

## Medical Considerations

by Jim and Sue Corenman with additions (in blue) by Kent Benedict

This topic causes more apprehension among first-time racers than almost any other, with good reason. There is no help readily available out there and if a problem occurs that you are not prepared to deal with, then it can be a very difficult situation. The good news is that people who do this race are almost invariably healthy to begin with and while you can't get drugs or supplies at sea there is usually advice available by radio. Therefore, the primary objectives for medical preparation ought to be the identification and correction of any known problems and the acquisition of appropriate supplies and drugs for the medical kit.

If there is a medical professional as part of the crew that's great, but most boats will not be in that situation and few skippers feel it is important to have a medical person aboard who is not also a good sailor. Your best health insurance is a crew that has the skill and experience to handle the boat safely and to keep themselves out of potentially dangerous situations.

As an example, consider what I feel to be the most frightening potential problem: a head injury caused by an accidental jibe. Even if the victim didn't get knocked straight overboard by the impact, these injuries can potentially be fatal. (The swelling of tissues inside the skull can constrict blood flow to the brain, leading to diminished function and possible death and there's almost nothing that can be done about it outside of the hospital). Rather than carry a brain surgeon, we feel it is better to have another good driver who would not be as apt to jibe the boat in the first place or a crew member with a good "ducking instinct".

The place to start your planning is with the identification of and preparation for any known health problems or sensitivities. Unless you know the crew well, a frank discussion with each crew member may help identify potential problems, and you should be sure that each crew member has had a current physical and dental checkup. You also need to find out about any drug allergies and specifically which drugs (especially antibiotics) have been taken in the past without problems. Many people are sensitive to penicillin or sulfa drugs and knowing that someone is not allergic can potentially be very helpful.

Try to become aware of any drug or drinking problems. There is no room for either on this trip. Having a crew member operating at less than full capacity or going through detox will put everyone else at a greater risk in terms of accidents or mishaps. The sea has no patience for problems like that and you should not have either. If you are not absolutely sure about a potential crew's ability to function without a crutch of some sort, do everybody a favor and leave them home.

A long passage like this is also a poor time to make any significant changes in habits or diet. Since there's no Seven-11 down the street, it seems like a great opportunity to go cold turkey and stop a smoking or drinking habit, but that often leads to very unpleasant experiences for everyone. Breaking these habits is hard and puts a lot of stress on the individuals who at the same time are trying to cope with a new situation and perhaps feeling a lot of stress already about the trip. Good idea, but this is definitely not the time.

Two last thoughts before we jump into more detail: first, remember that the most common problems at sea are the same as the most common problems at home and prepare accordingly (e.g. don't forget the Tylenol and Band-Aids), and secondly, be advised that the authors, while having some ocean experience, share your (presumed) medical incompetence and have thankfully had no experience to date with anything other than the most common problems. The comments here are offered only to guide you in discussions with a medical professional.

### Getting Educated

While some help may be available by radio in case of problems, it is essential that someone on board, preferably two people, have some basic knowledge on how to deal with likely situations and how to use the supplies on board. Unless you can find the right person willing to spend the time to teach you one-on-one, a class is the best place to get some guidance. The best classes will be those aimed at offshore sailing, generally aimed at cruising sailors. They will cover a combination of trauma and general medical topics and will be oriented towards professional help being days or weeks away. The usual first-aid and CPR courses are less useful, because they are oriented towards what to do in the few minutes until the ambulance arrives; in our world it isn't going to.

### Finding a Doctor

It is also very useful to establish a good working relationship with your family doctor or another medical professional. You need to make them understand the nature of this adventure, what the common problems are, confide your worst fears, and seek their advice on preparation. There are two reasons that this dialog is important: first, they will be able to really help with the education process, and secondly, you will need their confidence in your ability to handle the drugs that they will be prescribing.

What sort of doctor would be the best help? The family physician would be the first choice, because they know you and typically deal with a wide range of everyday problems. They probably don't understand the sailing environment, however, and may not be used to dealing with traumatic injuries or working without a lab next door to help with diagnosis. You may also be able to find help through friends or acquaintances, yacht club members, etc. Stick to medical generalists if you can, because while heart surgeons or neurologists might be happy to help, their experience with the more common problems may be limited. Being equipped to do brain surgery is no good if you forget the Band-Aids. Emergency room doctors are good choices, and are well equipped to deal with trauma, but they see little of other problems in their environment. It is up to you to understand and explain your environment to your doctor, whatever their background, and also to convince them that you will be careful with the drugs that you need to have on board.

