

TROPICAL CRUISING WITH YOUR PET

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This is the 'short version,' handout of the complete book, hopefully to be published and available within the next year as (possibly) *Captain Doctor Dave's Veterinary Handbook for Cruisers* or something similar. Watch for it.

The most important things to keep in mind when reading this material is that it is NOT written from the point of view of someone residing in a house on land in an urban/suburban environment. And, I am not a specialist in tropical diseases. Like you, I'm just here; and I'm trying to apply my veterinary expertise and some common sense to what you need to do while cruising here in the tropics. These recommendations are written with the idea that products and services that you might 'normally' consider to be readily available may be difficult or impossible to find. Therefore some of my recommendations in this brochure, for you as a cruiser, might be the antithesis of what they would be if you were visiting me in Baltimore, Maryland in an American animal hospital environment.

Remember the basic tenet of medicine is always to 'do no harm.' ALL medical decisions should always be made with concern for weighing the 'risk of treatment versus risk of disease' or the risk of a condition versus the risk of a given procedure. An old Chinese proverb says 'never try to kill a fly with an axe.' The same philosophy applies with medical procedures, both preventative and therapeutic. And, when you think about giving medication to your best friend, remember that **NO medication is ever completely without risk.**

Do not take someone's uneducated opinion, no matter how well-intentioned, as fact. "I do this and I've never had a problem" or "My dog gets that all the time" are generally the earmark of an opinion to avoid. There is a tremendous amount of potential danger in someone who has no clue how little he knows. Many health problems look alike. There are only so many responses that the GI tract, the ear, the eye, or the skin are capable of. Vomiting and diarrhoea from eating too much junk food can be the same as vomiting and diarrhoea from a parvoviral infection. Chewing and scratching from fleas is pretty much the same as chewing and scratching from an inhalant allergy. It is difficult for a trained professional to know the difference and, frankly, we often don't. When someone (even a doctor) says unequivocally "This will cure that." - beware. We equivocate because even we often cannot be 100% certain. Anybody who says to you "My cat had that. Here's what you need to do." should be attended with a great deal of scepticism. 'Know-it-alls' can cause you and your pet huge troubles.

THE STRESSES OF LIFE ABOARD

You may think that your pet loves life aboard the boat as much as you do. And for pets that were raised entirely aboard a vessel that could very well be true. Keep in mind however that the stresses of living aboard that you take for granted, may bother your pet more than you think. Slippery cabin soles, steps to negotiate in order to climb into and down from the cockpit (especially for older and/or larger dogs) and tropical heat are ever-present factors to be aware of. New noises and smells, constant changes in diet - not to mention the unpleasantness of the occasional inevitable rough passage - everything plays a role. For you, as pet owner, the constant threat of pet overboard should always be high on your list of priorities. Always know where the pet is - always! However do not be bound by guilt. Pets die every day in houses, cars, farms and fields. Living aboard a boat has never been the *cause* of any pet's death.

VACCINATIONS

Vaccinations should be kept current. Naturally, in both cats and dogs, you should never allow your rabies protection to lapse. Also important for dogs, is your distemper/ parvovirus combination (5-way up to 8-way) vaccination. Parvovirus is a threat when dogs are stressed. Heat is a major contributing stress factor that is always present. Parvovirus risk is questionable throughout the islands, but since treatment facilities are also questionable, it is probably to your dog's advantage to make certain that parvovirus immunity is at its greatest. (For cats, periodic distemper combination [3 way or 4 way] boosters are a good idea also.) Although yearly boosters are still a good idea if your pet handles vaccinations well, vaccination once every two or three years is probably adequate protection for most dogs and cats, and should be a good rule of thumb for pets that have

some difficulty handling vaccinations. Try to keep these basic vaccines current. On the other hand, if your pet suffers vaccine reactions or is in any *medical* way sensitive to vaccination, then you must weigh 'treatment versus risk.'

INTESTINAL PARASITES

Intestinal parasites are one of the most significant problems with which you must cope while cruising in foreign waters, especially so in the tropics. Warm, moist climates support the growth of many organisms, and provide an excellent medium to support the growth and development of worm eggs. Many species of worms which are parasitic to mammals require an 'intermediate host' to complete the development of the life cycle. This host could be a fish or frog (some flukes), a crab or other shellfish (some lungworms), a beetle or other bug of some type (esophageal and stomach worms), some type of small mammal (many tapeworms and some stomach worms), or even a large mammal such as a pig (trichinosis). Symptoms for these parasites are varied and range from no signs at all to severe, life-threatening disease.

