



“A condition which applies to an **individual** who becomes **incapacitated** as a result of a rise in core body temperature”

- Normal human's body temperature is between 36,5 and 37,5 °C.
- At 38°C symptoms as sweating start.
- At 39°C patient suffers from severe sweating, flushing, and breathlessness.
- At 41°C patient is a medical emergency with vomiting, severe headache, dizziness and confusion.
- At 44°C or higher temperatures death will occur.

- Hyperthermia
- Agitation
- Nausea or Vomiting
- Loss of Coordination
- Cramps
- Disturbed Vision
- Confusion, Collapse & Loss of Consciousness



Recognise signs in yourself and others

- Physical exercise (under high temperature).
- Lack of acclimatization.
- Dehydration (usually coexistent with hyperthermia).
- Tiredness.
- Concurrent mild illness (diarrhoea, common cold, fever).
- Drug abuse.
- “Energy” drink Overconsumption
- Obesity.
- Lack of physical fitness and/or lack of sleep.
- Heavy meals.
- Recent alcohol consumption.
- High Humidity and low wind speed.
- Protective equipment (fire retardant gloves, flag jackets and helmets).



Wet Bulb Globe Temperature (WBGT) Heat Stress Index



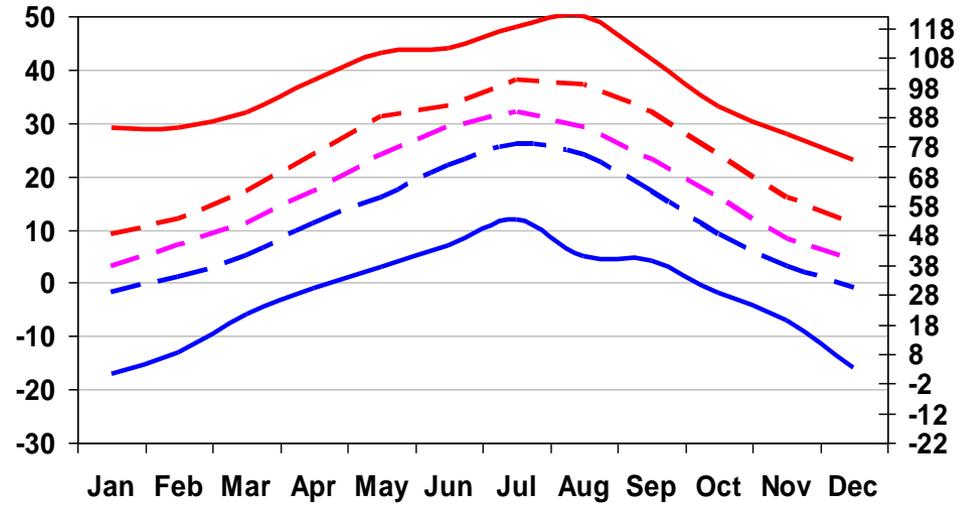
HEAT CATEGORY	WBGT TEMPERATURE	MINIMAL WATER REQUIREMENTS PER HOUR	WORK/REST CYCLE PER HOUR (Min)	INSTRUCTIONS FOR NON-ACCLIMATIZED
BLACK	>32° C >90° F	>2 LITER	20/40	HEAVY LABOR NOT ADVISED
RED	31-32° C 88-89.9° F	1.5 LITER	30/30	AVOID HEAVY LABOR FOR 12 WEEKS
YELLOW	29-31° C 85-87.9° F	1 LITER	45/15	NO HEAVY DUTY FOR 3 DAYS
GREEN	27-29° C 82-84.9° F	0.5 LITER	50/10	USE CAUTION
WHITE	28-27° C 78-81.9° F	0.5 LITER	No Limit	USE CAUTION