### Common Problems

As we said, the most common problems on board are the most common problems on shore. You should organize your medical supplies into two groups, for common problems and for emergencies. One of the most common and most preventable problems is sunburn. When we get to the warm weather, shorts will be the uniform of the day, and getting burned will be very easy because the sun will be straight up at mid-day. Take lots

of good sunscreen and use it! Also take some light cover-ups to minimize exposure without roasting. Pricey Paba-free sunscreens with fancy moisturizers may be worthwhile for the blondes and others with sensitive skin.

### Seasickness

Motion sickness is the big Numero Uno for most offshore sailors, particularly those new to the sport. In the most mild form, seasickness causes mild nausea and a bad attitude, but often progresses quickly to severe nausea, vomiting, and a Very Bad Attitude.

Dehydration can be a serious problem with prolonged sickness. Seasickness is caused by sensory conflict between what you see and feel and what your balance mechanism tells you is going on. Being on deck, looking around or driving, will help. Lying down in a warm bunk will also be OK. Avoid sitting below, staring at a chart, if you can. Lack of sleep, tension, and cheap red wine can also aggravate seasickness - unfortunately, all of the ingredients of a typical departure.

There are a number of remedies on the market, none 100% effective and none without side effects. Seasickness tends to go away after two or three days or when the motion of the boat improves. Bigger boats also help, but it's usually too late by then.

The common over-the-counter drugs, such as Dramamine, Merazine, and Bonine, are effective at preventing mild cases of seasickness, but won't do much once it starts, or for the bad cases. They also cause drowsiness, so one good strategy is to take one before going off-watch if you are feeling a little under the weather. [Staring Bonine well in advance of departure \(one to two days\) will reduce the side effect of drowsiness.](#)

Patches (Transderm Scop, a prescription drug) are quite popular, and work well for most people, but not without some side effects. Common problems are dry mouth, drowsiness and vision problems, and very occasionally problems occur with hallucinations or delirium. They are effective, however, if applied early and many people feel the side effects are a small price to pay for being functional. The side effects are less for large people and many smaller people trim off part of the patch to reduce the dose (although the manufacturer won't say this is OK). Vision problems can also occur as a result of handling; the drug is the same one that eye doctors sometimes use to dilate eyes, so if you don't wash your hands after applying the patch and then rub your eyes, they will dilate, leaving you with poor vision and very sensitive to bright light (e.g. sunshine). Do as your mother said and wash your hands.

Other prescription drugs that are often recommended for seasickness include [Phenergan](#) (promethazine, prescription), 12 or 25mg, alone or with Sudafed (pseudoephedrine), a non-prescription decongestant that is supposed to enhance the action of Phenergan and counter some of its sedative effects. Phenergan is a powerful drug, used for post-anesthesia nausea, and should be effective at preventing vomiting, if it will stay down. The side effects are also significant, however, and it makes most people groggy and not very safe to be on deck. For someone who has been sick for two days, unable to keep anything down, it may be just the ticket before going to bed for an extended off-watch. Phenergan is also available as a suppository, as is Compazine (a similar drug), which are useful for very bad cases if the pills won't stay down. These must be stored in a 'fridge, however, particularly in the tropics. If dehydration becomes an issue, then controlling vomiting can be quite important and that's where these drugs come in.

## Other Common Problems

Headaches and stomach problems are as common at sea as ashore and constipation is quite common for the first few days. Be sure you include in your kit things like Tylenol and aspirin (but never give aspirin for a head injury), plus Pepto Bismol, [Keopectate](#), Metamucil, etc. for stomach and bowel problems. For cuts and scrapes you should have Band-Aids of various sizes as well as Neosporin ointment and a good disinfectant soap.

Heat-related problems are also common once we get to the tropics. The transition to a warm climate will happen slowly enough that people sometimes get caught unaware, but for the last few days of the trip it will be warm enough that heat exhaustion and heatstroke are potential concerns (I know it seems unlikely, as we watch it rain outside, but believe me...). Heat exhaustion is common, and is caused by a lack of circulating fluids in the bloodstream. The scenario goes sort of like this: it's hot, you perspire trying to stay cool and a lot of salt gets dumped with the perspiration. The salt level in your blood drops and your body dumps more water (in urine) trying to get the relative salt level back up. You drink a slug of water, because you're starting to feel not so good, but that dilutes the salt further, making more pee, and the problem just gets worse. Symptoms, besides feeling lousy, include cold, clammy skin and a lower-than-normal temperature. The solution is salt tablets, coated so that they don't dissolve too quickly.

