Indigenous Services Canada | Services aux Autochtones Canada

A Public Health Overview from Begs Bugs to Radon and everything in between.

Environmental Public Health Services





Victoria Chatten
Environmental Public Health Officer
Amy Montgomery
Senior Environmental Public Health Officer

Canada

Environmental Public Health Program Overview

Today we will discuss:

Mould

Radon

Bed Bugs

First Nations Public Health

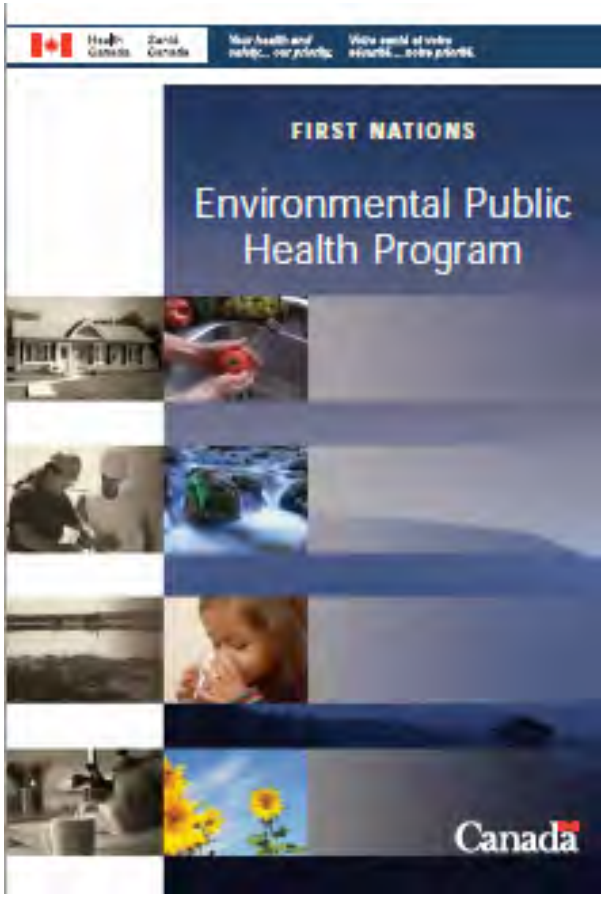
The First Nations and Inuit Health Branch (FNIHB) provides a suite of public health programs and services either through direct service delivery by staff or through funding agreements with communities or organizations.

FNIHB will fund or deliver:

- Community-based health promotion and disease prevention programs.
- Primary, home and community care services.
- Services to control communicable disease and environmental public health issues.
- Non-insured health benefits.

Program Objective

The Environmental Public Health Program **works to identify and prevent environmental public health risks that could negatively impact the health of First Nations** community residents and to recommend corrective action to reduce these risks.



Guiding Principles

1. **Work with First Nations communities as active partners** in the Environmental Public Health Program.

2. **Collaborate with** public health workers, provincial and local health authorities, First Nations organizations and other federal, provincial and municipal departments and agencies when delivering environmental public health programming in First Nations communities.

3. **Strive for a level of on-reserve environmental public health services** that is comparable to that available off-reserve and consistent from region to region.

Role of Environmental Public Health Officers

- EPHOs (formerly know as EHOs) provide advice, guidance, education, public health inspections and recommendations to First Nations to help manage public health risks associated with the environment.
- Gather data to analyse what steps can be taken to promote public health in First Nation communities.
- Can be employed by Indigenous Services Canada - FNIHB or First Nation organizations.
- All EPHOs **must be certified with the Canadian Institute of Public Health Inspectors**.

Ontario EPHS Organization

Sioux Lookout

- 1 Senior EPHO - Sioux Lookout
- 5 EPHOs: all in Sioux Lookout
- transferred EHOs (2) serving Sioux Lookout area/Thunder Bay area First Nations

Thunder Bay West

- 1 Senior EPHO - Thunder Bay
- 3 EPHOs: Fort Frances, Thunder Bay (2)
- transferred EHOs (2) serving Kenora area First Nations

