

Extreme Heat Policy

Policy Name: Extreme Heat Policy

Policy Number: 130OCC2013

Document Type: Policy

Effective Date: # December 2013

Last Reviewed: January 2022

Next Review: November 2024

Applicable Legislation: None

This policy will be reviewed every three years or earlier if required by the organisation. The review will ensure it reflects both the community expectations and all legal requirements.



Purpose Statement

This policy provides evidence-based guidance for protecting the health of those participating in Volleyball WA (VWA) activities, events, and competitions from the potential ill effects of extreme heat while ensuring that play is not unnecessarily interrupted.

The policy will assist those responsible for the safety and wellbeing of people engaging in VWA activities and events in hot weather, as well as individuals that need to manage heat stress risk during planned training activities.

The policy is based on the Sports Medicine Australia Extreme Heat Policy 2021, and as new research findings emerge, this policy will be updated accordingly.

Each event, activity or competition will be declared safe to play or not by the nominated VWA Representative on a case-by-case basis using the VWA Extreme Heat Policy.

Policy Application

This policy applies to all VWA employees, contractors, volunteers, and members and all other people or organisations which by agreement, or otherwise, are bound to comply with this policy.

This policy applies to behaviour occurring during VWA business, activities, competitions, and events.

Definitions

The following definitions are listed to provide clarity for this policy.

- **Bureau of Meteorology** is an executive agency of the Australian Government responsible for providing weather services to Australia and surrounding areas.
- **Extreme Heat** is when the predicted temperature for the day exceeds 36°C. The assessment of extreme heat conditions will be undertaken with reference to temperature and humidity information provided by the Bureau of Meteorology Website.
- **Heat stress** is when our body is unable to cool itself enough to maintain a healthy temperature.
- **Sports Medicine Australia (SMA)** is widely recognised as the leading sports medicine member organisation in Australia.
- **Volleyball Australia** is the national sporting organisation for volleyball in Australia.

Background

Western Australia experiences periods of sustained sweltering weather over spring, summer and even into autumn, with ambient temperatures in the shade regularly exceeding 35 to 40°C. Moreover, high levels of humidity that are often present impede the dissipation of heat due to a restriction of sweat evaporation.

“As such, the risk of heat illness, which is characterised by nausea, dizziness, vomiting and syncope, and can even result in death, is progressively greater as the environment becomes hotter and more humid. During exercise, however, the combination of temperature and humidity at which heat illness develops are much cooler and drier, due to the large quantities of heat that are generated by active muscles” (Sports Medicine Australia).

While fatal heat injury during sport is relatively rare, thousands of cases of heat-related illness (e.g., heat exhaustion) during sport competition/training have been reported. However, cases captured in this data are only those resulting in direct hospitalisation, and it is widely accepted that the incidence rate of heat-related illnesses in sport is vastly underreported. Due to this concern, Sports Medicine Australia (SMA) has historically developed extreme heat policies as a protective measure for all sporting organisations to use.

Assessment of heat stress risk is based on a fundamental heat balance model that determines the combination of temperature (measured in the shade) and humidity at which critical levels of heat stress risk to health are predicted to occur. These models are also adjusted for the effects of thermal radiation from the sun and air flow from the wind. Once a threshold is reached, a colour coding system recommends actions that can be taken to reduce heat-health risk (Sports Medicine Australia).

Sports Medicine Australia Extreme Heat Policy provides recommendations for volleyball's risk clarification as a Level 3 according to the combined effects of exercise intensity and clothing/equipment worn.

Volleyball Australia acknowledges that volleyball is classified as an Extreme Heat Risk Level 3 by Sports Medicine Australia. However, Volleyball Australia has taken further steps by aligning indoor volleyball to a Level 3 risk and has classified beach volleyball as a level 4 risk.

VWA has accepted this recommendation from Volleyball Australia and implemented this differentiation in the VWA Extreme Heat Policy.

In determining a procedural based hierarchy of heat mitigation protocols to align with SMA's Sport Risk Classification colour codes - Green, Yellow, Orange, and Red, VWA will implement the code for all VWA activities, events, and competitions for occasions where extreme heat conditions are likely.

