

FEI™ SPORTS FORUM

How to optimize horse performance in a
challenging environment

Dr David Marlin, UK

Aims of climate management

- Prevention
- Equine athlete welfare
- Human athlete welfare
- Fair & valid competition



Risk is related to Climate, Intensity & Duration

LOWER RISK



Climate



Exercise Intensity



Duration



HIGHEST RISK

ALL horses and athletes are affected by **HEAT**

Jumping and Dressage

- Large horses
- Working for long periods



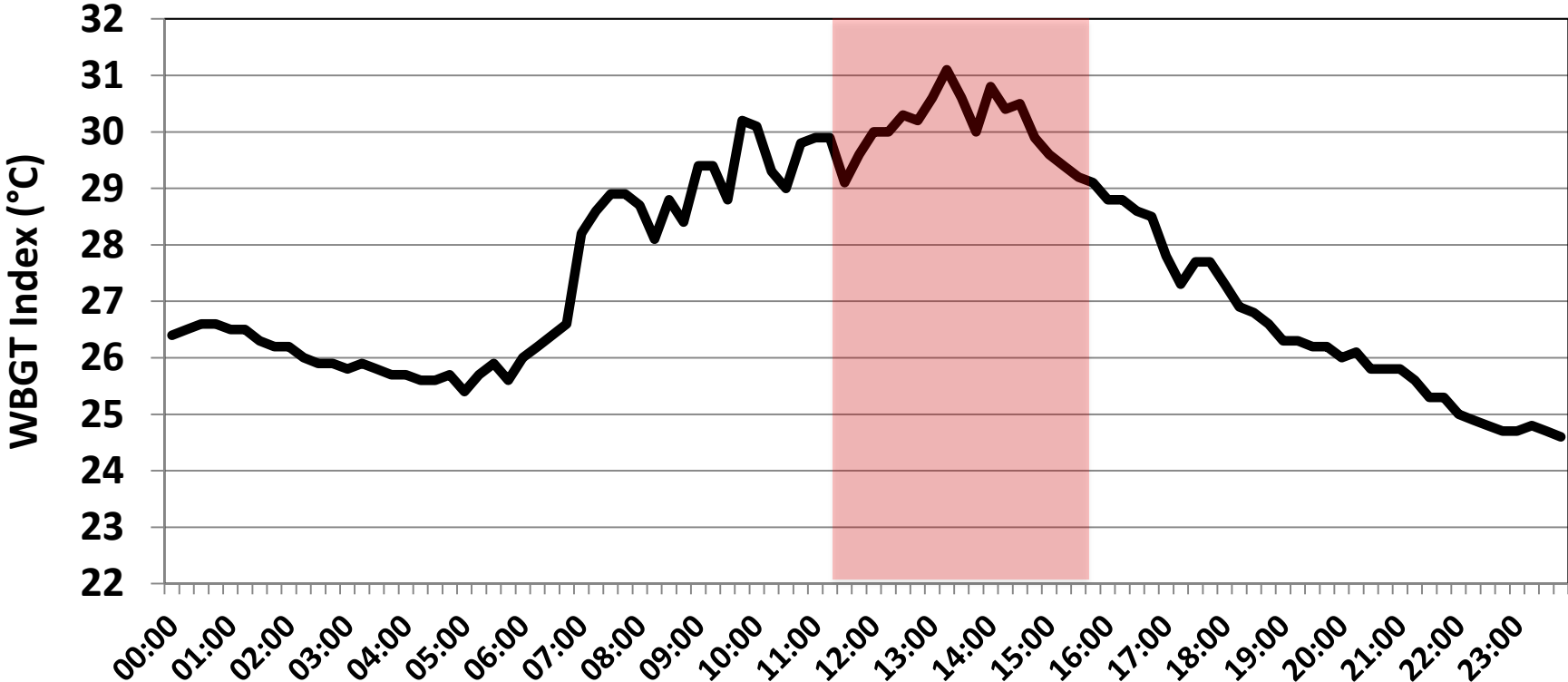
Eventing

- Intense exercise
- Moderate duration



Climate mitigation Competition Scheduling

WBGT Tokyo 9th August 2018



Climate Mitigation

Horse Preparation

Horse Preparation

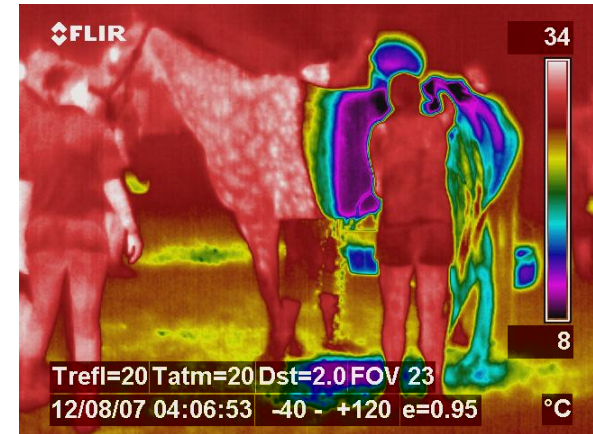
- Pre-Travel
- Travel
- Management at & During Competition



Horse Preparation

Pre-Travel

- Acclimatisation
- Nutrition
- Cooling
- Health - especially respiratory



Horse Preparation

Pre-Travel

- Acclimatisation
 - Training harder and longer than normal at home to reach a higher body temperature
 - Scheduling training sessions at home for the hottest part of the day
 - Training at home on a treadmill in a heated room
 - Training at home using rugs
 - Travelling to a hotter or hotter and more humid climate in advance of competition



Horse Preparation

Pre-Travel

- Acclimatisation
 - How often do I have to exercise my horse and for how many days? **~10 days**
 - Does acclimatisation fully restore a horses' capacity for exercise in the heat? **No.**
 - What can I expect to see when I start heat acclimatisation? **4-5 days**
 - Does heat acclimatisation work for all horses? **No.**

Horse Preparation

Pre-Travel

- Nutrition

- Horses sweat more in warmer climates
- Increased electrolytes loss in sweat and dehydration increase the risk of fatigue, muscle problems, respiratory problems and colic