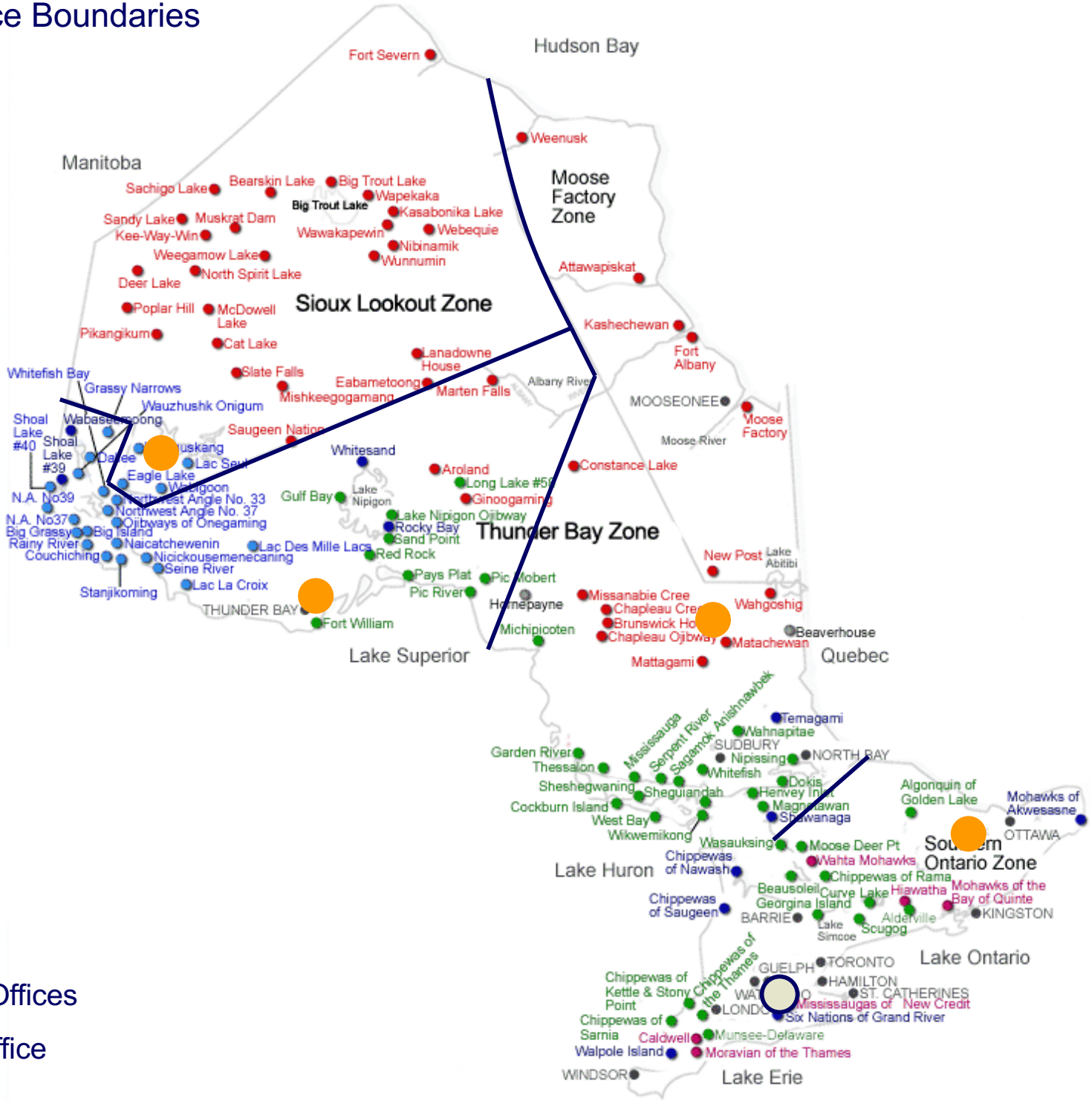
Thunder Bay East

- 1 Senior EPHO – Timmins
- 5 EPHOs: Sault Ste Marie, Sudbury(2), Timmins(2)

Southern Ontario

- 1 Senior EPHO - Ottawa
- 4 EPHOs: London, Brantford, Washago, Peterborough
- 1 transferred EHO serving Akwesasne

Program Service Boundaries



SEPHO Offices

REHM Office

Core Programming

1. Drinking Water
2. Food Safety
3. **Health and Housing**
4. Wastewater
5. Solid Waste Disposal
6. Facilities Inspection
7. Communicable Disease Control
8. Emergency Preparedness/Response

Environmental Public Health Services

EPHOs role in community Housing

HEALTH AND HOUSING

A healthy home means that residents have the physical and social conditions necessary for health, safety, hygiene and comfort. The Environmental Public Health Program works with First Nations communities and other agencies to help address public health issues in housing.

Activities

1) ENVIRONMENTAL PUBLIC HEALTH ASSESSMENT

- Provide public health inspections of on-reserve public/social housing upon request. Inspections may include evaluation of indoor air quality, contaminants, pest control, water supply, solid and liquid waste disposal, general safety, structural defects and overcrowding.
- Review plans from a public health perspective for new housing developments and renovations.
- Provide advice, guidance and recommendations to Chiefs, Councils, community workers and occupants related to all stages of housing: site and design, construction, occupancy and demolition.

2) PUBLIC EDUCATION

- Provide public education to Chiefs, Councils, community workers and occupants about how to maintain a safe and healthy home.

3) TRAINING

- Provide training sessions upon request on public health issues related to housing.

Mould





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Mould - Overview

1) What is Mould?
2) Conditions for Mould Growth
3) Health Effects
4) Investigation
5) Areas of High Risk of Mould Growth
6) Control Measures and Remediation
7) Tips for Occupants to Prevent Mould

What is Mould?

Mould is the common word for any **fungus** that grows on food or damp materials. Mould can be black, white or almost any colour. It often looks like a stain or smudge and it may smell musty.

In order to grow, mould needs moisture and a material it can live on. It then releases "spores" into the air which are small enough that people can breathe them into their lungs. Breathing in large amounts of these spores and the by-products they produce can negatively impact your health.

Conditions for Mould Growth

In order for mould to grow you need:

1) **Relative Humidity -** of 50% or higher
2) **Moisture** (water infiltration, plumbing leak, condensation, flooding)
3) **Time** (material must be wet for >48 hrs)
4) **Food source** (dust, drywall, cardboard, cellulose, insulation, wood, fabric, etc.)

What are the Potential Health Risks for Mould?

There is a relationship between indoor mould, damp conditions and increased;

- Eye, nose and throat irritation
- Coughing and phlegm build-up
- Wheezing and shortness of breath
- Symptoms of asthma
- Allergic reactions

*People respond to mould in different ways, depending upon the amount of exposure and the person's overall health

Investigation

Visual Inspection

Identifying damp areas or where water damage has occurred

Sampling

* Air sampling is not recommended

****The best way to reduce your health risk to mould is to identify and remove the moisture source and clean up the mould****

Areas at High Risk of Mould Growth

Downspout Missing or Damaged

Perimeter of House

Windows:

Condensation on surfaces due to excessive humidity, lack of ventilation, or low temperature

Results in Mould Growth

Under counter plumbing

Water Leaks

Plugged/Clogged Vents

Control Measures & Remediation

- First …try to find and fix the source of moisture causing the mould. i.e. Plumbing leak = Make any necessary repairs.
  *The source of moisture should be fixed to try to make sure the mould cannot grow back once it's cleaned.
- Before beginning any mould clean-up take steps to ensure that you do not expose yourself or others to mould spores.
- Recommended PPE = adequate breathing mask (N95 or better respirator), safety glasses or goggles and rubber gloves.

*Even with adequate precautions, mould spores may become airborne. As a precaution during clean-up, children, the elderly and sensitive people such as those with asthma, allergies or other health problems should leave the house. Consult your physician if in doubt.

Cleaning Up Small Areas (< 1 m^2)

You can clean mould areas that are less than the size of a standard large garbage bag folded in half (1 square metre).

Follow these steps:

1. Put on protective wear including a long sleeve shirt, appropriate and properly fitted dust mask, safety glasses or goggles and rubber gloves.
2. Prepare a bucket with water and a bit of dish detergent (unscented) and another with clean water. Cleaning drywall, can use baking soda instead of dish detergent.
3. Clean the surface
    1. Wipe the surface with a rag dipped in the soapy water
    2. Sponge with a clean, damp rag and dry quickly
    3. Do not allow the drywall to get too wet
4. Replace porous or absorbent materials (such as ceiling tiles, upholstery and carpeting) that become mouldy or are badly damaged.

Medium Areas (>1 m^2 but <3m^2)

- Can be multiple patches but total mould area is less than 3m^2 (patches close together are considered 1 patch)
- In many cases professional help is needed to take care of medium amounts of mould but the cleaning may be able to be completed with proper training and precautions

Larger Areas (> 3m^2)

- Large areas of mould should be left to contractors who are trained to deal with mould assessment and cleanup
- If the area to be cleaned is large and cannot be isolated from the rest of the house, it may be necessary to relocate the residents during clean-up and renovation work
- All workers should be familiar with their PPE, its repair, maintenance and its cleaning requirements and the hazards associated with handling mould-contaminated material

How to Prevent MOULD

When you see water or moisture report it and **act quickly!**

- Check home foundation, walls, windows, roof, plumbing, tubs and sinks for water leaks. If you find a leak or a spill, dry the area and fix the leak.