Policy Statement

To predict the heat risk associated with a volleyball activity, event or competition, the temperature and humidity for activity, event or competition location will be required if extreme heat is forecast.

VWA event, activity and competition organisers will be required to check the forecast temperature five days out of the event and again two days out of an event. The organisers may also need to alert all participants to the possibility that events, or activities may be cancelled or modified due to extreme heat conditions. The procedure for the checking is outlined in the **Extreme Heat Classification Level 3 – Indoor Volleyball Procedure and Extreme Heat Classification Level 4 – Beach / Outdoor Volleyball Procedure** section of this policy.

Reported temperatures and humidity values from the Bureau of Meteorology website will only be estimates. The most accurate conditions can be measured locally with devices such as the Environmental Measurement Unit (EMU).

The peak temperature during the time of play must also be used with the accompanying relative humidity at that specific time. If the peak relative humidity is used for a particular day, which usually occurs when the temperature is lowest, heat stress risk will be over-estimated, and competition unnecessarily disrupted or cancelled.

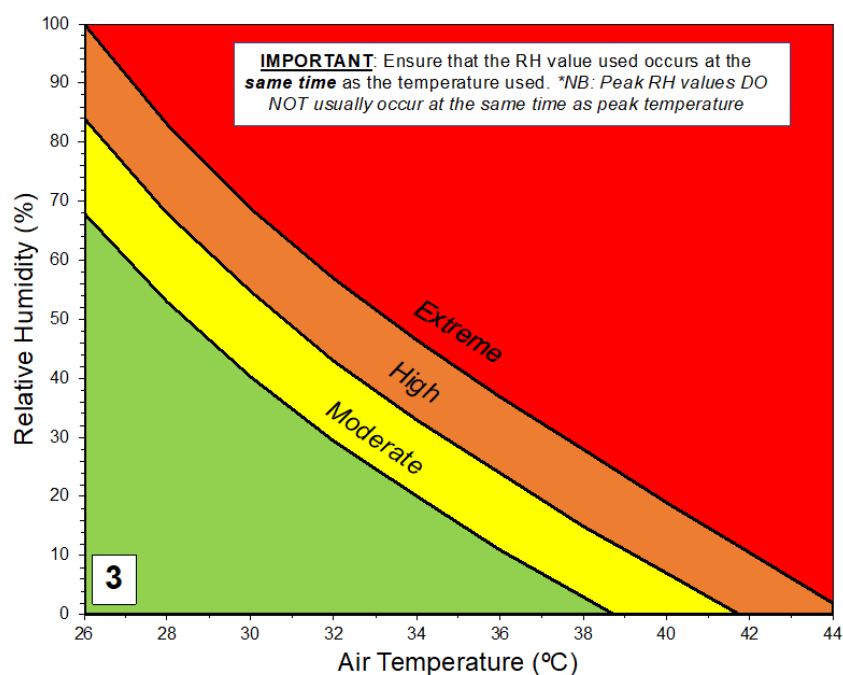
Extreme Heat Risk Classification Levels

Following is the VWA Classification Risk Tables for Level 3 and Level 4 as based on the Sports Medicine Australia's Sports Classification.

The combined Air Temperature (x-axis) and Relative Humidity (y-axis) should then be plotted on the appropriate classification. The point of intersection of these two values will subsequently fall in one of 4 coloured zones indicating a given level of heat stress risk:

