



Australian Flying Disc Association

Lightning Policy

This policy was enacted on 19 June 2004.

This policy was revised on 23 August 2007.

This policy was revised on 4 July 2012

This policy was reviewed on 17 September 2014

1. Aim & Scope

The aims of this policy are:

- To prevent injuries or deaths related to lightning strikes by informing players of the risks and supplying well-established procedures for removing themselves from harm.

2. Definitions

The Standard Definitions of the AFDA Operational Policy apply.

3. Revision

This policy is to be maintained and reviewed by the AFDA Board.

4. Summary

- Lightning kills 5-10 people per year in Australia
- Lightning deaths are preventable by taking proper precautions
- Use the 30/30 rule to assess danger:
 - Clear the playing field immediately the flash-to-bang gap is less than 30 seconds
 - Seek shelter in a large permanent structure or enclosed metal vehicle
 - If there is no shelter, crouch down with feet together preferably 20m away from solitary tall objects
 - Only return to the playing field once 30 minutes has elapsed since the last lightning strike

5. Background facts

- From 1803-1991 at least 650 people have been killed by lightning strikes in Australia (1)
- Lightning strikes are the second highest cause of weather-related deaths after flooding - in the US about 100 deaths per year are attributable to flooding, about 70 due to lightning strikes (6).
- While work-related fatalities have decreased, recreation-related fatalities have increased slightly
- Recreation-related fatalities account for about 20% of deaths (1)
- Outdoor sports account for 23% of recreation-related deaths (1)
- There are more than two known instances of ultimate players being killed by lightning - it could happen in Australia
- Sound travels at about 1 kilometre every 3 seconds; count the time between the lightning flash and the bang of the thunder and divide by three to get the distance away in kilometres.
- Storm cells typically move at around 40 km/hr
- A small number of games you play in will be affected each year - is protecting the lives of you and your friends worth the inconvenience experienced?
- Half of successive lightning flashes are around 9km apart (6)
- Lightning can spread out some 20 metres after striking earth (6)
- Lightning often strikes as far as 15 km away from any rainfall. Many deaths from lightning occur ahead of the storm because people try and wait to the last minute before seeking shelter. (7)
- Lightning injuries can lead to permanent disabilities or death. On average, 20% of strike victims die; 70% of survivors suffer serious long-term effects. (7)
- If your clothes are wet, you are less likely to be seriously injured if struck, as most of the charge will conduct through the wet clothes rather than your body. (8)

6. Be Aware and Prepare

- Be aware of appropriate shelter close to the playing field. Each playing field should have an evacuation plan in case of lightning, to an identified shelter or to cars.

- Be aware of any severe storm warnings for the time that you are intending to play.
- Prepare a schedule that allows at least an hour for severe storm delays.
- There is a high likelihood of severe storms in the late afternoon, so be prepared to delay or shorten a finals game at a tournament.
- If storms are possible, prepare fellow players for the likelihood that games will be interrupted and inform others of the protocol which will be followed.
- If storm clouds are observed, monitor their proximity by measuring the flash-bang gap.

7. Identify the risk

- If lightning is observed or thunder is heard, count the time between the lightning (flash) and the thunder (bang). If the time delay is less than thirty (30) seconds then the strike was closer than 10km and the playing area should be cleared immediately.
- If in doubt, seek shelter as soon as lightning is observed or thunder is heard.
- All players are responsible for identifying the risk and must trust the judgement of anyone who identifies the risk.

8. Seek shelter (2)(8)

- Seek shelter in a large building or fully-enclosed metal vehicle - avoid small structures, fabric tents and isolated or small groups of trees.
- If in the open away from shelter, crouch down (singly), preferably in a hollow, with feet together and remove metal objects from head and body. Do not lie down but avoid being the highest object in the vicinity. (1)
- If your hair stands on end or you hear buzzing from nearby rocks, fences, etc, move immediately. At night, a blue glow may show if an object is about to be struck (St Elmo's fire). (8)
- Don't handle long or metallic objects such as umbrellas in the open.
- Don't touch or move close to metal structures, wire fences, goal posts or light towers.
- Don't ride bicycles or drive in open vehicles.
- If inside a fully-enclosed metal-bodied vehicle park away from trees, power lines etc. Stay inside vehicles or caravans but do not touch or lean on metal body components.
- When inside a building AVOID use of the telephone, taking a shower, washing your hands, doing dishes, or any contact with conductive surfaces with exposure to the outside such as metal door or window frames, electrical wiring, telephone wiring, cable TV wiring, plumbing, etc.

9. First Aid (3)

- If someone is struck apply first aid techniques immediately.
- There is no threat of electrocution through bodily contact with someone who has been struck by lightning.
- Lightning fatalities usually are caused by cardiac arrest; the lightning causes the heart to stop.
- Where necessary, apply immediate heart massage and mouth-to-mouth resuscitation (CPR) to lightning victims until medical help arrives and they will have a good chance of survival.
- On average, 20% of people struck by lightning are killed.

10. Suspension of play

- Immediately someone has observed a delay of less than 30 seconds, play should be suspended and the disc left where it lays. Any play after this observation is deemed null and void.
- If one game at a venue suspends play due to a lightning observation, all games at that venue are deemed to have been suspended at that exact moment also.

11. Resumption of play

- Only return to the playing field after at least 30 minutes after the last lightning or thunder has been observed.
- Be conservative!

- Play should resume where possible with the disc in the approximate position it was when the field was cleared and with players in their approximate positions prior to the stoppage, to the satisfaction of both team captains.

12. Cancelled games

- If a particular competition or event has a policy for game cancellation, then that will override the following rules.
- If a game needs to be cancelled or shortened due to severe weather, the following rule shall be used:
- If at least half the game time has elapsed or one team has scored at least half the points target, then the leading team shall be declared the winner. If scores were tied, but ties are not allowed in the tournament, then the winner shall be determined by count-back to whichever team was ahead prior to the previous point being scored.
- Otherwise, the game shall be declared a 0-0 draw.
- If the game is a knockout game, then it can either be rescheduled or the higher-ranked team going into that game (according to standard tiebreakers for the event) will advance.
- If it is the final that has been cancelled, then the higher-ranked team (according to tiebreakers) shall be declared the winner, unless the event has a policy that joint winners may be declared.

13. References

- (1) - <http://www.springerlink.com/content/l4638234x8761785/> - abstract from Coates, L. Blong, R. and Siciliano, F., 1993, Lightning fatalities in Australia, 1824-1991. Natural Hazards 8:217-233.
- (2) <http://www.em.gov.au/Publications/Australianemergencymanualseries/Pages/default.aspx> - Australian Emergency Management Handbook
- (3) - <http://www.em.gov.au/sites/schools/Getthefacts/Severestorms/Pages/default.aspx> - Emergency Management Australia - Schools - Severe Storm Action Guide
- (4) - <http://www.ncaapublications.com/productdownloads/MD11.pdf> - NCAA Guideline 1d Lightning Safety, National College Athletics Association, 2003.
- (5) - <https://www.mja.com.au/journal/2002/177/1/recommendations-lightning-protection-sport> - Michael Makdissi and Peter Brukner, Recommendations for lightning protection in sport, Medical Journal of Australia, May 2002.
- (6) - http://www.lightningsafety.noaa.gov/little_known_facts.htm - Little known lightning facts, National Weather Service.
- (7) - <http://www.lightningsafety.noaa.gov/outdoors.htm> - Lightning safety outdoors, National Weather Service.
- (8) - <http://www.bom.gov.au/info/thunder> - Severe Thunderstorms: Facts, warnings and protection.