



## Rowing Australia Extreme Heat Recommendations

Heat stress is a serious health risk. High intensity exercise in a hot environment, with the associated fluid loss and elevation of body temperature, can lead to dehydration, heat exhaustion and heat stroke (which can be fatal). High humidity significantly increases the likelihood of heat stress. Children are at greater risk than adults are because their thermoregulation mechanisms are not fully developed. Older athletes can also be at high risk because of reduced cardiac function.

Competition organisers have a Duty of Care to monitor environmental conditions and to take action to minimise the risk of heat stress to athletes.

### 1. Scope of these Recommendations

These recommendations shall apply to all competitions conducted in Australia under the auspices of, and sanctioned, by Rowing Australia.

### 2. Structure of the Extreme Heat Recommendations

These recommendations are divided into sections:-

- Activating the Extreme Heat Recommendations
- Heat Index
- Requirements of the Regatta Secretary
- Recommendations to Regatta Committees
- Important Information
- Role and Responsibilities of the Regatta Secretary
- Instruments for measuring Heat Index
- Heat Index Table
- Procedures for reducing the risk of heat stress

### 3. Activating the Extreme Heat Recommendations

The following minimum requirements will determine activation of the Extreme Heat Recommendations. Temperatures are to be deemed at the regatta venue by the side of the course, NOT in direct sunlight.

For competitors 16 years and younger

*All racing must be suspended (on completion of the current race) and no further races are to commence if;*  
The Heat Index is 35 or greater  
The Absolute Temperature is 34 or greater

For competitors over 16 years of age (Open)

*All racing must be suspended (on completion of the current race) and no further races are to commence if;*  
The Heat Index is 35 or greater

### 4. Heat Index

The Heat Index shall be determined from the Heat Index Table enclosed by using the Ambient Temperature and the Relative Humidity measured at the course at the same time. For example, if the Temperature is 35°C and the Relative Humidity is 40%, the Heat Index is a value of 37. If the Temperature is 35°C and the Relative Humidity is 60%, the Heat Index is a value of 45.

### 5. Requirements of Regatta Secretary's

- Regatta Secretary's must have on site, the appropriate instrument to measure Temperature and Relative Humidity to determine Heat Index levels.

- Once the air temperature reaches 25°C, the conditions must be evaluated at least once every hour and recorded.
- Once the Extreme Heat Recommendations are invoked, the conditions must be re-evaluated every 30 minutes.
- Where racing is suspended, Regatta Secretary's must ensure that competitors involved in the next round of scheduled races do not leave the venue without permission of the Regatta Secretary.
- Once the Extreme Heat Recommendations are invoked, the Regatta Secretary must ensure that the minimum rest time between races is one hour.
- Cold drinking water should be made available.
- Cold showers should be made available.
- Ice should be made available for heat stress emergencies.
- Adequate shaded areas should be provided.
- Regatta Secretary's should have access to a person with a current Senior First Aid Certificate.
- Ready access to medical assistance.
- Information about the nearest medical assistance should be on display in a prominent location.
- Promote awareness of the seriousness of heat stress and the steps that can be taken to reduce the danger by displaying and distributing appropriate information such as the "Drink Up – Beat the Heat" leaflet (available at [www.sma.org.au](http://www.sma.org.au) produced by Sports Medicine Australia). The "Beat the Heat" Recommendations as included in the Extreme Heat Recommendations should also be displayed at all venues.

## 6. Recommendations to Regatta Secretary's

- Have cold water drinking fountains at each venue.
- Appoint a *Primary Health Care Provider* to the event.
- Encourage competitors to wear hats that cover the top of the ears and back of the necks.
- Avoid scheduling races in the middle of the day when the risk of heat stress is highest. Consider modifying racing distances.

## 7. Important Information

- Under the FISA Rules of racing, the Referee has the power to suspend racing or postpone any race on account of the weather conditions. The Referee **in consultation with** the Regatta Secretary and / or Primary Health Care Provider may invoke the Extreme Heat Recommendations if he/she believes there is real danger to the competitors' health.
- The measurement values used in the Extreme Heat Recommendations determine the level of risk are for an average person involved in continuous strenuous activity in high temperatures. Individual persons will be affected differently by the environmental conditions depending on their:
  - Fitness level
  - Athletic ability
  - Age
  - Gender
  - Any predisposed medical conditions
  - Level of acclimatisation

## 8. Role and Responsibility of the Referee

Under the FISA Rules of racing, the Referee has the power to suspend racing or postpone any race on account of the weather conditions. The Referee **in consultation with** the Regatta Secretary and / or Primary Health Care Provider may invoke the Extreme Heat Recommendations if he/she believes there is real danger to the competitors' health.

Upgrading the risk level and even suspending racing may be appropriate in environmental circumstances falling outside the cut-offs listed in the Extreme Heat Recommendations, particularly if Heat Index values are being used.

