



UV exposure and heat illness guide

helping to keep organised sport and physical
activity safe, healthy and fun for all





Acknowledgements

This guide was developed as part of a partnership between SunSmart and Smartplay. It is supported by the Victorian Health Promotion Foundation (VicHealth) vichealth.com.au, the Department of Planning and Community Development (Sport and Recreation Victoria) sport.vic.gov.au, Cancer Council Victoria cancervic.org.au and Sports Medicine Australia Victorian Branch vic.sma.org.au

Disclaimer

The information contained in this guide is general in nature and does not constitute medical advice from your doctor or health professional. While all reasonable attempts have been made to ensure the accuracy of the information, SunSmart, Smartplay, and associated parties cannot accept responsibility for loss, injury, claim or damage resulting from the use or application of information within this guide.

contents

- 4** Facts from SunSmart
- 5** Facts from Smartplay
- 6** Tips for creating UV and heat illness guidelines
- 8** UV exposure and heat illness checklist

This guide is relevant for:

- State and national sporting organisations
- Regional sports assemblies
- Local government authorities
- Clubs
- Physical activity groups
- Associations
- Leagues
- Schools
- Recreation centres
- Event organisers
- Fitness providers

introduction

This guide outlines practical steps to create a safe and enjoyable environment for participation in sport and physical activity.

The guide will assist you to:

- ensure a balanced approach to ultraviolet (UV) radiation exposure to reduce the health risks associated with overexposure (such as permanent skin damage, eye damage and skin cancer) and maintain adequate vitamin D levels
- protect participants from heat-related illness and injury
- create your own guidelines that are flexible, achievable and relevant to your sport or activity, which in turn may help to increase participation and improve performance.

It is possible to plan, prepare and reduce risk to participants by monitoring UV and heat forecasts and implementing your own guidelines. Visit the Bureau of Meteorology bom.gov.au to view UV alerts, weather forecasts and warnings.

When creating UV exposure and heat illness guidelines, it is important to consider all participants involved including athletes, officials, coaches, parents, volunteers, staff, sports trainers and spectators.

facts from SunSmart

The sun's UV is both the major cause of skin cancer and an important source of vitamin D. Sport and recreation settings should take a balanced approach to UV exposure that reflects the varying levels of UV throughout the year and across Victoria.

Skin cancer

Overexposure to UV can cause skin damage (including tanning and sunburn), eye damage and skin cancer. Childhood and adolescence are critical periods when sun exposure is more likely to contribute to skin cancer in later life. Cancer Council research indicates that adolescents are often sunburnt during sport and physical activity.

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 prevention strategies.

Whenever UV levels reach three and above, sun (UV) protection is needed. In Victoria UV levels generally reach three and above from September to April. 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. Put it on 20 minutes before you go 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.

Particular care should be taken between 10am and 3pm when UV levels reach their peak. UV cannot be seen or felt and can be damaging to skin even on cool, cloudy days. As you cannot rely on temperature to know when to protect yourself from UV, you should get into the habit of checking the SunSmart UV Alert. The alert appears when UV index levels reach three and above and can be found on the weather page of daily newspapers at sunsmart.com.au or bom.gov.au/weather/uv.

People with naturally very dark skin (not tanned or olive skin) are relatively protected from skin cancer by the large amount of pigment (melanin) in their skin. They do not normally need to apply sunscreen but are recommended to wear a hat and sunglasses to protect their eyes. Everyone should check their skin regularly, at least every three months to detect any skin changes.

Vitamin D

Vitamin D is important for general health and the development of healthy bones, muscles and teeth. In Victoria from September to April most people need only a few minutes a day of exposure to the sun, outside of peak UV times (10am to 3pm). People with naturally very dark skin need two to three times this amount. From May to August, average UV levels are generally below three and UV protection is not required unless you are in alpine regions or near highly reflective surfaces such as snow or water. When UV levels are below three this is the time to get some sun to help maintain vitamin D levels.

Visit sunsmart.com.au for more information about UV, skin cancer and vitamin D.

facts from Smartplay

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.

Visit smartplay.com.au for more information about heat illness and to download the **Beat the Heat** brochure.

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 equipment (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 black asphalt, concrete or black rubberised synthetic surfaces can intensify hot conditions.

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

The **Heat Illness Chart** is a **guide** to the relationship between ambient temperature and 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 local conditions.

Heat Illness Chart



15–20



Low

Comfortable, continue with usual activities. Heat illness can occur in prolonged high-intensity activities such as running.



21–25



Low–moderate

Comfortable for most people, continue with usual activities. Be cautious of participants who fit into high-risk categories and when relative humidity reaches over 70%.



26–30



Moderate–high

Uncomfortable for some people, modify activities for at risk individuals. Reduce intensity and duration of play/training and take more breaks. Be cautious when relative humidity reaches over 60%.



