



Your Health at Home

What you can do!

An Environmental Health Guide
for First Nations



Information about environmental health issues and tips on how to make changes in your home

Indoor Air

Noise

Drinking Water

Wastewater / Sewage

Food Safety

Artistry / Hobbies

Looking for Health Risks

Home is
where your
health is





Your Health at Home

Home is where the heart is—it is where we spend time with family, friends and loved ones. Because we spend so much time at home, *home is also where our health is.*

It is true that eating right and getting enough exercise and sleep are the foundation of good health and wellness for people of all ages. There are, however, other easy steps you can take to ensure your home is a healthy environment for yourself and your family.



Your Health at Home is an easy-to-use guide with information about environmental health issues, useful tips on how to make changes in your home, and a list of resources. The topics covered in this guide are:

Indoor Air

Noise

Drinking Water

Wastewater / Sewage

Food Safety

Artistry / Hobbies

Looking for Health Risks

Indoor Air

Indoor air may contain contaminants such as tobacco smoke, dust particles, mould spores, and chemicals, such as formaldehyde (from carpets, plywood, paints, adhesives etc.) or volatile organic compounds (VOCs), like benzene (found in cigarette smoke and other products like glues and paints, etc). These contaminants circulate through the air and are distributed throughout our homes.



What are the health effects?

Our health can be affected when harmful substances in the air enter our lungs when we breathe; our stomach/intestine when we eat foods where these particles have settled; or through our skin when we touch surfaces where these particles have settled.

Some effects may only be apparent after a period of repeated exposure (such as radon and lead), while others may have immediate effects (such as carbon monoxide and volatile organic compounds). Health effects associated with airborne contaminants can trigger and worsen existing breathing problems, such as:

- wheezing
- coughing
- sneezing
- eye, nose, and throat irritations
- asthma attacks

Even small actions—like taking off your shoes when you come inside or changing out of your work clothes when you get home—may reduce the chances of letting dirt that may contain various contaminants into your home. These habits are even more important if you work in or travel through areas where you might come into contact with products or materials that pose a health risk.

Here are some other simple steps for maintaining good indoor air quality and minimizing these health risks.

1. Smoke

Smoke can pass through cracks under and around doors, so no place in your home or car is safe from smoke! Toxic chemicals in cigarette smoke can also stick around even after the smoker has put out the cigarette, cigar, or pipe. Third-hand smoke can get trapped in hair, skin, fabric, carpet, furniture, and even toys. It builds up over time and each time another cigarette is lit, more smoke gets trapped and gets into people's lungs and bodies.



Tips – What can you do?

- By making sure your home and car are as smoke-free as possible, you will reduce harmful contaminants and keep the air clear.
- Install a smoke-detector on each level of your home.



2. Mould

Reducing indoor moisture is key to reducing potential health risks from moulds.



Tips – What can you do?

- Turn on fans that vent to the outdoors or open windows where moisture can collect such as when showering or boiling water on the stove.
- When drying clothes, either on racks or in a dryer, make sure the moisture can escape outdoors.
- Be sure to clean up spills and leaks right away. Dry out the area and dispose of wet materials that may promote mould growth such as paper, cardboard or fabric. Fix the source of moisture to avoid mould re-growth.
- Do not store items in your home that may allow mould to grow if they become wet, such as paper products, cardboard, leather, old clothes or fabric, especially items stored in the basement and closets.
- If you discover mould on hard surfaces in your home:
 - Clean up small areas of mould with soapy water and dry the surface completely.
 - Get help from an appropriate authority (such as Environmental Health Officer) when the mould covers areas larger than one square meter.

Ventilation

One of the easiest ways to improve the air in your home is through adequate ventilation. This will remove stale indoor air and reduce the amount of air pollutants inside your home and help control humidity levels.

- *Open windows and doors.*
- *Use kitchen and bathroom exhaust fans.*
- *Use and maintain your ventilation system according to manufacturer guidelines.*

3. Radon Gas

Radon is a radioactive gas that has no colour, smell or taste. It is formed by the breakdown of uranium, a natural radioactive material found in soil, rock and groundwater.

When radon is released from the ground into the outdoor air, it gets diluted to low concentrations and is not a health concern. However, in enclosed spaces, like basements, it can sometimes accumulate to high levels, which can be a risk to the health of you and your family.

The only known health effect associated with exposure to radon is a higher risk of lung cancer. When someone is exposed to both radon gas and tobacco smoke, the risk of lung cancer is even higher.





