

Space Cooling Strategies

Strategies to cool individual suites, common areas & entire buildings

Risk of heat-related illness starts to increase at indoor temperatures over 26°C for susceptible people, and it increases significantly for everyone at sustained indoor temperatures of 31°C or above. If a residence gets that hot, it is advisable to move to a cooler space.¹

No- or Low-Cost Cooling Strategies

Keeping buildings cool can be challenging, especially in older buildings. No- or low-cost ways to provide cooling include:

- **Minimize Heat:** Tilt or close blinds & drapes against the sun
- **Open & Close Windows:** Open windows when outside air is cooler; Close windows when it's cooler inside than out
- **Airflow:** Open windows across room/s or use fans to bring cooler air in ONLY if outside air is cooler than inside air
- **Fans:** Bring cooler air in; Bathroom & stove fans can remove heat & humidity if air outside is cooler
- **Turn It Off:** Limit or eliminate heat from stoves, ovens, dryers & dishwashers by reducing use
- **Building Upgrade:** Where & when appropriate, add external shading, window film

Mechanical Cooling Strategies

Mechanical cooling may be needed to ensure tenants' thermal safety in a heat wave, and can be used in suites, or refuge areas/designated cooling spaces.

Lower cost, easy installation, less efficient		Higher cost, more involved installation, more efficient	
<p>Portable Air Conditioners</p> <ul style="list-style-type: none"> ✓ Portable ✓ Installation is easy & inexpensive • Electric costs = 5 times that of a fan • Only works for smaller sized spaces ✗ Less efficient – operation discharges heat ✗ Noisy operation ✗ Has placement restrictions ✗ Could go missing ✗ Water drainage/management issues ✗ Requires frequent filter maintenance △ 2 hose models are more efficient than single hose models 	<p>Personal Fans – Pedestal/ Tower</p> <ul style="list-style-type: none"> ✓ Inexpensive to purchase ✓ Low running costs & energy usage ✓ Best used to bring cool air into room ✓ Portable, adjustable airflow direction ✓ Temporary relief if aimed at skin • Single room use only △ Above 31° can cause harm: does not lower room or body temperature. ! Health Note: Evidence shows using fans for personal cooling is not very effective. Above certain temperatures fans may make heat illness worse. 	<p>Mini Split Heat Pumps – Ductless</p> <ul style="list-style-type: none"> ✓ Cost savings: both heating & cooling ✓ Very efficient & quiet operation ✓ Low running costs ✓ Requires only a small hole in wall • May be used for multiple rooms ✗ Expensive to purchase and install <p>Ducted Terminal Heat Pumps (PTHP)</p> <ul style="list-style-type: none"> ✓ Cost savings: both heating & cooling ✓ Very efficient & quiet operation ✓ Low running costs ✗ Requires two 6”-8” small holes in wall 	<p>Central Air Conditioning Including Heat Pumps (HP)</p> <ul style="list-style-type: none"> ✓ Quiet operation ✓ Cools entire suite/common areas ✓ May be used for multiple rooms ✓ HP: Very efficient ✓ HP: Low running costs ✓ HP: Incentives may be available ✗ Expensive to purchase and install △ May not be possible in some existing buildings

Note: BC Housing Design Standards do not permit the use of Window Mounted Air Conditioners, nor do we recommend the use of Packaged Terminal Air Conditioners (PTACs).

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¹ https://ncceh.ca/sites/default/files/NCCEH%20Extreme%20Heat%20Event%20-%20Health%20Checklist%20WEB_0.pdf