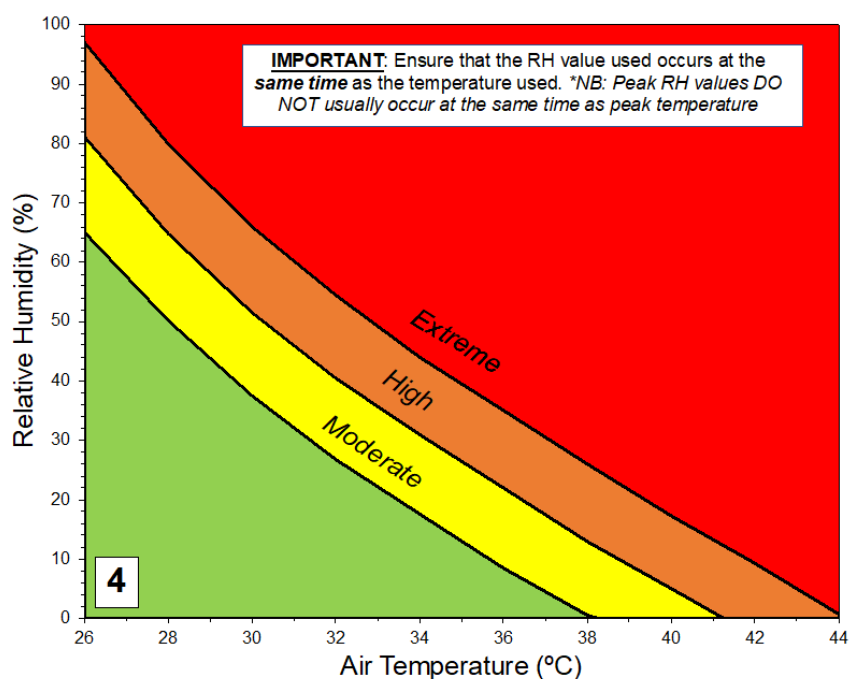
Extreme Heat Classification Level 3 – Indoor Volleyball

GREEN: Low Risk
YELLOW: Moderate Risk
ORANGE: High Risk
RED: Extreme Risk



Extreme Heat Classification Level 4 – Beach/Outdoor Volleyball

GREEN: Low Risk
YELLOW: Moderate Risk
ORANGE: High Risk
RED: Extreme Risk



Accompanying each rating are the recommended actions from Sports Medicine Australia Extreme Heat Policy to mitigate the overall heat stress risk.

GREEN: Hydrate – Drink regularly before, during and after exercise
Modify clothing – Wear lightweight clothing and remove excess layers

YELLOW: Rest breaks – Increase the frequency or duration of rest breaks

ORANGE: Active cooling – Cool yourself using active cooling strategies

RED: Stop exercise – Seek shelter and actively cool

VWA has adopted SMA actions and outlined the actions in the Extreme Heat Classification Indoor Volleyball Procedure and Beach/Outdoor Volleyball Procedures in this policy.

Extreme Heat Classification Level 3 – Indoor Volleyball Procedure

1. General procedures in the event of forecasted heat in the YELLOW Zone and above:

- a. When the forecast is issued by BOM **five days in advance** of an event or activity that indicates that the expected heat on the event day in the YELLOW zone or above, an email will be sent, or a notification will be placed on the VWA Facebook page alerting participants to the possibility that events, or activities may be modified or cancelled.
 - i. To obtain a forecast of temperature and humidity for the upcoming 72 hours
 1. Visit: <http://www.bom.gov.au/places/> and enter your location/postcode.
- b. Match scheduling to utilise the cooler parts of the day. Earlier starts, add breaks during the hottest part of the day.
- c. Use of air conditioning, if available.
- d. A follow-up forecast check will be done **two days prior to the event**. If the forecasted heat still falls in the YELLOW Zone or above on the event day VWA will email all nominated teams before 7.00pm alerting them to the situation and proposing that activities may be modified or cancelled. Information will also be provided on the VWA Facebook page.
- e. During periods of high temperatures, all players, coaches, officials, and parents should monitor the forecasted temperature to prepare for any eventual suspension, modification or cancellation of events or activities.

2. On the day of the event, activity, or competition, if there is a likelihood of the heat reaching the YELLOW Zone and above.