- Check window sills regularly for condensation or moisture, particularly during the cold months. If found, act quickly to dry the wet surface.

How to Prevent MOULD

Ventilation, Ventilation, Ventilation!

- Turn on an exhaust fan or open a window when showering or cooking. Let the fan run for a few minutes after you are finished.

- Check clothes dryer, bathroom and kitchen fans, stoves, and oil or propane heaters to be sure they are vented outside.

- Open windows, when practical. Use fans as needed.

- **Turn ON and use your HRV**

How to Prevent MOULD

Control moisture and keep home dry

- Keep home warm and ensure good air circulation.
- Rooms or areas that become cold can encourage condensation to form and surrounding materials to become damp and mouldy.
- Keep furniture and other belongings away from exterior walls to allow warm air to circulate.

How to Prevent MOULD

Remove items that may cause mould

- Reduce the amount of stored materials, especially in the basement and CRAWLSPACES.
- Throw out wet and badly damaged or musty smelling items.
- Do not store firewood inside the home.
- Remove carpet in bathroom and basements.
- Remove clutter and take out garbage regularly.

How to Prevent MOULD

Prevent water from entering a home

- Install downspout extensions to take rainwater and melted snow away from the home.

- Make sure eaves troughs/roof gutters and downspouts are connected and working. Clean and repair regularly.

- Make sure the ground slopes away from the home foundation, so that water does not collect around the foundation and enter the home.

Radon





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What is Radon ?

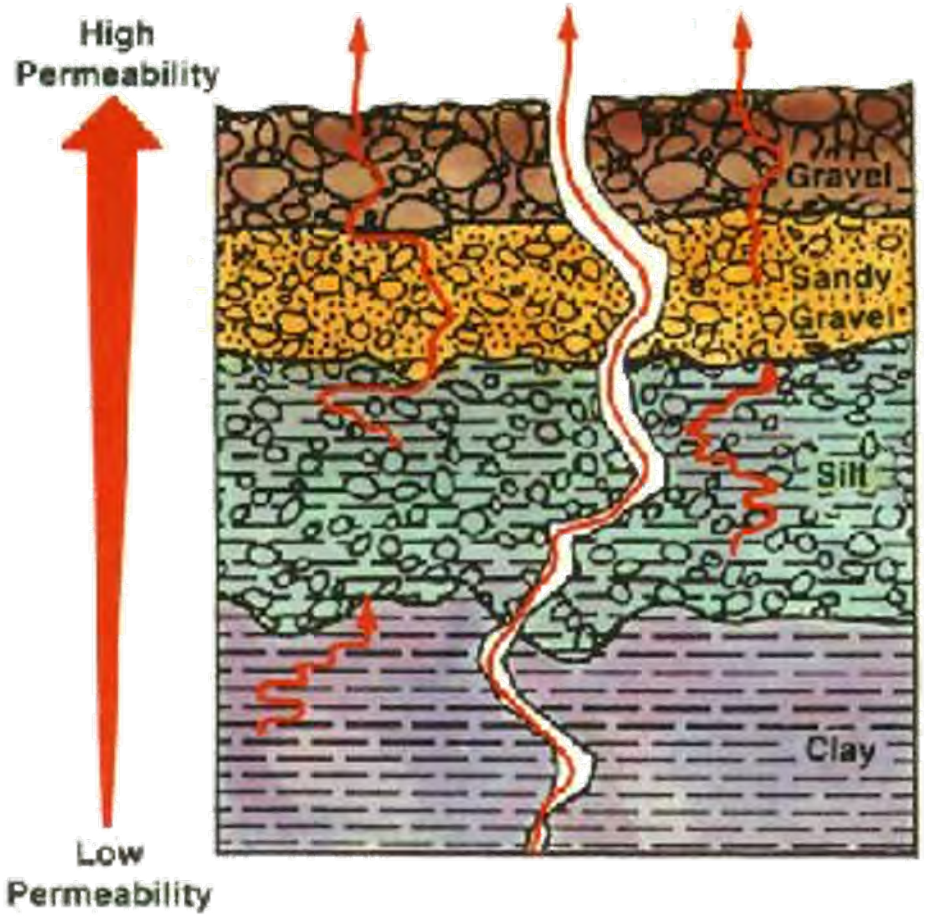
- Naturally occurring radioactive gas
- Colourless, tasteless, odourless

  you can't see it, you can't smell it, you can't taste it
- Produced from decay of uranium present in soils and rocks

- ^{222}Rn has a half-life of 3.8 days
- In Canada (and elsewhere) radon is measured in the SI units of becquerels per cubic metre (Bq/m^3)
- In the USA, radon is measured in picocuries per litre (pCi/L)

$1\ pCi/L = 37\ Bq/m^3$

Radon is released from soil…



- As uranium deposits in soil decay, radon gas is produced
- Radon gas can easily move through permeable soils such as sand and gravel
- Radon is soluble in water and can be found in groundwater from small wells
- Radon released into the atmosphere is diluted to low concentrations (10-15 Bq/m^3)

How Radon Enters a House?

- Any cracks, openings or gaps in foundation walls or floors provide route(s) of entry into home
- The air pressure inside a house is normally lower than the pressure underneath or around the foundation.
- This difference in pressure acts like a vacuum drawing radon in through foundation cracks and other openings.
- Once inside the home, radon can build up to dangerous levels

