



## **NORTHERN NSW FOOTBALL LIGHTNING POLICY**

### **Introduction**

In Australia, lightning accounts for five to ten deaths and well over one hundred injuries annually. A large percentage of lightning strike victims survive but many of these suffer from severe lifelong injury and disability. Statistics show that approximately 25% of people killed by lightning are playing sport. When thunderstorms threaten, coaches must not let the desire to start or complete a match or a coaching session hinder their judgment when the safety of players, coaches or spectators may be in jeopardy.

Thunderstorms are most likely to develop on warm summer days and will go through various stages of growth, development and dissipation. During the thunderstorm, each flash of 'cloud to ground' lightning is potentially lethal. Lightning can travel 80km before it strikes something. If a person is in the path of that lightning discharge, it could prove deadly as the current associated with the visible flash travels along the ground. Although some victims are directly struck by the main lightning stroke, many victims are hit as the current moves in, and along the ground. The ground emits charges that shoot up to meet the leading strikes and the high voltage gradients cause currents to flow in concentrated channels on the surface or within the soil. It is therefore evident that the potential exists for a large number of people to be struck by lightning as they leave themselves vulnerable due to inadequate protective action.

Contrary to popular belief, lightning does not always strike tall objects – it can strike anywhere and can strike repeatedly. Metal objects do not attract lightning, although they may channel it if the strike is already a few metres away. There is clearly a need for all clubs and associations to implement an action plan, and adopt all precautionary methods available, to prevent any casualties.

### **Lightning Facts:**

- All thunderstorms produce lightning and are dangerous.
- Lightning often strikes outside the area of heavy rain and may strike as far as fifteen kilometres from any rainfall.
- Any time thunder is heard, the thunderstorm is close enough to pose an immediate lightning threat to your location.
- When thunderstorms are in the area but not overhead, the lightning threat can still exist even when overhead it is sunny, not raining, or when clear sky is visible.
- Many lightning casualties occur before the thunderstorm rains have moved into the area. This is often due to people not seeking shelter soon enough.
- Large numbers of casualties occur after the rain dissipates. This can be due to people being in too much of a hurry to go back outside and resume activities.

A designated person should be responsible for monitoring the weather conditions in the area at which the ground is located, to provide awareness at individual club level. Where possible, the person should attempt to ensure that all players, officials and spectators are moved to safe areas.

The monitoring should begin the day before a scheduled match or training to confirm whether or not thunderstorm warnings have been given by the weather forecasters. If so, increased awareness of possible lightning strikes should continue on the day of the match/training.

Should thunderstorms be prevalent on match day, the '30-30' rule is to be used in order to determine whether a game/training should be suspended (to include delaying the commencement of the game) and when it is safe to resume.

When lightning is sighted, count the time until thunder is heard. If that time is 30 seconds or less, the thunderstorm is within 10km and is dangerous. As most experts believe that the 'safe' distance is no less than 10km, all people at risk should be seeking, or already inside safe shelters. This is the time at which matches/training should be suspended.

This rule is one of the most practical techniques for estimating the distance to lightning activity and is based on the fact that light travels faster than sound. As sound travels at a speed of around 1km every 3 seconds, the time that elapses between the flash of lightning and clap of thunder can be divided by 3 to give a measure, in kilometres, of how far away the storm is.

The threat of lightning continues for a much longer period than most people realise. It is imperative to point out that sunshine or blue sky should not fool anybody into thinking that it is safe, and you should remain alert to the possible return of the storm.

Once play/training is suspended a period of 30 minutes should be allowed before reassessing. Using the '30-30' rule, the distance of the storm should be estimated before allowing activity to continue.

There is not a place absolutely safe from the lightning threat, however some places are safer than others and, where practicable, people should be moved to a safe structure as soon as possible. The best option is a large building with electric and telephone wiring and plumbing to provide a safe pathway for the current to the ground. Once inside, stay away from corded telephones, electrical appliances, lighting fixtures, radios or microphones and electric sockets and plumbing. Mobile or cordless telephones are a safe option if the person and antenna are located within a safe structure. Do not watch lightning from open windows or doorways. Inner rooms are preferable.

### **Recommendations:**

- Every match/training session should have an identified person in charge who is responsible for ensuring that the lightning policy is adhered to.
- All coaches and administrative staff should be aware of the policy.
- The policy should also be circulated to players and parents.

- If thunderstorms occur, use the '30-30' rule to determine the distance of the storm and take appropriate action to suspend activity if less than 10km away.
- Activity can resume when the '30-30' rule has been satisfied.
- Where practicable, ensure that all present are relocated, if necessary, to a safe shelter. See Appendix 1
- Should a person be struck by lightning, ensure that immediate action is taken. See Appendix 2.
- Provide warnings to all of potential dangers caused by lightning and indicate safety guidelines clearly.

### Appendix 1

A large solid building is the best option or a hard top (metal bodied) vehicle (including buses) that guides the lightning current around the passengers, is an alternative. Shelter should NEVER be sought under a small group (or single) of trees, in an open field or in small open structures such as rain/picnic shelters. People should stay away from metal poles, fences, clothes lines etc and should not use umbrellas or mobile telephones. Metal is not to be touched.

### Appendix 2

If a person is struck by lightning, there are key first aid guidelines to follow. Medical care may be needed immediately to save a person's life. If at all possible, call '000' at once. As all deaths from lightning arise from cardiac arrest and/or stopping of breathing, it is imperative that treatment is commenced as soon as possible. CPR or mouth-to-mouth resuscitation is the respective recommended first aid.