



SLSA Guideline

Title: Lightning
Document Number: 2.2
Last Review Date: May 2013
Next Review Date: May 2014

INTRODUCTION

There are 5-10 deaths and over 100 injuries caused by lightning in Australia each year. Most lightning related injuries result from people using landline telephones during electrical storms. Being outdoors during a thunderstorm increases the risk of being struck by lightning or affected by close lightning strikes. This policy outlines what action should be taken to avoid the adverse consequences of lightning strikes during thunderstorms for SLSA activities.

WHAT IS LIGHTNING?

Lightning is a complex electrostatic phenomenon created when the normal distribution of electrical charges in the earth's atmosphere are altered during storms. Clouds become statically charged during storms, thought to be because of increased friction and temperature changes, and this alteration can decrease the normally insulating properties of air. When the static charge of the cloud interacts with the magnetic field of the earth or another statically charged cloud nearby, a conductive pathway is created. The rapid transfer of excess static charge via the newly created pathway is what results in the flash of light that we see. When static charge is transferred in this way, it also heats up the surrounding atmosphere, creating a shockwave that we hear as thunder.

PROTECTION AGAINST LIGHTNING STRIKES

Outdoor Protection

The 30/30 Rule:

The 30/30 Rule is recommended for lightning safety in the *AS/NZS 1768:2007 Lightning protection*. The rule is designed to provide guidance on the suspension and resumption of activities in an outdoor environment.

The 30/30 Rule sets out the following principals:

Close the beach

- When the 'flash to bang count' (i.e. the time between seeing the lightning and hearing the thunder) is 30 seconds or less. This indicates that the lightning is less than 10km away and is associated with significant risk that the strike could be at the patrol arena.

Open the beach

- When 30 minutes has passed since the last sighting of any lightning. A typical storm travels at about 40 km/h. Waiting 30 minutes allows the thunderstorm to be approximately 20km away.

- i. With an approaching thunderstorm, and where the 30/30 Rule applies, all persons should be advised to leave the water and clear the beach immediately. The Patrol Captain should remove the patrol flags, close the beach and then the patrol should retire to the shelter of the clubhouse, maintaining a surveillance lookout from there.
- ii. Seek shelter in a 'hard top' vehicle or building - avoid small structures, patrol shelters, fabric tents and isolated or small groups of trees as you may still be at risk from lightning strikes.
- iii. 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. You do not need to lie down, but you do need to avoid being the highest object in the vicinity.
- iv. If swimming, surfing or in a boat leave the water immediately and seek shelter.
- v. In the event of a surf carnival or special event, all effort should be made to ensure the safety of all personnel. All effort should be made by the carnival referee and/or organisers to delay the event until the danger has passed or cancel/postpone events completely.
- vi. Avoid the use of portable radios and mobile telephones during a thunderstorm. If emergency calls are required keep them brief.



Indoor Protection

- i. Avoid the use of telephones, radios, fax machines, computers and other electrical equipment. If emergency calls are required keep them brief.
- ii. Before the storm arrives disconnect external aerials and power leads to radios and other appliances.

FIRST AID

The normal emergency care procedures apply to any patients affected by lightning strikes. Ensure that the rescuer is in no danger of being struck by lightning. If the patient is not breathing commence resuscitation immediately.