

First Aid for Sailors

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First Aid

This is an overview that hits some of what I consider the high points: some of the more serious issues which you may confront racing or cruising. It is not a definitive text.

Of course, you may not be comfortable rendering some of the treatments that I suggest. You certainly may, if there is time, consult with a land based physician before proceeding.

You do need to carry a reference manual and ideally read it at least once ahead of time.

First Aid

- Does not mean “Final Aid:” You are not necessarily the final care giver.
- Your role is to render basic care and help determine next steps, if necessary.

First Aid

Some of what you do in delivering first aid is management :

- Taking people off watch
- Changing crew assignments
- Evacuation

First Aid

Always plan ahead:

- What is the next step in managing this situation?
- **Can you afford not to evacuate?**

First Aid

- To reach Coast Guard, know how to use Channel 16
.....NOT your cell phone!
- Carry a first aid kit and know what is in it.
- Check the kit yearly: drugs expire, things need replacement

First Aid

- Carry a first aid manual
 - Can download Dr. Rob Amsler's excellent free booklet from the DRYA web site
 - Go to "Winter Seminar" link on top right of DRYA Home page (DRYA.ORG)
 - In list - scroll down to Mar 18
 - » The booklet link is in the "Presentation" column and is called, "FirstAidBooklet"]
- US Sailing also has a manual for about \$10.
- Many others out there

First Aid Kits

- Keep control of the first aid kit: the stuff has to be there when you need it and you do not want any of the drugs to be abused.
- Consider two kits:
 - One for everyone with aspirin/tylenol/motrin, band-aids, tape, etc.
 - One with medications/supplies to which only one or two people have access
- Add to your kit as the situations change:
 - More mature crew
 - Children
 - Crew with unique problems (ask your crew)

First Aid Kits and Advice

- <http://www.oceanmedix.com>
- <http://www.adventuremedicalkits.com>
- http://www.riparia.org/cruising_medical_kit.html
- <http://danandcath.blogspot.com/2012/04/normal-0-false-false-false-en-us-ja-x.html>
- <http://www.bycmack.com/pdf/DrAmslersPresentation20080109.pdf>

First Aid

- Get medical information from each crew member before the race or cruise starts. Ask each individual to complete a form with relevant information that would be needed in an emergency. Such a form is on line on the Mac home page (BYC.COM>Bell's Beer Mac Race)
- Seal the form in an envelope to be opened only if necessary and returned un-opened at the end of the race if not needed.

The "Good Sam" Laws

The Congress and Admiralty Courts have addressed this little "at sea" loophole via the Good Samaritan regulations. Federal Law 46 USC paragraph 2303(c) states that the

Master or individual

involved in rendering assistance **"is not liable for damages as a result of rendering assistance or for an act or omission in providing or arranging salvage, towage, medical treatment or other assistance when the individual acts as an ordinary, reasonable and prudent individual would have acted under the circumstances."** This creates, in legalese, a "high legal hurdle" to prove a case against a Good Samaritan. The Admiralty Courts have always considered the chilling effect that a decision against a Good Samaritan would have upon centuries of life-saving practice. Even if the Good Samaritan made the situation worse, **the Court has only ruled against the "Good Sam" if they were grossly negligent or exhibited "reckless or wanton conduct" in attempting the rescue.**

CPR

Learn it!

- Take a course
 - American Heart Association: [www. OnlineAHA.org](http://www.OnlineAHA.org)
 - American Red Cross: www.RedCross.org
- Renew every few years as recommendations do change

Allergic Reactions

- There is a spectrum...
- Mild: Itching, rash, localized swelling (insect bite)
- Local creams/lotions
 - cortisone cream
 - calamine lotion
- Antihistamine (benadryl) or nothing

Allergic Reactions

SEVERE (Anaphylaxis):

- Difficulty breathing
- Swelling of tongue
- Generalized swelling
- Falling blood pressure (faint, dizzy)
- History of severe allergy: bee sting, peanuts, shell fish

Treatment:

- Epinephrine (injection)
- Benadryl 50 mg.
- Zantac 150 mg (yes, this is used for ulcers, too)
- Cortisone pills: “Medrol dose pack”

.....EVACUATION!