Tips – What can you do?

- Testing your home for radon is the only way to know if you have a radon problem. You can not see it or smell it. The levels of radon vary greatly across Canada. Even homes on the same street can have very different levels of radon. You can purchase a test kit at a local store, over the phone or through the internet. Ask your local Environmental Health Officer (EHO) for help if needed.
- Take action if the radon level is above the 200 becquerels per cubic metre (Bq/m³) guideline by completing the following.
 - Air out your basement, crawl spaces and other enclosed areas regularly.
 - Seal cracks and openings in your home's foundation walls and floors, and around pipes and drains.
 - Paint basement floors and foundation walls with sealant and concrete paint.
 - Cover exposed dirt floors in basements, cold rooms, storage areas, crawl spaces and other areas with moisture proof material (plastic sheeting).

4. Dust and Dust Mites

Reducing dust and dust mites in your home will help reduce irritants, which can cause allergic reactions and aggravate asthma and other breathing problems. Dust mites are so small that we can barely see them. They live in beds, carpets, furniture, pillows and blankets.



Tips – What can you do?

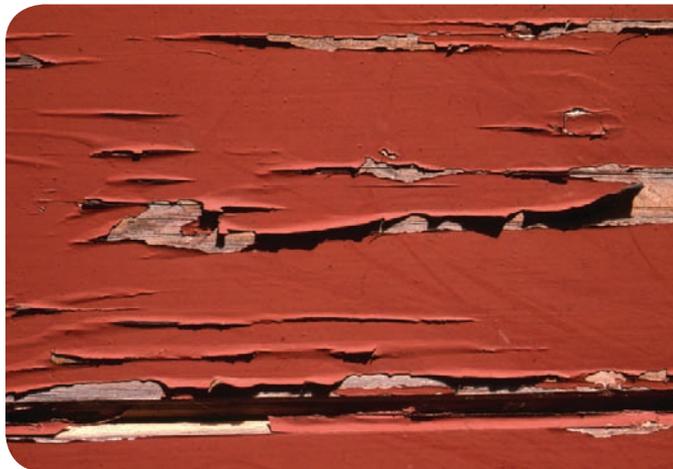
- Dust your home regularly from top to bottom. Use a damp cloth to avoid raising dust into the air.
- Reduce clutter so dust will have fewer places to settle and to make cleaning easier.
- Vacuum carpets and any fabric-covered furniture to reduce dust build-up. Vacuuming will also remove pet dander, which may cause allergic reactions in sensitive people. Keep pets out of bedrooms and off furniture to reduce your family's exposure to pet dander.
- Use a mattress and pillow protector, and vacuum mattresses to minimize dust mites. Wash sheets once a week in hot water.



5. Lead

Exposure to lead may cause harmful health effects to the nervous system, blood system and kidneys, especially in children and unborn babies. Exposure to even low levels of lead can cause learning disabilities and other harmful effects on the development of children. Pregnant women must also be careful, because lead can cross the placenta and affect their unborn child.

Lead was often added to paint made before 1960. For homes built between 1960 and 1990, small amounts of lead may still be in some of the paint used. The lead in old paint (on walls or on furniture) can be released into the air and dust if paint is poorly maintained, wearing out or chipping. As well, older homes may also have lead pipes or lead solder may have been used to join the copper pipes. The lead can then be released in your drinking water when you turn on the tap. Please see section on drinking water for more tips on how to protect your family from lead.





Tips – What can you do?

- Do not use sanders, heat guns or blowlamps to remove old paint. They create dust and fumes that contain lead. Use a chemical paint stripper, preferably one that comes in a paste form that you can apply with a brush. Chemical strippers contain potentially harmful substances, so read the instructions carefully and use them outside when you can. Keep children and pregnant women away from the work area. Always wear goggles, gloves and an appropriate breathing mask and make sure the area is well ventilated.
- Never burn waste oil, colored newspaper or magazines, batteries or wood covered with lead paint in or near your home. Doing this can cause lead fumes to be released. Please talk to your local Environmental Health Officer on disposal options for these items.
- Clean your home regularly to remove dust particles that may contain lead. This cleaning is especially important for surfaces that young children might touch or chew.
- Select toys suitable for a child's age group, and make sure to read and follow all warnings, safety messages (such as lead), and instructions that come with the toy.

