07 - Newfoundland and Labrador
- 08 - Nova Scotia
- 09 - New Brunswick
- 10 - Prince Edward Island
- 11 - Yukon
- 12 - Northwest Territories
- 13 - Nunavut

64. Community size

- 01 – 1 million plus
- 02 – 100,000 to 1 million
- 03 – 25,000 to 100,000
- 04 – 10,000 to 25,000
- 05 – 5,000 to 10,000
- 06 – Less than 5,000

65. Radon-prone areas

Halifax, NS
Bathurst, NB
Edmundston, NB
Miramichi, NB
Moncton, NB

Brandon, MB
Dauphin, MB
Morden, MB
Winkler, MB
Winnipeg, MB

Eston, SK
Regina, SK

Castlegar, BC,
Kamloops, BC
Nelson, BC
Vernon, BC

Brockville, ON
Chatham, ON
Kanata, ON
Smith Falls, ON
Windsor, ON

Chelsea, QC
Gaspé, QC
Oka, QC
Rimouski, QC

Yukon (Whitehorse)

COMMUNITIES FOR OVERSAMPLE:

MB - Brandon, Dauphin
BC - Castlegar, Kamloops, Nelson
NB - Bathurst, Edmundston, Miramichi
ON – Smith Falls, Brockville, Chatham
QC - Gaspé, Chelsea, Rimouski
SK - Regina

Santé Canada
Sondage national 2013 relatif au niveau de connaissance du radon
Questionnaire

Introduction

Bonjour/bonsoir. Je me nomme _____ et je vous appelle au nom d'Environics Research Group, une société de recherche sur l'opinion publique, pour le compte de Santé Canada. Aujourd'hui, nous réalisons un sondage auprès des propriétaires d'habitation sur des questions se rapportant à la santé au foyer.

SI LOCATAIRE (NON PAS PROPRIÉTAIRE) REMERCIER ET TERMINER

CONFIRMER SI LE/LA RÉPONDANT(E) PRÉFÈRE QUE L'INTERVIEW SE DÉROULE EN ANGLAIS OU EN FRANÇAIS.

Sachez que nous ne faisons pas de vente ni de sollicitation pour quoi que ce soit. Le sondage est effectué sur une base volontaire, et vos réponses demeureront entièrement anonymes et confidentielles.

[SI ON LE DEMANDE : Il faudra environ 20 minutes pour répondre au sondage]

[SI ON LE DEMANDE : Le sondage est commandité par Santé Canada]

[SI ON LE DEMANDE : Ce sondage est enregistré dans le système national d'enregistrement des sondages. Le système d'enregistrement a été mis sur pied par l'industrie canadienne de recherche par sondages, afin de permettre au public de vérifier la légitimité d'un sondage, d'obtenir plus de renseignements au sujet de l'industrie des sondages ou de déposer une plainte. Le numéro de téléphone sans frais du système d'enregistrement est le suivant : 1 888 602-6742, poste 8728.]

SI ON DEMANDE CE QUE SONT DES NIVEAUX DE RADON ÉLEVÉS, SÉCURITAIRES OU NON SÉCURITAIRES À TOUT MOMENT DURANT LE SONDEGE :

Les niveaux de radon dans les habitations sont considérés comme étant élevés lorsqu'ils dépassent la norme canadienne de 200 becquerels [PRONONCÉ bek^{uh}-rel] par mètre cube.

A. Puis-je confirmer que vous êtes bien âgé(e) de 18 ans ou plus?

01 – Oui CONTINUER

02 – Non Ce sondage doit être rempli par une personne âgée de 18 ans ou plus. Est-ce qu'il y a une autre personne dans votre ménage qui est âgée de plus de 18 ans et qui est responsable de prendre les décisions relatives à votre habitation? SI OUI, DEMANDER À PARLER À CETTE PERSONNE ET REPRENDRE L'INTRODUCTION DU SONDEGE.

B. Participez-vous aux décisions sur des questions se rapportant à votre habitation telles que le déménagement ou les rénovations?

01 – Oui CONTINUER

02 – Non Est-ce qu'il y a une autre personne dans votre ménage qui est âgée de plus de 18 ans et qui est responsable de prendre les décisions relatives à votre habitation? SI OUI, DEMANDER À PARLER À CETTE PERSONNE ET REPRENDRE L'INTRODUCTION DU SONDEGE.

NON SUGGÉRÉ

03 – La maison est louée, pas propriétaire REMERCIER ET TERMINER

SI LA PERSONNE CHOISIE N'EST PAS DISPONIBLE, PRENDRE DES ARRANGEMENTS POUR UN RAPPEL.
CONFIRMER SI LE/LA RÉPONDANT(E) PRÉFÈRE QUE L'INTERVIEW SE DÉROULE EN ANGLAIS OU EN FRANÇAIS.

Sélection du/de la répondant(e)

Avant de commencer. . .

C. Êtes-vous propriétaire ou locataire de votre habitation?

01 – Propriétaire

02 – Locataire

99 – NSP/PR

REMERCIER ET TERMINER

REMERCIER ET TERMINER

D. Aujourd'hui, nous nous adressons à des personnes qui vivent dans certains types d'habitations. Est-ce que vous vivez dans une habitation dont la surface habitable se situe au rez-de-chaussée?

