

Health Effects Associated with Older Homes

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Overview

Health Effects Associated with Older Homes:

- 1. Mould
- 2. Asbestos
- 3. Lead
- 4. Radon

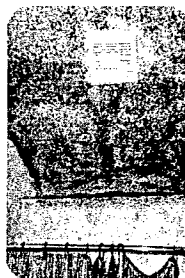
Children's Environmental Health Issues

Mould

Definition:

- 1. Any fungus that grows on food or damp materials.
- 2. Can be black, white, or any colour.
- 3. Can appear like a stain or smudge on surfaces.
- 4. May smell musty.
- 5. Needs moisture and a food source to grow.
- 6. Commonly grows on window sills, fabrics, carpets, and walls in kitchens, bathrooms, and laundry rooms.

Mould Continued...



Sources:

- 1. Condensation on surfaces due to excessive humidity, lack of ventilation, or low temperature.
- 2. Steam or excess moisture in the air from baths/showers and cooking.
- 3. Water leakage, such as from a roof or plumbing leak, a cracked basement, or flooding.

Mould Continued...

Health Effects:

- 1. Eye, nose and throat irritation
- 2. Coughing and phlegm build-up
- 3. Wheezing and shortness of breath
- 4. Symptoms of asthma
- 5. Allergic reactions

Mould Continued...

Remediation:

- 1. Fix the source of the moisture.
- 2. Clean up small areas with bleach and water solution or detergent and water solution (while wearing PPE and following Health Canada's Guidelines www.healthcanada.ca)
- 3. Dispose of any items that cannot be cleaned.
- 4. Consult a professional if area is larger than 1 square meter.

Mould Continued...

Prevention:

- Ventilate your home.
- Keep your home warm and ensure good air circulation.
- Remove items that may cause mould.
- Keep your home clean and dry.
- Minimize other indoor moisture sources.
- Prevent water from entering your home.
- When you see water or moisture act quickly to remove and dry the areas.

Asbestos

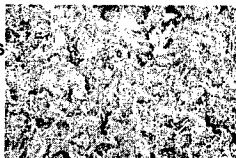
Definition:

- Asbestos is the generic name for a variety of fibrous minerals found naturally in rock formations around the world. Because asbestos fibres are strong, durable and non-combustible, they were widely used by industry, mainly in construction and friction materials.

Asbestos Continued...

Sources: (Pre- 1980)

- Insulation
- Fire-retardant coatings
- Stucco & Stipple
- Concrete & Bricks
- Gaskets
- Roofing
- Flooring & Ceiling Tiles
- Drywall & Joint Compound
- Lawn furniture
- Automobile Brake Pads (Pre-1990)



Asbestos Continued...

Health Effects:

- When inhaled in significant quantities, asbestos fibres can cause:
 - Asbestosis - scarring of the lungs which makes breathing difficult
 - Mesothelioma - a rare cancer of the lining of the chest or abdominal cavity
 - Lung cancer
 - Smoking increases your risk

Asbestos Continued...

Remediation:

- Research materials before renovating to determine if asbestos may be present.
- If in doubt, have it analyzed by a qualified professional first.
- Receive expert advice before removing materials that may contain asbestos.
- If you must remove small amounts of asbestos containing materials follow the Health Canada Guidelines (www.healthcanada.ca)
- If you must remove large amounts of asbestos seek a "qualified professional".

Asbestos Continued...

Prevention:

- Maintain your homes finishes. Asbestos is only a hazard if it is damaged or friable.
- Know the types of finishes in your home and what year they were installed. Keep a list of potential materials that may contain asbestos.
- Wear PPE if you must handle any asbestos containing materials.
- Hire a qualified professional for large scale remediation.

Lead

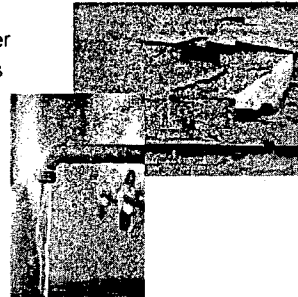
Definition:

- Lead is a poisonous metal that can damage nervous connections (especially in young children) and cause blood and brain disorders.
- Lead poisoning typically results from ingestion of food or water contaminated with lead; but may also occur after accidental ingestion of contaminated soil, dust or lead based paint.

Lead Continued...

Sources:

- Drinking Water
- Paint Finishes
- Dust and soil
- Food
- Air



Lead Continued...

Health Effects:

- Appetite loss
- Abdominal pain
- Constipation
- Fatigue
- Sleeplessness
- Irritability
- Headache
- Kidney damage
- Exposure is especially damaging to infants, children and pregnant women.

Lead Continued...

Remediation:

- Replace lead pipes with newer copper or plastic pipes.
- Do not use solder or fittings that contain lead.
- Remove damaged or peeling lead based paints while following Health Canada's Guidelines (www.healthcanada.ca)
- Remove all lead based paints or furniture with lead based paints from areas where children frequent.
- If you are unsure if a paint in your home has lead in it, have it tested or use PPE when removing it.

Lead Continued...

