Humans in Hot Climates
Practical Advice
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Preparation

• Historical record of weather: [https://www.wunderground.com](https://www.wunderground.com)
• Acclimatisation
• “Fitness”
• Clothing
• Hydration strategy
Precautions

• Athletes with chronic health problems – discuss with physician
• Regular medication – discuss with physician
• Long haul flights - protect against dehydration, dvt, jet lag
• Check necessary vaccinations
Acclimatisation

- Complete acclimatisation takes up to 14 days, reduced if increased regular exercise at home prior to travel
- Improved regulation of body temperature
- Reduction in cardiovascular strain with reduced rating of perceived exertion
- Conservation of electrolytes with reduced sodium chloride in sweat
Acclimatisation

• No-one acclimatises in an air conditioned hotel or shopping mall!

• Increase exposure to climate
Aids to acclimatisation before travel

• Increased exercise
• Heat chamber
• Exercise in impermeable clothing

• Preferably these activities should be for 1 hour, daily, for 7 – 21 days
Good Practice

• Before exercise
  • Pre-cooling (vests, air-conditioning). Drinks, rest.

• During exercise
  • Thin, lightweight, white cotton clothing reflects heat and allows evaporation of sweat. Drinks.
Avoid sunburn

During exercise and at leisure
Avoid sunburn – clothing, hats and sun block
Drink

• Sunburn and heat illness can impair ability to cope with heat for up to 4 weeks
After Exercise

**Cold drinks**
Sipping cold drinks will help lower temperature

**Remove clothing**
Remove and loosen clothes
Change to cool cotton shirt if possible

**Air conditioning**
Portable units can be hired
If not, rest in shade

**Air fan**
Fans aid cooling as well as being refreshing
Cold sponging can be used
Hydration

• Good hydration before competing
• Make sure preferred drink is available at competition
• Electrolytes/isotonic sports drinks especially for endurance events
How much should I drink?

• Average person sweats 0.8 – 1.4 litres/hour, jogging at 20 degrees C
• Accurate measurement would be weighing:
  • 1% loss body weight = early dehydration
  • 2% loss = definite decline in physical and mental performance
  • >2% loss can be life threatening
Measure dehydration

- Weight
- Urine chart
Heat Illness

- Tiredness, weakness, feeling faint, headache
- Muscle cramps, nausea/vomiting
- Heavy sweating, fast pulse
- Loss of consciousness, convulsions
- First Aid and seek medical assistance
Use a fan to lower temperature

Elevate feet

Apply cold compresses

Give fluids

Have the person lie down
BUT

• After this winter in the UK
• A little warmth would be fine
OPTIMISING PERFORMANCE IN A CHALLENGING CLIMATE

Question and Comments Please.
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• Select the chart you want to edit and right click, then select Edit Data in Excel.

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