

When smoke gets in your eyes

Information sheet

The most common eye hazards people face in bushfire circumstances are smoke, noxious/poisonous gases, or thermal hazards such as embers from fires.

Smoke from vegetation is composed to hundreds of chemicals in gaseous, liquid and solid forms. These include noxious gases (e.g. carbon monoxide), aldehydes, benzene, water vapour, and small particles of carbon and other materials (median aerodynamic equivalent diameter of 3.5-µm) from what was being burnt.

Exposure to these substances (especially carbon monoxide and aldehydes) can lead to irritation of the eye on contact.

What to do

If you get any smoke in your eye:

- Wash eyes with sterile saline or cold tap water (or artificial tears).
- Seek medical aid if necessary.
- The blink reflex usually causes the eye to close in response to heat, hence thermal injuries tend to affect the eyelid rather than the eye itself.

If any embers fly into your eye OR if you had a direct fire/thermal burn to your eye:

- Do not rub the eye.
- Open your eyelid gently and wash your eye with large amounts of cold flowing water for 20 minutes.
- Place an eye pad or light clean dressing over injured eye only (if available).
- See a doctor if the specks cannot be washed out or if pain or redness continue.
- See a doctor immediately if your vision had deteriorated after the burn, or if you have a continuing pain and discomfort.

If the burning material includes plastics or rubbers, the gases and particles are likely to be particularly irritating.

Common symptoms following exposure to and contact with smoke include:

- pain
- discomfort
- redness
- watering of the eyes



If you have any concerns, please contact your eye health professional or General Practitioner

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If you feel you have a foreign body in your eye:

- Do not rub the eye.
- Do not try to remove the foreign object stuck in the eye.
- Seek immediate medical attention.

Important: If you are administering first aid for ANY eye injuries, **do not:**

- Touch the eye or any contact lens.
- Allow the patient to rub their eyes.
- Try to remove any object which is penetrating the eye.

Resource material and references

- <https://www.cdc.gov/niosh/topics/eye/eyesafe.html>
- <https://www.cdc.gov/disasters/wildfires/pdf/firecleanupworkers.pdf>
- https://healthywa.wa.gov.au/Articles/F_I/First-aid-for-eye-injuries
- <https://www.ncbi.nlm.nih.gov/pubmed/25286571>
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