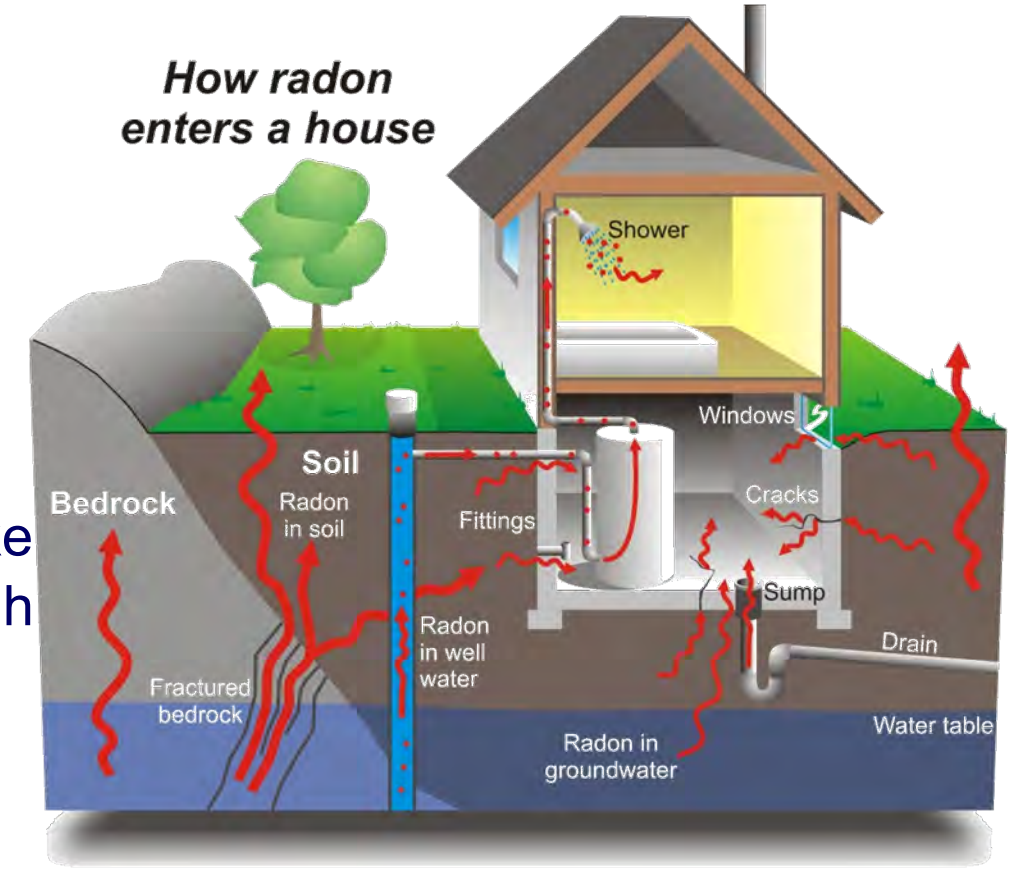


Image: Courtesy of the Department of Natural Resources Canada

What factors affect Radon levels in a house ?

Indoor radon levels vary greatly, even over a 24 hour period!

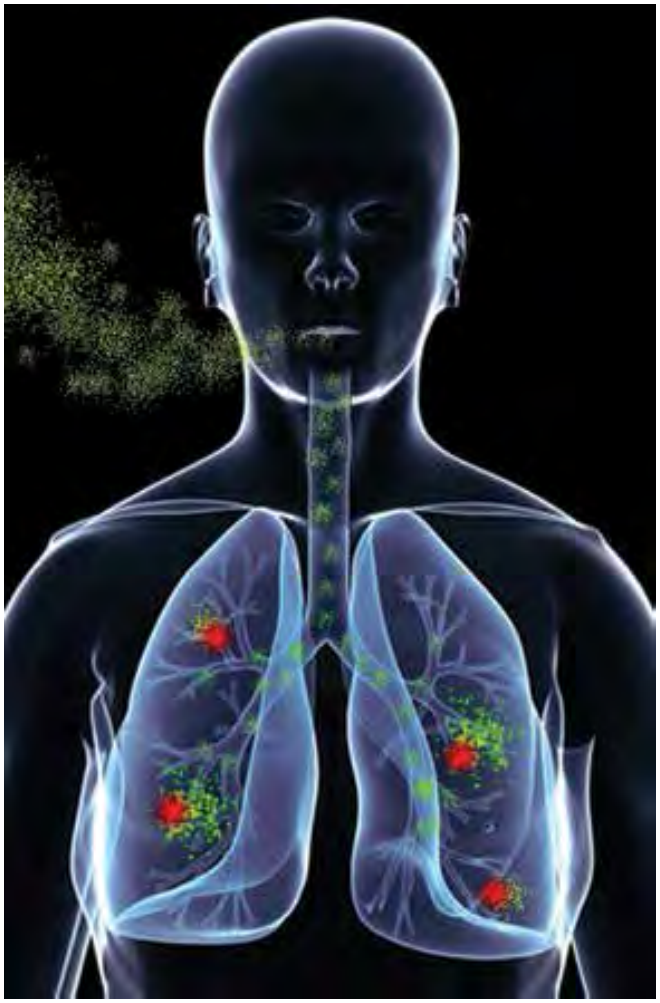
- Amount of uranium in the ground
- Weather
- Soil type and moisture
- Foundation design and construction materials used
- Number and size of openings in foundation
- Heating and ventilation
- Occupancy patterns

Two identically built houses side-by-side can have different indoor radon levels

Radon and Health

- Radon is the largest source of natural radiation exposure (52%)
- The known health effect of radon exposure is the high risk of developing **lung cancer**
- Worldwide, approximately 10% of all lung cancers are attributable to radon exposure
- In Canada, approximately 16% of lung cancer deaths are due to radon exposure
- In Ontario, approximately 13.6% of lung cancer deaths are due to radon exposure (850 deaths per year)

Health Affects of Radon Exposure



- Radon enters into lung with inhaled air
- Continuous and prolonged tissue damage can result in cancer development
- The risk of developing lung cancer depends on the *radon concentration, duration of exposure, and smoking habits*

- **Radon exposure is the leading cause of lung cancer among non-smokers**
- **Radon exposure is the second leading cause of lung cancer among smokers**

Radon Level (Bq/m^3)	Lifetime Risk Non-Smoker	Lifetime Risk Smoker
Background	1%	12%
200	2%	17%
400	3%	22%
800	5%	30%

The combined effects of radon exposure and smoking create a RISK greater than the two actions separately

Radon – Federal Guidelines

New guideline introduced in 2007:

"*Remedial measures should be undertaken in a dwelling whenever the average annual radon concentration exceeds 200 Bq/m^3 in the normal occupancy area*"

"Dwelling" includes residential homes, and buildings with a high public occupancy rate such as schools, hospitals, long-term care residences, and correctional facilities

Normal Occupancy =

Occupied for greater than 4 hours per day

How to Test for Radon

Two options:

1. Hire a certified radon measurement professional

2. Purchase a long term, do-it-yourself test kit

(available online, over phone, and some retail stores)

- Health Canada recommends using long-term test device, for a minimum of 3 months, ideally during the fall and winter seasons

- Measurements gathered over a longer period of time will provide a better estimate of the annual average exposure

