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| Heat Health Preparedness Guidance  |
| Health and Community Services – Background – November 2022 |

Contents

[Introduction 1](#_Toc120789853)

[Purpose 2](#_Toc120789854)

[Audience 2](#_Toc120789855)

[Heat warning systems 2](#_Toc120789856)

[Bureau of Meteorology heatwave warnings 3](#_Toc120789857)

[Chief Health Officer’s Health alert: heat health warnings 3](#_Toc120789858)

[Vic Emergency platform 3](#_Toc120789859)

[Preparedness guidance 3](#_Toc120789860)

[Further information 5](#_Toc120789861)

[Extreme heat and heatwaves 5](#_Toc120789862)

[Heatwave and heat health warnings 5](#_Toc120789863)

[Emergency Respite 5](#_Toc120789864)

[Fires 6](#_Toc120789865)

[Appendix 1: At-risk population groups 7](#_Toc120789866)

# Introduction

Victoria's climate has changed in the past 100 years by becoming more than 1.0°C warmer and the number of unusually hot days has almost tripled.[[1]](#footnote-1) Victorian climate projections indicate that these trends will continue, with estimates of a further doubling of the number of very hot days and warming of up to 2.4°C by 2050.1

Extreme heat and heatwaves are periods of unusually high maximum and minimum temperatures that could negatively affect human health.[[2]](#footnote-2)

In Australia, extreme heat and heatwaves are a significant cause of morbidity and mortality. Heatwaves have caused more deaths in Australia in the past 100 years than the sum of all other natural hazard events.[[3]](#footnote-3) The seriousness of this effect is often under-appreciated.

Extreme heat and heatwaves can affect health by both directly causing heat-related illness and indirectly by precipitating or exacerbating other medical conditions. Furthermore, some prescribed medications can also increase the risk of heat-related illness or may be less effective or more toxic when stored at high temperatures. These serious heat-related impacts on health and wellbeing are disproportionally born by those most at risk of extreme heat, such as older adults, people of low socioeconomic status, and people with existing chronic or complex health conditions (see Appendix 1).

Extreme heat and heatwaves also affect Victoria’s natural, built and economic environments, often through the compromised operation of critical infrastructure, facilities and services. These can have health consequences (e.g., prolonged loss of electricity can limit access to cooling, and can lead to food spoilage and subsequent gastroenteritis).

Extreme heat and heatwaves place increased demands on health and community services and may require changes to processes to maximise the safety of patients, clients, staff, and community partners. As with all external events that may challenge health and community services, good preparation is essential to minimise risk and ensure a safe and appropriate response.

## Purpose

This guidance aims to help you self-assess your organisation's planning and preparedness to respond to extreme heat and heatwaves. It may assist in identifying gaps in preparedness so that your organisation can develop and implement effective strategies to minimise the effect of extreme heat on your patients, clients, staff and services. <https://www.health.vic.gov.au/publications/residential-aged-care-services-heatwave-ready-resource>

## Audience

This document should be read by staff who work in health and community services in preparation for extreme heat and heatwaves. This includes public and private health services, general practices, community service organisations and mental health services.

It may also assist other organisations that have existing resources, such as:

* aged care facilities who can refer to the [Department of Health’s ready resource](https://www.health.vic.gov.au/publications/residential-aged-care-services-heatwave-ready-resource) <<https://www.health.vic.gov.au/publications/residential-aged-care-services-heatwave-ready-resource>>
* sporting organisations who can refer to [Sports Medicine Australia’s Extreme Heat Policy](https://sma.org.au/sma-site-content/uploads/2021/02/SMA-Extreme-Heat-Policy-2021-Final.pdf) <<https://sma.org.au/sma-site-content/uploads/2021/02/SMA-Extreme-Heat-Policy-2021-Final.pdf>>
* organisations with people who work in the heat who can refer to [Safe Work Australia](https://www.safeworkaustralia.gov.au/safety-topic/hazards/working-heat) <https://www.safeworkaustralia.gov.au/safety-topic/hazards/working-heat>.

