

Wildfire safety

Radiant heat – the killer in a bushfire

Every summer, people try to survive bushfires by wearing light summer dresses, shorts, singlets and even swimsuits. They often die without flames ever touching their exposed skin. People need to understand the real risks of bushfire – heat stroke, dehydration and asphyxiation.

Radiant heat can kill. You need to cover up – dress to protect yourself. Take refuge from direct heat. Radiant heat cannot be transmitted through solid objects.

If you put your hand near open flame, an electric heater element, or an electric light bulb, you can feel the radiant heat it generates. Draw your hand away and the amount of heat on your skin decreases.

Put something between your skin and the heat source and your skin immediately feels cooler. That's all you need to remember about radiant heat from bushfires – distance and shielding protect you from dangerous exposure.

The danger is real. Radiant heat from the flame-front of a bushfire scorches vegetation well in front of its path. It kills animals caught in the open. People can also die if they do not seek protection.

Death is caused by heat stroke, which occurs when the body's cooling system fails, leading to heat exhaustion and heart failure.

What you can do to shield yourself from radiant heat – cover up and take cover

1 Protect your exposed skin areas

Bushfires usually occur on days of high temperature. You and your family may be in

shorts, swimsuits, bare feet or sandals.

Remember, the dangerous effects of radiant heat are increased by the amount of skin exposed. As soon as you know there are bushfires in your area, cover up!

Firefighters wear protective gear to survive, so should you. Put on natural fibre long pants, light long-sleeved wool jumpers, close weave cotton shirts or overalls. Wear good solid footwear – preferably leather and a sturdy hat. This is your survival suit.

No matter where or when you face a bushfire, remember to wear your survival suit. Cover up to survive.

Don't be caught outside wearing a swimsuit or shorts, cover yourself as soon as you become aware of a fire in your area.

2 Take cover inside your house

As the fire front passes, radiant heat levels become extreme.

Your clothing may not be sufficient to protect you for the five to twenty minutes it may take for the fire to pass. But radiant heat cannot penetrate through solid objects. That means your best protection is a well-prepared house. As the fire front passes, stay inside with doors and windows shut to protect against spark entry. Remember, if you flee from your house, you lose its protection against radiant heat. Other structures such as brick walls can offer protection.

3 Reduce the risk of dehydration

Dehydration occurs when fluid output from the body is greater than fluid input. It is dangerous because it creates a build up of salts and minerals in the body tissues, which puts strain on the kidneys. When the kidneys fail, death can quickly follow.

The high air temperature during a bushfire and the added stress of wearing extra clothing to shield against radiant heat will contribute to make you sweat heavily. The fluids you lose must be replaced continuously or you risk dehydration. Keep cool and drink water often. Drink cool fluids at every opportunity – even if you don't feel thirsty.

Drink often to replace the fluids you sweat off. Alcohol and fizzy drinks must be avoided as they aid dehydration.

Children and the elderly are especially vulnerable, so pay attention to their needs. Keep them indoors where they do not need to wear heavy protective clothing for long periods. Cool the skin by sponging with cold water. Make sure they drink frequently.

4 If caught on the road

Remember, if your plan is to leave your home on a day of extreme fire danger then do it early – well before you become aware of a fire. A late evacuation is a deadly option. Declaration of a Total Fire Ban should be your trigger to put your plan into action.

Always u-turn to safety if you have the option but if you are caught on the road your car offers the best protection from radiant heat as the fire front passes. Do not get out and run.

Resources for teachers

Fire Safe and Junior Fire Safe

Classroom lessons for primary students covering a broad range of fire safety issues, including bushfire preparedness, outdoor fire safety, CFA in the community, personal fire safety and home fire safety. Contact CFA:

T (03) 9262 8444.

Mobile Education Unit

The Mobile Education Unit (MEU) is an exciting education experience on wheels. This specially designed teaching unit focuses on home fire safety and travels to primary schools throughout Victoria. Onboard is a trained CFA presenter who delivers the fire safety program to students.

Brigades In Schools

Brigades in Schools is a fire safety education program targeted at primary school students. The lessons are delivered in the classroom by trained CFA career and volunteer members. Brigades in Schools aims to teach knowledge, skills, attitudes and behaviours related to:

- Personal fire safety
- Home fire safety
- Outdoor fire safety
- Bushfire preparedness, and
- CFA in the community.

Children can play an important role in spreading fire safety messages to their families and the wider school community. Brigades In Schools lessons are designed to be interactive with plenty of opportunities for children to be actively involved in learning how to 'stop, drop and roll' if their clothes are on fire, and how to "crawl low in smoke" to safely escape a house fire.

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