Prevention:

- Have your drinking water tested for lead levels if your home was built before 1970 (max acceptable level = 10 $\mu\text{m/L}$).
- Flush taps each morning for 1 minute to remove high standing lead levels.
- Read the labels of paints (some specialty paints may still contain lead but must be labeled)

Radon

Definition:

- Radon is a colourless, odourless, radioactive gas that occurs naturally in the environment. It comes from the natural breakdown of uranium in soils and rocks.

Radon Continued...

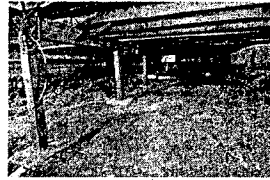
Sources:

- ✱ Dirt floors
- ✱ Cracks in concrete
- ✱ Sumps
- ✱ Joints
- ✱ Basement drains
- ✱ Under the furnace base and jack posts
- ✱ Concrete-block walls
- ✱ Exposed bed rock in basements
- ✱ Water from wells with high levels of uranium

Radon Continued...

Health Effects:

- ✱ Increased risk of lung cancer over a lifetime



Radon Continued...

Remediation:

*Remedial measures should be taken in a dwelling if the average annual radon concentration in the normal occupancy area exceeds 200 becquerels per cubic meter.

- ✱ Renovating existing basement floors, particularly earth floors.
- ✱ Sealing cracks and openings in walls and floors, and around pipes and drains.
- ✱ Ventilating the sub-floor of basement floors.
- ✱ Placing home on "positive pressure" by use of fans.

Radon Continued...

Prevention:

- Have your home tested for radon.
- Have your well tested for uranium.
- The construction of new dwellings should employ techniques that will minimize radon entry and will facilitate post-construction radon removal.

Questions...

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References

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PROGRAMME OF COMMUNITY HEALTH SERVICES
FOR CHILDREN AND YOUNG PEOPLE

Role of the Public Health Nurse and Children's Environmental Health Issues.



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Exposure to environmental hazards

Can create consequences during preconception and pregnancy, and can directly impact on child health.

PLAYING IT SAFE: Service Providers Strategies to Reduce Environmental Risks to Preconception, Prenatal and Child Health (2006).



Children are more vulnerable to harm from environmental exposures.



Children:

Drink and eat more per kilogram of body weight than adults.

Hidden Exposures (2000). South Riverdale Community Health Centre



Children:

Breathe in contaminants faster than adults.

Hidden Exposures (2000). South Riverdale Community Health Centre



Children:

Are active and explorative.

Hidden Exposures (2000). South Riverdale Community Health Centre



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Week 30

new-baby-and-beyond.com

Toxic exposures during late pregnancy are more likely to result in functional impacts, such as learning difficulties resulting from impacts on fetal brain development.

PLAYING IT SAFE: Service Providers Strategies to Reduce Environmental Risks to Preconception, Prenatal and Child Health (2006).

Health impacts from prenatal or childhood environmental exposures:

- ☒ Are characteristically complex and difficult to verify with scientific certainty.
- ☒ Are most commonly measured following widespread exposure of the child population.

PLAYING IT SAFE: Service Providers Strategies to Reduce Environmental Risks to Preconception, Prenatal and Child Health (2006).

Tips to reduce exposure:

- ☒ Good hand washing.
- ☒ Wash all produce well.
- ☒ Peel the skin off fruits and vegetables.
- ☒ Grow your own food.
- ☒ Do not wear outdoor shoes inside.
- ☒ Wipe surfaces – ie. after art activities.

PLAYING IT SAFE: Service Providers Strategies to Reduce Environmental Risks to Preconception, Prenatal and Child Health (2006).

- ☒ Dust with a damp cloth to collect dust rather than scatter it.
- ☒ Vacuum regularly and change the vacuum bag frequently.
- ☒ Vacuum when children are not in the room.
- ☒ Keep children away from areas being repaired or renovated.
- ☒ Do not store poisons in food containers.

PLAYING IT SAFE: Service Providers Strategies to Reduce Environmental Risks to Preconception, Prenatal and Child Health (2006).

- ☒ Open windows to keep your home smelling fresh, empty garbage regularly to avoid use of air fresheners.
- ☒ Air out new carpets, vacuum carpets regularly, wash throw rugs regularly, air out crib mattress.
- ☒ Reduce the use of perfumes and scented personal care products or use them in well ventilated areas, particularly when children are present.

PLAYING IT SAFE: Service Providers Strategies to Reduce Environmental Risks to Preconception, Prenatal and Child Health (2006).

- ☒ Be knowledgeable about the hazardous substances that may be used or within the house.
- ☒ Check blinds – Polyvinyl chloride (PVC) blinds made before June 1996 contained lead.
- ☒ Identify places where toxic materials may be exposed.
- ☒ Be alert at all times.

PLAYING IT SAFE: Service Providers Strategies to Reduce Environmental Risks to Preconception, Prenatal and Child Health (2006).



- Action is needed: before children are conceived, during pregnancy and all life stages.
- Create awareness: childproofing our homes, schools and communities for environmental health.
- It is better to be safe than sorry.

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