

Hydration on a high fire danger day

What to drink, how much, and what to watch for — for residents doing property monitoring and protection, not firefighters.

SECTION 1

Why your body won't tell you

On a high fire danger day, adrenaline is doing its job — keeping you focused and moving. But it has a significant side effect: it suppresses your body's normal signals for thirst, hunger and fatigue. You will feel fine — until you are not.

Dr Rob Gordon OAM – Psychologist, Bushfire Recovery Specialist

“High arousal shuts down the body’s normal feedback system — you will not feel hungry, thirsty or tired until you are seriously depleted.”

Dr Gordon has worked with bushfire-affected communities including locally at Scotsburn (2015–16). Full video: *“Emotional Preparedness as part of Bushfire Preparedness”* Emergency Recovery Victoria, December 2020. [youtube.com/watch?v=H6lQRqvFbSw](https://www.youtube.com/watch?v=H6lQRqvFbSw)

The implication is direct: you cannot rely on feeling thirsty or hungry as your signal to drink or eat. You need a schedule — and you need to stick to it whether you feel like it or not.

SECTION 2

The practical rule: how much and how often

The following guidance comes from NIOSH (the US National Institute for Occupational Safety and Health) and OSHA — occupational health agencies whose guidance is designed for workers doing physical tasks in heat, not athletes. This is the closest available authoritative guidance for your situation.

For the first hour or two of activity:

- Drink approximately 250ml (one cup) every 15–20 minutes
- Drink before you feel thirsty — thirst means you are already behind
- Drinking at shorter intervals is more effective than large amounts infrequently

After the first hour, or if sweating is sustained:

- Plain water alone is not enough — include something with salt or sugar alongside: fruit juice, a piece of fruit, crackers, a sports drink, or any salty food
- Workers who eat regular meals and salt-containing snacks during activity will usually replace electrolytes adequately — you do not need to overthink this

The upper limit — this also matters:

- Do not drink more than approximately 1.5 litres per hour
- Drinking too much plain water continuously over several hours can cause its own dangerous condition (see Section 3)

Gordon’s schedule rule — apply this to food and rest too:

“Make a deliberate decision: rest for a couple of minutes every half hour, eat something, have a drink. Do this on a schedule, not when you feel like it. Do it for each other.”

— Dr Rob Gordon OAM

SECTION 3

The overhydration warning — this applies to you too

Most people know about dehydration. Fewer know that continuously drinking large amounts of plain water over several hours — without replacing electrolytes — can cause a separate and dangerous condition: low blood sodium (hyponatremia).

The reason this matters is that the symptoms look almost identical to dehydration — but the treatment is different. Giving more water to someone with low blood sodium makes them worse, not better.

Symptoms of low blood sodium (overhydration):

- Headache
- Nausea
- Fatigue, weakness
- Confusion, dullness, slow thinking
- These are also symptoms of heat exhaustion — which is why the distinction matters

KNOW THIS — IT MAY APPLY TO YOU

If you develop a headache, feel confused or increasingly unwell despite having drunk a lot of water — stop drinking water and have something salty (food, a sports drink, salted crackers). This may be overhydration, not dehydration. The treatment is different. Get inside, rest, and if you are not improving, call for help.

The practical protection against overhydration is simple: include electrolytes (salt and sugar) alongside water from the first hour, and don't exceed about 1.5 litres per hour. If you are eating normally and drinking a mix of water and something with salts or sugars, overhydration is very unlikely.

SOURCES

Dr Rob Gordon OAM — adrenaline and decision-making under stress

'Emotional Preparedness as Part of Bushfire Preparedness', Emergency Recovery Victoria, December 2020. [youtube.com/watch?v=H6lQRqvFbSw](https://www.youtube.com/watch?v=H6lQRqvFbSw)

NIOSH — 250ml per 15–20 minutes guidance for workers

National Institute for Occupational Safety and Health, 'Keeping Workers Hydrated and Cool Despite the Heat', CDC NIOSH Science Blog, 2011. [cdc.gov/niosh/bulletin/2011/heat2.html](https://www.cdc.gov/niosh/bulletin/2011/heat2.html)

CDC / OSHA — electrolytes after first hour; 1.5L per hour upper limit

CDC Workplace Recommendations: Heat. [cdc.gov/niosh/heat-stress/recommendations/index.html](https://www.cdc.gov/niosh/heat-stress/recommendations/index.html) | OSHA Water. Rest. Shade. [osha.gov/heat-exposure/water-rest-shade](https://www.osha.gov/heat-exposure/water-rest-shade) | CDC/NIOSH Heat Stress: Hydration (fast facts PDF). stacks.cdc.gov/view/cdc/45851

Overhydration / low blood sodium — symptoms and treatment

Hew-Butler T et al., 'Exercise-Associated Hyponatremia: Updated Guidelines from the Wilderness Medical Society', American Family Physician, Feb 2021. [aafp.org/pubs/afp/issues/2021/0215/p252.html](https://www.aafp.org/pubs/afp/issues/2021/0215/p252.html)

Disclaimer: This information is provided in good faith to help residents understand their situation and make informed decisions. It is not medical advice. If you or someone with you is unwell, call 000.

Brown Hill FireAware Network — a community initiative of the PLEA Network, Brown Hill, Ballarat Victoria. pleanetwork.com.au/brown-hill-community-fireaware-network