Bleeding

- Control with direct compression
- If bleeding persists, as a last resort, consider tourniquet, but must release every few hours to give the tissues a “drink.” Consider evacuation if you need to
- **DO NOT PROBE THE WOUND**
- Check the color and sensation beyond the area of damage.

Burns

- Immediately cool the area
- Blisters: cover (don't open)
- Loss of skin or loss of sensation: Third degree
 - Need to prevent infection
 - Silvadene cream (note that people with sulfa allergies cannot use this)/any antibiotic ointment
 - Place dressing
 - Consider Evacuation if a large amount of skin involved
- If evidence of inhalation burns (singled nasal hair, difficulty breathing)

.....Evacuate!

Drowning

- Physiology of Drowning
 - Low levels of oxygen
 - Loss of consciousness
 - Reflex swallowing

.....Death

Drowning

- Resuscitation
 - Lung infections
 - Dry Drowning

.....Evacuation!

Hypothermia

Definition: Core body Temperature less than 35 degrees Celcius/ 95 degrees Fahrenheit

Symptoms: Look for the "*umbles*"—*stumbles, mumbles, fumbles*

Mild: Shivering, mental confusion

Moderate: mental confusion, shivering stops

Severe: mental confusion, death (cardiac arrest)

Hypothermia

- Rapid onset in water
- About 10 minutes in cold water before this sets in
- Can kill in an hour, but in water you'll drown way before that: PFD's are essential to give you the best chance at survival

Hypothermia

How hypothermia affects most adults

Water Temperature (Fahrenheit)	Exhaustion or Unconsciousness	Expected Time of Survival
32.5 degrees	Under 15 minutes	Under 15 to 45 minutes
32.5 to 40 degrees	15 to 30 minutes	30 to 90 minutes
40 to 50 degrees	30 to 60 minutes	1 to 3 hours
50 to 60 degrees	1 to 2 hours	1 to 6 hours
60 to 70 degrees	2 to 7 hours	2 to 4 hours
70 to 80 degrees	2 to 12 hours	3 hours to indefinite
Over 80 degrees	Indefinite	Indefinite

Hypothermia

- Incapacitation in cold water results in:
 - Difficulty in swimming ability
 - Loss of manual dexterity muscle cramping
- Swimming speeds onset of hypothermia

Hypothermia

- Cold Water Risks Summary
 - Cold Shock (0-2 minutes)...avoid panic
 - Functional disability (2-30 minutes)...increasing over time
 - Hypothermia (>30 minutes)

Hypothermia

- Remember, hypothermia can occur out of water as well as in.....
- Dress appropriately!

Hypothermia

- Treatment:
 - Slow rewarming
 - Take off wet clothes
 - NO alcohol
 - Consider evacuation
- Excellent on line video: “Cold Water Bootcamp”

Hypothermia

- If you are in the water and can do so,
 Get Out of the Water !!
- No matter what the weather conditions, you're almost always better off out of the water.
- Water is a great conductor of heat, much better than air, so you'll cool off faster in the water than out.

Hyperthermia

- Symptoms:
 - feeling faint
 - dry mouth
 - Cramping
- Treatment: It is important to drink plenty of cool fluids with electrolytes (1/2 strength Gatorade...due to sugar content) (if not alert, do not give oral fluids)
 - Cool off: remove clothing
 - Ice packs to neck/groins/axillae (arm pits)
 - Lie down
- If individual is not responding to care or temperature is 105 degrees Fahrenheit
.....Evacuate!

Heart Attacks

- Most difficult diagnosis
 - Chest Pain/Pressure
 - Jaw/Shoulder Pain/Back pain
 - Shortness of breath
- Consider prior history/age
- Treatment:
 - Full dose Aspirin
 - Nitroglycerin

.....Evacuation!

