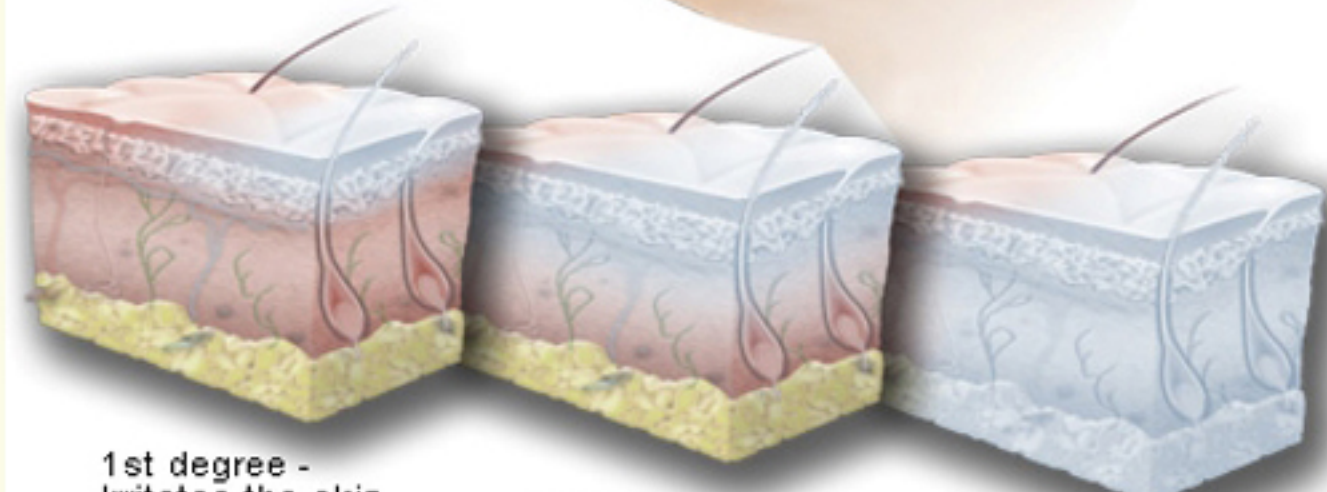


# Frostbite



1st degree - Irritates the skin

2nd degree - Blisters but has no major damage

3rd degree - Involves all layers of the skin and causes permanent tissue damage

# HOSPITAL TREATMENT FOR HYPOTHERMIA

[www.hypothermia.org](http://www.hypothermia.org)

## CAUTION

No re-exposure to cold  
Exercise to generate body heat but no sweating.  
Warm bath.  
Warm sweet drinks, calories  
Keep warm for several hours.  
Watch for drop in temperature.

**DO NOT** massage cold limbs.  
**DO NOT** give alcohol or coffee.

### CHECK FOR OTHER INJURIES. MINIMUM STAY – 48 HOURS

Watch out for late cardiac arrhythmia.  
Warm only trunk, chest.  
Give warm, sweet drinks.  
Warm moist air or warm moist oxygen, 40-42°C at mask.  
e.g. Warm IV fluids e.g. Dextrose/Saline 5% at 37°C, 50% Dextrose, 20ml.  
Monitor pulse, respiration, ECG.

**NO** exercise.  
**NO** external warmth except Hiebler warm water type jacket to trunk and chest.  
**NO** cold air, oxygen.  
**NO** cold drinks.  
**DO NOT** overload with IV fluids.

### JOLTING DURING TRANSPORT MAY CAUSE CARDIAC ARREST.

Nil by mouth except glucose jelly.  
Check airway, recovery position.  
Turn every 2 hours to protect skin.  
Oropharyngeal airway  
Slow synchronous mouth-to-mouth or mask.  
Defibrillate if necessary. Intubate if unable to maintain airway. Ventilate with 50% humidified oxygen at 42°C, CPR at 6-12 ventilations/min. and 40-80 compressions/min. Warm peritoneal lavage (standard dialysate as fast as it will flow), or Arterio-venous by-pass warming.

**NO** food or drink  
  
Endotracheal intubation may precipitate ventricular fibrillation.  
**NO** drugs unless CORE temp. above 32°C. e.g. Lignocaine.

### CONTINUE TO TREAT

### DO NOT GIVE UP

Monitor Core temp.  
Monitor biochemistry (potassium, sugar, acidity) and correct cautiously.

**DO NOT** defibrillate until CORE temp. above 30°C.

**NOTE:** CORE temp. lags behind skin temp, watch out for after-drop. Other complications may arise during rewarming (e.g. cardiac, fluid balance).



°F

MPH Knots (Temperatures are in degrees fahrenheit)

Calm	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	4	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
10	9	30	20	15	10	5	0	-10	-15	-20	-25	-35	-40	-45	-50	-60	-65	-70	-75
15	13	25	15	10	10	-5	-10	-20	-25	-30	-40	-45	-50	-60	-65	-70	-80	-85	-90
20	17	20	10	5	0	-10	-15	-25	-30	-35	-45	-50	-60	-65	-75	-80	-85	-95	-100
25	22	15	10	0	-10	-15	-20	-30	-35	-45	-50	-60	-65	-75	-80	-85	-95	-105	-110
30	26	10	5	0	-5	-20	-25	-30	-40	-50	-55	-65	-70	-80	-85	-95	-100	-110	-115
35	30	10	5	-5	-5	-20	-30	-35	-40	-50	-60	-65	-75	-80	-90	-100	-105	-115	-120
40	35	10	0	-5	-10	-20	-30	-35	-45	-55	-60	-70	-75	-85	-95	-100	-110	-115	-125

Winds above 40 MPH have little additional effect	Little Danger of Frostbite	<b>INCREASING DANGER</b> (Flesh may freeze within one minute)	<b>GREAT DANGER</b> (Flesh may freeze within 30 seconds)
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