31–35



High–very high

Uncomfortable for most people, modify activities. Reduce intensity, take more breaks and limit duration to less than 60 minutes. Be cautious when relative humidity reaches over 50%.



36 & above



Extreme

Very stressful for most people, modify, postpone or cancel activities. Reschedule to a cooler part of the day or cooler location. Be cautious when relative humidity reaches over 30%.



Ambient Temp °C



Risk of Heat Illness



tips

for creating UV and heat illness guidelines

Consider who is participating

- Victoria's communities are diverse and sport and physical activity should be accessible to everyone.
- Consider the characteristics of your participants, including age, level of play and individual risk factors.
- Cater for officials, coaches, parents, volunteers, staff, sports trainers and spectators in your prevention strategies.

Cricket Victoria has identified heat considerations are not the same for elite pathway and community cricket and has developed both pathway and community cricket policy documents. – cricketvictoria.com.au

Work together

- Involve individuals from all areas of your organisation or club to ensure equal ownership of guidelines.
- Include UV exposure and heat illness on your meeting agendas.
- Incorporate feedback into a regular review of your guidelines.
- Some governing bodies have existing UV exposure and heat policies that should be used in conjunction with this guide and checklist.

Plan for safety

- Skin damage, skin cancer and heat illness are largely preventable.
- Generate a checklist of prevention strategies and monitor implementation.
- Discuss UV or heat related incidents and strategies to prevent reoccurrence.
- Download Smartplay's club action plan and priority tools at smartplay.com.au or call SunSmart or Smartplay for support.

Qualified safety personnel are important members of a sporting club. A qualified sports trainer or sports first aider is trained to identify and manage signs and symptoms of heat illness. For more information about becoming a sports first aider or sports trainer visit sma.org.au.

Make guidelines specific to your sport or activity

- Prevention strategies will be different for every sport or activity.
- Add or remove strategies from the checklist on pages 8 and 9 to meet the needs of your own sport or activity.

It is not always possible to wear broad-brimmed hats in sporting competitions; however, hats can be worn on the interchange bench or at training. 'At club water polo competitions held outdoors, when shade is not available, players can wear full-brimmed hats over their water polo caps.' – vicwaterpolo.com.au





Be flexible

- Be flexible in the duration, location, intensity, amount of rest and the way you allocate points.
- Flexibility is key to increasing participation and ensuring safety, enjoyment and lifelong participation.

Tennis Victoria avoids scheduling matches in the middle of the day where possible and recommends that matches be decided in a manner that reduces the duration of play. For example, a 'best of two sets' format with a deciding match tiebreak if required or one 'pro set' which is first to eight games instead of best of three sets. – tennis.com.au

Raise awareness

- Educate participants on the importance of guidelines in preventing overexposure to UV and heat illness.
- Use various communication methods, such as newsletters, websites, SMS, noticeboards and social networking to deliver key heat illness prevention messages.
- Allocate responsibility for specific components of your guidelines.
- Ensure those responsible have access to the information and resources they need to make informed decisions.

Coaches should be aware of UV and heat policies of their sports governing body (particularly for competitions), and discuss when the policy will take effect with a match referee. If a policy is not yet in place, coaches need to use their experience to manage athletes appropriately, particularly when conditions are extreme. – **Sport Education Victoria**

Use positive role models

- Role models can influence the culture of your club or organisation, as well as individuals' approaches to their own safety and the safety of others.
- When respected individuals comply with heat and UV exposure guidelines, others, particularly junior players, will be more likely to change their own behaviour.

'As the club's sports trainer I always make sure that sunscreen is available to our players. I check the sunscreen is in date and that players apply it well before the start of the match or training. This is one of my responsibilities when the UV levels are three and above.' – **Paul Dillon, Level 1 SMA Sports Trainer, Craigieburn Football Club**

Consider climate change

- Australia is expected to experience more extreme weather with climate change.
- Guidelines should cater for extreme conditions in your geographical location.

Coaches play a key role in minimising the risks associated with heat exposure and illness. Some of the strategies coaches are obliged to use to reduce the impact of playing in the heat include interchange, field rotation, additional drink breaks and reducing intensity and/or duration of training. – **Sport Education Victoria**. For more information on becoming a coach visit vicsport.asn.au or ausport.gov.au.



UV exposure and heat illness checklist

This checklist is a starting point for you to create UV exposure and heat illness guidelines. These guidelines will help provide a safe environment for athletes, officials, coaches, parents, volunteers, staff, sports trainers and spectators. Some checkpoints may not be relevant and can be removed or you may have some additional prevention strategies to add.

Strategies relating to UV exposure should reflect the varying levels of UV throughout the year and across Victoria. Create your own guidelines by downloading a modifiable word version of the checklist from sunsmart.com.au or smartplay.com.au.