# Heat warning systems

Heat warning systems provide an early notification to organisations and the public of forecast extreme heat or heatwave. When a warning is issued for forecast extreme heat or heatwave, your organisation should prepare in accordance with your heat plans, and monitor the local weather conditions on the [Bureau of Meteorology’s 7-day forecast website](http://www.bom.gov.au/vic/forecasts/map7day.shtml) <www.bom.gov.au/vic/forecasts/map7day.shtml>.

## Bureau of Meteorology heatwave warnings

The Bureau of Meteorology issues heatwave warnings on their public channels when ten per cent or more of a weather district is in a severe or extreme heatwave based on the Excess Heat Factor (EHF). Heatwave warnings will be issued up to four days prior to the event.  The warnings will appear on the Bureau of Meteorology’s [website](http://www.bom.gov.au/australia/heatwave/) <www.bom.gov.au/australia/heatwave/> and [app](http://www.bom.gov.au/app/) <http://www.bom.gov.au/app/>.

The EHF, the metric for heatwaves in Australia, is based on three days of unusually high maximum and minimum temperatures for a location. The EHF categorises heatwave into three levels based on intensity: low-intensity, severe and extreme. The Bureau of Meteorology will issue warnings only for severe and extreme heatwaves.

According to the Bureau of Meteorology, most people are expected to have adequate capacity to cope during low-intensity heatwaves, however, some population groups may still be at-risk of heat-related illness. Severe heatwaves will be even more challenging for at-risk groups, whereas, during an extreme heatwave, everyone is at risk.

In addition to heatwave warnings, the Bureau of Meteorology’s Heatwave Service for Australia also provides heatwave assessments (which identify heatwaves that occurred during the previous days) and heatwave forecasts (which predict those about to occur).

The heatwave warnings, Heatwave Service for Australia and additional information about EHF can be found on the Bureau of Meteorology’s [website](http://www.bom.gov.au/australia/heatwave/) <http://www.bom.gov.au/australia/heatwave/>.

## Chief Health Officer’s Health alert: heat health warnings

To align with the Bureau of Meteorology’s heatwave warnings, the Victorian Department of Health is introducing a new ***Health alert: Heat health warning*** that replaces the Department’s *heat health alerts*. All subscribers of the *Heat Health Alert System* will automatically be transferred to the new *heat health warning* system.

For summer 2022-23, the Chief Health Officer will issue a *heat health warning* to share the Bureau of Meteorology’s heatwave warnings. The Chief Health Officer may issue a *heat health warning* for forecast high temperatures of concern that do not meet the criteria for a Bureau of Meteorology heatwave warning.

You can [subscribe](https://www.health.vic.gov.au/environmental-health/subscribe-to-heat-health-alerts) <https://www.health.vic.gov.au/subscribe> to receive *heat health warnings* from the Department of Health.

## Vic Emergency platform

The Bureau of Meteorology’s heatwave warnings, along with preparedness information, will be published on the [Vic Emergency website](https://emergency.vic.gov.au/respond/) <https://emergency.vic.gov.au/respond/> and app. You can set up a watch zone to receive warnings for your area through the menu on top right-hand corner of website.

# Preparedness guidance

The Department of Health asks all health and community service organisations and their staff to be mindful of the impact that heat can have on patients and clients, their management and service logistics.

Health and community services should develop clear plans individualised to their service’s operational function and capacity that covers seasonal preparedness, and actions to be taken if extreme heat or a heatwave is forecast. Good preparation is essential to ensure a safe and appropriate response.

Please consider the organisation-specific heat health guidance that is available in the appendices in your organisation’s preparedness planning.

The department has also made available a [Heatwave plan review tool](file:///C%3A%5CUsers%5Cvidpqj9%5CDownloads%5CHeatwave%20plan%20review%20tool) <https://www.health.vic.gov.au/publications/heatwave-plan-review-tool> which contains templates and tasks to help guide organisations to review and revise their heatwave plans.

