



Safety-at-Sea Seminar Summary March 29-30, 2008
U. S. Naval Academy, Annapolis, MD

Report from Safety-at-Sea Seminar
March 29-30, 2008

U. S. Naval Academy, Annapolis, MD

by the Hetherington Crew (KARAYA) and the Engelskirchen-Pilert Crew (FISCAL STRAY)

- Two-day seminar
- Offshore safety issues valuable to cruisers and racers
- Topics included Medical, Weather, Damage Control, Boat Preparation, Man Overboard Readiness and Equipment
- Day 1 included excellent live on-the-water rescue demonstrations and a helicopter rescue
- Day 2 featured two simultaneous programs:
 - (a) In-depth presentation on Weather
 - (b) Hands-on sessions: Fire Fighting and Damage Control; Jury-Rigging; Safety Gear; and Life-Raft Boarding (with voluntary in-the-pool participation).

Biggest TAKE-AWAYS
From OFFSHORE Safety-at-Sea Seminar
For Cruising Couples

LIFESAVING EQUIPMENT:

1. Personal: Wear CG-approved Lifejackets or Hydrostatic PFDs (inspect CO₂, whistle, light) & Harnesses
2. Jacklines (properly installed before going offshore)
3. Boom Preventer (releasable from cockpit)
4. Lifesling (fastened to boat)
5. Hand-held VHF & GPS (as back-ups; check batteries)
6. Visual Distress Signals: Buy high-quality SOLAS flares; watch expiration dates; keep dry
7. 406MHz EPIRB
8. Liferaft (locate to accommodate 15 second deployment; fasten to boat if need to use it; know what supplies are in it)
9. Grab Bag (Ditch Bag) prepared before going offshore



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10. Important papers (boat insurance, passports, medical information, on-shore contact information, etc.) packed in waterproof container & readily accessible

LIFESAVING SKILLS needed by Captain and Crew . . . Practice before going offshore!

1. Operate the boat single-handedly . . . under power & under sail (including taking down sails)
2. Handle radio communications
3. Perform MOB procedure single-handedly ("Quick Stop Method")
4. CPR and First Aid Training (keep up certification)

WEATHER:

1. Use MULTIPLE sources w/ human content, don't rely ONLY on GRIB Files
2. Always travel based on weather/sea conditions and NOT on calendar

OFFSHORE BOAT PREPARATION

1. Good Communication Equipment: VHF, hand-held VHF/GPS; SSB (nice to have)
2. Offshore Medical Supplies: prescription meds in labeled containers & dosage amounts; first aide; seasickness treatments; etc.
3. Damage Control tools and materials for hull damage, fire, standing rig, engine failure (belts, fuel filters, etc.)



Notes from specific speakers:

Big ideas for Safety at Sea: Capt. J. Kip Louttit (Coast Guard)

Be prepared (Avoid trouble in the first place)

- Good crew, boat, & equipment (crew familiar with boat & equipment, crew drilled in emergency procedures, crew (not just the captain) can handle boat- docking, anchoring, piloting, & radio communications)
- *Practice* procedures under controlled conditions (inshore) day/night, heavy weather

Self-Rescue (prepare for extenuating circumstances)

- Blown-out sails (tri-sails, repairs, etc.)
- Broken: rudder, standing rig, mast, boom, etc. (jury rigging skills, materials, etc.)
- Person overboard: plan AND practice ahead
- Fire control: (small/large . . . controllable / uncontrollable)
- Flooding: minor / uncontrollable. . .finding the source
- Medical: first aid . . . accessing advice by radio
- Grounding or hull damage: soft / hard . . . life threatening (e.g. surf, container's damage)

Outside Assistance . . . call COAST GUARD (Channel 16)

- Call *early* if having trouble: CG will put you on a communications schedule
- Leave a FLOAT PLAN with someone ashore
- Search and Rescue Checklist (first thing. . . because may lose communications)
 1. POSITION, POSITION, POSITION
 2. Number of people aboard
 3. Nature of distress
 4. Description of vessel (name, length, type, make, color (deck, bottom))
 5. Put on lifejackets (if not already)



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Preparedness by Jim Mattingly (Big-time Offshore Racer w/ Ted Turner)

- All crew need to be familiar with boat handling & safety gear/ techniques
- Know weather *before* going offshore and log information
- Floatable waterproof pack: crew medical info & shore side contacts, ship's papers, etc.
- Back-up crew on-board for radio communications, navigation, & emergency repairs
- Seasick preventions/medications: try out before going offshore
- Prepare your boat for *offshore* (e.g. watertight, back-up radio/GPS, EPIRB, etc.)
- Log boat position regularly
- Releasable boom preventer
- Life-raft: 15 seconds to deploy
- Emergency 12 v battery for lights
- Post diagram of thru-hull holes; attach stoppers

