

SOFTBALL QUEENSLAND INC



WEATHER GUIDELINES

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Disclaimer

The information contained in this guide is general in nature and does **not** constitute medical advice from your doctor or health professional.

1. INTRODUCTION

Softball Queensland Inc (SQI) has a responsibility to take a positive leadership role in educating and increasing the awareness of its participants towards the dangers of physical activity in the heat and during extreme weather conditions. These guidelines support that responsibility. It should be noted that these are purely guidelines.

The guidelines should be considered for all participants involved in softball, including players, officials, umpires, coaches, scorers, volunteers, staff and spectators. Clubs and Associations are strongly encouraged to adopt these guidelines.

2. EXTREME WEATHER

Extreme weather may be defined as weather that threatens the short or long term safety of individuals as a result of rain, hail, lightning, wind chill or heat. The risk is determined in conjunction with Sport Medicine Australia's Guidelines as well as the Bureau of Meteorology's forecast conditions.

Weather Condition	Extreme weather determinant
Ambient temperature	> 36 degrees Celsius
Wet bulb globe temperature (shade)	> 30
Apparent temperature (wind chill)	< 2 degrees Celsius
Wind speed	> 40km per hour
Rainfall	> 80mm within 24 hours

Notes:

- Wind may create additional hazards in regard to trees, branches or other materials becoming projectiles.
- Rain also needs to be considered in relation to its impact on the safety of the playing surface.

3. UV EXPOSURE AND HEAT ILLNESS

The sun's UV is both the major cause of skin cancer and an important source of vitamin D. It is recommended that sport and recreation organisations take a balanced approach to UV exposure that reflects the varying levels of UV throughout the year and across Australia.

Overexposure to UV can cause skin damage (including tanning and sunburn), eye damage and skin cancer. The good news is that skin cancer is largely preventable. Sport and recreation providers can reduce the risk associated with UV overexposure by implementing some simple preventative strategies.

Whenever UV levels reach three and above, sun (UV) protection is needed. During this time, use a combination of five sun protection measures:

1. **Slip** on sun-protective clothing – that covers as much skin as possible.
2. **Slop** on SPF30+ sunscreen and lip balm – make sure it is broad spectrum and water-resistant. Apply sunscreen 20 minutes before going outdoors and every two hours afterwards.
3. **Slap** on a hat – that protects your face, head, neck and ears.
4. **Seek** shade.
5. **Slide** on some sunglasses – make sure they meet the Australian standard.

Even if you cannot utilise some of these points when playing, ensure that you follow them in off-field activities. You can easily find the daily UV alert by checking the newspaper or looking on the SunSmart (www.sunsmart.com.au) or Bureau of Meteorology (www.bom.gov.au) websites.

For further information relating to UV exposure and heat illness visit www.smartplay.com.au.

3.1 Heat Illness

Heat illness can occur when a participant exercises vigorously in hot conditions. It may also occur with prolonged exposure to hot weather, even if activity is low intensity. In cool weather, heat illness can also present when exercising at high intensity.

Heat illness in sport presents as heat exhaustion (more common) or heat stroke (rare but life threatening). Symptoms may include light-headedness, dizziness, nausea, obvious fatigue or loss of skill and coordination, unsteadiness, cessation of sweating, confusion, aggressive or irrational behaviour, collapse or ashen grey pale skin.

Responses to heat vary. It is not possible to provide overall recommendations about limiting conditions in hot weather. However, heat illness can be prevented by knowing the risk factors and applying prevention strategies to minimise risk. Factors that increase the risk of heat illness include:

- high exercise intensity (e.g. exercising close to your personal capacity)
- lack of fitness (e.g. exercising at an intensity or duration beyond your current capacity)
- previous history of heat illness or heat intolerance
- age – junior and veteran participants are at higher risk due to their age
- illness and medical conditions (e.g. current or recent infectious illness or chronic health disorders at any age)
- high air temperature and high humidity (see Heat Illness Chart below)
- low air flow or movement (no wind)
- prolonged exposure to hot conditions, heavy clothing and protective clothing (e.g. padding)
- lack of acclimatisation to being active in warm and humid conditions
- dehydration (inadequate water intake before exercise and during activity longer than 60 minutes)
- radiant heat from surfaces such as concrete surfaces can intensify hot conditions.