NE PAS LIRE LA LISTE

INTERVIEWEUR(EUSE) : LE/LA RÉPONDANT(E) PEUT VIVRE EN APPARTEMENT, DANS UN DUPLEX OU UN CONDOMINIUM, À CONDITION QUE L'UNITÉ DE LOGEMENT DANS LAQUELLE IL/ELLE VIT SOIT SITUÉ AU REZ-DE-CHAUSSÉE – IL/ELLE DOIT AVOIR UNE SURFACE HABITABLE QUI EST EN CONTACT AVEC LE SOL, PAS SEULEMENT UN VESTIBULE, UNE AIRE DE SERVICES OU UNE SORTIE. LES MAISONS MOBILES/MAISONS-REMORQUES SONT ACCEPTABLES.

01 – Oui, l'habitation a une surface habitable au rez-de-chaussée

02 – Non, vit sur un étage supérieur

03 – NSP/PR

REMERCIER ET TERMINER

REMERCIER ET TERMINER

A. Questions générales au sujet de l'environnement

J'aimerais commencer par vous poser des questions relatives à la santé...

NOUVEAU

66. Pensez à la qualité de l'air dans une habitation canadienne moyenne; selon vous, quels sont les principaux risques pour la santé liés à la qualité de l'air intérieur, dans une maison?

NE PAS LIRE – INSCRIRE LA PREMIÈRE MENTION ET LES AUTRES MENTIONS SÉPARÉMENT – JUSQU'À TROIS MENTIONS

01 – Le tabac/la fumée secondaire

02 – Les produits chimiques toxiques

03 – La qualité de l'air intérieur/la pollution de l'air intérieur

04 – La moisissure

05 – Le formaldéhyde

06 – L'amiante

07 – Le radon

08 – Le monoxyde de carbone

98 – Autre (PRÉCISER_____)

99 – NSP/PR

B. Qualité de l'air intérieur

2007 Radon-Q5

67. À l'heure actuelle ou à un certain moment dans le passé, avez-vous été préoccupé(e) par la qualité de l'air intérieur dans votre habitation?

SI PRÉOCCUPÉ(E), CONFIRMER SI ACTUELLEMENT OU DANS LE PASSÉ
INTERVIEWEUR(EUSE) : SI À LA FOIS ACTUELLEMENT ET DANS LE PASSÉ, SÉLECTIONNER
ACTUELLEMENT

- 01 – Oui, préoccupé(e) à l'heure actuelle
- 02 – Oui, préoccupé(e) dans le passé
- 03 – Jamais été préoccupé(e)
- NON SUGGÉRÉ
- 99 – NSP/PR

2007 Radon-Q6 VARIATION

68. (SI 01 OU 02 À LA Q. 2) Quelle est/était la source de votre inquiétude relative à la qualité de l'air dans votre habitation?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – La poussière/les acariens
- 02 – La moisissure
- 03 – La fumée secondaire/le tabac
- 04 – L'absence de ventilation
- 05 – Les fournaises au gaz/les appareils ménagers au gaz
- 06 – L'humidité/la condensation/le mildiou (PAS LA MOISSURE)
- 07 – Les poêles à bois/les foyers
- 08 – Les animaux domestiques/les squames des animaux
- 09 – Les émissions de polluants de nouveaux tapis/produits
- 10 – Les allergies/l'asthme/les troubles respiratoires
- 11 – L'isolation/les matériaux de construction dans la maison
- 12 – Le radon (sous-sol)
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

C. Connaissances et sensibilisation relatives au radon

2007 Radon-Q9

69. Avez-vous déjà entendu parler du radon?

- 01 – Oui
 - 02 – Non
 - 99 – NSP/PR
- PASSER À L'ÉNONCÉ QUI PRÉCÈDE LA Q. 9
PASSER À L'ÉNONCÉ QUI PRÉCÈDE LA Q. 9

2007 Radon-Q10

70. Qu'est-ce que vous vous rappelez avoir entendu ou vu à propos du radon?
INSCRIRE MOT POUR MOT

- 97 – Ne sait pas
 - 99 – REFUS/PR
- PASSER À L'ÉNONCÉ QUI PRÉCÈDE LA Q. 9

2007 Radon-Q11 – shortened precode list

71. Où avez-vous entendu ou vu quelque chose à propos du radon?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Médecin de famille/omnipraticien
- 02 – Médias (télévision, journaux, magazines)
- 03 – Internet – SONDER POUR OBTENIR DES PRÉCISIONS
- 04 – Santé Canada
- 05 – Gouvernement provincial/ministère provincial de la Santé
- 06 – Agent d'immeuble
- 07 – Association pulmonaire locale
- 08 – Autre association pulmonaire (p. ex. nationale)
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

2007 Radon-Q12

72. À partir de ce que vous savez ou avez entendu, qu'est-ce que le radon?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Un élément
 - 02 – Un gaz
 - 03 – Radioactif
 - 04 – Incolore
 - 05 – Inodore
 - 98 – Autre (PRÉCISER _____)
 - 99 – NSP/PR
- SAUTER APRÈS Q. 8

2007 Radon-Q13

73. Diriez-vous que vous connaissez beaucoup de choses, certaines choses, peu de chose ou presque rien à propos du radon?