Indoor Air

- If you use lead solder in a hobby, such as in joining pieces of stained glass, use a good quality breathing mask, keep surfaces clean and keep children and pregnant women out of the area. Otherwise, use lead-free solder.
- If you are concerned about your exposure to lead, talk to your doctor, who can order a test to measure the amount of lead in your blood.



6. Chemical Products

Some of the products that we buy and use in our homes can pose threats to our health, if not used according to directions. These products include household cleaners, personal-care products, and pesticides approved for indoor use. Protect everyone in your home, including those with sensitivities, young children and pregnant women by following these tips.



Recognize these warning symbols



Poison – the contents of containers with this symbol are poisonous if swallowed, touched or inhaled.



Corrosive – the contents of containers with this symbol will burn skin or eyes and can also burn the stomach if swallowed.



Flammable – the contents of containers with this symbol catch fire easily if near heat, flames or sparks.



Explosive – containers with this symbol can explode if heated or punctured.

Each warning symbol also has one of these words under it.

CAUTION – means a temporary injury may occur from improper use of the product. Death may occur after extreme exposure.

DANGER – means that the product may cause temporary or permanent injury, or death.

EXTREME DANGER – means that being exposed to even a very low quantity of the product may cause death, or temporary or permanent injury. Be very, very careful.



Tips – What can you do?

- Follow directions on the labels that tell you how to use, store and dispose of products safely.
- Always wear protective clothing (such as gloves, masks, eye protection) when using and handling chemical products.
- Open your windows when using any product with ingredients that may pose a risk.
- Teach children the symbols for DANGER!
- Make sure chemical products are stored properly:
 - Keep all chemical products out of sight, away from food, and out of reach of children (not under the kitchen sink).
 - Store household chemicals preferably in locked cabinets and in their original containers. Do not remove or cover up the symbols and labels on containers.
 - Store fuels and oils in proper containers. Make sure that these products and any machinery containing these products are properly stored outside of your home.
 - Make sure that household pesticides and bug repellants are stored away from children.
 - Read the label before each use. If there is anything in the label instructions that you do not understand, ask for help.

- Never mix chemicals together. Some mixtures can produce harmful gases (such as bleach and ammonia).
- Make sure that child-resistant containers are being used.
 - Child-resistant does not mean child-proof. Close the cap on the container all the way even if you set it down for just a moment and make sure that these child-resistant caps are working properly.
- Avoid the use of deodorizers, air fresheners or scented household cleaners. The chemicals in these contain irritants, which can cause allergic reactions and aggravate asthma and other breathing problems in people who are susceptible. You can use a solution of white vinegar and water as an alternative to clean your home.



7. Carbon monoxide

Carbon monoxide (CO) is a deadly gas that has no colour, smell or taste. It is impossible to detect without a carbon monoxide detector. It can come from:

- Unvented kerosene and gas space heaters
- Gas water heaters
- Wood stoves and fireplaces
- Charcoal burners
- Gas stoves
- Exhaust from generators and other gasoline-powered equipment like cars or snowmobiles
- Tobacco smoke

Even at low levels of exposure, CO can cause headaches and make you feel tired. The health effects at higher levels are more serious and cause death.





Tips – What can you do?

- Put at least one carbon monoxide detector with a sound alarm in your home. It should be certified by the Canadian Standards Association (CSA). Look for this certification on the label. Follow instructions for where the detector should be placed. This type of alarm will alert you early if there is a CO leak in your home.
- Maintain appliances such as furnaces, fireplaces, gas stoves and water heaters so they work properly and are properly vented. Have them inspected by a professional at least once a year.
- Never use barbecues or outdoor/camping stoves indoors. Do not use a kerosene or oil lamp in an enclosed space unless the label clearly says they are made specifically for indoor use.
- Do not start cars, trucks, snowmobiles or other vehicles or let them idle near open doors or windows or in enclosed spaces such as a garage if you have one, even when the garage door is open.
- Never start or run a gas powered lawnmower, trimmer, or snow blower in an enclosed space such as a garage.
- Keep the door between your home and the garage closed.

Noise

To most of us noise means loud sounds that we do not want to hear.

