



## Adverse Weather Conditions - Lightning

The following information is made available to assist the appropriate person making a determination to abandon and or restart a game due to lightning, details of “safe structure” and first aid for lightning strikes. Please refer to HV Regulation 3.3.1 for information on who is responsible for the abandonment of matches.

### Criteria for suspension and resumption of activities

Lightning can strike more than 10km from the edge of a thunderstorm. It is generally agreed that 10km is the minimum safe distance from a storm. The 30/30 rule is used to serve as a guide for the suspension and safe resumption of activities.

The first part of the 30/30 rule is determined by counting the seconds from when the lightning flash was seen to when the thunder is heard. Sound travels at about 1 kilometre every 3 seconds, so a 30 second interval means the storm is 10km away.

Umpires/Team Managers/Captains should be monitoring the storm’s approach and as the flash to bang count nears 30 seconds, people at risk should already be seeking safe shelter. A “flash to bang” count of 30 seconds or less requires immediate and urgent evacuation to safety.

The second part of the 30/30 rule provides the criteria for resuming activities. It is recommended that the storm be 20km away before it is considered safe. A typical storm moves at 40km/h, so waiting 30 minutes after the last thunder is heard or lightning seen provides the 20km safe distance.

It is important to emphasize that blue sky and the absence of rain are not adequate reasons to ignore the 30/30 rule. Many victims are struck before the storm actually arrives because they wait too long to seek shelter. This is the proverbial “bolt from the blue”.

The 30/30 rule is not an absolute rule. A storm may move very quickly, or not generate any lightning or thunder until it is very close or topographical or wind conditions may prevent sound from travelling to your position. These conditions are especially common in mountain areas. It is important that staff observe weather conditions and be alert to the possibility of the above occurring.

### Identification of safe structures

No place is absolutely safe from lightning strikes, but some places are much safer than others. Each location must identify its safe areas and ensure that Umpires/Team Managers/Captains are aware of them.

SAFER areas include:

- Enclosed vehicles with windows closed (car, bus, tractor with cab), do not touch metal parts
- Substantial enclosed buildings
- Low ground, sheltering in clumps of low bushes
- Trees of uniform height- ie forest.

UNSAFE areas include:

- High ground
- Open ground
- Water
- Isolated or tall trees
- Near outdoor metal structures such as fences, gates, poles, seating, ropes courses
- Insubstantial structures such as picnic sheds and shade shelters
- Machinery such as mowers or unenclosed tractors

If you are caught outside during a storm and feel your hair stand on end or hear buzzing/crackling noise in the air, you are within the field of charge of a lightning strike. Remove metal objects (keys, badges, belts etc), crouch down with feet together, head down and hands over your ears. It is safer to adopt this position if outdoors than to be in one of the unsafe situations listed above.

## First Aid

Victims of lightning strikes are safe to handle- they do not “retain charge”. First aiders must ensure they do not become another casualty- move the victim to a safer location. Effects of lightning strike include cardiac and respiratory arrest caused by disruption of the brains’ control centres. CPR or EAR should be given as required. It is important that even people who show no symptoms immediately after the strike receive medical attention as some effects may not be immediately obvious.

## Sources

Davidson, Lea. Lightning Safety Recommendations - NSW Sport and Recreation Outdoor Activities; Leichhardt Rowing Club February 2007.

<http://www.lrc.com.au/doc/LightningSafetyRecommendations.pdf>

Makdissi, Michael and Brukner, Peter. Recommendations for lightning protection in sport; The Medical Journal of Australia 2002

[www.mja.com.au/public/issues/177\\_01\\_010702/mak10009\\_fm.html](http://www.mja.com.au/public/issues/177_01_010702/mak10009_fm.html)

Accessed 11/5/06

Waddell, Robert. Lightning Safety Policy, Soccer NSW. March 2004 Mullen, Leslie. Human Voltage: When lightning strikes people.[http://science.nasa.gov/newhome/headlines/essd18jun99\\_1.htm](http://science.nasa.gov/newhome/headlines/essd18jun99_1.htm) Accessed 17/5/06