HEAT INJURY-ENVIROMENTAL TEMPERATURE CORRELATION



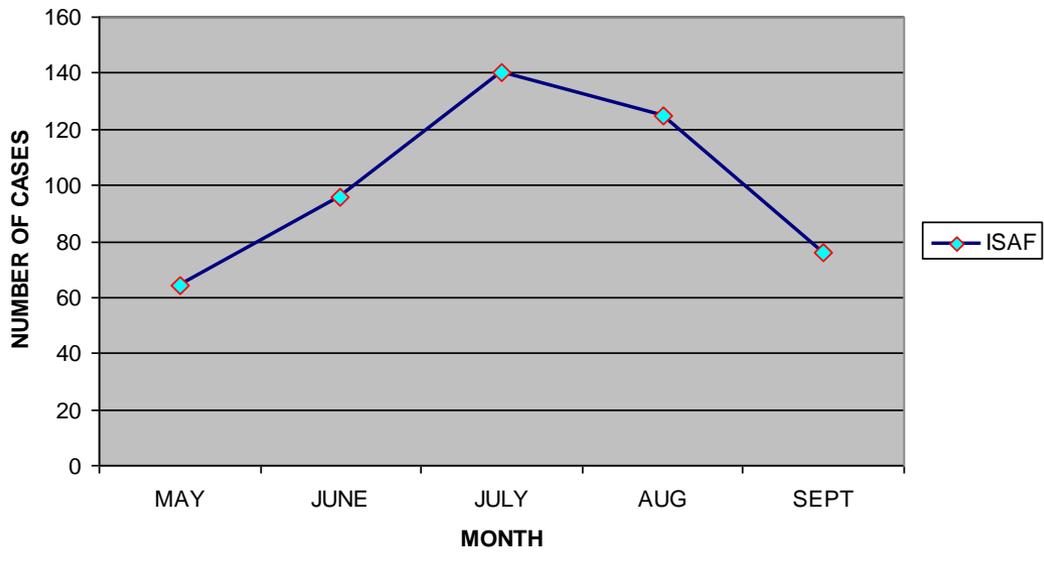
Temperature Variation along ISAF AOO (C & F)



— Extreme Max - - - Mean Max - - - Mean
- - - Mean Min — Extreme Min

Positive correlation between heat injury and temperature variation

ISAF 2008 HEAT INJURY INCIDENCE





- **Commanders' Risk Assessment**
- **Individual measures**
- **Awareness of Risk - WBGT Heat Stress Index
(Wet Bulb Globe Temperature)**

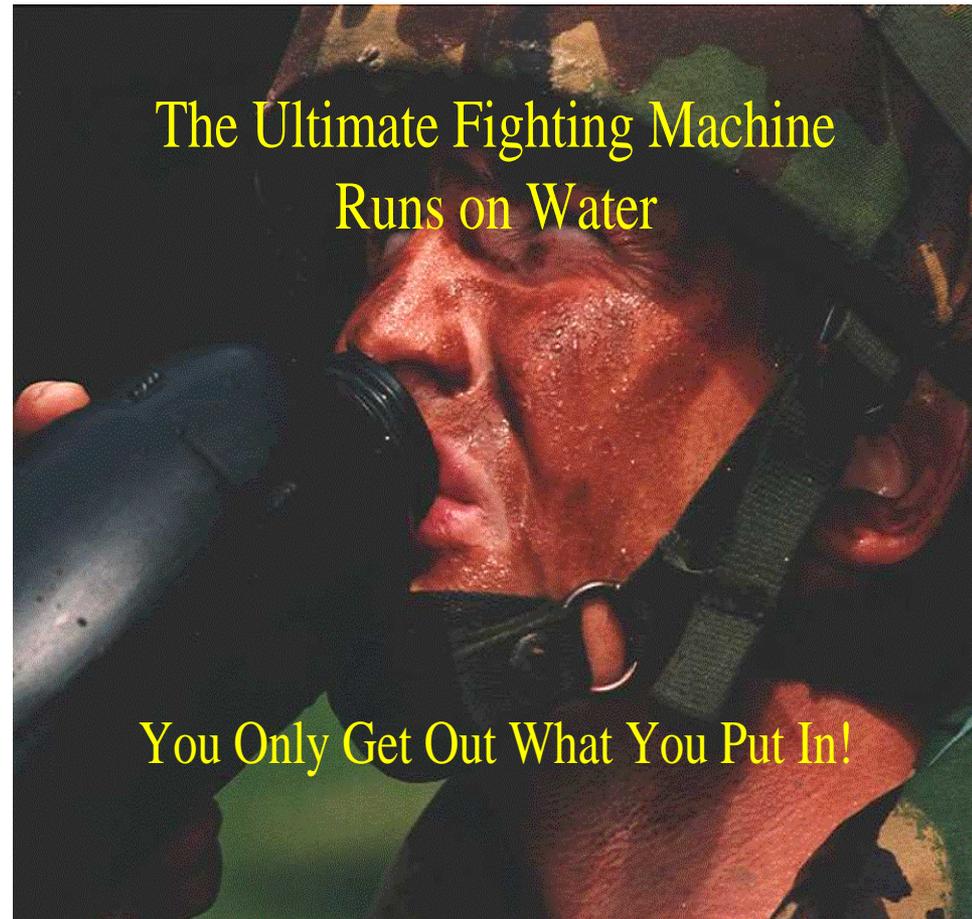
- **Environmental Conditions(WBGT index)**
- **Work Intensity**
- **Acclimatization**
- **Individual Risk Factors**

