

Chapter 39

All chapters, full text, free download, available at <http://www.divingmedicine.info>

FIRST – AID KIT

Certain drugs and equipment are of value in a diving accident and a diving team could reasonably be expected to acquire and carry these on diving expeditions. Training in the use of these, as well as in resuscitation, is of great importance.

FIRST-AID MATERIALS

For shark attack or trauma, large sized thick **cotton pads** (more than 20 cm square) with 10 cm **crepe bandages** (6 of each) are useful to make **pressure dressings** to stop bleeding and also for pressure bandages to reduce venom absorption. If obtainable, **shell** dressings of the type used by the military are ideal for this purpose. They can sometimes be obtained from army disposal stores.

A **rubber bandage** 10 cm wide ("esmark" bandage obtainable from a medical equipment supplier) for use as a **tourniquet**. When wrapped tightly around the limb this is the best form of tourniquet. It covers a wide area, effectively stopping blood flow to the limb while minimising damage to tissues under the tourniquet.

Small adhesive skin **dressings** such as Elastoplast or Band-Aids.

Surgical instruments — scissors, artery forceps, fine forceps, disposable scalpel blade, disposable syringes and needles.

An aluminised **thermal blanket** such as a "Space blanket" to protect divers suffering from hypothermia.

Heat packs — of value in treating fish and minor jellyfish stings (not box jellyfish).

Cold packs — of value in reducing pain with jelly fish sting and general muscular strains

Eye irrigation solution.

Torch, pen and paper (for recording purposes).

RESUSCITATION EQUIPMENT

- **Airways (Guedel type)** in two adult sizes are useful if a victim loses consciousness and develops airway obstruction, or if artificial respiration is needed. A positive pressure air system (such as an AMBU Bag) is of value in combination with the airway, for prolonged artificial respiration. As with all resuscitation techniques, training and practice is required
- **Oxygen First Aid and Resuscitation Equipment.** A supply of oxygen and equipment to administer it can be lifesaving in some diving accidents. Devices as described in Chapter 40 should include a complete oxygen supply and delivery system in a robust portable container.
- A **large oxygen cylinder** with appropriate adaptors should be available if diving at a distance from diving medical facilities and recompression chambers.

An **underwater oxygen** system (appendix C) for recompression therapy by more sophisticated groups, in remote areas.

MEDICATIONS FOR DIVING PROBLEMS

- Household **vinegar**, preferably a litre or more, to neutralise adherent stinging cells of box jellyfish and some other tropical jellyfish. Household **bleach** is useful for sterilising coral cuts.
- **Local anaesthetic spray or ointment** (lignocaine) to relieve the pain from minor stings from animals such as Portuguese man-o-war and other jellyfish stings. **Solacaine** or other anti-burn preparations such as **Tannic acid** sprays may be efficacious for this purpose.
- Topical **antibiotic powder** to prevent infection from coral cuts and other minor injuries.
- **Skin antiseptic solution** such as chlorhexidine for cleaning wounds contaminated with dirt.
- Broad spectrum **antibiotic tablets** (e.g. erythromycine, doxycycline) to initiate treatment for serious infections, otitis externa, otitis media, sinusitis, and coral cuts etc.
- **Prophylactic ear drops** such as commercial preparations of Aqua Ear, Vosol or Otic Domoboro.
- **Therapeutic ear drops**, including antibiotic and steroid combination, for outer ear infections.
- **Local anaesthetic for injection** such as lignocaine 1% (without adrenalin) for wounds from stone fish and other fish stings. Up to 15 ml of this solution can be injected into the stung area in an adult and repeated every 2 hours if necessary.
- **Antivenoms** — depending on the geographical location.

GENERAL MEDICATIONS

- **Anti-diarrhoea** tablets such as diphenoxylate ("Lomotil") or loperamide ("Imodium").
- **Analgesics** (pain killers) such as paracetamol (acetaminophen). Aspirin, or drugs containing this substance, may be unpredictable and hazardous and are best avoided.
- **Ultra-violet** blocking sunscreen (SP15+ or greater). A **1% hydrocortisone cream** is useful to treat sunburn, allergic dermatitis or itching.
- **Anti-Seasickness** tablets (see Chapter 32).
- **Decongestants** — pseudoephedrine tablets, and topical nasal sprays.
- **Topical antibacterial and antifungal** preparations, such as Cicatrin or Neosporin.

TRAINING

A diving team venturing to a remote locality should have at least one member (preferably two in case that one becomes the victim of an accident) trained in first aid relevant to divers. Resuscitation and oxygen administration requires expert training and supervision. Training in the use of injections is an advantage, both for the administration of local anaesthetics, antivenoms and other drugs under the direction and advice of a distant medical specialist.

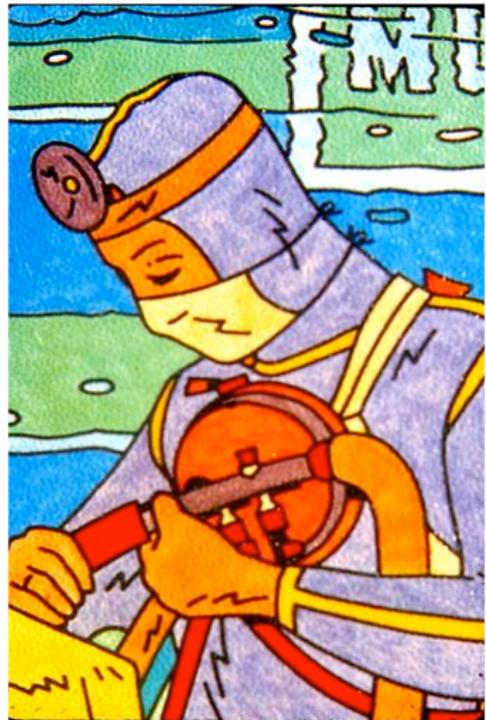
MEDICAL INFORMATION

Perhaps the most valuable addition to any first aid box is a source of information. This should include diving **medical texts** (see appendix A) and general **contact numbers** (see appendix B & D) for both medical assistance and recompression chamber availability. This should be supplemented by local contacts and phone numbers of knowledgeable divers and diving physicians.

A copy of **this book** should remain with the First-aid kit.

Also in the kit should be a list of its **contents**, including purchase and expiry dates of the drugs.

**INFORMATION NEEDED
about a DIVING ACCIDENT.
CHECK LIST**



Name of informant

Name and age of victim

TELEPHONE NUMBER to return call, or if disconnected

Geographical location (+ local medical facilities or RCCs)

Case history

Initial symptoms, including time of onset

Description of clinical symptoms + progress

Signs of illness

Negative findings (symptoms NOT present e.g. micturition, dyspnoea, skin wounds)

First aid given (including oxygen, amount and method)

Dive details: Profile, gases, deco,(+ recent dives)

Personal history

Diving

Illnesses – diving and general

Medications and surgery

Any other persons injured

First aid facilities and/or medical personnel available on site

Follow up arrangements

Medevac possibilities