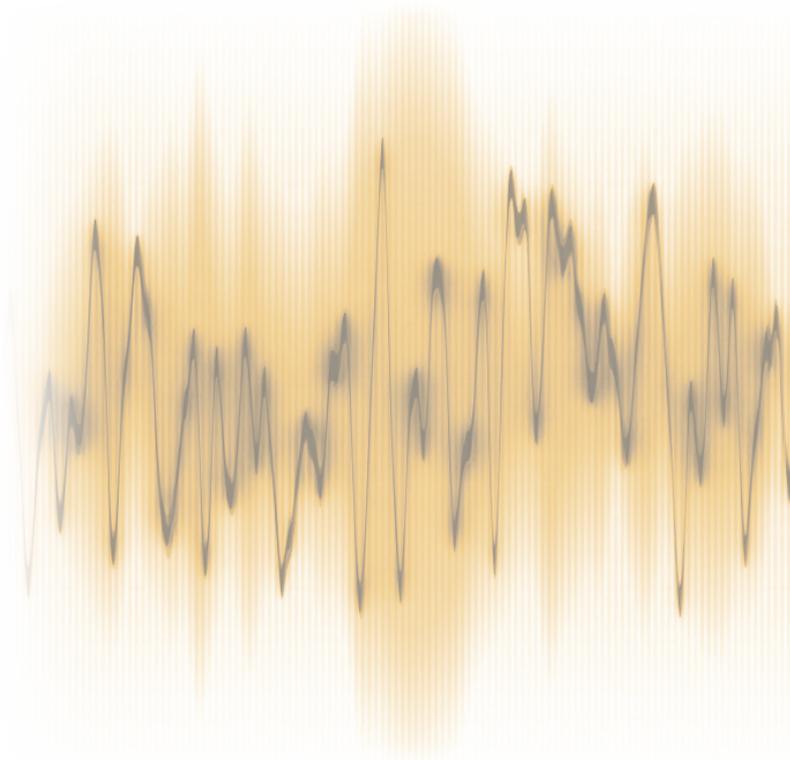
What are the health effects?

Most people find too much noise very annoying. Over time, high levels of annoyance can affect your quality of life, can be harmful to your health, and may lead to hearing loss. As homes and communities become more crowded, environmental noise levels increase.

Children may have a stress response to loud noise which in turn might have a negative effect on learning and language development. It may also disturb motivation and concentration, and may result in reduced memory and ability to carry out tasks.



Consequences of exposure to loud noise include temporary or permanent hearing loss and ringing or buzzing in the ears (tinnitus). Noise may also affect your ability to have a normal conversation, enjoy leisure activities, get a good night's sleep, or do work that needs thought and concentration. A lack of sleep deprives the body and brain of time needed to rest and renew. Over time, this can lead to stress, anxiety, and high blood pressure.





Common sources of high levels of noise that may pose a risk to health include:

- Personal music players used with headphones or ear buds.
- Toys, especially noisy toys that may be held too close to a child's ear or that a child may use in ways that are not according to the manufacturer's "recommended use" instructions.





Tips – What can you do?

- Limit the amount of time you spend on noisy leisure activities, or wear protective gear.
- Give your ears time to recover if you have been exposed to loud noise and experienced temporary hearing loss or ringing or buzzing in your ears.
- Buy toys that do not have loud sound effects.



Drinking Water

Typically, groundwater is naturally clean and safe to drink. Because the soil on top acts as a filter, groundwater is usually free of micro-organisms that may cause disease. However, groundwater can become contaminated if the casings or caps for wells are not installed in the correct way.

What are the health effects?

Health effects that come from drinking contaminated water include:

- Gastro-intestinal infections
- Nausea and vomiting





Tips – What can you do?

In order to prevent illness, people who use well water should maintain their well properly and test their well water regularly.

- Check the well cap regularly to ensure that it is securely in place and watertight.
- Have your well tested at least once a year for the presence of coliforms. You may not be able to see, smell or taste these contaminants, but they could still be there. The best times to sample your well water are:
 - In early spring just after the thaw,
 - After a long dry spell,
 - Following heavy rains, or
 - When you start to use the well again after not using it for a long time.
- Have your well water tested occasionally for possible inorganic and organic chemical contaminants.
- Run the cold water tap for a few minutes each morning or when the system has not been used for a number of hours.
- Use only **cold** tap water for drinking, cooking and making baby formula, since hot water may contain toxic metals such as lead (hot water will more easily dissolve contaminants and hot water often can sit for long periods of time in your hot water tank and pipes).
- During boil-water advisories or boil-water orders, you should bring your water to a rolling boil for a full minute. Do this for all water you use for drinking, cooking, making beverages and ice cubes, washing fruits and vegetables, or brushing teeth. Supervise toddlers and infants to ensure they do not drink the water while being bathed.



Wastewater / Sewage



Tips – What can you do?

