Chapter 6

EXPEDITION TRAINING

SECTION 28. — AIDE MEMOIRE FOR INSTRUCTORS

General

0601. This section is included for the benefit of all adults who may be required to plan, organize and carry out a self reliance training expedition. An expedition at elementary level will naturally not require all aspects of this 'aide-memoire' to be complied with.

Planning

0602. All expedition planning will take place weeks, or months before, and must include:

a. Obtaining from the appropriate G3 Training Branch at District HQ permission to use a training area and any special instructions for expedition training.

b. Selection of a suitable piece of country for the expedition, so that it will be within the scope of the cadets' abilities.

c. Selection of the base camp and bivouac sites.

d. Selection of routes and tasks.

e. If a training area is not to be used visiting the landowners and/or farmer(s) concerned, to agree the points at **b. c.** and **d.** above. In such cases District HQ must be informed.

f. Checking local police and rescue services locations and telephone numbers and their method of operation.

g. Submission of the proposed plan to appropriate superior authorities.

h. At the same time as **a. - g.** above, members of the proposed expedition must be preparing themselves physically by means of training walks on which they 'wear in' their footwear and equipment.

Organization

0603. The organization of an expedition will begin when planning is well advanced and will continue during and after it is finished. It must include:

a. *Before the Expedition Starts.*

(1) Obtaining and checking all clothing and equipment in time to replace or repair any which may be found unserviceable.

(2) Obtaining and checking suitable food, including emergency rations.

(3) Obtaining the latest local weather forecast and deciding whether a start is advisable.

(4) Preparing, practising and briefing all concerned about the drills to be carried out in the event of any emergency such as the party losing its way or member(s) being affected by exposure or other mental and physical disabilities.

(5) Informing base camp and other appropriate organizations in the area of route and expected time of arrival (ETA).

(6) Checking that all members are properly briefed, dressed and equipped at the start.

b. *During the Expedition.*

(1) Following the intended route.

(2) Moving at the pace of the slowest and avoiding splitting the party.

(3) Putting into effect the previously decided emergency drill if lost. If the weather turns bad putting into effect a previously prepared plan to either take an escape route or turn back.

c. *After the Expedition.*

(1) Checking that all members have completed the expedition and that they are in good shape physically.

(2) Listing any clothing and equipment lost or damaged during the expedition.

SECTION 29. — EXPOSURE

General

0604. This section deals in detail entirely with exposure. All instructors must be aware of the problem and how to deal with it when it occurs, and realize that it can occur amongst cadets even when climatic conditions do not appear to be unduly severe, and when the expedition is not conducted in wild country or at a great height.

Introduction

0605. Exposure is not strictly a medical term. It describes the serious effects which may result from exposure to climatic hazards. The essential feature of exposure is a reduction in the heat content of the body to the point when deep body temperature begins to fall, at which stage it becomes serious. In normal conditions the inner 'core' (trunk and brain) of the body remains constant at 37°C (98.4°F); the temperature of the outer shell is always below this. This outer shell consists of the skin, underlying fat and muscle, and extremities (arms and legs, ears, nose) and comprises almost half of the body.

0606. What is VITAL is the preservation of the deep core temperature. A shift in this leads directly to MENTAL DETERIORATION and LOSS OF MUSCULAR CO-ORDINATION, and eventually to UNCONSCIOUSNESS, HEART and RESPIRATORY FAILURE and DEATH. The body itself acts to maintain core circulation and temperature by restricting the flow to the exposed periphery so that core blood is not cooled at the surface.

0607. **IN ANY TREATMENT, THEREFORE, THE IMPORTANCE MUST BE REALIZED OF NOT INCREASING PERIPHERAL CIRCULATION UNLESS THERE IS MINIMAL LOSS OF HEAT AT THE SKIN SURFACE.FURTHER HEAT LOSS FROM THE CORE MUST AT ALL COSTS BE AVOIDED. SUDDEN SURFACE WARMING THEREFORE IS WRONG.**

0608. When once the symptoms are clearly established any further exertion, such as forcing the victim to go on walking, even downhill, must be avoided. The party must stop and proceed to treatment. **IT IS IMPOSSIBLE TO OVERSTRESS THE IMPORTANCE OF THIS.**

Ignorance

0609. Ignorance of this condition by other members of a team and rescuers has often led to dangerous incorrect treatment being given. The bare facts are given in the following paragraphs in an effort to assist in a greater understanding of exposure, but it is complicated and detailed and continuing research is required.

