

INFORMATION FOR MEDICAL STAFF

Treatment of Cryogenic Burns

(Guidance from BOC UK)

Cold burns and frost bite should receive medical attention as quickly as possible. However, such injuries are not an everyday occurrence and doctors, hospital staff or first aid personnel may not be aware of the basic methods of treatment. The following procedures for first aid and further treatments by a medical practitioner or hospital are recommended.

First aid treatment

The aim of the treatment is to raise the temperature of the affected part SLOWLY back to normal

MINOR INJURIES

- 1) Move casualty to a comfortable room if possible.
- 2) Ensure that clothing is loose to provide unrestricted circulation. Do not remove clothing that is stuck to the body until thawed thoroughly.
- 3) Place affected part in TEPID WATER, or run TEPID WATER over for half an hour, until skin changes from pale yellow through blue to pink or red.
- 4) Do not use hot water or any form of direct heat.
- 5) Cover affected part with bulky dry sterile dressing.
- 6) Send/accompany casualty to A&E for further assessment.

MAJOR INJURIES

- 1) Call for assistance – **4444** on a hospital phone
- 2) Follow minor injuries procedure as much as possible.

**NEVER GIVE ALCOHOL
OR ALLOW SMOKING**

Treatment by medical practitioner or hospital

- 1) Remove any clothing that may restrict circulation to the affected area.
- 2) Immediately place the affected part in a water bath with a temperature of, ideally, not less than 40°C (104°F) but certainly not more than 42°C (108°F). **Note:** 1. Never use hot water or dry heat. 2. Temperatures in excess of 45°C will superimpose a burn on the frozen tissue.
- 3) If there has been extensive body exposure to cryogenic temperatures such that the general body temperature is depressed, the patient must be rewarmed without delay. The patient should be placed in a bath of warm water at a temperature of 40-42°C (104-108°F). It is important that the temperature of the bath is maintained at a level of not less than 40°C to maximize the rate of rewarming.
- 4) In the absence of facilities for this treatment, the patient must be taken to a warm atmosphere, preferably at a temperature of 22°C, kept at rest, and lightly covered with one or two blankets until recovery is complete.
- 5) Shock may occur during the rewarming process.
- 6) Frozen tissues are often painless and appear waxy with a pallid yellowish colour. Thawing after disruptive deep burns results in vasodilation, increased capillary permeability and oedema. The tissue becomes painful, swollen, and prone to infection when thawed. Thawing may take from 15-60 minutes and should be continued until the pale colour of the skin turns to pink or red. The thawing process may require major analgesia. Symptomatic treatment and the prevention of infection is indicated.
- 7) If the frozen part of the body is thawed by the time medical attention has been obtained, do not rewarm. Cover the area with dry sterile dressing with a large bulky protective covering.