What are the health effects?

Wastewater/sewage can be harmful to humans because it contains disease-causing organisms and toxins. It must go through a treatment process, otherwise it can pollute surface water, groundwater sources and even drinking water.

If you have a piped system and if there is an interruption in water service, when service resumes, run water to flush the line to ensure no contamination remains in the system.

If you have a septic tank and leaching bed, here are some tips to keep your family safe.

Leaching Bed

- Do not build anything on top of the leaching bed, such as parking areas, deck or storage shed.
- Do not drive vehicles or machinery over the bed, as the weight could crush the distribution pipes or pack down the soil, even in winter.
- Make sure the ground over the leaching bed has a good cover of grass or very shallow rooted plants.
- Do not plant trees or shrubs near the leaching bed.
- The leaching bed should be built such that water does not pool around it. If water does start to pool, contact your Environmental Health Officer for advice.



Septic Tank

- Make sure you have easy access to your septic tank.
- Complete maintenance regularly.
 - Have your septic tank pumped out every three to five years or when 1/3 of the tank is filled with solids (sludge). You will need a licensed professional to pump and dispose of the waste.
 - If your system has effluent filters, clean them out on a regular basis. How often you clean them depends on the filter type and size and the amount of water used in your household.
- Be careful what you put into your septic system.
 - Do not pour paints, solvents, thinners, nail polish remover, or other common household products, medicines or antibiotics down the drain or into your toilet. Doing this could kill the bacteria that break down the organic matter in the wastewater.
 - Never put oils, grease, fat, disposable diapers, tampons and their applicators, condoms, cat box litter, plastics, cigarette filters, egg shells, or other kitchen waste into the septic system. Solids are not digested and can block your system or shorten its life.
 - Try to control the amount of water that enters your septic system by reducing the amount of water you use. Some good ways to reduce use are to fix leaky faucets, repair running toilets, and use low-flow toilets.

Food Safety

What are the health effects?

Foodborne illness occurs when a person gets sick from eating food that has been contaminated with an unwanted micro-organism, such as a bacteria, virus or parasite. This type of illness is also known as food poisoning.

The most common symptoms of foodborne illness include stomach cramps, nausea, vomiting, diarrhea, and fever. Many cases of foodborne illness are not reported because the signs often resemble the stomach flu.

While most people fully recover from foodborne illnesses, they can result in chronic health problems in some cases.

Although food handling practices that minimize the number of bacteria in food must be employed at all stages of commercial processing, consumers also have an important role to play in practicing safe food handling techniques in the home.





Tips – What can you do?

Food Handling

Clean

- Always wash your hands and cooking surfaces with soap and hot water before you handle food. Do this often while you prepare the food, and again when you have finished. Sanitize countertops, cutting boards and utensils with a freshly made mild bleach solution (15-20 ml bleach in 1 L of water).
- Make sure you try to wash dishes and clean up food residues right away after each meal.
- Wash all fresh fruits and vegetables under cool running water before you eat or cook them.
- Clean country food (fish, caribou, deer, seal, etc.) outside when it is possible to do so. This will reduce exposure to unwanted bacteria and dander. When cleaning country food indoors, clean and disinfect the counters, cutting boards, and knives completely when you are finished.

Separate

- Keep foods like meats and their juices away from other foods during storage and preparation.
- Have separate cutting boards for raw meats and for vegetables or cooked foods.

Cook

- Cooking times vary for meats and fish. After they are cooked, keep meats and fish out of the “danger zone” - between 4°C to 60°C (or 40°F to 140°F) by preparing them quickly and serving them right away. Do not let food sit at temperatures where bacteria can grow (in the danger zone). Keep hot foods, hot and cold foods, cold.

Store

- Refrigerate or freeze foods that can spoil, as well as cooked food and leftovers within two hours. Make sure the refrigerator is set at a temperature of 4°C (40°F) or colder, and keep the freezer set at -18°C (0°F).
- Store food in containers with lids or resealable bags.

Food Consumption

- Consult your local, provincial or territorial governments for information about amount of locally caught fish that is safe to eat in certain regions (to avoid excess mercury from fish).
- Pregnant and nursing women, as well as children, should avoid certain organs, such as the liver and kidneys of wildlife.



Artistry / Hobbies

What are the health effects?

As well as creating hours of fun, hobbies can also be good for your health since they stimulate both body and mind. Practicing a hobby can boost creativity, self esteem, passion, pleasure and accomplishments. On the other hand, hobbies can have some negative health effects, especially if they involve lead (see section on indoor air quality).