- 01 – Connaît beaucoup de choses
- 02 – Connaît certaines choses
- 03 – Connaît peu de choses
- 04 – Connaît presque rien
- NON SUGGÉRÉ
- 99 – NSP/PR

LIRE À TOUS : Voici certains faits au sujet du radon. Le radon est un gaz radioactif qui est incolore, inodore et sans goût. Il provient de la désintégration naturelle de l'uranium dans les sols, les roches et l'eau.

NOUVEAU

74. Je vais maintenant vous lire trois énoncés. Pour chacun d'entre eux, veuillez me dire si vous pensez qu'il est certainement vrai, qu'il pourrait être vrai, qu'il pourrait être faux ou qu'il est certainement faux.

LIRE ET RÉPARTIR AU HASARD

- a) L'exposition au radon est la deuxième cause de cancer du poumon, après la cigarette.
- b) On trouve du radon dans la plupart des habitations.
- c) Il est difficile d'extraire le radon d'une habitation.

01 – Certainement vrai
02 – Pourrait être vrai
03 – Pourrait être faux
04 – Certainement faux
NON SUGGÉRÉ
99 – NSP/PR

LIRE À TOUS : Voici certains faits au sujet du radon. Le radon émane du sol. Lorsque le radon s'échappe à l'extérieur, ce n'est pas problème. Cependant, le radon qui pénètre dans un espace clos, telle une habitation, peut s'accumuler et devenir un risque pour la santé. La plupart des habitations ont un certain niveau de radon. Une exposition à long terme à de fortes concentrations de radon est la deuxième cause du cancer du poumon, après la cigarette.

2007 Radon-Q16 VARIATION

75. Comment le radon s'infiltré-t-il dans une habitation?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Par des fissures dans les fondations
- 02 – Par les fenêtres et les portes
- 03 – Par les drains des sous-sols
- 04 – Par les pompes d'assèchement
- 05 – Le plancher du sous-sol
- 98 – Autre (PRÉCISER _____)
- 99 – Ne sait pas

2007 Radon-Q17 VARIATION

76. Est-ce que vous savez ce que les gens peuvent faire pour savoir s'il y a une forte concentration de radon dans leur habitation?

NE PAS LIRE – NE PAS EXPLORER POUR CONNAÎTRE QUEL TYPE DE TEST – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Peuvent le faire mesurer par un professionnel
- 02 – Peuvent acheter une trousse d'essai pour les résidences
- 03 – Peuvent le faire tester (méthode non précisée)
- 04 – Détecteurs offerts (général)
- 98 – Autre (PRÉCISER _____) PASSER À Q.13
- 99 – Ne sait pas PASSER À Q.13

NOUVEAU

77. (SI 01,02 OU 03 OU 04 À Q. 11) Des trousse de mesure « faites-le-vous-même » pour le radon sont offertes en magasin. Où iriez-vous pour en acheter une?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Magasin de rénovation (p. ex. Home Depot, Rona)
- 02 – Bureau de santé publique
- 03 – Association pulmonaire
- 04 – Autre détaillant (p. ex. Walmart)
- 05 – Détaillant en ligne
- 98 – Autre (PRÉCISER _____)
- 99 – Ne sait pas

2007 Radon-Q18

78. Et, s'il y a lieu, savez-vous ce que les gens peuvent faire pour réduire la quantité de radon présent dans une habitation?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT; SONDER POUR OBTENIR DES PRÉCISIONS : Est-ce qu'il y a autre chose?

- 01 – Sceller les fissures et autres ouvertures dans les fondations
- 02 – Installer un système permettant de réduire les concentrations de radon/un système de dépressurisation sous la dalle de plancher
- 03 – Couvrir ou sceller les pompes d'assèchement
- 04 – Couvrir le sol exposé dans les vides sanitaires avec des barrières étanches
- 05 – Accroître la ventilation/utiliser un ventilateur mécanique/récupérateur de chaleur/ échangeur de chaleur
- 06 – On peut faire quelque chose, mais je ne suis pas certain(e) de savoir quoi
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

D. Expérience antérieure avec le radon

2007 Radon-Q19 VARIATION

79. Vous rappelez-vous avoir déjà vu ou entendu quelque chose se rapportant aux niveaux de radon intérieur dans votre collectivité?

- 01 – Oui
 - 02 – Non
 - 99 – NSP/PR
- PASSER À LA Q. 16
PASSER À LA Q. 16

2007 Radon-Q20 VARIATION

80. (SI « OUI » À LA Q. 14) Pouvez-vous me dire ce vous vous rappelez avoir entendu ou vu (au sujet des niveaux de radon dans votre collectivité)?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT; SONDER POUR OBTENIR DES PRÉCISIONS : Est-ce qu'il y a autre chose?

- 01 – Les niveaux de radon dans la collectivité sont élevés
- 02 – Les niveaux de radon dans la collectivité sont faibles
- 03 – Les niveaux de radon dans la collectivité sont modérés
- 04 – Les résidents locaux devraient faire tester le radon
- 05 – Possibilités de problèmes de santé causés par le radon
- 06 – Comment les gens peuvent réduire leur exposition/les risques d'exposition au radon – SONDER POUR OBTENIR DES PRÉCISIONS
- 07 – Communiqué d'intérêt public – SONDER POUR OBTENIR DES PRÉCISIONS
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

2007 Radon-Q21

DEMANDER À TOUS

81. Avez-vous déjà fait mesurer les concentrations de radon dans votre habitation?

- 01 – Oui
 - 02 – Non
 - 99 – NSP/PR
- PASSER À LA Q. 19

2007 Radon-Q22

82. (SI « NON » OU « NSP/PR » À LA Q. 16) Avez-vous déjà envisagé de faire mesurer les concentrations de radon dans votre habitation?