3.2 Children and Heat Stress

Children sweat less and get less evaporative cooling than adults. In warm and hot weather they have greater difficulty getting rid of heat; they look flushed, and feel hotter and more stressed than adults. Overweight children are particularly disadvantaged exercising in warm weather.

Children seem to be effective at “listening to their bodies” and regulating their physical activity. For this reason, children should always be allowed to exercise at their preferred intensity. They should never be urged to exercise harder or compelled to play strenuous sport in warm weather. If children appear distressed or complain of feeling unwell, they should stop exercising.

In warm weather wet sponging will make children feel more comfortable. Drinks should be provided for children playing sport.

3.3 Heat Illness Chart

The Heat Illness Chart is a guide to the relationship between ambient temperature and the risk of heat illness. When observing this chart consider:

- there are not clear demarcations in risk between temperature ranges
- stress increases with rising air temperature and relative humidity
- at low ambient temperatures the body can cope with higher humidity than at high ambient temperatures
- stress increases with relative humidity as it becomes more difficult to regulate body temperature due to a decrease in the evaporation of sweat (a mechanism used to keep the body cool in the heat and while exercising)
- individual risk factors including acclimatisation to location conditions.

Ambient Temperature

Easily understood, most useful on hot, dry days.

Ambient Temperature °C	Relative Humidity	Risk of Heat Illness	Recommended management for sports activities
15-20		Low	Heat illness can occur in running. Caution over-motivation.
21-25	Exceeds 70%	Low – Moderate	Increase vigilance. Caution over-motivation.
26-30	Exceeds 60%	Moderate - High	Moderate early pre-season training. Reduce intensity and duration of play/training. Take more breaks.
31-35	Exceeds 50%	High - Very High	Uncomfortable for most people. Limit intensity, take more breaks. Limit duration to less than 60 minutes.
36 and above	Exceeds 30%	Extreme	Very stressful for most people. Postpone to cooler conditions (or cooler part of the day) or cancel.

Wet Bulb Globe Temperature (WBGT) Index

Further guidance might be gained from the WBGT index. The WBGT is particularly useful for hot, humid days.

WBGT	Risk of Heat Illness	Recommended management for sports activities
Less than 20	Low	Heat illness can occur in running. Caution over-motivation.
21-25	Moderate - High	Increase vigilance. Caution over-motivation. Moderate early pre-season training. Take more breaks.
26-29	High – Very High	Limit intensity, take more breaks. Limit duration to less than 60 minutes per session.
30 and above	Extreme	Consider postponement to a cooler part of the day or cancellation (allow swimming).

3.4 Check local weather conditions

The Bureau of Meteorology provides information on local weather conditions and observations including temperature, UV, wind speed and thermal comfort. Weather warning, including heat waves, fire and storms can be viewed at www.bom.gov.au and should be considered as part of any club's safety plan. The provision of safety personnel able to identify, treat and manage heat illness is also an important part of this planning.

4. HAIL

All hailstorms present some risk to players in an open playing field, and the size and intensity of the storm can change dramatically in a short period of time.

All play should be suspended during hailstorms so that players and officials can seek suitable shelter.

It is important to also be aware of any significant temperature drop, rainfall and increased wind that may be associated with the hail conditions. Play should be restarted after the hail has stopped falling, with particular attention being given to the amount of ice on the playing surface (size and thickness of layer).

In some cases it may be unsafe to resume play immediately due to an ice-covered surface. Deferral of the restart to allow melting (or manual clearing in parts) should be considered in extreme circumstances.

5. LIGHTNING

5.1 Introduction

Lightning is the visible part of an electrical discharge. Thunder is the resulting sound from the rapid expansion of the air after this electrical discharge. In statistical terms, lightning poses a greater threat to individuals than almost any other natural hazard in Australia, accounting for five to ten lives and well over 100 injuries annually. These figures are likely to increase in line with the growing proportion of people who are engaging in outdoor recreational activities.

5.2 Procedure

In the lead up to the game, it is recommended that a designated official monitor weather forecasts on the Bureau of Meteorology (BOM) website (<http://www.bom.gov.au/>). If access to BOM is not available on the day, the 30/30 rule is recommended.