Tips – What can you do?

- Sand and/or carve wood, antler, bone, soapstone outside when possible. If you must do it inside, please wear a good quality breathing mask and make sure the area is well ventilated.
- Tan hides outdoors or outside the home.
- When using paints, glue or any other type of chemical product, make sure you do it in a well-ventilated room or outdoors when possible.
- Use a damp cloth or mop to pick up dust from sewing, knitting, etc.



Looking for Health Risks

As part of healthy everyday habits, it is a good idea to take a close look at your home to search for any hidden health risks.

Doing a home-health inventory is easy. Here are a few simple things you can do yourself in just a few hours. This can help you transform your home into a healthier and safer place.

If you suspect it, check it!

If you think something is not right, check it out. Once you know, you will be better able to decide how to manage the risks, and protect both your health and your family's health.



What you can do

Indoor Air

- Make my home and car as smoke-free as possible.
- Check for mould that can be seen, especially in damp areas like the bathroom and basement.
- Clean up small areas of mould and get help with large areas.
- Remove unneeded materials that are stored inside.
- Fix leaks and clean up after leaks and spills.
- Turn on fans that vent outside or open windows wherever moisture can accumulate such as when showering or boiling water on the stove.
- Vent clothes dryer to the outside.
- Dust and vacuum regularly.
- Safely dispose of all old, unused chemical products, paints, pesticides, etc.
- Keep chemical products locked, out of sight and reach of children.
- Have the furnace, fireplace, wood-stove and/or gas-stove inspected by a trained technician.
- Install a Canadian Standards Association approved carbon monoxide detector and smoke-detector on each level of my home according to the installation instructions.
- Do not idle vehicles in an enclosed space such as a garage that is attached to my home, or near an open door or window.

Noise

- Limit the amount of time spent on noisy leisure activities, including listening to loud music.
- Wear ear protection if exposed to loud noises.

Drinking Water

- Run the water until it cannot get any colder first thing in the morning each day.
- Use only cold tap water for drinking, cooking and making baby formula.
- Follow local boil water advisories.

Wastewater/Sewage

- Complete septic tank maintenance regularly.
- Do not build anything on top of the leaching bed.
- Do not pour household chemicals, medicines, grease or other kitchen waste down the drain.
- Do not park or drive vehicles on the leaching bed.

Food Safety

- Wash hands, cooking surfaces, dishes and utensils before and after you handle food.
- Refrigerate or freeze foods that can spoil, as well as cooked food within two hours.

Artistry / Hobbies

- Open windows when using paint, varnish, or adhesives (glue).
- Sand and carve wood, antler, bone, soapstone outside when possible, and/or use an appropriate breathing mask.

Resources

Visit these Web sites for further information on a number of the potential health risks described in this guide:

- Health Canada's **Indoor Air quality** – information on a wide range of indoor air issues and associated health risk: <http://www.hc-sc.gc.ca/ewh-semt/air/in/index-eng.php>
- Health Canada's **Health and Air Quality** – Wide range of information on air quality and related activities for both indoor and outdoor air quality: www.healthcanada.gc.ca/air
- Health Canada's **Mould & Your Health** – Booklet and video on mould, including health effects, prevention and clean up: www.hc-sc.gc.ca/mould
- Health Canada's **It's Your Health** – publications on a wide range of health and safety issues: <http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/index-eng.php>
- Health Canada's **Consumer Product Safety** – Advisories, Warnings, and Recalls: <http://www.health.gc.ca/consumer>
- Canadian Partnership for Consumer Food Safety Education – **Be Food Safe**: <http://www.befoodsafe.ca> (Health Canada, the Public Health Agency of Canada, Canada Food Inspection Agency and Agriculture and Agri-Food Canada are partners)
- Canada Mortgage and Housing Corporation (CMHC) – **Maintaining a home**: <http://www.cmhc.ca/en/co/maho>
- Canada Mortgage and Housing Corporation (CMHC) – **Indoor Air Quality Program**: <http://www.iaq-qai.com>

To find out who your local Environmental Health Officer is, please contact your local Band office.

To learn more about environmental health issues and tips on how to make changes in your home, visit your **local health centre** or go to **www.healthycanadians.gc.ca/homehealth**

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ISBN: H34-218/1-2010E

Catalogue No.: 978-1-100-15378-0

Cette publication est aussi disponible en français sous le titre
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