- 01 – Oui
- 02 – Non
- 99 – NSP/PR

2007 Radon-Q23

83. (SI « OUI » À LA Q. 17 OU « OUI » À LA Q. 14, MAIS PAS « OUI » À LA Q. 17) Pourquoi n'avez-vous pas fait mesurer les concentrations de radon dans votre habitation?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Les niveaux de radon dans la collectivité sont faibles/modérés/pas un problème
- 02 – A déjà été testé/par le propriétaire antérieur/un résident
- 03 – Pas inquiété par le radon/ne présente pas suffisamment de risque
- 04 – Pas le temps/trop occupé
- 05 – Ne sait pas quoi faire/manque d'information
- 06 – N'y a pas pensé
- 07 – Trop cher/pas les moyens
- 08 – Pas pratique
- 09 – Trop paresseux(euse)/pas motivé(e)
- 10 – Ne peut pas faire de changements
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

TOUS LES « NON » ET « NSP/PR » À LA Q. 16 (N'A JAMAIS FAIT MESURER LES CONCENTRATIONS DE RADON), PASSER À LA SECTION E

2007 Radon-Q24

84. En quelle année avez-vous fait mesurer le niveau de radon dans votre habitation?

SI LE/LA RÉPONDANT(E) INDIQUE QUE CELA A ÉTÉ TESTÉ PLUS D'UNE FOIS, DIRE : je veux dire la première fois qu'on l'a mesuré)

_____ INDiquer L'ANNÉE
99 – NSP/PR

2007 Radon-Q25 VARIATION

85. De quelle façon avez-vous fait mesurer le niveau de radon dans votre habitation? (SI TESTÉ PLUS D'UNE FOIS, DIRE : je veux dire la première fois qu'on l'a mesuré)

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Un inspecteur d'habitations
- 02 – Un entrepreneur privé
- 03 – Le gouvernement/Santé Canada
- 04 – Testé moi-même à l'aide d'une trousse d'essai que j'ai achetée
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

NOUVEAU

86. Pendant combien de temps le niveau de radon a-t-il été mesuré dans votre habitation?

LIRE AU BESOIN.

AU BESOIN, DIRE AU RÉPONDANT/À LA RÉPONDANTE QUE LA PÉRIODE NE DOIT PAS INCLURE LE DÉLAI D'EXPÉDITION ET D'ANALYSE AVANT QUE LES RÉSULTATS SOIENT DISPONIBLES.

(SI LE/LA RÉPONDANT(E) INDIQUE QUE LE NIVEAU DE RADON A ÉTÉ MESURÉ PLUS D'UNE FOIS, DIRE : je veux dire la première fois qu'on l'a mesuré)

- 01 – Quelques jours
- 02 – Trois mois ou plus
- NON SUGGÉRÉ
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

2007 Radon-Q27B

87. Diriez-vous que le niveau de radon était... ?

- 01 – Élevé
- 02 – Modéré
- 03 – Faible
- NON SUGGÉRÉ
- 99 – NSP/PR

2007 Radon-Q28

88. Est-ce que des mesures correctives ont été recommandées à la suite de cet examen?

- 01 – Oui
 - 02 – Non
 - NON SUGGÉRÉ
 - 99 – NSP/PR
- PASSER À LA SECTION F

2007 Radon-Q29

89. Avez-vous pris des mesures correctives pour réduire la concentration de radon?

- 01 – Oui
 - 02 – Non
 - NON SUGGÉRÉ
 - 97 – Mesuré récemment – pas encore pris de mesures
 - 99 – NSP/PR
- PASSER À LA Q. 26
- PASSER À LA Q. 26

2007 Radon-Q30

90. (DEMANDER SI « NON » OU « NSP/PR » À LA Q. 24) Pourquoi n'avez-vous pas pris de mesures correctives pour réduire la concentration de radon?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Les niveaux de radon dans la collectivité sont faibles/modérés/pas un problème
- 02 – Mesuré récemment/pas encore eu le temps d'apporter les mesures DEMANDER Q. 26 – Q. 28
UNIQUEMENT SI CODE 02
- 03 – Pas inquiété par le radon/ne présente pas suffisamment de risque
- 04 – Pas le temps/trop occupé
- 05 – Ne sait pas quoi faire/manque d'information
- 06 – N'y a pas pensé
- 07 – Trop cher/pas les moyens
- 08 – Pas pratique
- 09 – Trop paresseux(euse)/pas motivé(e)
- 10 – Ne peut pas faire de changements
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

PASSER À LA SECTION F

SI CODE 01 À LA Q. 24 – A PRIS DES MESURES CORRECTIVES – DEMANDER Q. 26 – Q. 28 AU PASSÉ
SI CODE 97 À LA Q. 24 OU CODE 02 À LA Q. 25, DEMANDER Q. 26 – Q. 28 AU FUTUR

2007 Radon-Q31

91. [Combien cela a-t-il coûté/Combien pensez-vous que cela coûtera] pour réduire le niveau de radon dans votre habitation?