1. Schedules, fixtures and rule modifications (including a 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 (according to the rules of «insert your sport's governing body») 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:

- Warm-up activities are limited in duration and intensity.
- The duration of the activity is reduced.
- Activities start earlier in the morning or later in the evening.
- Rest breaks and opportunities to seek shade and rehydrate are increased.
- Officials rotate out of the sun more frequently than usual.
- Player interchange and substitution is used more frequently than usual.
- Activity is held at an alternative venue (e.g. training at a pool).
- Officials, coaches and senior members act as role models by wearing sun-protective clothing and hats, applying sunscreen and seeking shade wherever possible.

2. Shade

- An assessment of existing shade has been conducted (using the SunSmart shade audit resource) at commonly used outdoor venues.
- The use of shade from buildings, trees and other structures is utilised where possible (e.g. for player interchange, marshalling areas, spectator areas).
- When not actively playing or between individual events, participants are able to rest in shaded areas.
- Marshalling, interchange and presentation ceremony areas are protected by shade.
- Participants and officials rotate to cooler, shaded areas.
- Where there is insufficient natural or built shade, temporary shade structures are provided or participants are notified to bring their own temporary shade (e.g. tents or umbrellas).

3. Clothing

- Sun-protective clothing is included as part of on and off-field uniform and uniform for officials and volunteers.
- Tops/jerseys are made from UPF (UV protection factor) 50+ material and have long sleeves and a collar.
- Tops/jerseys are loose fitting and lightweight.
- Wide-brimmed or legionnaire-style hats are included as part of the on and off-field uniform (even if they can't be worn in actual play). Caps and visors do not provide adequate sun protection to the face and neck.
- Participants are advised to wear wrap around sunglasses that meet the Australian standard (AS/NZS 1067:2003).
- Participants without appropriate protective clothing are not 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. People with naturally very dark skin (not a tan or olive skin) may not need to wear sunscreen.
- 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 or immediately after swimming or toweling dry.
- 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 (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 officials and coaches) are required to bring their own clearly labelled drink bottle.
- Cool 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.
- Smartplay's Drink Up fact sheet or poster is on display.

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 determined by the SunSmart UV Alert) and the Sports Medicine Australia heat illness chart are displayed in a prominent location.
- Links to SunSmart sunsmart.com.au and Smartplay smartplay.com.au are included on our website.
- 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.

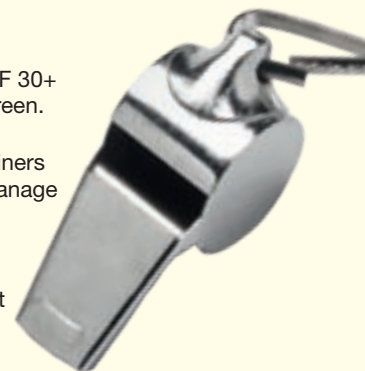
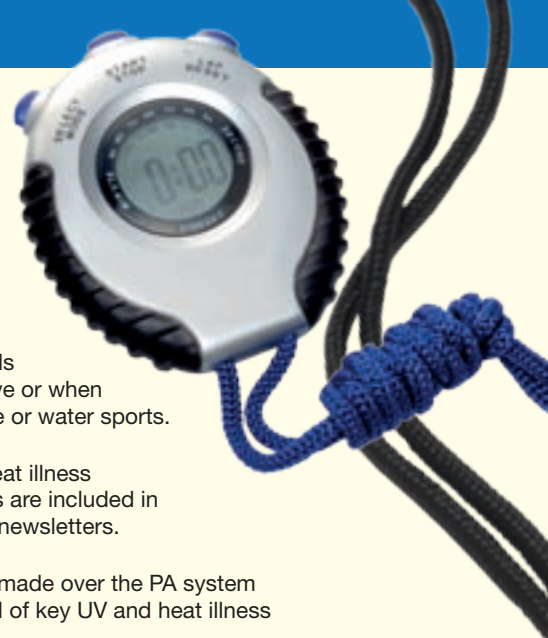
- Participants are notified at the start of May that sun (UV) protection measures are no longer required unless UV index levels reach three and above or when participating in alpine or water sports.
- UV protection and heat illness prevention messages are included in event programs and newsletters.
- Announcements are made over the PA system to remind all involved of key UV and heat illness prevention measures.

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.





Additional UV exposure and heat illness resources

sunsmart.com.au

- Brochures and information sheets (available in multiple languages)
- SunSmart UV alert
- Display posters
- Policy assistance
- Sample public announcements
- Outdoor events kit

smartplay.com.au

- Beat the Heat brochure
- Drink Up fact sheet or poster
- Sample athlete medical form and injury report form
- Publication articles
- Policy assistance
- Latest research

Further information

SunSmart
100 Drummond Street
Carlton VIC 3053
+61 (03) 9635 5148
sunsmart@cancervic.org.au
sunsmart.com.au

Smartplay
Sports Medicine Australia
(Victorian Branch)
Sports House, 375 Albert Road
South Melbourne VIC 3205
+61 (03) 9674 8777
smartplay@vic.sma.org.au
smartplay.com.au

