

impact on the length of the health recovery period of both the disaster workers and the affected populations.

Planning needs include better coordination among the many agencies that must respond in extreme environments, and the selection and utilization of specific techniques, equipment, and medical and support staff who are able to work in such conditions. Despite the current use of different types of protective equipment, there is a continuing need to enhance the physical and psychological comfort of disaster workers, and thus increase their effectiveness in extreme conditions.

Examples of the types of problems encountered in extreme environments are presented, based on the author's first-hand knowledge of the Chernobyl and Armenian earthquake disasters, and more recently, winter exercises held in Minnesota to enhance disaster response effectiveness in harsh climatic conditions. The Health Protection Center recently developed at the University of Minnesota is described, including its focus on helping individuals cope with the many problems encountered in extreme environments. Research currently is underway on the management of astronauts in the environmental extremes of simultaneous heat and cold that occur in open space, in which it is highly important to stabilize overall and local comfort. The focus of these investigations is on the development of informative and effective feedback techniques regarding physiological functioning and human performance, and tactics for health protection and safety. Planning for the provision of medical services in such extremes, including various emergency conditions, also is a research goal.

**Key Words:** disaster workers; extreme cold conditions; extreme heat; population protection

### Training of Doctors In Cardiopulmonary Resuscitation—The Saxonia Model

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The success of cardiopulmonary resuscitation (CPR) depends primarily upon the quickness and knowledge of the first helper. Consequently, the first-aid capabilities of the emergency witness is the principal limiting factor in the rescue chain. This also applies to general practitioners as well as doctors working in hospitals and in university clinics.

From the experiences gathered at the Department of Anaesthesia, University of Leipzig, we show that the doctors have a deficit in the knowledge of the basic steps in CPR. Based on these facts, the proposal for obligatory resuscitation training for doctors in all fields of specialization was accepted unanimously by the delegates of the 3rd Saxonia Doctors' Congress in 1993.

We have provided such training at our clinic since April 1994. Under the patronship of the Medical Council of Saxonia (MCS), the courses are being conducted at more than 15 centres. This was possible through the purchase of skill materials (Skillmeter Anne by Laerdal) valued at 75,000 DM, financed by the

Medical Council of Saxonia. The theoretical and practical instructions are in accordance with a standardized curriculum, authorized by the MCS which also adheres to the recommendation of the European Resuscitation Council (ERC). The participants received eight hours of training from an experienced anaesthetist. The independent and repetitive practice on mannequins are the main aspects of this training. If any participant possesses an emergency kit, he/she is allowed to bring it along and practice with it on the mannequin.

At present, 1,300 doctors in Saxonia have been trained. In 10 of Berufsordnung der Sächsischen Landesärztekammer (service regulations of Saxonia's doctors), the duty for further education and practical resuscitation training is included. The training was well-received by the participants and confirmed the necessity of such training along with the studies. It would be desirable for the enhancement of general quality that all the doctors have the obligation of the described.

**Key Words:** Cardiopulmonary Resuscitation (CPR); continuing education; physicians; practice; quality

### Orotracheal Intubation in Anaesthesia: Method

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Video Film: 14 minutes, French or English language

This film presents the method to perform an oro-tracheal intubation in anaesthesia. It includes:

- 1) patient examination;
- 2) classification of Mallampati, Cormack and Lehane;
- 3) technique of this practice;
- 4) validation of the probe position; and
- 5) analysis of the different views of the glottis.

**Key Words:** anaesthesia; tracheal intubation; training

### Session 5A: CardioPulmonary Resuscitation

Chairpersons:

F. Rutten (The Netherlands)

H. Geyvais (Germany)

### Modification of the Closed Circuit Underwater Breathing Apparatus, Lar V, Makes It Suitable for Artificial Ventilation in Mass Casualty, Ship Accidents

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**Objective:** Military divers are familiar with cardiopulmonary resuscitation (CPR) as well as with various kinds of diving equipment. The purpose of this study was to find out, if the closed circuit underwater, rebreathing set, LAR V (Dragger ERG, Lübeck, Germany) could serve as adjunct for ventilation in remote locations, for example,