Giardia, amoeba, and other intestinal Protozoan infections are also possible from drinking contaminated water. Symptoms are similar to those found in humans, as is treatment. Also, you should be aware that the old familiar intestinal parasites, Ascarids (roundworms), hookworms, whipworms, and common tapeworms are undoubtedly widespread in the local pet populations.

Routine prophylactic deworming with a 'safe' (remember 'safe' is a relative term when speaking of medications) parasitocidal product is probably a good idea if your dog is allowed to come into contact with local dogs or if you feel your dog is otherwise at risk. Fenbendazole, albendazole, and mebendazole are good, broad spectrum dewormers for most prophylactic situations. Praziquantel is an excellent product for tapeworms and some special parasitic infections. Unfortunately the dosages vary with these products, depending upon what worms are being treated. Fenbendazole (available at some veterinary stores, trade name: *Panacur*) is probably your best broad-spectrum dewormer (You can also use Albendazole [often available OTC as a human dewormer].) Either product, dosed at 50 mg/kg of body weight once a day for three to five days in a row, is a good *general purpose* dewormer. You may want to do this twice a year. If your pet seldom leaves the boat or is particularly clean and doesn't pick things up from the ground or have contact with other animals, then I would probably not do this. Although these products are safe, both present a very slight possibility (fenbendazole is the safer one) of causing liver damage. Nonetheless fenbendazole is used quite indiscriminately in the U.S. as a routine dewormer by veterinarians in just about all species of animals. (Ivermectin can also be used for some of these parasites, but must be dosed properly and at a significantly higher dose than for heartworm prevention - a dose that can be fatal in collie-type dogs.) If your pet receives *Sentinel* or *Interceptor* for heartworm prevention each month, these tablets provide a fairly effective routine intestinal deworming (for the most common worms) every time you give them. For that reason I consider this to be the best heartworm preventative you can use. (Other products such as *Heartgard* make intestinal worm claims but are MUCH less effective.) Praziquantel is a dewormer that is much more specific and is very effective against tapeworms and some of the more exotic worm species (available in both injection and oral forms on both the human and veterinary markets - dosages vary).

Remember that routine deworming is NOT a substitute for periodic stool sample tests and heartworm preventative medication is not a substitute for periodic heartworm testing. Periodic diagnostic testing is important to find those unusual or unexpected problems. (If you should happen to reach a port where the veterinary services are above average, take advantage of the opportunity to have a complete exam and workup done.) When possible, take a fresh stool sample to a veterinarian and have it tested. Get a heartworm test. If a problem develops with diarrhea lasting for more than a couple of days, take the pet and a stool sample to the doctor. And NEVER deworm a sick pet. Most of the time you run the risk of making the problem worse. If you want to play doctor, then act like one: try to find out what is wrong - BEFORE you treat.

HEARTWORMS

PAY ATTENTION! You are now in the land of the heartworm. This is undoubtedly the single biggest health threat to your dog. (Even cats are at some risk for heartworm infection. We just can't be sure quite how much of a risk.) Heartworms are carried by mosquitoes and are deadly. A simple mosquito bite is all it takes for your dog to acquire several heartworms. Heartworms look like spaghetti and live inside the chambers of the heart in the flow of the blood and clog things up like gobs of hair can clog up plumbing. If you do not have your dog on heartworm preventative medicine and it gets heartworm they CAN be treated effectively - but it is expensive to treat. And I'm not certain just how readily you can get a dog treated here or how safe the therapeutic medication might be. There is an old form of injectable arsenic that was very dangerous, even

though effective. The newer form of arsenic is much safer but still - hello! - it's arsenic, guys - that's the stuff they used to use in all the old movies to KILL people. This is the easiest disease in the world to prevent and the prevention is relatively cheap. Don't take silly chances. The medication is easy to give and is given just once a month throughout the mosquito season. Contrary to what you may have heard, long hair or keeping your dog or cat indoors is no assurance against heartworm infection - but heartworm medication is. It is one of the most effective medications you can buy and it is not expensive. Because of its extra protection against intestinal worms, I give a hands down preference for milbemycin (the active ingredient in *Interceptor* and *Sentinel*), but for simple heartworm protection, the avermectin products are just as effective. If you need medication you can get it from the local veterinary clinics or see me. Or you can use diluted ivermectin at a dosage of 3 to 12 *micrograms/kg* body weight in dogs once a month orally, and 24 *micrograms/kg* in cats once a month orally. (Be careful in collies, part-collies, and collie-type dogs. A slight overdose with this drug can be lethal.)