Weather by Lee Chesneau (retired NOAA Weather Forecaster; private consultant)

- Have a system in place for accessing frequent updates on weather (VHF, SSB, cell phone, PC w/ AirCard, etc.)
- DO NOT DEPEND ONLY ON GRIB FILES (They represent ONLY one of MANY computer models. They provide a misleading sense of precision. They make use of NO human experience and judgment.)
- Use MULTIPLE sources w/ human content (e.g. For ocean cruising <www.opc.ncep.noaa.gov>: Surface Forecast, Wind & Wave Forecast, 500mb Forecast, and Surface Analysis; For coastal cruising: area Coastal Forecast)
- Before leaving understand how to read these forecast maps and understand how they are produced (e.g. their interrelationships)
- Access and log weather information for destination days ahead (to track patterns)
- Always travel based on weather/sea conditions and NOT on calendar (commitments to be somewhere by a certain date is NEVER a good plan)



Useful Resource Book:

Safety Recommendations for Cruising Sailboats (US Sailing)

Recommended minimum equipment and accommodation standards for monohull sailboats used for cruising beyond "daysailing":

Inshore (IC)

Coastal Passage-Making (CPM)

Ocean-Passage-Making (OPM)

"SEAWORTHY VESSEL":

- A boat should be properly rigged and ballasted and be fully seaworthy.
- All equipment should function properly, be readily accessible, and fastened securely (above & below deck).

GENERAL RECOMMENDATIONS

1. Through-Hull Openings: Locate and diagram; attach (soft-wood) stoppers to all fittings
2. Heavy items: Secure batteries, gas bottles, anchors & chains, etc.
3. Navigation lights: Inspect and upgrade (if needed)
4. Engine and Fuel (CPM/OPM): Carry spare fuel filters (rough seas stirs up contamination in tanks), and spare parts (e.g. belts, filters, hoses, spare engine oil & coolant)
5. Radios: Handheld VHF (waterproofed): CPM/OPM need Installed 25 wt VHF w/ masthead antenna
6. HF/SSB marine transceiver good to have for CPM, recommended for OPM for weather information and to communicate ashore medical & other emergencies
7. 406MHz EPIRB recommended for CMP/OPM
8. GPS (and back-up handheld GPS) recommended for all categories

PERSONAL EQUIPMENT

1. Lifejackets or Hydrostatic PFDs: must meet CG regulations
2. Safety Harnesses: ORC specified;
 - snaphook at the harness end of safety line to allow for detachment in case boat sinks (crew should carry a knife if not);
 - may be integrated with PFDs;
 - should be worn in rough weather, on cold water, at night, in reduced visibility, when sailing short-handed, and when wearing foul weather gear or boots.



TRAINING

1. **REGULAR CREW OVERBOARD PRACTICE:**
The "Quick-stop" and Lifesling procedures should be practiced aboard every cruising boat on a regular basis, and at the beginning of each cruise with new crew
2. **FIRST AID & CPR TRAINING:** At least one member of the crew should be currently certified in Cardiopulmonary resuscitation.

PORTABLE EQUIPMENT & SUPPLIES

1. Jacklines (CMP/OPM): deck & cockpit, attached to through-bolted or deck-plates
2. Fire Extinguishers: to USCG standards, inspect & replace when needed
3. Anchors: two adequately-sized anchors with nylon rode and chain, chafing gear
4. Flashlight (CPM/OPM): minimum of two (inspect and replace batteries as needed)
5. First Aid Kit and Manual (CPM/OPM): extensive supplies, including prescription drugs & medical advice. (Crew should be familiar with managing medical emergencies and procedures for using radio to obtain medical advice)
6. Foghorn and Bell: USCG regulations apply
7. Radar Reflector: mount as high as possible
8. Navigation (CPM/OPM): piloting equipment & charts (not electronic only); light list, tide, & current tables (e.g. Reed's) for areas of voyage
9. Lead Line or Echo Sounder: recommended for all categories
10. Speedometer/Distance Measuring Instrument: recommended for CPM/OPM for dead reckoning
11. Emergency Steering (CPM/OPM): carry an emergency tiller capable of being fitted to the rudder stock (check how to attach before going offshore)
12. Tools & Spare Parts: sufficient to make repairs and control damage especially to disconnect/sever standing rigging, engine consumables, spare blocks, spare lines, hull/deck patching materials
13. Identification: boat name on all buoyant equipment (e.g. lifejackets, lifebuoys, lifeslings, cushions, etc) to facilitate rescue operations. (Use reflective tape as well.)