Radon Test Devices

- **Electret Ion Chamber**

- **Alpha Track Detector (ATD)**

- **Continuous Radon Monitor (CRM)**

200 - 600 Bq/m³
fix your home
within 2 years

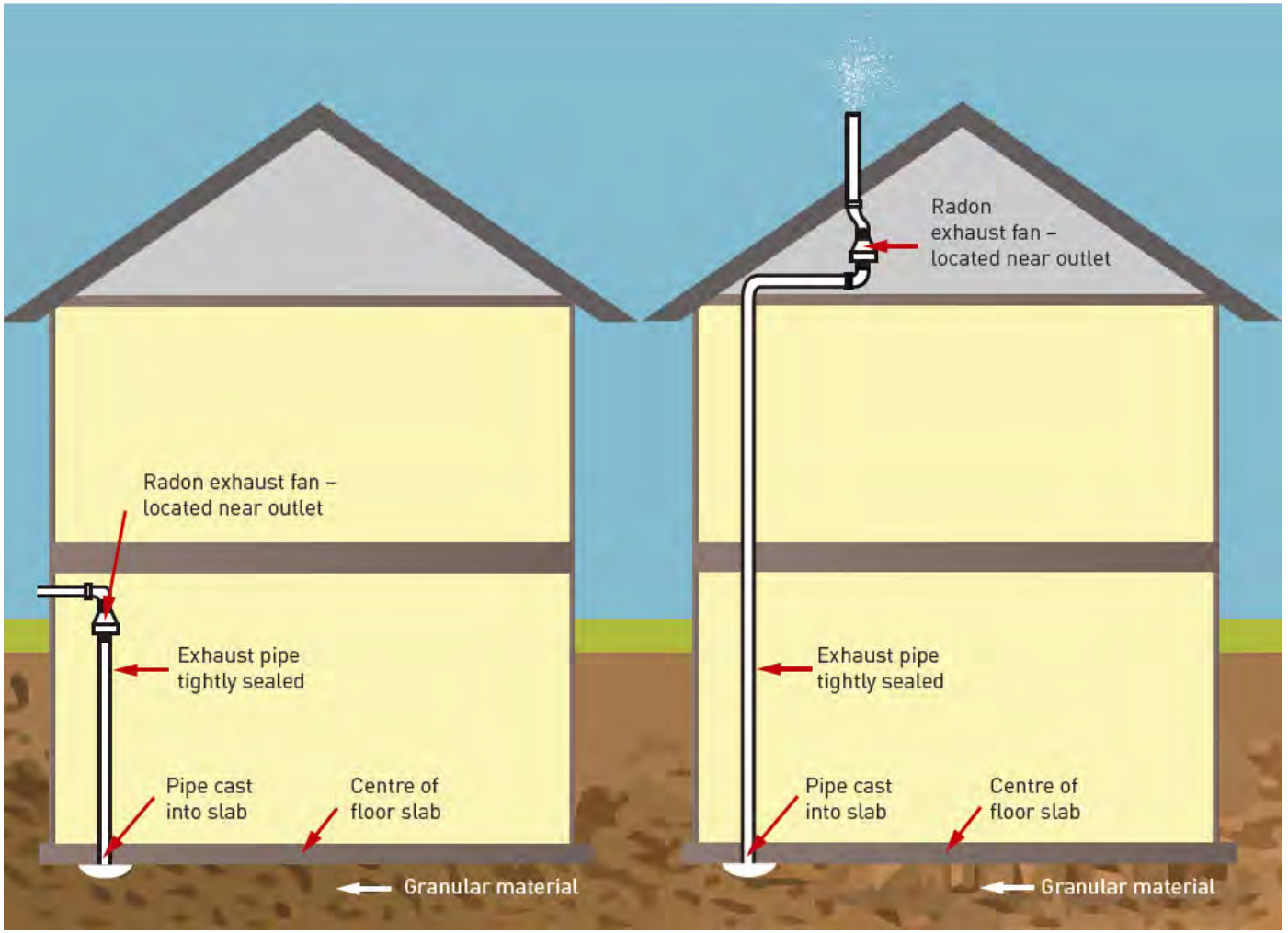
Above 600 Bq/m³
fix your home
within 1 year

How can you reduce Radon levels?

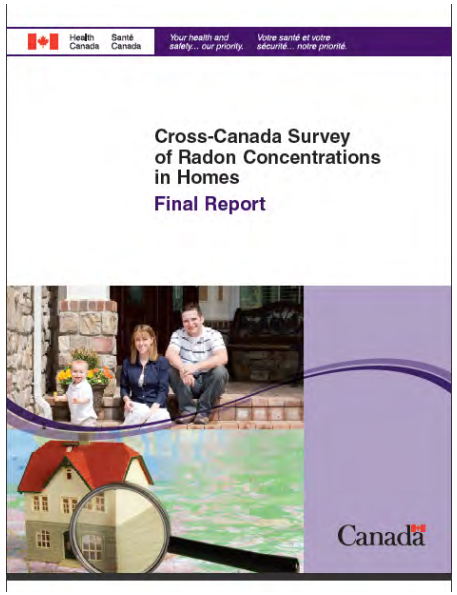
- If the radon level is found to be high, it can be fixed at a reasonable cost
- Hire a C-NRPP certified radon mitigation professional
- The most effective radon reduction method is called **Active Soil Depressurization** – typically done by a contractor
- Other actions that can be taken to reduce radon:
  - Increase the balanced exchange of air – air exchanger or HRV
  - Seal radon entry routes - cracks in the foundation, sump holes, gaps around pipes and drains

Active Soil Depressurization (ASD)

- The most effective radon reduction method
- Involves installing a pipe and fan that draws the radon from below the house and pushes it to the outside before it can enter your home
- Typically leads to radon reductions of 90%+



Cross Canada Residential Survey of Homes - RADON SURVEY



- From 2009 to 2011, we have surveyed approximately 14,000 homes across Canada

- About 95% of Health Regions that participated had homes tested above the Canadian guideline of 200 Bq/m^3

- Approximately 7% of Canadian homes exceeded the Canadian guideline

Cross Canada Residential Radon Survey

Population Weighted % Homes >200 Bq/m^3

AB	5.7%
BC	3.9%
MB	19.4%
NB	20.6%
NL	5.1%
NS	10.7%
NT	5.4%

NU	0.0%
ON	4.6%
PE	3.5%
QC	8.2%
SK	15.7%
YT	19.6%

Even in provinces where population weighted % was low, there were a significant number of Health Regions where 10% or more of homes tested were above the guideline:

ON 13/36 (36%) HRs
BC 5/16 (31%) HRs

95% of HRs had homes with high radon

There are no areas of the country that are 'radon free'

