



CRUISING CLUB OF AMERICA



FLEET SURGEON'S

MEMORANDUM FOR OFFSHORE PASSAGES

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Medical skills, first aid equipment and communication are the essentials of managing a medical emergency offshore. Significant medical conditions of individual crew should be on record and known to the medical officer before departure. The Newport Bermuda Race requires that two members of each crew have valid First Aid and CPR certificates (see Newport Bermuda Race, Notice of Race, Medical Training).

The Injury and Illness Survey of past Bermuda Races lists the extremities, especially fingers and toes, as most at risk for injury. Spine, face, abdominal and head injuries also occurred. Sea sickness and sunburn were common. Infections, migraine headaches, diabetic complications, dehydration, urinary retention and airway obstruction requiring a Heimlich maneuver were also encountered. Pre-race seminars stress the importance of preventing hypothermia, dehydration, fatigue and seasickness.

Conditions not reported in the race surveys must also be considered. The incidence of malignant melanoma, a highly lethal condition, as well as other skin cancers, have increased alarmingly among sailors. Asthma, life-threatening allergic reactions, heart attacks, strokes, seizures, burns and surgical emergencies can be added to the list of things one might have to deal with on an offshore passage. Anticoagulants (blood thinners), which are used to treat recurrent venous thrombosis (blood clots) or cardiac conditions such as atrial fibrillation (abnormal heart rhythm), can turn a minor knock on the head into an untreatable and fatal intracranial hemorrhage. .

A culture of caution and prevention is the best way to minimize the risk of injury and illness. Falling overboard or being hit on the head by the mainsheet or boom during an accidental jibe may be fatal despite one's best efforts, but such accidents are often avoidable, by always wearing an inflatable harness, in the case of the former, and by a permanently installed and always engaged preventer, in the case of the latter.

Acknowledging that not every medical situation can be handled safely and successfully at sea, a single person, the Medical Officer, not necessarily a medical professional, has the responsibility of caring for the ill or injured crew member at sea and preparing the vessel and the crew for any likely medical emergency, making sure there are on board the following:

1. Information from each crew member about significant medical conditions, allergies and necessary medications that is easily accessible;
2. Medical and surgical skills appropriate to the voyage;
3. Appropriate medical supplies - reference books, a medical/surgical kit and medicines (addenda 1-3), appropriate to the level of medical training on board;
4. An appropriate emergency communication system (see addendum 4 ??).as well training of the entire crew as to the proper use of the equipment

Medical training to improve the skills of a lay person who has become a yacht's medical officer is available in a number of commercial programs aimed at the wilderness adventurer. Such skills are important because although there are rescue services available in many places, even in the best of coastal cruising situations on a small boat there is no "911" as we have come to know it and expect it.

Addendum 1: References Books

For Limited Passages

Advanced First Aid Afloat, by Peter F. Eastman, M.D., Fifth Edition: Cornell Maritime Press, Inc, Centreville, MD, *Doctor On Board: A Guide to Dealing with Medical Emergencies*, by Jurgen Hauert, M.D.

Sailing and Yachting First Aid, by John Bergan, M.D. and Vincent Guzzetta, M.D., prepared for the United States Sailing Association, Portsmouth, RI

First Aid at Sea, by Douglas Justins and Colin Berry, Adlard Coles Nautical, A&C Black (Publishers) Ltd, 35 Bedford Row, London, WC1R 4JH, 1999 ISBN 0 7136 4922 4

The Onboard Medical Handbook, by Paul G. Gill, Jr., M.D., International Marine, Camden, ME 1997 ISBN 0 07 024274 7

A Comprehensive Guide to Marine Medicine, by Eric A. Weiss, MD and Michael Jacobs, MD, Adventure Medical Kits, Oakland CA 94624, 2005 ISBN 1-9659768-2-3

For Extended Passages

The Ship Captain's Medical Guide, 22nd edition. Crown Copyright 1999. Obtainable from Her Majesty's Stationary Office, e-mail book.orders@tso.co.uk, fax – 44 (0)870 600 5533; tel – 44 (0)870 600 5522.

International Medical Guide for Ships, Third Edition, World Health Organization, 1988, reprinted 1994 ISBN -10 92 4 154231 4, order number 11502078 (go to publications at www.who.int)

The Ship's Medical Chest and Medical Aid at Sea, DHHS Publication(PHS) 84-2024 Government Bookstore, O'Neil Building, 10 Causeway, Boston, MA 02222 (telephone 617 565 6680) and www.fas.org/irp/doddir/milmed/ships.pdf. Comprehensive and contains an extensive list of medical references.

Merck Manual of Diagnosis and Treatment, 18th Edition, Editors Mark H Beers, Robert S. Porter, Thomas V. Jones, Merck Research Laboratories, Division of Merck & Company, Inc., Whitehouse Station, NJ 08889-0100, 2006

Wilderness, first aid and emergency medicine texts are also available.

