



First Aid

Cold Exposure

Mgr. Zdeňka Kubíková
Bc. Barbora Zuchová and others

Damage of organism

- **Local** – frostbites
- **General** – hypothermia

Frostbites

- they are caused by very cool environs on exposed **part of the body** (mostly fingers, nose, chin, ears) or by touch of very cool object
- liquid nitrogen, ice directly on skin



Frostbites

- affected tissues are firstly **pale, waxy white, blue spots** could proceed stage by stage, they **get black**, could be **blisters**
- firstly **ador** and stinging pain, **then loss of sensibility**, white numb skin

Frostbites

First aid – in the field

- **replace clothing**
- **hot liquids to drink**
- **warm with body heat (don't rub)**

return of sensibility till 10 min.?

YES – continue in trip **NO** – go into the nearest shelter

Frostbites

First aid – indoor

- put off the rings!!!
- expose affected parts, if you can
- **warm – bath 40°C + Betadine or Iodine disinfectant**
- enough liquids
- due to range of frostbites – call EMS 155
- check on vital signs

www.horosvaz.cz – we recommend!!!

Frostbites



www.perun.cz

Hypothermia

- is caused by very cool environs on organism; wind makes the effect much greater!!!
- **general hypothermia of organism**
- gradual fall of physical temperature leads to slow down of vital signs, then to death

In winter – homeless (the most endangered group of people), mountain climbers

Near drowner – both in summer (!!!) and in winter

Hypothermia

Stages:

- **firstly** casualty has shivering fit, clammy, pale, dry skin
- **then** shivering fit ends, inadequate behaviour starts, slow, apathic ... unconsciousness
- **Final stage:** slow motion of pulse rate and breathing... cardiac arrest

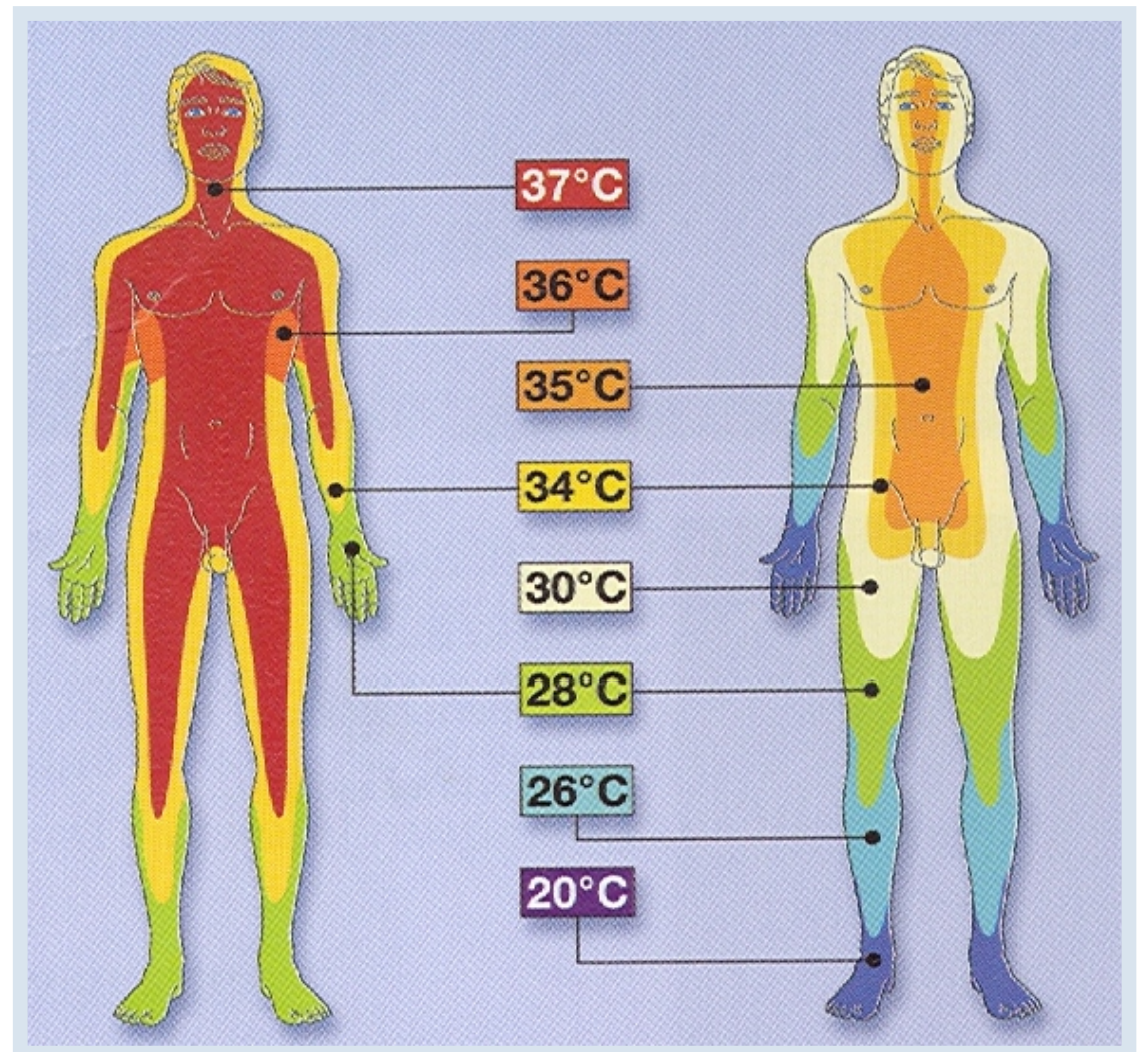
Hypothermia

picture

Defensive mechanism

Conation to maintain
maximal physical
temperature

Keggenhoff, 2006



Hypothermia

- Due to consciousness level give to casualty hot liquid, hot chocolate...
- care about heat comfort – isolate from the ground + cover the casualty
- if it begins – inadequate, slow, apathic behaviour – **don't move** with casualty
- dialling of **EMS 155**
- check on vital signs