# Further information

## Extreme heat and heatwaves

* [Department of Health – Extreme heat and heatwaves](https://www.health.vic.gov.au/environmental-health/extreme-heat-and-heatwaves)

<https://www.health.vic.gov.au/environmental-health/extreme-heat-and-heatwaves>

* [Department of Health - Planning for extreme heat and heatwaves](https://www.health.vic.gov.au/environmental-health/planning-for-extreme-heat-and-heatwaves)

 <https://www.health.vic.gov.au/environmental-health/planning-for-extreme-heat-and-heatwaves>

* [Department of Health - Heatwave plan review tool](https://www.health.vic.gov.au/publications/heatwave-plan-review-tool) <https://www.health.vic.gov.au/publications/heatwave-plan-review-tool>
* [Department of Health – Extreme heat information for clinicians](https://www.health.vic.gov.au/environmental-health/extreme-heat-information-for-clinicians) <https://www.health.vic.gov.au/environmental-health/extreme-heat-information-for-clinicians>
* [Department of Health – Extreme heat community resources](https://www.health.vic.gov.au/environmental-health/extreme-heat-community-resources) <https://www.health.vic.gov.au/environmental-health/extreme-heat-community-resources>
* [Better Health Channel – How to cope and stay safe in extreme heat](https://www.betterhealth.vic.gov.au/health/healthyliving/how-to-cope-and-stay-safe-in-extreme-heat) <https://www.betterhealth.vic.gov.au/health/healthyliving/how-to-cope-and-stay-safe-in-extreme-heat>
* [Better Health Channel – Heat stress and heat-related illness](https://www.betterhealth.vic.gov.au/health/healthyliving/heat-stress-and-heat-related-illness#prevention-of-heat-related-illness) <https://www.betterhealth.vic.gov.au/health/healthyliving/heat-stress-and-heat-related-illness#prevention-of-heat-related-illness>
* [Better Health Channel – Survive the heat – partner kit](https://www.betterhealth.vic.gov.au/survive-heat-media-kit)

<https://www.betterhealth.vic.gov.au/survive-heat-media-kit>

* [Department of Health – Residential aged care services – heatwave ready resource](https://www.health.vic.gov.au/publications/residential-aged-care-services-heatwave-ready-resource) <https://www.health.vic.gov.au/publications/residential-aged-care-services-heatwave-ready-resource>
* [Safe Work Australia – Working in the heat](https://www.safeworkaustralia.gov.au/safety-topic/hazards/working-heat) <https://www.safeworkaustralia.gov.au/safety-topic/hazards/working-heat>
* [Sports Medicine Australia – Extreme heat policy](https://sma.org.au/sma-site-content/uploads/2021/02/SMA-Extreme-Heat-Policy-2021-Final.pdf) <https://sma.org.au/sma-site-content/uploads/2021/02/SMA-Extreme-Heat-Policy-2021-Final.pdf>

## Heatwave and heat health warnings

* [Bureau of Meteorology - Heatwave Service](http://www.bom.gov.au/australia/heatwave/) <www.bom.gov.au/australia/heatwave/>
* [Bureau of Meteorology - Climate outlooks](http://www.bom.gov.au/climate/outlooks/#/overview/summary) <www.bom.gov.au/climate/outlooks/#/overview/summary>
* [Department of Health – Subscribe to heat health warnings](https://www.health.vic.gov.au/subscribe) <https://www.health.vic.gov.au/environmental-health/subscribe-to-heat-health-alerts>
* [Vic Emergency Platform](https://emergency.vic.gov.au/prepare/#heat-health-alerts) <https://emergency.vic.gov.au/prepare/#heat-health-alerts>

## Emergency Respite

* Carers Victoria 1800 514 845, Carelink 1800 052 222 (business hours) or 1800 059 059 (after-hours).
* Veterans’ Home Care assessment service 1300 550 450 (business hours) (for emergency after-hours respite call Carelink above).
* Annecto Emergency After-Hours Response Service (Victoria) 1800 72 72 80 (5 pm–9 am weekdays, 24 hours on weekends and public holidays). Free short-term personal care, respite crisis management, telephone and in-home support for older people, people with a disability or carers who do not have funded assistance.
* Some local governments may provide respite services.