The first part of the 30/30 rule is a guide to the postponement or suspension of games. During a thunderstorm, a 'flash-to-bang' count of 30 seconds indicates that the lightning is 10km away (1km per 3 seconds) and the chance of being struck by lightning is high. This indicates a potential for significant risk and the plate umpire should suspend the game.

The second part of the 30/30 rule provides a guide to the resumption of games. It is recommended that a period of 30 minutes should elapse after the last sight of lightning or the sound of thunder before resuming the game.

Note: blue sky and lack of rainfall is not a reason to breach the 30 minimum return-to-activity rule. 'Australia Wide First Aid' encourages you to find solid shelter during a storm, not including a tree. Try to find shelter within a building, bus shelter or car and avoid water and objects that conduct electricity. If you're unable to find safe shelter, crouch down in the open, feet together with your head tucked down towards your chest. You should make yourself as small as you can. Laying down flat on the ground increases your total body surface area, which also increases your chance of getting struck by lightning. Wait approximately 30 minutes after the last flash of lightning before you leave your shelter. More than half of lightning deaths occur once the storm has passed.

Avoid:

- open fields;
- close vicinity to the tallest structure (e.g. tree, light pole);
- small structures (e.g. rain/picnic shelters, tents, lightweight dugouts);
- umbrellas, bats; or
- other objects that increase an individual's height.

Avoid the use of portable radios, mobile and landline telephones, fax machines, computers and other electrical equipment. If emergency calls are required, keep them brief.

5.3 Game responsibilities

The plate umpire is responsible for suspending games, The Tournament Chief Umpire (TCU)/Tournament Management Committee (TMC) may also suspend games. Once a game is suspended, the plate umpire hands responsibility to the TMC. The TMC consists of:

- TCU
- SQI Representative
- Tournament Convenor

The TMC must ensure all participants convene to a safe area (e.g. club house, 'hard top' vehicle etc.) and is responsible for notifying all team managers of the situation and keeping them informed. Team managers are responsible for notifying their own team personnel of the situation. The TMC is responsible for deciding if and when the game will resume and will not do so unless 30 minutes has elapsed after the last sight of lightning or sound of thunder. Once the game resumes, the TCU will hand over responsibility to the Plate Umpire for the game to recommence.

5.4 First aid

If someone is struck by lightning, get medical attention as quickly as possible and:

- ensure the rescuer is in no danger of being struck by lightning. If the patient is not breathing commence resuscitation immediately; and
- check for burns in two places – the injured person may be burned, both where they were struck and where the electricity left their body.

Being struck by lightning can also cause nervous system damage, broken bones, and loss of hearing or eyesight. Be aware that the victim will not retain an electrical charge, so it is safe to touch them.

6. COLD WEATHER

Extreme weather can produce two chill risks: the absolute air temperature and the wind chill factor. Of these, wind chill in winter sports is the more significant risk.

Apparent Temperature (AT) is an adjustment to the actual air (ambient) temperature based on the perceived effect of the extra elements such as humidity and wind.

AT is valid over a wide range of temperatures, and it includes the chilling effect of the wind at lower temperatures. Minus 2°C (AT) is the point where play should be suspended for wind chill factor.

When using the AT as a wind chill indicator, the model assumes an appropriately dressed adult for those conditions. If clothing were to get wet, the cooling effect would be greater than that predicted by the model, and the chance of hypothermia would be greater than indicated by the AT. In wet, windy conditions, someone wearing inadequate clothing can become hypothermic in quite mild conditions. The risk also increases for children.

7. UV EXPOSURE AND HEAT ILLNESS CHECKLIST

1. Schedules, fixtures, rule modifications and cancellation policy

- ◇ Where possible, training, events and competitions are scheduled to minimise exposure to UV levels of three and above and avoid high temperatures.
- ◇ Cancellation of training, events or competition occurs when high-risk conditions are forecast.

Where it is not possible to avoid peak UV and heat periods, the following interim steps are taken to minimise the risk of overexposure to UV and heat illness:

- ◇ The duration of the match, warm-up, training or other activity is reduced and has limited intensity where applicable.
- ◇ Scheduling of activities to start earlier in the morning or later in the evening thus avoiding high-risk UV exposure times.
- ◇ Increase and/or extend the number of rest breaks and opportunities to seek shade and refreshments.