- a. The nominated VWA Representative conducts a temperature and humidity check every hour on the court and commences recording the measurements when the temperature reaches any area in the YELLOW zone.
 - i. To obtain a forecast of temperature and humidity:
 1. Visit: <http://www.bom.gov.au/places/> and enter your location/post code.
 2. Click on: "DETAILED 3-HOURLY FORECAST"
 3. Select the specific day/date of enquiry
 4. Identify the column with the nearest time to the planned competition/practice.
 5. Note the "Air Temperature (°C)" value AND IN THE SAME COLUMN, note the concurrent "Relative Humidity (%)" value found towards the bottom of the entry for that date.
 - b. Implement match modifications when the heat reaches the YELLOW zone.
 - i. **YELLOW** - Rest breaks
 1. Increase the time of a Time Out from 30sec to 45/60 seconds.
 2. Enforce a Technical time out at 16 points.
 - ii. **ORANGE** - Active cooling
 1. 5-minute hydration break at 16 points, instead of Technical Time out.
 - iii. **RED** - Stop exercising
 1. Matches are ceased and, according to the rules of the game, are either continued when cooler or are rescheduled.

Extreme Heat Classification Level 4 – Beach/ Outdoor Volleyball Procedure

1. General procedures in the event of forecasted heat in the YELLOW Zone and above:

- a. When the forecast issued **five days in advance** of an event or activity that indicates that the expected heat falls within the YELLOW zone or above, an email will be sent, or a notification will be placed on the VWA Facebook page alerting participants to the possibility that events, or activities may be cancelled or modified or cancelled.
 - i. To obtain a forecast of temperature and humidity for the upcoming 72 hours
 1. Visit: <http://www.bom.gov.au/places/> and enter your location/postcode.
- b. Match scheduling to utilise cooler parts of the day. Earlier starts, add breaks during the hottest part of the day and a provision for night matches.
- c. Organise for the provision of shade adjacent to all courts where possible or alert teams if they should bring their own shade.
- d. Organise trained First Aid personnel available to treat any heat-related illness.
- e. Organise a first aid kit to be at the event.
- f. A follow-up forecast check will be done **two days prior to the event**. If the forecasted heat still falls in the YELLOW Zone or above on the event day VWA, VWA will email all nominated teams before 7.00pm alerting them to the situation and proposing that activities may be modified or cancelled. Information will also be provided on the VWA Facebook page.
- g. During periods of high temperatures, all players, coaches, officials, and parents should monitor the forecasted temperature to prepare for any eventual suspension, modification or cancellation of events or activities.

2. On the day of the event, activity, or competition, if there is the likelihood of heat in the YELLOW Zone and above

- a. Ice and water are to be made available at player benches.
- b. Match format for reduced points E.g., 18, 18 and 12 points per set.
- c. Provision to purchase beach socks.
- d. The nominated VWA Representative conducts a temperature and humidity check every hour on the court and commences recording the measurements when the temperature reaches the YELLOW Zone
 - i. To obtain a forecast of temperature and humidity:
 1. Visit: <http://www.bom.gov.au/places/> and enter your location/post code.
 2. Click on: "DETAILED 3-HOURLY FORECAST"

3. Select the specific day/date of enquiry
 4. Identify the column with the nearest time to the planned competition/practice.
 5. Note the "Air Temperature (°C)" value AND IN THE SAME COLUMN, note the concurrent "Relative Humidity (%)" value the bottom of the entry for that date.
- e. Implement match modifications when the heat reaches the YELLOW zone.
- i. **YELLOW** - Rest breaks
 1. Beach Volleyball - At the change of ends, athletes to access water bottles and store at the end of the court
 2. Beach Volleyball - Technical time out at every 14 points
 3. All other outdoor events, activities, and competitions rest breaks as per the event, activity, or competition guidelines
 - ii. **ORANGE** - Active cooling
 1. Beach Volleyball - Water the sand
 2. Beach Volleyball - Technical time out at every 7 points
 3. Beach Volleyball - 5-minute hydration/shade break
 4. All other outdoor events, activities, and competitions rest breaks as per the event, activity, or competition guidelines
 - iii. **RED** - Stop exercising
 1. Matches are ceased and according to the rules of the game are either continued when cooler or are reschedule

Recognising signs and symptoms of heat-related illness

Whenever exercise or sport is being carried out in the heat, irrespective of the heat stress risk level, recognising the signs and symptoms of heat-related illness is essential for ensuring the safety and wellbeing of all participants.