## 9. Instruments for measuring Heat Index

In using the Heat Index Table provided, Ambient Temperature and Relative Humidity should be measured directly at each competition venue. Relative Humidity can be determined by using a digital thermometer/hygrometer that can be purchased at electronic stores at a reasonably low cost.

## 10. Heat Index Table

The Heat Index was devised for shady, light wind conditions and does not take into account radiant heat. Direct sunshine and strong, hot, dry winds can significantly increase the “apparent temperature” and thus the risk of heat stress.

		AMBIENT (AIR) TEMPERATURE (°C)																	
		25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
R E L A T I V E	0%	24	25	26	27	27	28	29	30	31	32	32	33	34	35	35	36	37	37
	5%	24	25	26	27	27	28	29	30	31	32	32	33	34	35	36	36	37	38
	10%	24	25	26	27	27	28	29	30	31	32	32	33	34	35	36	37	38	39
	15%	25	25	26	27	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	20%	25	25	26	27	27	28	29	30	31	32	33	34	35	37	38	39	40	42
	25%	25	26	26	27	28	28	29	30	31	33	34	35	36	38	39	41	43	45
	30%	25	26	26	27	28	29	30	31	32	33	35	36	38	39	41	43	45	47
	35%	26	26	27	27	28	29	30	31	33	34	36	38	39	41	43	46	48	50
	40%	26	26	27	28	29	30	31	32	34	35	37	39	41	43	46	48	51	54
	45%	26	26	27	28	29	30	32	33	35	37	39	41	43	46	49	51	54	57
H U M I D I T Y	50%	26	27	27	28	30	31	33	34	36	38	41	43	46	49	52	55	58	62
	55%	26	27	28	29	30	32	34	36	38	40	43	46	48	52	55	59	62	66
	60%	26	27	28	29	31	33	35	37	40	42	45	48	51	55	59	63	67	71
	65%	26	27	28	30	32	34	36	39	41	44	48	51	55	59	63	67	72	77
	70%	26	27	29	31	33	35	38	40	43	47	50	54	58	63	67	72	77	82
	75%	26	27	29	31	34	36	39	42	46	49	53	58	62	67	72	77	83	88
	80%	26	28	30	32	35	38	41	44	48	52	57	61	66	71	77	83	89	95
	85%	26	28	30	33	36	39	43	47	51	55	60	65	70	76	82	88	95	102
	90%	26	28	31	34	37	41	45	49	54	58	64	69	75	81	88	95	102	109
	95%	26	28	31	35	38	42	47	51	57	62	68	74	80	87	94	101	109	117
100%	26	28	32	36	40	44	49	54	60	66	72	78	85	92	100	108	116	125	

## 11. Procedures for Reducing the Risk of Heat Stress

### BEAT THE HEAT

High intensity exercise in a hot environment, with the associated fluid loss and elevation of body temperature, can lead to Dehydration, Heat Exhaustion and Heat Stroke.

### AVOID HEAT STRESS BY ADEQUATE FLUID REPLACEMENT.

- Racing in hot weather will result in extra fluid loss (dehydration). Even small degrees of dehydration will cause a decrease in performance and this can occur at any stage of a competition, particularly in hot conditions.
- Dehydration contributes to fatigue and may make you more susceptible to cramps, heat stress and heat stroke.
- Children are at a greater risk of heat stress than mature adults.

### ‘BEAT THE HEAT’ USING THE FOLLOWING MEASURES

#### WHAT TO WEAR

- Wear a hat, cap or visor – a broad brimmed hat is preferred.
- Wear a 30+ sunscreen to prevent skin damage and skin cancer.
- Wear sunglasses to protect your eyes.
- Replace sweat-saturated garments with dry clothing.

## **DRINK PLENTY OF WATER**

- **Do Not Wait To Feel Thirsty Before You Drink!**
- Sweat is mainly water and a very little salt.
- Drink cool water as it is absorbed more rapidly than warm water.
- If competing for more than one hour, use a sports drink - a carbohydrate drink of 5-10% concentration with a small amount of sodium chloride (salt tablets should be avoided because of their very high sodium chloride content, which can make dehydration worse).
- Thirst is a poor indicator – it is a late signal of severe fluid loss.

## **FLUID REPLACEMENT ROUTINE**

- Avoid starting exercise dehydrated (drink plenty of fluids for several hours prior to participating).
- Drink at least 500 ml (2-3 glasses) ½ to 1 hr before a race.
- Drink at least 500 ml to 1 litre (5-6 glasses) after a race and continue to drink until fluid losses are replaced.

## **SYMPTOMS OF HEAT INJURY OR HEAT STROKE**

- Symptoms of heat injury or heat stroke include:
  - Fatigue
  - Nausea
  - Headache
  - Confusion
  - Light-headedness
- If you have these symptoms, you should stop competing, drink more fluids and cool down (seek medical treatment if symptoms do not improve rapidly).