Sea Sickness

–Symptoms:

»nausea

»vomiting

»cold sweats

• Treatment:

– look at the horizon (tiller/wheel)

– stay close to a position on the boat with least amount of movement: alongside the mast

– Fluids

– rest

Sea Sickness

- Medications:
 - Dramamine non-drowsy/antivert (meclizine)
 - Dramamine Original formula (dimenhydrinate)
 - Compazine (prochlorperazine) rectal suppositories
 - Phenergan (promethazine) rectal suppositories
 - can add Adderal 4 mg. to counteract sedation effects of above medication-
 - Transderm Scop (transdermal scopolamine) Patches

Diarrhea

- Drink fluids with electrolytes (sodium, potassium) : Gatorade and similar. (Due to sugar content, dilute this by 50%)
- Food: rice, bananas.
- Medications
 - Immodium
 - Lomotil
 - Pepto-Bismol
 - Kaopectate
- May require evacuation if getting progressively dehydrated

Head Trauma

- Loss of consciousness
- Convulsion
- Change in mental status (ability to think)
- Inability to perform tasks and commands
- Nausea/vomiting
- Weakness, numbness, paralysis
- Fluid from within an ear
- Anxiety
- Worsening Headache
-Evacuation

Head Trauma

- Lesser trauma: observe for further changes
 - Observation
 - Check eyes: pupils –Both eyes should move together.
 - Change in level of consciousness, ability to function, seizures
 - No aspirin or opium derived pain medicine such as Norco, Vicodin.
 - If a person is taking a “blood thinner” [coumadin, (warfarin), Eliquis, Xarelto, and Pradaxa], they are at particular risk for bleeding within their head...consider early evacuation
- If deterioration:
.....Evacuate!
- Note: you can see progressive changes over several days

Strokes

- Change in mental status
 - Acronym: FAST
- Inability to talk, follow commands, move extremities
- Loss of sensation
- Treatment:
 - Keep the individual safe
 - DO NOT GIVE ASPIRIN
 - Do not give anything by mouth
 - Evacuate!

Eye Trauma

- If the globe is punctured or lacerated (cut), appears cloudy
.....Evacuate!
- If foreign body present, irrigate the eye with sterile saline (salt water), apply antibiotic and patch. If increasing pain, seek medical advice.

Spine Injuries

- Neck injuries:
 - Stabilize
- Avoid movement to lessen the chance of spinal cord injury or worsening injury:
splint neck

.....Evacuate!

Abdominal Trauma

- Increasing pain
 - Increasing abdominal distention
 - Penetrating abdominal trauma
 - LEAVE the object: DO NOT REMOVE
-Evacuate!

Urologic Emergencies

Inability to urinate (urinary retention)

- Treatment:
 - Repeated catheterizations
 - Therefore, add a urinary catheter of your emergency kit...this is not part of most first aid kits
 - YouTube videos on technique
- Prevention: These drugs may cause this problem. If people are experiencing a decrease in their urine flow, stop taking them
 - antihistamines
 - sea sickness medications
 - oral decongestants

Lacerations

- Superficial (not full thickness skin)
 - Clean
 - Antibiotic Ointment
 - Dressing
- Deeper/Full Thickness
 - Clean/remove foreign bodies
 - Antibiotic Ointment to edges
 - Pull wound edges together: tape/suture

Lacerations

Deep: see bone (not fractured), muscle/tendons

- Clean
- Pull edges together
- Antibiotic ointment
- Antibiotic by mouth
- Dressing

Lacerations

- Tendon injuries: need surgical repair
 - Approximately 5 day period in which to operate....don't wait until the last minute
 - Elevation
- Can be severe even though they looked OK initially: re-evaluate daily

Extremities

Fractures:

- If the bone breaks the skin: compound fracture
 - Immobilize (splint), oral antibiotic, and evacuate
- If suspect fracture/severe sprain
 - Immobilize
- Note: fractures and severe sprains both require immobilization, thus the diagnosis in the acute situation is not that critical
- Ice the area
- NSAID (Motrin, Naproxen)

Amputations

- Control bleeding
- Save body part in container with salt water (irrigating saline/1 tsp table salt in 8 oz. water)
- DO NOT FREEZE: keep cold
.....Evacuate!

References

- Health Care on Your Own, DRYA presentation by Dr. Robert Amsler
- Basic Trauma and Alarming Medical Symptoms, DRYA Presentation by K.Pitus, D.O.
- Medicine Afloat, DRYA presentation by Robert D. Welch, MD,MS
- If you are interested in a medicine at sea course:
www:wildmed@medofficer.net

Thank you for your attention!

Questions?