Radon Testing First Nation Communities in Ontario

- In 2013-14, Health Canada's National Radon Program in collaboration with the **First Nations and Inuit Health Branch (**FNIHB) of Health Canada tested 75 public buildings in 14 First Nations communities across Ontario

- From 75 buildings, **only 3 buildings (4%) were tested high**

- FNIHB EPHOs followed up with the individual Bands that had high radon results. They worked with each community to determine the next steps for the identified buildings

National Building Code of Canada - 2010

- **In 2010, major changes were introduced in Canada's National Building Code**
- **Changes provide basic protection against radon ingress**

Applies to <u>all new housing</u> and small buildings:

✓Polyethylene soil gas barrier required under slab

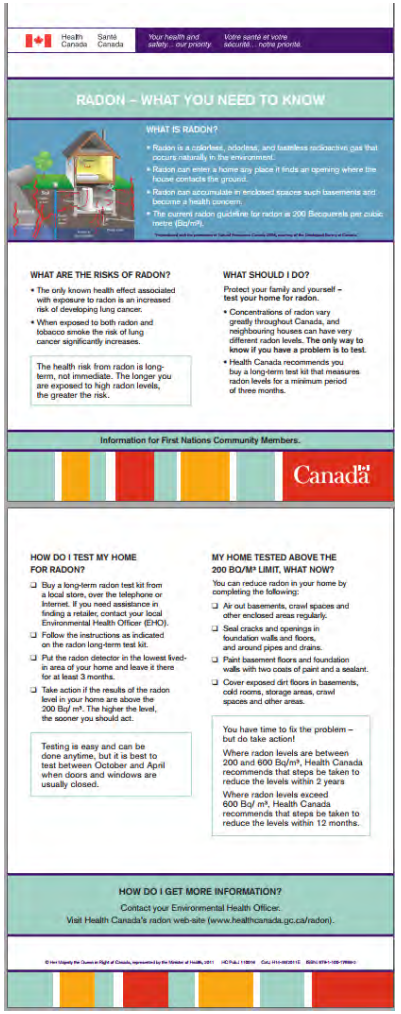
✓Slab perimeter sealed to air barrier of the wall

✓All penetrations (mostly pipes) sealed

✓Sump pit cover required to be airtight

When a community expresses an interest in surveying their housing, Environmental Public Health Officers will assist communities:

- in planning their testing and sampling approach
- provide guidance on the proper deployment of detectors
- provide recommendations based on the results of the laboratory reports



Health Canada / Santé Canada

Your health and safety... our priority. / Votre santé et votre sécurité... notre priorité.

RADON – WHAT YOU NEED TO KNOW

WHAT IS RADON?

- Radon is a colorless, odorless, and tasteless radioactive gas that occurs naturally in the environment.
- Radon can enter a home any place it finds an opening where the house contacts the ground.
- Radon can accumulate in enclosed spaces such basements and become a health concern.
- The current radon guideline for radon is 200 Becquerels per cubic metre (Bq/m³).

WHAT ARE THE RISKS OF RADON?

- The only known health effect associated with exposure to radon is an increased risk of developing lung cancer.
- When exposed to both radon and tobacco smoke the risk of lung cancer significantly increases.

The health risk from radon is long-term, not immediate. The longer you are exposed to high radon levels, the greater the risk.

WHAT SHOULD I DO?

Protect your family and yourself – test your home for radon.

- Concentrations of radon vary greatly throughout Canada, and neighbouring houses can have very different radon levels. The only way to know if you have a problem is to test.
- Health Canada recommends you buy a long-term test kit that measures radon levels for a minimum period of three months.

Information for First Nations Community Members.

Canada

HOW DO I TEST MY HOME FOR RADON?

- ❑ Buy a long-term radon test kit from a local store, over the telephone or Internet. If you need assistance in finding a retailer, contact your local Environmental Health Officer (EHO).
- ❑ Follow the instructions as indicated on the radon long-term test kit.
- ❑ Put the radon detector in the lowest lived-in area of your home and leave it there for at least 3 months.
- ❑ Take action if the results of the radon level in your home are above the 200 Bq/ m³. The higher the level, the sooner you should act.

Testing is easy and can be done anytime, but it is best to test between October and April when doors and windows are usually closed.

MY HOME TESTED ABOVE THE 200 BQ/M³ LIMIT. WHAT NOW?

You can reduce radon in your home by completing the following:

- ❑ Air out basements, crawl spaces and other enclosed areas regularly.
- ❑ Seal cracks and openings in foundation walls and floors, and around pipes and drains.
- ❑ Paint basement floors and foundation walls with two coats of paint and a sealant.
- ❑ Cover exposed dirt floors in basements, cold rooms, storage areas, crawl spaces and other areas.

You have time to fix the problem – but do take action!

Where radon levels are between 200 and 600 Bq/m³, Health Canada recommends that steps be taken to reduce the levels within 2 years

Where radon levels exceed 600 Bq/ m³, Health Canada recommends that steps be taken to reduce the levels within 12 months.

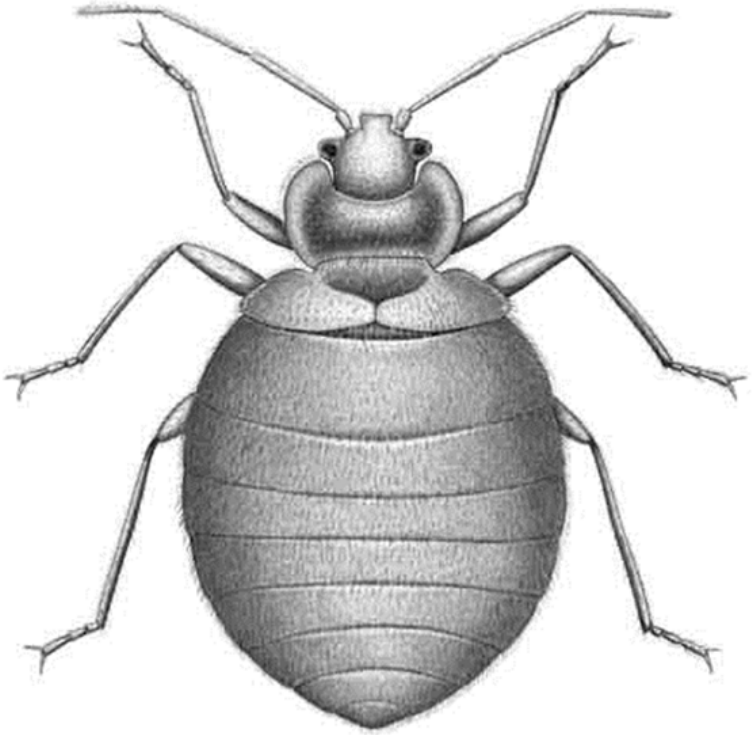
HOW DO I GET MORE INFORMATION?