Signs and Symptoms

0610. It is not always easy to decide early enough that you have a mild case of exposure on your hands. It is very important to do so, since it may be possible to avoid a crisis, if at the outset you are aware of the symptoms and can begin to treat them. The following are among the most usual symptoms:

a. Unexpected and apparently unreasonable behaviour, often accompanied by complaints of coldness and tiredness.

b. Physical and mental lethargy, including failure to respond to or understand questions and directions.

c. Failure of or abnormality in vision. It should be noted that some failure of vision is a very usual symptom, and when this does occur the condition should be regarded with extreme seriousness.

d. Some slurring of speech. There is not necessarily early failure of speech, and the victim may speak quite strongly until shortly before collapse.

e. Sudden shivering fits.

f. Violent outbursts of unexpected energy, possibly physical resistance to succour, and violent language.

g. Falling.

0611. It should be stressed that not all of these symptoms may be noticed nor necessarily in this order. Other symptoms which may sometimes be observed are muscle cramp, extreme ashen pallor, lightheadedness and occasionally a fainting fit.

Methods of Treatment

0612. **a.** *Immediate Treatment in the Field.*

(1) As already indicated, the risk of precipitating a sudden surge of circulation to the surface, such as may be produced by hot water bottles, rubbing and alcohol intake, should be avoided. The precipitation of a sudden surge of core blood can be disastrous, as this blood is cooled by going through the cold outer shell, and is then returned to the heart. Unexpected deaths of raft survivors are often due to this.

(2) **THE ESSENTIAL AND IMMEDIATE TREATMENT IS TO PREVENT FURTHER HEAT LOSS BY INSULATING THE BODY.**

(3) Methods will vary according to conditions and the equipment immediately available. An outline of what should be done, if at all possible, is:

(a) Get the victim into a sleeping bag, or if this is impracticable wrap him in sleeping sacks to provide insulation below, as well as above his body.

(b) Put a fit companion into the sleeping bag alongside him to give to him bodily warmth, or lying close beside him if he cannot get into the same sack.

(c) There should be a windproof and waterproof covering (e.g., polythene) around the bag and the victim, and the insulation between him and the ground is the most important of all.

(d) Try to provide some shelter as a windbreak.

(e) Meanwhile, get the rest of the party to pitch a tent over the victim to provide fuller shelter. If the tent has a sewn-in groundsheet, carry him inside the tent.

(f) If the victim can still take food, sugar in easily digestible form (e.g., condensed milk) may be given.

(g) If respiration ceases, perform artificial respiration continuously by mouth to mouth method until the patient breathes normally himself or until a doctor arrives and tells you to stop.

(4) There will then normally ensue a period perhaps of some hours duration before the rescue party with stretcher that has been summoned can arrive. Even if during this period the patient apparently recovers, and even if he insists that he is quite fit, he must still be treated as a stretcher case, however unwilling or ashamed he may be, and the full normal rescue drill must be enforced.

(5) During this waiting period, once the patient has been insulated, a brew-up should be started and hot beverages and food should he given to him, according to what he can take. Food and hot drinks should also be taken by those members of the party who have remained with him and whom it is safer to regard as themselves suffering in some degree from shock and exhaustion.

(6) The stretcher party, when it arrives, should of course preserve all the insulation around the patient during the carry, with which he has been protected during the waiting period. It is important that his face and mouth should be protected to minimize heat-loss, without interfering with ventilation and ease of breathing. If a case of exposure occurs in a very

distant and isolated spot and the delay before the arrival of the rescue party is likely to be inordinately long, the instructor or leader may face the very difficult decision as to whether to start removing the casualty towards the rescuers and safety. But before any such attempt is made all the measures of immediate treatment in the field, as outlined above, should be taken first. And only if considerations of time, distance and bad weather then clearly make it less of a risk to carry the patient towards safety, than to keep him insulated and cared for where he is, should the risk of transporting him be accepted.

(7) This emphasizes the real need for all instructors and leaders in charge of a party to be trained not only in up-to-date First Aid methods, including mouth-to-mouth resuscitation, but also to be expert in the safest carrying techniques, that may be attempted without a proper stretcher.

b. *Treatment on Reaching Base.*

(1) If it can be done, rapid re-warming by total immersion in a hot bath (not to exceed 45°C, 113°F) is a proven lifesaver. A bath thermometer is a useful thing to have available, otherwise judge the safe heat as being the hottest temperature in which an immersed elbow can be kept. Subsequently, after body temperature has returned to normal, the patient should be placed in a warm room at 68° - 70°F. The point of time at which to make this transfer may be roughly judged as being the same as that at which the patient in the bath begins to sweat.

(2) It is assumed that a doctor will usually be available at base, so any further treatment will be directed by him.

Conclusion

0613. **a.** It is emphasized that it is far better to take what steps are possible to avoid cases of exposure than to allow them to occur and then have to treat them.

b. In cold conditions on mountains, especially when there are strong winds as well, an instructor must keep a sharp watch for signs of exhaustion amongst his party. He must ensure that waterproof anoraks and windproof over-trousers are put on in time and he must also ensure members of his party continue to eat small quantities of energy-giving food, as arranged beforehand, in spite of bad weather conditions.