- Horses may require electrolyte supplementation
- **Changes in diet during TRAVEL are a major RISK FACTOR for COLIC!**



Horse Preparation

Pre-Travel: Cooling Familiarisation & Training

“Aggressive cooling is almost certainly the single major factor in reducing heat related illness in horses in thermally stressful conditions.

Aggressive cooling of hot horses does not cause muscle damage and can greatly reduce the risk of collapse and injury or the development of heat-related illness”

Cooling



Ice & Water Buckets



Cold water Sprays



Misting tents

Horse Preparation

TRAVEL

- Nutrition - **Avoid changes in diet as much as possible!**
- Forage & water during travel to reduce stress
- Reduce hard feed/concentrate and feed small amounts frequently
- Arrival - allow horses to get heads down
- Respiratory monitoring - “Shipping Fever”



Horse Preparation

TRAVEL

- Allow time to recover
 - *One day of recovery with limited exercise for each 8 hours (1 day) of road travel or ½ day recovery for each hour of flight, up to 5 days*
- Monitor feed and quantity of water intake and clinical signs
 - Bodyweight
 - Rectal temperature
 - Heart rate
 - Urination



Horse Preparation

MANAGEMENT AT & DURING COMPETITION

- Water – do not restrict
- Monitor daily
- Acclimatisation
- Avoid sunburn
- Avoid over-heating
- White or light flysheets and rugs
- Be aware of anhidrosis



Horse Preparation

MANAGEMENT AT & DURING COMPETITION

- Warm-up
 - Reduce duration OR break-up and cool down
- Water
 - In Training
 - Before Competition
 - During Competition
 - After Competition
- Use indoor arena as appropriate



Summary

- Preparation
- Recovery from travel
- Acclimatisation
- Cooling
- Individual horse management

Equine & Human Athlete Welfare & Climate

- Awareness
- Education
- Prevention
- Mitigation