Contact your Environmental Health Officer.
Visit Health Canada's radon web-site (www.healthcanada.gc.ca/radon).

Bed Bugs

Overview of Bed Bugs

- History
- Biology
- Activity/Signs of Infestation
- Treatment/Control
- Prevention
- Strategies for Housing Departments
- Social Stigma of Bed Bugs



HISTORY

- Around 1950 bedbugs were thought to be eradicated
- The pesticide DDT was very effective at eliminating the bugs (as well as other insects.)

Then….

- Concerns with DDT = banned as an insecticide
- Resistance to DDT in bedbugs, caused infestations to increase in number.
- Increased Global Travel – bed bugs spread globally by travellers and trade
- Increase in the purchase of second-hand items

BIOLOGY

- Oval, flat, wingless body – 6 mm long
- Reddish brown in colour (deep red after feeding)
- Blood feeding
- Cannot fly or jump
- Life cycle contains eggs, nymphs and adults
- Nymphs are smaller and lighter than adults
- Eggs are whitish – 1mm

Indigenous Services Canada
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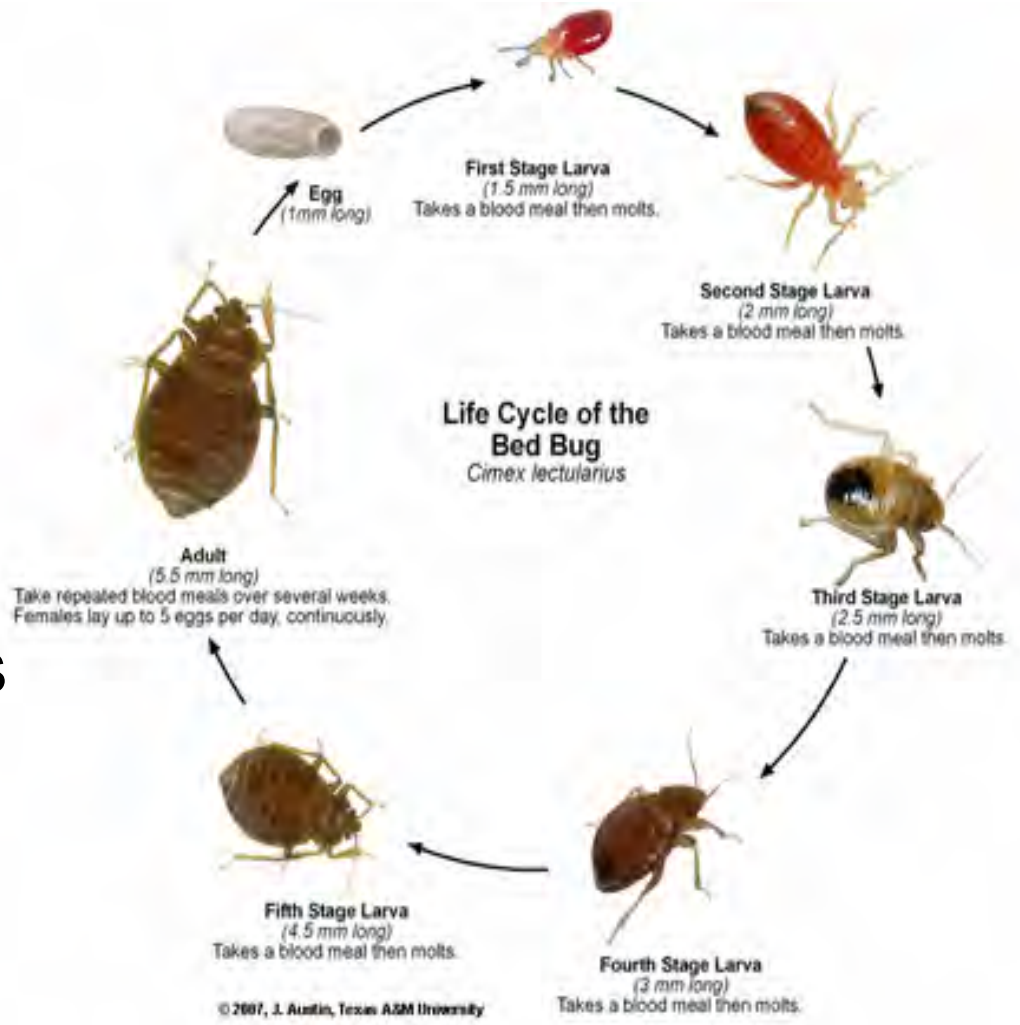
LOOK-A-LIKES

Book Louse

Flea

BIOLOGY - LIFE CYCLE

- Bedbugs go through 6 stages (5 nymph and 1 adult stage)
- They must feed at each stage (blood meal)
- Female can lay 200 eggs in lifetime (2-4 per day)
- Eggs hatch in 6-10 days
- Adults can live for up to a year without blood meal



Biology – Bug Activity

- Do not wander far from food source
- Feed at night
- Attracted to carbon dioxide
- Can feed on pets
- Like dark places to hide
- Hitchhike on luggage, furniture etc.

Signs of Infestation - BITES

- Usually painless, despite the small, visible bite marks
- Most people do not report a reaction to bed bug bites
- Most bites heal within a week, unless they are aggravated by scratching
- May look like the bites of other insects such as fleas, mosquitoes, or spiders and may also look like a rash
- Difficult to diagnosis

Harmful to Humans???

- Bed bugs are a nuisance - NOT a health hazard

There is no evidence that bed bugs transmit blood-borne infectious diseases e.g., Hepatitis B, Hepatitis C or HIV

- Secondary infections may result from scratching and bites should be treated by health care professional
- Saliva from the bites may cause a mild or severe allergic reactions in certain individuals

Signs of Infestation – IN THE HOME

- Visible bugs on furniture, bedding etc.

If bug is found – use clear jar/bottle or Ziploc bag for identification by your EPHO

- Dark spots visible on bedding or furniture from their droppings
- Bloodstains from crushed bed bugs on sheets
- May be a sweet, musty odour in your home

Signs of Infestation – Where to Look

- Floor Cracks
- Carpets - underneath
- Cracks between walls
- Behind Electrical Plates/Jacks
- Inside vents
- Along mattress seams and folds
- Couch/Seat cushions, covers
- Upholstered furniture
- Inside box springs
- Blankets
- Bed Frames/Legs
- Frame Joints Headboards
- Pet Bedding
- Underneath drawers


Courtesy of the National Pest Management Association; PestWorld.org

Signs of Infestation – Close Up

Signs of Infestation – Close Up

Treatment/Control

Bed bug clean up and control

- Difficult to get rid of - infestations are hard to treat.
- Repeat applications are usually required
- Best and safest approach is to hire a **licensed pest control operator =** Trained professionals that have the experience in bed bug control methods, tools and equipment necessary to treat affected areas.