## Fires

* [Victorian Government – Plan and prepare for fire](https://www.vic.gov.au/plan-and-prepare) <https://www.vic.gov.au/plan-and-prepare>
* [Business Victoria – Plan and prepare for bushfires](https://business.vic.gov.au/business-information/disaster-resilience/deal-with-bushfires/plan-and-prepare-for-bushfires) <https://business.vic.gov.au/business-information/disaster-resilience/deal-with-bushfires/plan-and-prepare-for-bushfires>
* [Department of Health – Emergency preparedness in residential aged care services – natural hazards](https://www.health.vic.gov.au/residential-aged-care/emergency-preparedness-in-residential-aged-care-services-natural-hazards) <https://www.health.vic.gov.au/residential-aged-care/emergency-preparedness-in-residential-aged-care-services-natural-hazards>
* [Department of Health – Bushfires and public health](https://www.health.vic.gov.au/environmental-health/bushfires-and-public-health) <https://www.health.vic.gov.au/environmental-health/bushfires-and-public-health>

# Appendix 1: At-risk population groups

Extreme heat and heatwaves can affect anyone. Some people are more susceptible to its effects due to factors such as their age, health, environment, social and economic circumstances, location or occupation. The following population groups are likely to be most affected by heat. While these groups are not in any specific order, belonging to more than one at-risk group may further increase susceptibility to heat.

### People of a certain age or life stage

* Over 65 years old, especially those living alone
* Pregnant women and breastfeeding mothers
* Babies and young children

### People with particular health conditions

* Heart and lung disease, high blood pressure, diabetes, cancer or kidney disease
* Certain neurological illnesses (e.g., Parkinson’s Disease, Multiple Sclerosis)
* Mental illness
* Illness or infection that causes dehydration or fever
* Conditions that impair sweating including dehydration, skin disorders (e.g., sunburn, prickly heat and extensive scarring from burns), cystic fibrosis, quadriplegia and scleroderma
* Problematic alcohol or other drug use (e.g., amphetamines)
* Cognitive impairments limiting the ability to identify or communicate their discomfort or need for water
* Limited mobility (e.g., those who are bed-bound or in a wheelchair)
* Overweight or obesity
* Low cardiovascular fitness

### People taking medications that may affect the way the body reacts to heat

* Allergy medicines (antihistamines)
* Some blood pressure and heart medicines (beta-blockers and vasoconstrictors)
* Seizure medicines (anticonvulsants)
* Thyroid medications (thyroxine)
* Water pills (diuretics)
* Antidepressants and antipsychotics

### People with particular social and economic circumstances

* Sleeping rough or in poor quality homes
* Low socioeconomic status who may restrict use of, or have limited access to, air-conditioning
* Living alone or who are socially isolated
* Non-English-speaking people who may not be able to understand heat alerts and warnings or have reduced access to appropriate health or support services

### People outdoors during extreme heat

* Working or being physically active outdoors (e.g., gardeners, athletes and labourers).

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1. Department of Environment, Land, Water and Planning. Victoria’s Climate Science Report 2019. [Internet] Melbourne: Department of Environment, Land, Water and Planning; 2019. Available from https://www.climatechange.vic.gov.au/\_\_data/assets/pdf\_file/0029/442964/Victorias-Climate-Science-Report-2019.pdf [↑](#footnote-ref-1)
2. Extreme heat refers to one or two days of unusually high maximum and minimum temperatures that could negatively affect human health. Prolonged periods of extreme heat, lasting three or more consecutive days, is referred to as a heatwave. [↑](#footnote-ref-2)
3. Coates L, Haynes K, O’Brien J, McAneney J, De Oliveira FD. Exploring 167 years of vulnerability: An examination of extreme heat events in Australia 1844–2010. Environmental Science & Policy. 2014 Oct 1;42:33-44. [↑](#footnote-ref-3)