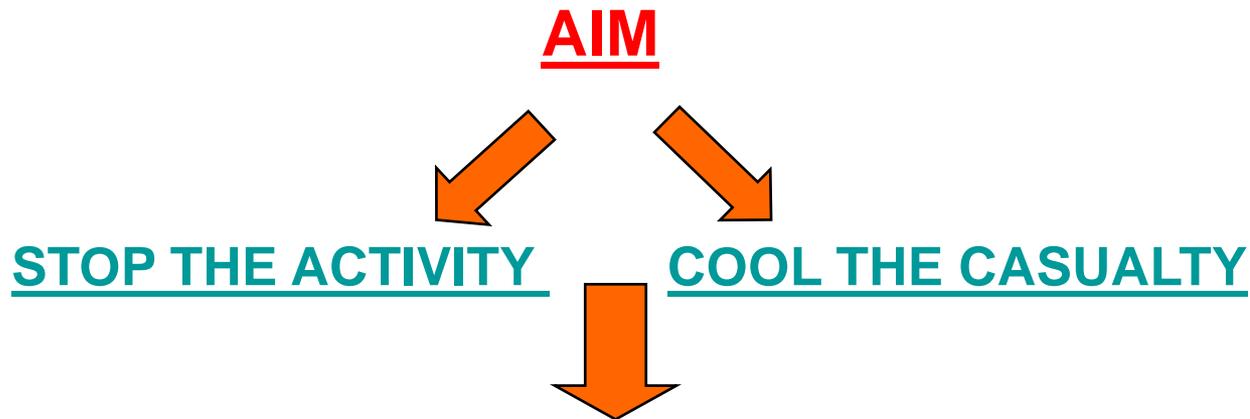


- Identification of concurrent illness
- Gradual acclimatization
- Wearing loose clothing and hats
- Sufficient water intake prior to thirst threshold
- Avoidance of being overexposed to sunlight
- Early recognition of heat illness



- **Store water in your body**
- **Drink only safe water**
- **Maintain light colored urine**





- Lie casualty in shade.
- Remove equipment and strip to underwear.
- Fan casualty's skin.
- Sponge or spray continuously or apply ice if available.
- Give fluid to drink **only if conscious.**
- CASEVAC

- SOP 1141 “Medical Force Protection” Annex B “Climatic illness”
- WiseWeb Weather Forecast
- PrevMed / Induction Briefing





Prevention is the most important measure in order to minimize the effects of hot weather