The licensed pest control operator will be able to:

- Confirm if you have bed bugs
- Find out where bed bugs are hiding
- **Treat the home and belongings with steam, heat or chemical pesticides if necessary**

**If pesticides are used licences and training are required to handle chemicals*

- Conduct subsequent inspections conduct repeated treatments as necessary
- Follow their recommendations; Room preparation, after treatment precautions, and what to look for after treatment

PREVENTION

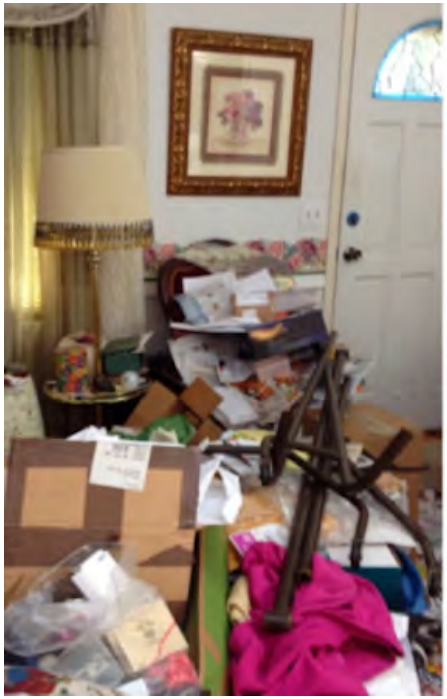
- Do not bring second hand/used mattresses, box springs, headboards or other upholstered furniture into your home
- Inspect used furniture before accepting and bringing into your home
- Second hand clothing - Launder in hot water immediately and dry in the drier on the hottest cycle.

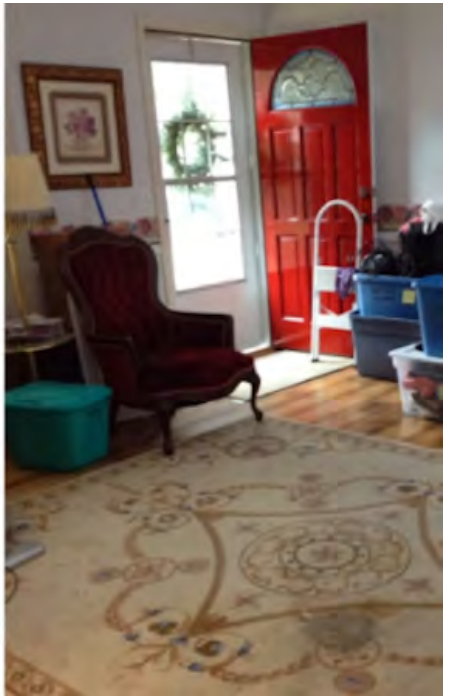
Heat at 50°C is effective at killing bed bugs and bed bug eggs.

- Leave luggage bags in the garage or in the bathtub while unpacking - bed bugs cannot crawl on slippery surfaces
- After traveling launder clothing and bedding immediately in hot water/hot dryer cycle
- Minimize the clutter in your home and on the floor such as books, boxes, clothing to control bed bug hiding places. Store these items in sealed containers as bed bugs do not chew through plastic or furniture

PREVENTION – DE-CLUTTER

- Bed Bugs are NOT an indicator of cleanliness or sanitation, so having a clean home does not mean you cannot get bed bugs
- However, if you do have bed bugs, having a clean and tidy home will make it easier to see bed bugs and control them.
- Minimize the clutter in your home and on the floor such as books, boxes, clothing to control bed bug hiding places.





Strategies for Housing Departments

Prevention is the best measure.

COMMUNICATION within your communities:

- Education sessions
- Utilize community websites, newspapers, community newsletters, Social Media, radio stations..
- Providing resources such as information sheets, fact sheets
- Messages can include…how to look for bed bugs while travelling, etc.

Strategies for Housing Departments

- If you suspect that you have a Bed Bug problem within a community home, the best approach is to capture a bug for identification and Contact your community EPHO
- Housing Departments should be aware and the pest management approach should be all inclusive (involve health/social departments)
- Cooperation between the individual/family and the Housing Department is important!

Strategies for Housing Departments

- Use a bright flashlight to find bed bugs in their hiding spots (bed frames, behind baseboards, seams of mattresses, clothing on the floor)

- Tidy up all clutter around the home and start by:
  - Clean bedding, linens, curtains and rugs.
  - To kill bed bugs: linens and clothing should be washed in hot water and dried in the dryer for 30 minutes on the hottest setting
  - Clothing should be stored in dresser or wardrobes and not on the floor

Strategies for Housing Departments

- Seal cracks and crevices to reduce hiding spots
- Place monitoring devices around home such as sticky glue paper
- Climb up interceptors - placed around bed posts. Prevents bed bugs from climbing up to bed and traps bed bugs.
- Vaseline/petroleum jelly

Strategies for Housing Departments

- Use bagged vacuum with nozzle attachment. Vacuum the seams of mattress, and bed frames, nearby furniture, along baseboards and floors.
- Place used vacuum bag into a plastic bag, seal and discard right away
- Encase mattresses and boxsprings in zippered mattress cases
- If bed bugs are found on mattress/boxspring - Professional pest control operators can safely steam, heat treat and apply chemicals to destroy the bed bugs (Don’t have to throw out)

Social Implications of Bed Bugs

Social Determinants of Health:

Living condition – the social and material circumstances that people are exposed to in their homes, workplaces and communities constitute a primary determinant of the health of the population.

Social Implications of Bed Bugs

- People living in infested homes have reported mental health impacts including **stress**, **anxiety** and **insomnia**.
- Mental health can be affected if all belongings are thrown away or if occupant is isolated (social isolation)

"When the prevailing social stigma that bed bug sufferers encounter is added into the mix, the result is stress, anxiety, sleeplessness, and social isolation—all of which compromise people's health and well being."

Canadian Centre for Policy Alternatives Manitoba

- Increase awareness on how bed bugs behave will help dispel myths and reduce the negative social stigma
- Inclusive support with Health & Housing departments

Thank you!