Example: 1.5 hour games have a 5 min break at the 40min mark/completion of innings

- ◇ Rotate officials out of the sun more frequently than usual. Be aware that older volunteers maybe at an increased risk of heat illness.
- ◇ Increase the number of player rotations within a match.
- ◇ Hold activity at an alternative venue or reschedule wherever possible.
- ◇ Officials, coaches and senior members are to act as role models by wearing sun-protective clothing and hats, applying sunscreen and seeking shade wherever possible.

2. **Shade**

- ◇ Conduct an assessment of the existing shade available at outdoor venues. Identify whether the shade is appropriate or needs improvement.
- ◇ Utilise shade available from buildings, trees and other structures where possible. These can be used for player interchanges, between activities or as spectator areas. Ensure that these identified areas provide shade when matches are played.
- ◇ Provide areas of rest in shaded areas for spectators and individuals when not actively participating or playing. This may include the interchange bench and off-field officials.
- ◇ Where necessary, interchange and presentation ceremony areas are to be protected by shade.
- ◇ Participants and officials rotate to cooler, shaded areas.
- ◇ Ensure when there is insufficient natural or built shade, temporary shade structures are provided and/or participants and spectators notified to bring their own temporary shade structures; such as umbrellas.

3. **Clothing**

- ◇ Officials, volunteers, and players must ensure that when off field that sun protection is addressed such as wearing a wide brimmed hat and sunglasses.
- ◇ Ensure that playing uniform and other parts of clothing are loose fitting and lightweight where possible.
- ◇ Participants without appropriate protective clothing should not be permitted to spend extended periods exposed to UV levels of three and above.

4. **Sunscreen**

- ◇ SPF 30+ broad spectrum, water resistant sunscreen is promoted and/or provided to participants.
- ◇ Sunscreen is stored below 30°C and replaced once it is past the use-by-date.
- ◇ Participants are encouraged to apply sunscreen 20 minutes before training or playing and to reapply every two hours.
- ◇ For best protection, participants are encouraged to apply a generous amount of sunscreen (the equivalent of one teaspoon per limb).

5. **Air Flow**

- ◇ Air flow is maximised at training and competition venues, specifically indoor venues (e.g. doors and windows are opened or marquee walls removed).
- ◇ Spaces with air-conditioning or fans are made available in high-risk conditions.

6. **Hydration**

- ◇ All participants (including players, coaches and officials) are required to bring their own clearly labelled drink bottle.
- ◇ Cool clean water is available to all participants.
- ◇ All those involved are aware that they need to be well hydrated before participating in physical activity.
- ◇ Flexible drink breaks are provided in hot or humid conditions.
- ◇ Individuals are permitted to drink between breaks at their own discretion.

7. Education and Information

- ◇ The UV exposure and heat illness guidelines are displayed in a prominent location (e.g. website or noticeboard).
- ◇ The times when UV protection is required (as indicated by a newspaper and/or the SunSmart website) and the Sports Medicine Australia heat illness chart are displayed in a prominent location.
- ◇ Participants are notified at the beginning of September that UV levels will generally be three and above between 10am - 3pm and sun (UV) protection measures need to be implemented.
- ◇ Participants are notified at the start of May that sun (UV) protection measures are no longer required unless UV index levels reach three and above.
- ◇ UV protection and heat illness prevention messages are included in event programs and newsletters.
- ◇ Announcements and/or notifications are made to remind all involved of key UV and heat illness prevention measures.
- ◇ Clubs or Officials are responsible for identifying what the UV level is going to be and remind athletes at the training or match the precautions to be taken.

8. First aid

- ◇ The first aid kit includes a supply of SPF 30+ broad spectrum, water resistant sunscreen.
- ◇ Trained first aid personnel or sports trainers are present at training and events to manage sunburn and heat illness.
- ◇ Contact details of the closest medical assistance are displayed in a prominent location (e.g. first aid room or canteen).
- ◇ Any participant feeling discomfort or distress is monitored and evaluated by trained safety personnel.
- ◇ Ice, fans and water spray bottles are available as cooling aids.

9. Individual risk factors

- ◇ Information on participants' medical conditions and medical history is collected (according to privacy legislation).
- ◇ A record of injuries (including heat illness) is kept.
- ◇ Age, fitness, skin characteristics, acclimatisation, gender and medical conditions are considered when making decisions.
- ◇ If in doubt, an individual is advised to see a medical professional for clearance to participate.