_____ INSCRIRE LE MONTANT EN DOLLARS (ARRONDIR AU DOLLAR) OU

01 – Cela n'a rien coûté/cela ne coûtera rien/pas de frais

02 – Ne prévoit pas apporter des mesures correctives PASSER À LA SECTION F

98 – Autre (PRÉCISER _____)

99 – NSP/PR

2007 Radon-Q32 VARIATION

92. [Que ferez-vous/ Qu'est-ce qui a été fait] pour réduire le niveau de radon dans votre habitation?
NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT; SONDER POUR OBTENIR DES PRÉCISIONS : Est-ce qu'il y a autre chose?

01 – A scellé/scellera les fissures et les autres ouvertures dans les fondations

02 – A installé/installera un système permettant de réduire les concentrations de radon/un système de dépressurisation sous la dalle de plancher

03 – A couvert/couvrira ou a scellé/scellera les pompes d'assèchement

04 – A couvert/couvrira le sol exposé dans les vides sanitaires avec des barrières étanches

05 – A accru/accroîtra la ventilation, a posé/posera un ventilateur mécanique/récupérateur de chaleur échangeur de chaleur

97 – Ne prévoit pas apporter des mesures correctives à l'habitation PASSER À LA SECTION F

98 – Autre (PRÉCISER _____)

99 – NSP/PR

2007 Radon-Q33 VARIATION

93. [Est-ce que vous avez apporté/Est-ce que vous apporterez] des changements à votre habitation liés à la présence de radon ou est-ce que quelqu'un d'autre [l'a fait/le fera] pour vous?
NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT/SI PAS PAR SOI-MÊME, SONDER POUR SAVOIR QUI

01 – Soi-même

02 – Ami ou membre de la famille

03 – Spécialiste/professionnel du radon certifié

04 – Entrepreneur privé

97 – Ne prévoit pas apporter des mesures correctives à l'habitation PASSER À LA SECTION F

98 – Autre (PRÉCISER _____)

99 – NSP/PR

SI CODE 97 À LA Q. 24 OU CODE 02 À LA Q. 25, PASSER À LA SECTION F

2007 Radon-Q34 VARIATION

94. [SI CODE 01 À LA Q. 24] Avez-vous fait mesurer de nouveau le niveau de radon depuis que les travaux ont été exécutés?

01 – Oui

02 – Non

99 – NSP/PR

PASSER À LA SECTION F

PASSER À LA SECTION F

2007 Radon-Q35A

95. (SI « OUI » À LA Q. 29) : Quel était le niveau de radon après que les changements aient été apportés?

_____ becquerels par mètre cube (Bq/m^3) [PRONONCÉ bek^{uh}-rel]

OU

_____ picocuries par litre (pCi/L) [PRONONCÉ pi-co-cu-ri]

PROGRAMMEUR(EUSE) – CONVERTIR EN (Bq/m^3) EN MULTIPLIANT PAR 37

99 – NSP/PR

2007 Radon-Q35B

96. (POSER SI « NSP/PR » À LA Q. 30) Diriez-vous que le niveau de radon était...?

01 – Élevé

02 – Modéré

03 – Faible

NON SUGGÉRÉ

99 – NSP/PR

SI « OUI » À LA Q. 16 PASSER À LA SECTION F

E. Expérience hypothétique avec le radon

2007 Radon-Q36 VARIATION

97. Si vous deveniez préoccupé(e) par la présence de radon dans votre habitation, feriez-vous certainement, probablement, probablement pas ou certainement pas mesurer le niveau de radon?

SI ON DEMANDE DE QUELLE FAÇON LE NIVEAU DE RADON PEUT ÊTRE MESURÉ DANS

L'HABITATION : Vous pouvez soit acheter une trousse d'essai et le mesurer par vous-même ou engager un professionnel certifié pour mesurer le niveau de radon pour vous.

01 – Certainement

02 – Probablement

03 – Probablement pas

04 – Certainement pas

NON SUGGÉRÉ

05 – Cela dépend

99 – NSP/PR

2007 Radon-Q37

98. (SI « PROBABLEMENT PAS », « CERTAINEMENT PAS », « NSP/PR » À LA Q. 32) Pourquoi n'est-il pas probable que vous fassiez mesurer les niveaux de radon dans votre habitation?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

01 – Les niveaux de radon dans la collectivité sont faibles/modérés/pas un problème

02 – A déjà été testé/par le propriétaire antérieur/un résident

03 – Pas inquiété par le radon/ne présente pas suffisamment de risque

04 – Pas le temps/trop occupé

05 – Ne sait pas quoi faire/manque d'information

06 – N'y a pas pensé

07 – Trop cher/pas les moyens

08 – Pas pratique

09 – Trop paresseux(euse)/pas motivé(e)

10 – Ne peut pas faire de changements

98 – Autre (PRÉCISER _____)

99 – NSP/PR

2007 Radon-Q38 minor variation

99. (SI « CERTAINEMENT », « PROBABLEMENT » À LA Q. 32) : Combien d'argent seriez-vous disposé(e) à dépenser pour faire mesurer le niveau de radon dans votre habitation?