Addendum 2: Sample Equipment List

Note: Medical kits must meet the objectives of the intended voyage and the abilities of the ship's medical officer. Commercially available medical kits vary in complexity and if used their contents should be reviewed to be sure they meet the objectives of the voyage. The items below, or appropriate substitutes, are recommended however are not intended to be a substitute for proper consultation with a medical provider.

Airway kit: Oral airways (small, medium and large), Ambu bag, CPR mask

Bandages/ Minor Trauma/ Burns:

- Adhesive tape 1"
- Sterile dressing sponges (4X4) Ice bags
- Band-aids
- Non-adhesive dressings (Telfa) Steri- strips (1/2")
- Roll Gauze (2" and 4")
- Ace bandages (2,4, and 6")
- Triangle bandages (for sling and swath) Large abdominal/ trauma dressing
- Finger splinting material (tongue depressors, aluminum splint) Xeroform gauze/ Vaseline impregnated gauze (large)

Surgical Kit/ Major Trauma:

- Laceration tray (1% lidocaine, syringe, needles (18 and 25 gauge), hemostat, needle driver, forceps, gauze sponge, iodine prep stick)
- Suture material – 5.0/ 4.0/ 3.0 nylon, 4.0 vicryl, 4.0 chromic
- Dermabond
- Skin Stapler
- Clozex (for skin closures)
- Sterile gloves (7,7.5,8)
- Suture removal kit/ Staple removal kit

- Scalpel – 11 blade (incision and drainage kit – can use laceration tray) 14 gauge angiocath (3’)

ENT/ Eyes/ Dental

- Sterile irrigation fluid for eye wash
- Nasal packing (merocel nasal tampons, 1 inch Vaseline gauze) Calcium hydroxide dental paste

Splints:

- Inflatable (or other) splints for arms, legs, tongue depressors, cervical spine collar

Catheter: Bladder catheterization kit

Exam tools: BP cuff, stethoscope, thermometer Intravenous fluid administration kit

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Addendum 3: Suggested Medications

Note:

1. Medicines should be assembled with the help of a physician, and those selected will depend on the nature of the voyage, the type of vessel and crew and the expertise of the ‘medical officer.’.
2. Prescription medications are in italics; "over the counter" medicines in regular type.
3. Prescription medicines should be given only on the recommendation of a physician.
4. Know about a crew member’s medical conditions, current medications and allergic or adverse reactions before giving medication.

AILMENT or PROBLEM MEDICATION

Allergic Reactions Benadryl, *prednisone (oral)*, *Epipen*

Antihistamines Benadryl, Claritin

Antiseptic Solutions Betadine, Alcohol, Hibiclens

Asthma *Albuterol inhaler*, *prednisone*

Burns Bacitracin ointment, *Silvadene cream*, Vaseline

Cardiovascular/ ACLS *Epipen*, *Sub-lingual nitroglycerin*, Aspirin (325mg)

Constipation Dulcolax suppository/ oral, Fleets enema, Colace

Cough Robitussin DX

Diarrhea Immodium, Kaopectate, Oral rehydration solution

Diabetic Emergency *D50 IV*, oral sugar solution

ENT/ Dental *Corticosporin Otic Suspension*, Sudafed, *Calcium Hydroxide dental paste*, *Afrin nasal spray*

Eyes *Erythromycin ophthalmic ointment*, *Ocuflox Ophthalmic drops*, *tetracaine ophthalmic*, Artificial Tears

Gastritis Maalox, Zantac, *Prilosec*

Hemorrhoids Preparation H, tucks pads

Infections:

Urinary Tract *Ciprofloxacin, Bactrim DS*
Respiratory *Azithromycin, Levofloxacin, Amoxicillin*
ENT/ Dental *Augmentin, Clindamycin*
Skin/ soft tissue *Keflex*
Gastrointestinal *Flagyl, Cipro*

Essential antibiotics: *Cipro, Azithromycin, Keflex, Augmentin*

Intravenous Antibiotics *Ceftriaxone (2gm)*

Intravenous Fluids Normal Saline (sterile 0.9% saline), D51/2 NS

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Inflammation/ Pain Tylenol, Ibuprofen

Local Anesthetic (injectable) *Lidocaine 1%* (with and without epinephrine)

Narcotic pain medication *Oxycodone 5mg, Vicodin 5/500*

Skin/ Rash *triamcinolone acetonide 0.1%, Nystatin topical Hydrocortisone 1% ointment*

Sea sickness ** *scopolamine transdermal patches*, Dramamine, Stugeron (cinnerrazine, which is over the counter in UK, Spain, Bermuda, Ireland, etc), *Compazine Rectal Suppositories*

Sleeping Benadryl, *lorazepam, Ambien*

Sunburn Topical aloe, solarcaine

** In the case of sea sickness medications, it is imperative due to potential side effects that these medications be trialed on shore prior to use on board.