Heat-related illnesses represent a spectrum of disorders, ranging from mild symptoms to a life-threatening illness. The health impacts of heat-related illness can be a direct result of an increase in core temperature or the result of the strain on the heart associated with defending the rise in body temperature.

The symptoms and signs of heat-related illness and the immediate management procedures are summarised in table* on the next page. The table and its information on the following page are an extract from the Sports Medicine Australia Extreme Heat Policy 2021.

While even the fittest athlete can fall victim to heat-related illness, certain people are especially vulnerable:

- Aged over 65 years, especially if unfit. Note that age effects on thermoregulation may become progressively worse with age, so risk is generally greater with more advanced age
- Heart or kidney disorders / disease presents a greater risk of cardiovascular or renal failure during or following exercise in the heat.
- Recently sick with a fever.
- Taking prescription medications that impair sweating.
- A reduced ability to behaviourally respond to heat, e.g., due to mental health challenges or substance abuse.
- Very high body fat.
- Recently (in the past week) arrived from a cold climate.

	Heat Exhaustion / Syncope	Exertional Heat Stroke (EHS)
Symptoms (What the person might feel)	<ul style="list-style-type: none"> • Headache • Dizziness • Weakness • Nausea • Vomiting 	Brain symptoms including: <ul style="list-style-type: none"> o Confusion o Agitation - Symptoms can develop rapidly - EHS is a medical emergency
Signs (What you might see)	<ul style="list-style-type: none"> • Fainting • Increased heart rate • Decreased blood pressure • Core temperature usually, < 40°C • Absence of brain symptom 	<ul style="list-style-type: none"> • Brain symptoms including: Confusion Unsteadiness Aggressive or irrational behaviour • Altered level of consciousness, seizures, coma • Increased heart rate, • Increased breathing rate, • Decreased blood pressure • Core temperature usually > 40°
Immediate management	<ul style="list-style-type: none"> • Move to shade and cool • Remove as much clothing as possible • Remove protective equipment • Apply lots of water to skin • Oral Fluids • Lie on back with legs elevated • Watch for worsening 	<ul style="list-style-type: none"> • BC (airways, breathing, circulation) • Aggressively cool the body with ice and water • Call ambulance • Continue cooling while transfer to hospital • * Cool first, transport second *

Other Extreme Weather Conditions

Other conditions that will be considered by the nominated VWA Representative when deciding whether to modify or cancel an event will include extreme wind, thunder (see VWA Lightening Policy) and rain.

Policy Breaches

VWA will take all breaches of the policy seriously and will ensure they are dealt with promptly, sensitively, and confidentially.

Disciplinary action may be taken against a person who is found in breach of this policy, in accordance with the Complaints Management Procedure.

If a criminal offence is considered to have been committed, the appropriate authorities will be contacted for advice and guidance.

Disclaimer

The information in this policy is general. Reading or using this policy is not the same as getting medical advice from your doctor or health professional. All reasonable attempts have been made to ensure the information is accurate. However, VWA is not responsible for any loss, injury, claim or damage that may result from using or applying the information in this policy.

Document Control

Version History

Date	Version number	Executive Summary of changes
December 2013	1.0	<ul style="list-style-type: none">• This policy was adopted at the December 2013 VWA Board Meeting.
November 2017	2.0	
November 2021	3.0	<ul style="list-style-type: none">• Change of name due to updated changes in the Sports Medicine Australia Extreme Heat Policy• Amendments to reflect the updates in the Sports Medicine Australia Extreme Heat Policy and the Volleyball Australia Events Heat Migrations Support Document V2• It is updated to reflect at VWA activities, events, and competitions.• It is updated to the new VWA policy template.
January 2022	4.0	<ul style="list-style-type: none">• Amending reference of 36 degrees to colour of chart

Appendix & Relevant Procedures

This policy is to be read in conjunction with the following:

- VWA Complaints Handling Policy
- VWA Lightening Policy
- Sports Medicine Australia Extreme Heat Policy 2021