NE PAS LIRE – INSCRIRE UNE SEULE RÉPONSE

- 01 – Jusqu'à 25 \$
- 02 – 25 \$ à un peu moins de 50 \$
- 03 – 50 \$ à un peu moins de 100 \$
- 04 – 100 \$ à un peu moins de 250 \$
- 05 – 250 \$ à un peu moins de 500 \$
- 06 – 500 \$ ou plus
- 07 – Pas disposé(e) à dépenser pour faire mesurer le niveau de radon
- 08 – Dépenserait la somme nécessaire
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

2007 Radon-Q39

100. Si le niveau de radon avait été mesuré et que la concentration de radon dans votre habitation avait été jugée élevée, est-ce que vous prendriez certainement, probablement, probablement pas ou certainement pas des mesures correctives pour réduire les concentrations de radon?

- 01 – Certainement
- 02 – Probablement
- 03 – Probablement pas PASSER À LA Q. 37
- 04 – Certainement pas PASSER À LA Q. 37
- NON SUGGÉRÉ
- 05 – Cela dépend
- 99 – NSP/PR PASSER À LA Q. 37

2007 Radon-Q41

101. (DEMANDER SI « PROBABLEMENT PAS », « CERTAINEMENT PAS » À LA Q. 35) Pourquoi est-il improbable que vous apportiez des mesures correctives pour réduire les niveaux de radon?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Les niveaux de radon dans la collectivité sont faibles/modérés/pas un problème
- 02 – A déjà été testé/par le propriétaire antérieur/un résident
- 03 – Pas inquiété par le radon/ne présente pas suffisamment de risque
- 04 – Pas le temps/trop occupé
- 05 – Ne sait pas quoi faire/manque d'information
- 06 – N'y a pas pensé
- 07 – Trop cher/pas les moyens
- 08 – Pas pratique
- 09 – Trop paresseux(euse)/pas motivé(e)
- 10 – Ne peut pas faire de changements
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

F. Impacts hypothétiques relatifs à la remédiation du radon

NOUVEAU - DEMANDER À TOUS

102. Réduire les niveaux de radon dans une habitation coûte habituellement de deux à trois mille dollars. Croyez-vous qu'il s'agit d'un montant raisonnable à payer, ou non?
NE PAS LIRE – INSCRIRE UNE SEULE RÉPONSE

01 – Oui, il s'agit d'un montant raisonnable PASSER À LA Q. 39
02 – Non, il ne s'agit pas d'un montant raisonnable
NON SUGGÉRÉ
05 – Cela dépend
99 – NSP/PR

2007 Radon-Q40

103. (SI « NON, IL NE S'AGIT PAS D'UN MONTANT RAISONNABLE » À LA Q. 37) Combien d'argent seriez-vous disposé(e) à dépenser pour réduire le niveau de dans votre habitation?
NE PAS LIRE LA LISTE

01 – Jusqu'à 500 \$
02 – 500 \$ jusqu'à 1 000 \$
03 – 1 000 \$ jusqu'à 2 000 \$
04 – 2 000 \$ jusqu'à 3 000 \$
05 – 3 000 \$ jusqu'à 5 000 \$
06 – 5 000 \$ ou plus
07 – Pas disposé(e) à dépenser
08 – Dépenserait la somme nécessaire
09 – Cela dépend
98 – Autre (PRÉCISER _____)
99 – NSP/PR

NOUVEAU

104. Dans quelle mesure serait-il important pour vous que la personne que vous engagez pour réduire le niveau de radon dans votre habitation soit un spécialiste du radon certifié?

01 – Très important
02 – Plutôt important
03 – Pas très important
04 – Pas du tout important
99 – NSP/PR

2007 Radon-Q42

105. Dans quelle mesure serait-il probable que vous achetiez une habitation qui vous plaît vraiment si vous pensiez que la présence de radon pourrait être problème, c'est-à-dire si vous saviez que les niveaux de radon sont élevés dans cette habitation? Est-ce que vous achèteriez certainement, probablement, probablement pas ou certainement pas une telle habitation?

01 – Certainement
02 – Probablement
03 – Probablement pas
04 – Certainement pas
NON SUGGÉRÉ
05 – Cela dépend
99 – NSP/PR

NOUVEAU

106. Dans quelle mesure serait-il probable que vous achetiez une habitation qui vous plaît vraiment si vous saviez que les niveaux de radon ont déjà été élevés, mais que le propriétaire a payé pour les faire réduire? Achèteriez-vous certainement, probablement, probablement pas ou certainement pas une telle habitation?

01 – Certainement
02 – Probablement
03 – Probablement pas
04 – Certainement pas
NON SUGGÉRÉ
05 – Cela dépend
99 – NSP/PR

G. Informations au sujet du radon**2007 Radon-Q45 VARIATION**

107. Connaissez-vous des activités ou des programmes destinés à aider les résidents à s'informer au sujet du radon ou à régler le problème du radon dans leur habitation?

