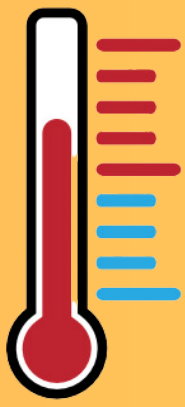

Pre-Summer Heat Risk Assessment

A guide for preparing your home

- With summer fast approaching, it is important to perform an annual pre-summer assessment to check your home's preparedness for the summer heat.
- You should assess your home before temperatures begin to rise. This will ensure adequate time to address any concerns, especially if larger modifications to your home are required.

This guide has 4 pages with important information for doing home self-assessments before the summer heat season.

uOttawa
Human and Environmental Physiology Research Unit

Home self-assessment checklist

If you know your home gets hot in the summer, you will likely experience potentially dangerous increases in indoor temperatures during an extreme heat event.

To assess your home consider the following building characteristics and identify those that best represent your home living environment. The more boxes checked, the higher the potential risk.

Location

☐	**Dense Housing**	Located in a neighbourhood with dense housing and limited yard space and tree coverage.
☐	**New Development**	Newly developed housing community with little vegetation and trees.
☐	**Proximity to Industrial Area**	Located in or near an industrial area with large warehouses, tires, parking lots and few trees.
☐	**Direction of Home**	Primary living space (bedroom, living and dining room) facing West (sunset) or East (sunrise) exposure.
☐	**High Traffic**	Located next to a road with high traffic.
☐	**Minimal Tree Coverage**	Located in an open space but with no tree covering.

Building Characteristics

☐	**Multi-storey Complex**	Multi-level home or apartment (living on upper floors).
☐	**Age of Home**	Older home (~30 years or older).
☐	**Size of Home**	Small home (1000 square feet or less on the main floor).
☐	**Attic Space**	Attic with no or limited ventilation.
☐	**Insulation**	Home with limited or old insulation.

Home self-assessment checklist (continued)

If you know your home gets hot in the summer, you will likely experience potentially dangerous increases in indoor temperatures during an extreme heat event.

To assess your home consider the following building characteristics and identify those that best represent your home living environment. The more boxes checked, the higher the potential risk.

Building Characteristics

☐	**Roofing Material**	Dark roof shingles or flat roof.
☐	**Siding**	Vinyl or wood siding only or with little or no brick or stone.
☐	**Basement**	Home with no basement.

Windows & Ventilation

☐	**Interior Coverings**	Only a few windows with partial or full interior window coverings (e.g., curtains, blinds).
☐	**Exterior Coverings**	Windows have no exterior overhangs, awnings, or shutters.
☐	**Number of Windows**	Many and or large windows (especially facing East or West).
☐	**Inoperable WIndows**	Some windows are fixed (not operable) or do not open very much.
☐	**Window Paning**	Single-paned windows.
☐	**Air Conditioning**	No central air conditioning system or air cooling is limited to portable or wall/window-mounted air conditioners.
☐	**No Fans**	No fans in primary living space and or limited to pedestal fans.

Indoor temperatures of 26°C and below are usually safe. **There is an increasing risk of heat illness at temperatures over 26°C**, especially over 31°C for heat vulnerable people such as older adults and individuals with chronic disease. To protect you and your family, it is important that you understand those factors that increase the risks of overheating in your home and that you take steps to lower that risk as early as possible.

Options to Reduce Overheating in Your Home

If one or more of the above characteristics listed apply to you, you can take action to make some modifications to limit overheating in your home this summer.

Immediate

- Check that all windows that can be opened are functional to permit airflow.
- Open windows on multiple storeys of the home (if dwelling type permits) to promote a 'chimney' ventilation effect.

⚠ For personal safety, avoid leaving your window opened for extended periods, especially at night.

Short-Term

- If possible, create a temporary summer living space in a cooler area, such as the lowest level of the house (e.g., basement).
- If you don't have a thermostat or direct access to a thermostat, consider installing a temperature and humidity monitoring unit to track overheating in your home.
- Purchase a pedestal fan or portable air conditioning unit to enhance air circulation in your home.

Moderate

- Consider permanent internal (e.g. blinds, drapes) or external (e.g. awnings, shutters, canopies) shading solutions to block the sun.
- Install a ceiling fan in your primary living spaces.
- Install external solar control coatings to reduce heat gain from the sun.
- Remove or relocate any reflective material (e.g., metal sheds) and glass barriers (e.g., outdoor greenhouses) around your home that can absorb and reflect the sunlight.
- If you have an attic, ensure it is properly insulated and ventilated so that excess heat can escape.
- Keep your yard as green as possible (e.g., grass, bushes and trees), as large asphalt, concrete or paved driveways can absorb and radiate more heat.

Long-Term

- Plant trees in areas that would provide the most coverage to the primary living space of your home.
- If you have many and/or large windows, consider solar control coatings to reduce the amount of solar radiation that can enter your living space.
- Install a central air conditioner if you have existing ductwork or consider a ductless wall-mounted air conditioner.
- If it is time to change your shingles consider a light-coloured roof as it can reduce the amount of heat absorbed by your home.
- Replace single-paned windows with more energy-efficient double or triple-paned windows.
- Renovate your basement to create a permanent bedroom and living space in this cooler area of your home.

Understanding Who is Vulnerable to Overheating in your Home

In addition, to understanding those factors that can cause your home to overheat, you should also consider those personal factors that can limit a person's ability to cool, resulting in reduced tolerance to heat. **If you or your family member(s) have identified one or more factors below, you may be at greater risk of developing a heat-related injury at a lower indoor temperature.**

Personal Vulnerability Assessment

☐ **Older Adult (60 years+)**	The body's natural cooling processes are impaired with age.
☐ **Presence of Chronic Disease**	Individuals with chronic diseases such as diabetes, heart disease, respiratory disease, cancer and others can limit the body's ability to cool, causing dangerous increases in body temperature.
☐ **Mental Illness or Cognitive Disorders**	Conditions such as anxiety disorders, depression, schizophrenia, and dementia, among others, can reduce awareness of heat-related risks.
☐ **Substance Dependency or Use**	The ability to sense and respond to heat and remain hydrated may be altered due to the use of alcohol or drugs, especially in those with a substance dependency disorder.
☐ **Medication Use**	Medications such as anti-adrenergic, beta-blockers, diuretics, NSAIDs, anticholinergics, antidepressants, antipsychotics and others can affect your body's ability to lose and dehydrate you.
☐ **Impaired or Decreased Mobility**	People with impaired or reduced mobility might be less able to take protective measures during extreme events.
☐ **Living Alone or Socially Isolated**	People who live alone or do not have strong social connections or support are at higher risk of a heat-related injury.
☐ **Poor Physical Fitness**	People who are not engaged in regular physical activity have a reduced ability to lose heat when exposed to hot environments.
☐ **Previous Heat Injury**	People who have previously experienced a heat illness or injury may be less tolerant of the heat.
☐ **Lack of Acclimatization**	People who are not regularly exposed to heat have a reduced capacity to lose heat and may be less tolerance to heat.
☐ **Chronic Insomnia and Poor Sleep**	Sleep deprivation can reduce heat tolerance.
☐ **Current or Acute Illness**	People who are usually healthy but are temporarily unwell may be more susceptible to heat.