Canadian Red Cross
Croix-Rouge canadienne

7/4/2006

Stay Warm

As a general rule, if the water feels cold – *it is cold!*

Water is generally considered cold at 21°C (69°F) but if you are in the water for a long time, temperatures as high as 27°C can endanger you. This means that with the exception of certain small lakes, even in July and August, *all water in Canada is cold*!

THE FACTS

Prepare !

- What to wear for ice-related activities:
  - Warm layers of clothing
  - Helmet
  - Wool hat (over 50% of body head is lost through the head and neck)
  - Mittens (more effective than gloves)
  - Wool socks
- Basic Safety Equipment for ice-related activities:
  - First aid kit with a blanket
  - Reaching assists (i.e. ladder, rope)
  - Matches in waterproof container
- Precautions to take with Snowmobiles:
  - Snowmobiles are *heavy,* they need *thick* ice for support.
  - Wear a PFD-floater coat
  - Snowmobile with a buddy
  - Follow the shoreline
  - Have necessary rescue equipment
  - Leave 15 metres between snowmobiles

Is the Ice Safe ??

If you see any of the following, the ice you are about to use may not be safe…

- Springs or fast-moving water
- Dark patches
- Wind and wave action
- Decomposing material in the water
- Waterfowl and schooling fish
- Water bubblers (devices designed to keep water near boat docks from freezing thick)
- Discharge from industrial sites
- Objects protruding from the ice such as tree stumps / rocks
- One body of water follows into another
- Currents
- Snow cover
- Wet cracks

- Ice forms on fresh water when the surface temperature falls to 0, or at lower temperatures if impurities such as salt are present. Annual freeze-up dates, rate of ice growth and ice quality all depend on factors such as air temperature, solar radiation, wind speed, snow cover, wave action, currents and the size/depth of water body.

There are two types of ice:

Clear ice – formed by the freezing of water

Snow Ice – formed when water-saturated snow freezes on top of ice.

The colour of ice indicates its strength and quality. Blue ice is the strongest. Opaque White ice has a high air content, although high-density white ice is almost as strong as blue ice. Grey ice indicates the presence of water and is unsafe.

Hypothermia is caused by exposure to cold or cold stress in either air or water. Heat loss from the head is particularly important in air hypothermia. Hypothermia can occur in any season – even Summer!

Stay Safe !

Safety Tips

Any simulation of hypothermia or ice conditions must ALWAYS be supervised.
Discourage careless behavior

The National Research Council indicates that "to initially determine effective ice thickness, the rule to use is 1 inch of clearblue ice for every thousand pounds". However, ice that is "less than 6 inches (15cm) thick should not be used because natural variations reduce the uniformity of thickness". Many communities have organizations responsible for measuring and reporting ice thickness. The Canadian Red Cross also provides the following safety zones:

15 cm of uniform thickness for skating, walking or skiing in small groups
20 cm for larger groups, such as skating parties
25 cm for snowmobiles or all-terrain vehicles

Avoid ice that has recently frozen, thawed and then frozen again.

Survive !

Things that effect the rate of Immersion Hypothermia

Water temperature
Body size
Body fat
Amount of body out of water
Behavior in the water
Type of PFD worn
Intoxication or illness

You need to call EMS immediately if someone is suffering from hypothermia.

Hypothermia should be treated gently. Get Sheltered. Get Warm.

In immersion hypothermia the arms and legs cool quickest, but long-term survival depends on minimizing heat loss from the trunk and neck. The head is normally the highest-risk area but is usually of little importance because is most often held away from the cold water by a good PFD.