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14. Liferrafts: needed for OPM, recommended for CPM (or inflatable dinghy OK in warm waters)
15. Grab Bag (CPM/OPM): recommended; should contain waterproof hand-held VHF transceiver and EPIRB, and other survival supplies (check to see what is already in packed Liferaft)
16. Lifebuoys: Lifesling (with self-igniting light) highly recommended for CPM/OPM; add lifebuoy self-igniting light, drogue & pole with flag for OPM
17. Pyrotechnic Signals (SOLAS much more effective): Red parachute flares (CPM-4; OPM-8); 4 Red hand flares (CPM & OPM); 2 Orange smoke flares (CPM & OPM)
18. Heaving Line: 50-75 ft. readily available in cockpit (CMP/OPM)
19. Storm & Heavy Weather Sails (CPM/OPM) (Practice setting sails before going offshore) Carry a "heavy weather jib" set on separate stay or halyard to deal with storm conditions Capability of reefing mainsail by at least 40% of luff OR carry a trysail
20. **Preventer**: on ALL cruising boats rig to prevent uncontrolled jibing while running; attachment should be easy and quick
21. Light Air Sails: Cruising spinnaker recommended for OPM
22. Drogue or Sea Anchor: recommended for OPM
23. Boatswain's Chair: Should be carried by all categories



Medical and General First-Aid

Dr. Dan Carlin gave a very comprehensive talk on all aspects of medical care and precautions at sea. Reference book: *A Comprehensive Guide to Marine Medicine* by Weiss and Jacobs (\$17).

1. Crew Members should have taken a CPR and general first-aid class
2. Contact sources for medical advice at sea
3. Well stocked Medical/First-Aid Kit
4. Medical Records Summary for each crew member

MEDICAL ADVICE AT SEA

Consultations with a medical advisory service allows those aboard to diagnose and treat various illnesses and injuries. Emphasis is not for emergencies but for early intervention and appropriate treatment. Contact any of these e-mail addresses to receive information about their services.

- World Clinic, Inc.: (800) 636-9186 www.worldclinic.com
- Maritime Medical Access (George Washington Univ.) (202) 741-2929
email: kroberts@mfa.gwu.edu
- Jeffery Isaac: www.medicalofficer.net

MEDICAL RECORDS SUMMARY

Medical records summary for each crew member as part of your medical readiness preparations.

- List of active medical problems i.e. Diabetes, hypertension, cancer
- List of inactive medical problems i.e. Had hip replacement in '05, heart attack
- List of current medications and dose
- List of allergies
- How to reach your doctor
- Number of contact person on land
- Copy of your latest EKG

MOST COMMON PROBLEMS AND INJURIES PREVENTION

- Head injury due to accidental jibe (Use a preventer)



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- Age-related: back pain, hypertension, dental, heart disease (Stretch, keep fit, diet, meds)
- Allergies (medication)
- Seasickness (meds, sea bands, ginger)
- Hypothermia (Dress in layers, warm slowly)
- Hyperthermia (heat stroke) (Shade body, Cool core, fluids)

MEDICAL/FIRST-AID KIT

This can be as comprehensive as you want but here are the basics:

- Sea sickness Medication—If you are still queasy after regular meds, try a decongestant (Sudafed) for relief
- Anti-inflammatory and analgesic medication
- Sun Protection
- Minor wound care materials—adhesive bandages in variety of sizes, liquid bandage, antiseptic wipes, antibiotic ointment—Ace Bandage for covering and protecting larger wound dressings
- Non-prescription drugs for common ailments—eye wash, antacids -- Zantac, Milk of Magnesia, Pepto-Bismol and Imodium, decongestants, Tinactin powder and Lamisil cream for fungal skin irritations, and Otic Domeboro for swimmer's ear.
- Insect repellent and white vinegar and alcohol for inactivating the stings of sea creatures
- Betadine
- Q-Tips
- Suggested Prescription Medications: Scopolamine patch/tablets, Epi-Pen, Antibiotics: **Azithromycin (ZPack), Amoxicillin, Erythromycin, Silver Sulfadiazine Cream (Silvadene) for burns.
Eyes: Tobrex, Ears: Cortisporin Otic Suspension, Pain :Vicodin
- Get meds filled in a blister pack—keeps longer and safely
- Dental Kit: Floss, Cavit temporary filling material, cotton rolls, zinc oxide, Eugenol (oil of cloves)