Heat stroke is more serious, and occurs when the body's cooling system overloads and stops working. Symptoms include red, dry, hot skin, and an elevated temperature; the primary treatment is cooling the patient, and keeping them out of the heat for a while.

Allergies can sometimes occur unexpectedly, due to a change in environment, and can be potentially dangerous if inflammation of the airway occurs. [Benadryl](#) will help with mild reactions or itching and you should carry Bee-sting kits for more severe reactions. These are small syringes loaded with epinephrine (a prescription item) for sub-cutaneous injection - ask your doctor or pharmacist to show you how to use them.

## Emergencies

Getting into emergency situations, rope burns are not uncommon. They can be avoided by proper use of winches or line stoppers, but if they occur, they need to be treated the same as a thermal burn with Silvadene ointment (50 mg jars, prescription). Burns should be left uncovered if possible, but sometimes that isn't possible, so you should have something like Adaptic non-stick dressings in a variety of sizes (also useful for large scrapes), as well as Kling stretch gauze to hold things in place without a lot of pressure.

Cuts can also occur, and you need to know how to stop bleeding with pressure, and how to bandage it up. Steri-strips are commonly used to hold a wound together instead of stitches and come in two sizes. Tincture of Benzoate is typically used to improve adhesion to the skin. Gauze pads and tape will also be required. [Some doctors recommend superglue instead of sutures for closing an open wound.](#)

Sprains are also not uncommon, and you will want to have Ace bandages of various sizes, plus some way to splint a bad sprain or a fracture. Be careful not to apply excessive pressure and be sure circulation past the splint is unimpeded (check for pink toes). Splints can be plaster or malleable metal with the limb secured to the split with an ace bandage or

an inflatable air splint. Rigid splints should not fully encircle the injury and be careful with air splints to not cause excessive pressure to the injury.

## Trauma

Fortunately, major trauma is uncommon aboard sailing vessels. The December 2010 issue of *Wilderness & Environmental Medicine* published a survey of over 1000 sailors who reported 1715 injuries of which only about 70 were major injuries. Trauma to arms and legs accounted for over 80% of all injuries. Minor injuries such as cuts, bruises and sprains were most common. The most serious injuries were fractures, torn tendons, concussions, and dislocations. Tacking and jibing maneuvers as well as sail changes and winch handling contributed to most injury incidents. Only about 4% of all injuries required medical evaluation and/or hospitalization.

## Infections

Infections are worrisome, because they can get out of control in the couple of weeks that we will be at sea. You will want a two-week supply of at least two different broad-spectrum antibiotics, because you will not be able to get a lab culture and diagnosis, so trial and error is the approach. Common types of infections include dental abscesses, which can be very painful but will respond to antibiotics; our dentist uses Penicillin VK if there are no allergies. Erythromycin is often prescribed as a first try if allergies are not known; it has very few side effects, but is also not as effective as other drugs.

Other potential infections can include staph infections in the skin, especially knees, caused by excessive crawling around on hard foredecks (get some kneepads). Most of these are penicillin-resistant, but respond to Keflex. Appendicitis is always scary, but rather than attempt surgery with your rusty rigging knife on the salon table (just kidding!), control it with antibiotics until you get there. If there are female crewmembers, you should have drugs for problems like yeast infections and the like which can appear unexpectedly with a change of environment. It has also been reported that certain social diseases mysteriously appear a few days after departing, so you might want to be prepared there also.

Besides abscess, other dental problems can include broken or loose fillings or crowns. These can expose nerve tissue and be quite painful, but can be fixed temporarily with something like the Dent-Aid kit.

Many of these kinds of problems involve substantial pain, so pain medication from the mild to quite strong should be part of your medical kit. Controlling severe pain can be an important part of helping the victim cope with his injuries, and should not be overlooked. Tylenol with Codeine, and Percodan or Demerol are often prescribed.

Remember that this is just a partial list of all of the things that you should consider. Talk it over with your doctor, and add to the list, but try not to get excessive. Time and energy spent doing medical preparation, beyond a certain point, might be better spent gaining sailing experience and learning how to do things safely offshore.

## References

The best book currently on the market is [A Comprehensive Guide to Marine Medicine](#) by Eric A. Weiss, MD and Michael Jacobs, MD. Highly recommended.