



## Heat Acclimatisation for Endurance Athletes

- Heat acclimatisation takes around 10-14 days for athletes
- When training in hot environments aim for 1 liter per hour of a 6% carbohydrate-electrolyte solution. I would practice pre and post exercise weighing, for every kilo lost in weight you need to consume 1.5 liters of fluids. *Use a set of scales, please pre and post weigh and bring 3 litres of fluids.*
- Evaporative cooling is what primarily assists in heat dissipation

### Hot and Humid Environments

- When humidity is high (Asia, Kona, etc) evaporative cooling is compromised as dry air is required for effective evaporation
- In order to replicate humid conditions through heat acclimatisation indoors turn the fan off as this reduces sweat evaporating on the skin, similar to humid environments
- *Please aim for a litre an hour when training on the computrainer platform, electrolytes are preferred*

### Rate of adaptation

- 10-14 days is required for adaptation to occur
- 75% of adaptation occurs in the first 5 days
- An increase in plasma volume is a primary adaptive response
- Start out slowly, shorter duration at a lower intensity, then increase in duration/intensity. Or increase temperature of training sessions

### Rehydration

- For every kilogram lost post weigh in please consume 1.5-1.6 liters of fluids.
- If less than 1 litre of urine output is observed during a 24hr period, then the body is retaining water
- If urine colour is dark yellow in colour then dehydration has occurred.

### Know the Signs of Heat Illness

- Heat stroke presents with a hyperthermia of greater than 40.6°C
- Symptoms include: confusion and lack of sweating
- Avoid caffeine when training

### **Proposed outline of heat acclimation**

1<sup>st</sup> session- 25c ambient temperature, 3hr TT at your own pace.

2<sup>nd</sup> session- 25c ambient temperature, turn fan off for periods (30mins on, 30mins off)

3<sup>rd</sup> session- 25c ambient temperature, fan off

4<sup>th</sup> session- 26c ambient temperature

Subsequent sessions increase by 1c ambient temperature

### **Guidelines for the sessions and what to bring:**

1. Please arrive 15mins early
2. Please bring your bike, shoes and clothing
3. Please bring 1g/kg/hr of CHO (carbohydrate), that equals one poweraide and one gel/bar an hour
4. DRINK!!!!!!!!!!!!!! Aim for 800ml per hour if not more of electrolyte
5. If running off the bike please bring appropriate running gear
6. Please sign the waiver
7. Please be sensible about training in the heat, if you feel any signs/symptoms of heat exhaustion let us know.
8. Have a bloody good time!