HEAT TRAINING POLICY

Scope
Most people understand the importance of physical activity for good health but it is just as important that, when levels of activity rise, the risk of harm is minimised. And it is even more important for those who have not recently or regularly taken part in sport or physical activity.

- A common sense approach and consideration of the comfort and well-being of all individuals including participants and officials.
- Modification or cancellation of events, training or withdrawal from participation may be appropriate
- Need to be aware of the difficulty of settling “one size fits all” guidelines.

Guidelines
For normally healthy active people, the only dangers from heat illness are likely to arise from high intensity exercise such as endurance running.

Heat illness in sport presents as heat exhaustion or the more severe heat stroke.

Heat exhaustion:
- Characterised by a high heart rate, dizziness, headache, loss of endurance/skill/confusion and nausea.
- The skin may still be cool/sweating, but there will be signs of developing vasoconstriction (eg, pale colour).
- To avoid heat exhaustion, if people feel unwell during exercise they should immediately cease activity and rest. Further benefit comes if the rest is in a shaded area with some passing breeze (from a fan if necessary) and the person takes extra hydration. Misting or spraying with water can also help.

Heat stroke:
- Characteristics are similar to heat exhaustion but with a dry skin, confusion and collapse.
- Heat stroke may arise in an athlete who has not been identified as suffering from heat exhaustion and has persisted in further activity.
- This is a potentially fatal condition and must be treated immediately. It should be assumed that any collapsed athlete is at danger of heat stroke.

The best first aid measures are “Strip/Soak/Fan”:
- strip off any excess clothing;
- soak with water;
- fan;
- ice placed in groin and armpits is also helpful.

The aim is to reduce body temperature as quickly as possible.

The athlete should immediately be referred for treatment by a medical professional.

Important: heat exhaustion/stroke can still occur even in the presence of good hydration. Dehydration Dehydration is fluid loss which occurs during exercise, mainly due to perspiration and respiration. It makes an athlete more susceptible to fatigue and muscle cramps. Inadequate fluid replacement before, during and after exercise will lead to excessive dehydration and may lead to heat exhaustion and heat stroke.

To avoid dehydration, it is recommended that:

- athletes drink approximately 500 mls (2 glasses) in the 2 hours prior to exercise;
- during exercise longer than 60 minutes, 2-3 cups (500-700ml) of cool water or sports drink are sufficient for most sports.
- after exercise replenish your fluid deficit to ensure that you are fully rehydrated, but not over-hydrated.

Aim to drink enough to replace lost fluids, but not more than that.

Temperature

Ambient temperature is the most easily understood guide available, and is most useful on hot, dry days

Ambient temperature	Relative humidity	Risk of Heat Illness	Possible management for sustained physical activity
15 - 20		Low	Heat illness can occur in distance running. Caution over-motivation.
21 - 25	Exceeds 70%	Low - moderate	Increase vigilance. Caution over-motivation.
26 – 30	Exceeds 60%	Moderate	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 per session.
36 and above	Exceeds 30%	Extreme	Very stressful for most people. Postpone to a cooler conditions (or cooler part of the day) or cancellation.

The Bureau of Meteorology (BOM) produces ambient readings for many locations in Australia. You can check these readings and a guide for the relative risk for your location at **www.bom.gov.au/info/thermal_stress/index.shtml**

Duration and intensity

The combination of extreme environmental conditions and sustained vigorous exercise is particularly hazardous for the athlete. The greater the intensity of the exercise, the greater the risk of heat related symptoms; eg, distance running is more of a problem than stop-start team events.

- Athlete rotation may be considered
- Reducing timeframe and extending rest periods with opportunities to rehydrate would help safeguard the health of participants.
- Provision of extra water for wetting face, clothes and hair is also important.
- A fan to enhance air movement would be beneficial

Conduct of competition and training (hydration and interchange opportunities)

- Dividing sessions into shorter periods to allow for extra breaks.
- alternative training times and venues during hot weather.
- Remember, even five minutes rest can cause a significant reduction in core temperatures.

Time of Day

Avoid the hottest part of the day (usually 11 am-3 pm). Scheduling outside this time should be a consideration throughout summer.

Acclimatisation of the participant

- Preparation for exercise under hot conditions should include a period of acclimatisation to those conditions, especially if the athlete is travelling from a cool/temperate climate to compete in hot/humid conditions.
- It has been reported that children will acclimatise slower than adults.

Fitness levels/athletic ability of participant

- A number of physical/physiological characteristics of the athlete will influence the capacity to tolerate exercise in the heat, including body size and endurance fitness.
- Overweight and unconditioned athletes, umpires, officials and volunteers will generally also be susceptible to heat stress.

Age and gender of participant

- **Female participants** may suffer more during exercise in the heat because of their greater percentage of body fat.
- **Young children** are especially at risk in the heat. Prior to puberty, the sweating mechanism, essential for effective cooling, is poorly developed. The ratio between weight and surface area in the child is also such that the body absorbs heat rapidly in hot conditions.
- In practical terms, child athletes must be protected from over-exertion in hot climates, especially with intense or endurance exercise.
- Veteran participants may also cope less well with exercise in the heat. Reduced cardiac function is thought to be responsible for this effect.

Predisposed medical conditions

- It is important to know if athletes, umpires, officials or volunteers have a medical condition or are taking medication that may predispose them to heat illness.
- Examples of illnesses that will put the participant or official at a high risk of heat illness include asthma, diabetes, pregnancy, heart conditions and epilepsy. Some medications and conditions may need special allowances.
- Participants and officials who present with an illness such as a virus, flu or gastro or who are feeling unwell are at an extreme risk of heat illness if exercising in moderate to hot weather.