USAR dogs and cold conditions

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Contents

- Coldness
  - physiology
  - searching circumstances

- Maintenance
  - water / food
  - warm-up
  - clothes
  - rest
Warm-blooded

- Regular body temperature is necessary to maintain body function
  - energy
Acclimatization

- Adapting to climate happens slowly and is reversible
Body heat-economics

- Core: regular temperature
  - abdominal cavity
  - thoracic
  - brain
- Surface: temperature can vary
  - extremities
  - big muscles
Cold conditions

- Wind and humidity intensify the effect of cold
- Moving keeps warm
Cold conditions

- Wet dog freezes easily
  - hypothermia

- Falling sick takes more energy to recover
Cold tolerance

- Body size
- Body shape
- Fat layer
- Fur
- Fitness
- Age
- Gender
- Medication
- etc…
Frostbites

- ears
- paws
- groin
- momma
- foreskin
- testicles
Challenges

- Cold air is dry
  - impacts respiratory system
  - can decrease optimum function of nose

- Scent behavior can differ
Environment

- Slippery base may lead to musculoskeletal injuries
  - skeletal muscle
  - tendon
  - ligament
  - joint
Snow

- Snow in paws or body harms working
  - short-haired paws more susceptible to frostbites
  - very hairy may collect
Canine features

• Differences between
  – dog breeds
  – individuals
Fur

- Undercoat
  - thick
  - soft
  - downy
- Guard hair
  - stiffer
  - often longer
- Outside / indoors
Water

• Enough unfrozen water available
  – cold increases water consumption
  – thermos flask?
Food

- Cold conditions raise energy consumption
Maintenance

- warm-up before and after searching
- no full speed searching
Clothes?

• winter coat
  – extra layer

• thin wool blanket
  – helps to dry

• Back on Track
  – recovery
  – maintenance
Resting place

- Warm and dry
  - warm tent
  - insulated bed / cage
  - sleeping bag
Danger!

- Antifreeze poisoning from ethylene glycol
  - dogs find antifreeze quite tasty
  - kidney failure, often fatal
Coldness advantages?

- Less ticks, mosquitoes, snakes, etc
Thank you for your attention 😊