01 – Oui
02 – Non PASSER À LA Q. 45
99 – NSP/PR PASSER À LA Q. 45

2007 Radon-Q46 VARIATION

108. (SI « OUI » À LA Q. 42) Pouvez-vous me dire qui commandite ou finance ces programmes ou ces activités?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

01 – Le gouvernement fédéral
02 – Le gouvernement provincial
03 – L'administration municipale
98 – Autre (PRÉCISER _____)
99 – NSP/PR

NOUVEAU

109. Qui devrait être responsable de fournir des informations aux propriétaires d'habitation sur la façon de régler un problème de radon?

NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

01 – Les médias
02 – Santé Canada
03 – Le gouvernement (général)
04 – Les inspecteurs d'habitations
05 – Les agents immobiliers
06 – Les médecins/les professionnels de la santé
07 – Association pulmonaire locale
08 – Autre association pulmonaire (p. ex. nationale)
98 – Autre (PRÉCISER _____)
99 – NSP/PR

2007 Radon-Q47

110. Avez-vous posé des gestes pour vous renseigner au sujet du radon?

- 01 – Oui
- 02 – Non
- 99 – NSP/PR

2007 Radon-Q48A – shortened precode list

111. (SI « OUI » À LA Q. 45) Où vous êtes-vous tourné(e) pour obtenir de l'information sur le radon?
NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Médecin de famille/omnipraticien
- 02 – Médias (télévision, journaux, magazines)
- 03 – Internet – SONDER POUR OBTENIR DES PRÉCISIONS
- 04 – Santé Canada
- 05 – Gouvernement provincial/ministère provincial de la Santé
- 06 – Agent d'immeuble
- 07 – Association pulmonaire locale
- 08 – Autre association pulmonaire (p. ex. nationale)
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

2007 Radon-Q48B – shortened precode list

112. (SI « NON » OU « NSP/PR » À LA Q. 45) Si vous vouliez obtenir de l'information sur le radon, où est-il probable que vous cherchiez à l'obtenir?
NE PAS LIRE – INSCRIRE TOUTES LES RÉPONSES QUI S'APPLIQUENT

- 01 – Médecin de famille/omnipraticien
- 02 – Médias (télévision, journaux, magazines)
- 03 – Internet – SONDER POUR OBTENIR DES PRÉCISIONS
- 04 – Santé Canada
- 05 – Gouvernement provincial/ministère provincial de la Santé
- 06 – Agent d'immeuble
- 07 – Association pulmonaire locale
- 08 – Autre association pulmonaire (p. ex. nationale)
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

NOUVEAU - DEMANDER Q. 48 SI « NON » OU « NSP/PR » À LA Q. 16

113. Est-ce que ce que vous avez appris aujourd'hui au sujet du radon vous motive à faire mesurer les niveaux de radon dans votre habitation?

- 01 – Oui
- 02 – Non
- NON SUGGÉRÉ
- 03 – Peut être
- 04 – Motivé(e) à en apprendre davantage
- 99 – NSP/PR

H. État de santé

À présent, j'aimerais vous poser quelques questions sur votre santé et la santé des autres personnes de votre ménage...

2005 IAQ-Q49/2007 Radon-Q49

114. Comparativement à d'autres personnes de votre âge, comment qualifieriez-vous votre état de santé?

Diriez-vous qu'il est :

LIRE

- 01 – Excellent
- 02 – Très bon
- 03 – Bon
- 04 – Passable seulement
- 05 – Mauvais
- NON SUGGÉRÉ
- 99 – REFUS/PR

2005 IAQ-Q47 VARIATION/2007 Radon-Q53A

115. Est-ce que vous-même ou un membre de votre ménage fumez?

SI OUI, SONDER POUR SAVOIR SI SOI-MÊME, UNE AUTRE PERSONNE OU LES DEUX

- 01 – Oui, moi-même
- 02 – Oui, quelqu'un d'autre dans le ménage
- 03 – Les deux, moi-même et quelqu'un d'autre
- 04 – Non/personne PASSER À LA Q. 52
- 99 – NSP/PR PASSER À LA Q. 52

2007 Radon-Q53B

116. (SI « OUI » – SOI-MÊME OU LES DEUX : Est-ce que vous fumez/ SI OUI POUR AUTRE : Est-ce que cette personne fume) à l'intérieur de votre habitation?

- 01 – Oui
- 02 – Non
- 99 – NSP/PR

NOUVEAU

117. Est-ce que vous ou un membre de votre ménage avez déjà reçu un diagnostic de cancer du poumon? INTERVIEWEUR(EUSE) – Y COMPRIS QUELQU'UN D'AUTRE, MÊME SI CETTE PERSONNE EST DÉCÉDÉE

- 01 – Oui, moi-même
- 02 – Oui, quelqu'un d'autre DEMANDER Q. 53
- 03 – Non
- 99 – NSP/PR

NOUVEAU

118. [SI « OUI, QUELQU'UN D'AUTRE » À LA Q. 52] Cette autre personne (est-elle/était-elle) un fumeur?

- 01 – Oui
- 02 – Ancien fumeur, mais a cessé de fumer
- 03 – Non
- 99 – NSP/PR

I. Caractéristiques démographiques

Enfin, J'aimerais vous poser quelques questions sur vous-même, qui nous aideront à analyser les résultats de ce sondage...

2007 Radon-Q57 VARIATION

119. Depuis combien de temps vivez-vous dans votre habitation?

PRÉCISER

___ ANNÉES OU

01 – Moins de six mois

02 – Entre six mois et un an

999 – NSP/PR

2005 IAQ-Q58/2007 Radon-Q63

120. Combien de personnes, y compris vous-même, habitent dans votre domicile à l'heure actuelle?

___ PR/REFUS

SI Q. 55 = 1, PASSER À LA Q. 57

2005 IAQ-Q59/2007 Radon-Q64

121. Est-ce qu'il y a des enfants de moins de 16 ans qui vivent actuellement dans votre domicile?

01 – Oui

02 – Non

99 – NSP/PR

2005 IAQ-Q56/2007 Radon-Q61

122. Quel est le niveau de scolarité le plus élevé que vous avez complété?

LIRE AU BESOIN – INSCRIRE UNE SEULE RÉPONSE

01 – Niveau primaire

02 – Partie du niveau secondaire

03 – Études secondaires complétées

04 – Partie des études collégiales/professionnelles/techniques//Cégep

05 – Diplôme d'études collégiales/d'études techniques/Cégep

06 – Partie du premier cycle universitaire

07 – Premier cycle universitaire complété

08 – Diplôme d'études supérieures

09 – Aucune scolarité

NON SUGGÉRÉ

97 – Pas de réponse/Refus

2005 IAQ-Q57/2007 Radon-Q62/POR STANDARD

123. En quelle année êtes-vous né(e)?

_____ année de naissance

9999 – REFUS/PR

2005 IAQ-Q61/2007 Radon-Q65 minor variation

124. À des fins statistiques seulement, nous avons besoin de renseignements au sujet du revenu de votre ménage. Veuillez me dire laquelle des catégories suivantes correspond au revenu total de votre ménage pour 2012.

LIRE – INSCRIRE UNE SEULE RÉPONSE – ARRÊTER DÈS QUE LA CATÉGORIE EST IDENTIFIÉE

- 01 – Moins de 40 000 \$
- 02 – De 40 000 \$ à un peu moins de 75 000 \$
- 03 – De 75 000 \$ à un peu moins de 100 000 \$
- 04 – De 100 000 \$ à un peu moins de 150 000 \$
- 05 – 150 000 \$ et plus
- NON SUGGÉRÉ
- 99 – NSP/PR

2005 IAQ-Q62

125. Pour terminer, afin de mieux comprendre la façon dont les résultats varient d'une région à l'autre, puis-je avoir les six caractères de votre code postal?

ACCEPTER LES TROIS PREMIERS CARACTÈRES SI LE/LA RÉPONDANT(E) NE VEUT PAS EN DIVULGUER DAVANTAGE

999999 – NSP/PR

Voilà qui complète le sondage. Si mon/ma superviseur(e) veut s'assurer que j'ai effectué cette entrevue, puis-je avoir votre prénom?

Prénom : _____

Ce sondage a été réalisé pour le compte de Santé Canada et est enregistré conformément à la *Loi canadienne sur l'accès à l'information*. Merci beaucoup de votre participation.

SI ON DEMANDE OÙ S'ADRESSER POUR OBTENIR DE PLUS AMPLES RENSEIGNEMENTS AU SUJET DU RADON OU DES TESTS DE MESURE DU RADON : pour plus de renseignements, vous pouvez visiter le site Web de Santé Canada à l'adresse <http://www.hc-sc.gc.ca/> ou vous pouvez obtenir des documents sur le radon en appelant au Bureau de la radioprotection au numéro (613) 954-6647.

INSCRIRE :

126. Sexe

- 01 Masculin
- 02 Féminin

127. Langue de l' interview

- 01 Anglais
- 02 Français

128. Province/territoire

- 01 - Colombie-Britannique
- 02 - Alberta
- 03 - Saskatchewan
- 04 - Manitoba
- 05 - Ontario
- 06 - Québec
- 07 - Terre-Neuve-et-Labrador
- 08 - Nouvelle-Écosse
- 09 - Nouveau-Brunswick
- 10 - Île-du-Prince-Édouard
- 11 - Yukon
- 12 – Territoires du Nord-Ouest
- 13 – Nunavut

129. Taille de la collectivité

- 01 – Plus de 1 million
- 02 – 100 000 à 1 million
- 03 – 25 000 à 100 000
- 04 – 10 000 à 25 000
- 05 – 5 000 à 10 000
- 06 – Moins de 5 000

130. Régions exposées au radon

Halifax, NS
Bathurst, NB
Edmundston, NB
Miramichi, NB
Moncton, NB

Brandon, MB
Dauphin, MB
Morden, MB
Winkler, MB
Winnipeg, MB

Eston, SK
Regina, SK

Castlegar, BC,
Kamloops, BC
Nelson, BC
Vernon, BC

Brockville, ON
Chatham, ON
Kanata, ON
Smith Falls, ON
Windsor, ON

Chelsea, QC
Gaspé, QC
Oka, QC
Rimouski, QC

Yukon (Whitehorse)

COLLECTIVITÉS POUR SURÉCHANTILLON :

MB - Brandon, Dauphin
BC - Castlegar, Kamloops, Nelson
NB - Bathurst, Edmundston, Miramichi
ON – Smith Falls, Brockville, Chatham
QC - Gaspé, Chelsea, Rimouski
SK - Regina