MOTION SICKNESS and ANXIETY

If your pet suffers from motion sickness, most products available for human use, can safely be used in dogs and cats. Meclizine (marketed in the U.S. as *Bonine*, *Dramamine II* or *Dramamine Less Drowsy*, *Antivert*, *Antrizine*) can be used at 25 mg/dog no more than once every 12 hours in dogs, and at 6 to 12 mg/cat no more than once a day in cats. Dimenhydrinate (marketed in U.S. as *Dramamine*, *Calm-X*, *Dimetabs*, *Tiptone*) can be used at 25 to 50 mg/dog one to three times a day, or in cats at 12 mg/cat up to three times a day. Remember that these are maximum dosages and that these are not veterinary products so the dosage and safety data has not been scientifically determined (i.e. use them at your own risk). Also most of the time these type of antihistamine drugs are very nasty tasting, so you're best bet is to poke them down your pet's throat. Mixed in water they will taste very bitter and may cause severe frothing especially in cats. Chlorpromazine (*Thorazine*), prochlorperazine (*Compazine*), metoclopramide (*Reglan*) and ondansetron (*Zofran*) can also be used safely, but frankly, if you need these products for your pet to live aboard, he's better off at home. Remember killing the fly with the axe?

Stugeron is available in many countries outside of North America and is safe and highly effective in humans without causing drowsiness (not necessarily a positive attribute in your pet). It probably is similar in its action in pets, but I have no data on this drug.

For anxiety, sometimes more of an issue than motion sickness in some pets, diazepam (*Valium*) is cheap and works quite well (2mg to 10 mg/dog, depending on size of dog, once every 8 to 24 hours; 1 to 2 mg/cat for a cat once every 8 to 24 hours). Diazepam stimulates appetite in cats, so don't let him get fat. With variable dosage ranges like these, start with a small dose and work your way up. If by the time you reach the upper range in a large dog (10mg) [half that (5mg) in a small dog], you're not seeing results, then give it up.)

For panic attacks in dogs, alprazolam (*Xanax*) often helps (0.01 to 1.0 mg/kg once every 12 to 24 hours - maximum of 4 mg/day total).

LOCAL and REGIONAL DANGERS

When you are visiting an area, try to learn the risks and dangers peculiar to that area. Toads, lizards, snakes, spiders, and possibly aquatic life can all be a risk to your pet. Some tropical TOADS (*Bufo marinus*) can be deadly. They tend to be more active at dawn and in the early evening. Keep your dog on a leash and watch closely. A toad can be in his mouth before you realize it has even happened. The toad secretes a toxin from glands located on the back of the head. This toxin causes profuse salivation and can cause cardiac arrhythmias and death. It can happen literally in minutes. Consider carrying a treatment kit with you whenever you have your dog ashore (and know how to use it BEFORE you need it), but, at the very least, carry a quart or more of fresh water in a squirt bottle. Immediate and profuse flushing of the oral cavity (by far the most important part of treatment) with copious amounts of fresh water can remove the poison from the dog's mouth and possibly save its life. Do NOT try to get your pet to a professional. Time is your enemy in this situation. Your pet's life is literally in your hands.

LIZARDS of various types are common throughout the tropics. I have been unable to find any concrete information on this subject, but anecdotal evidence suggests that mouthing of these lizards can cause symptoms of toxicosis ranging from gastrointestinal signs to seizures and very severe illness, possibly even death. This problem can actually be more of a threat to cats, as cats seem to be quite sensitive to the effects and, because of their stalking and hunting ability and their quickness, they are more likely to catch a lizard than are dogs.

TARANTULAS may be present. I have heard (again, not scientifically substantiated - more anecdotal evidence) suggestions that some varieties of tarantulas, have brittle, spine-like hairs that can break off in the skin when touched or mouthed. It seems that these hairs may secrete some type of dermatotoxin which can cause devitalization of the skin and sloughing of the damaged skin resulting in a large, slow-healing, open wound. Don't take chances. Keep your pet clear of these guys.

SNAKES are another possibility. Often it can be difficult to get accurate information regarding this type of threat, since most of the places you visit want tourists and the associated income. Advertising the presence of snakes and tarantulas is not the way to attract tourists. Ask about snakes. If they are present, use caution. I have read at least one narrative account of a cruiser who was killed by a snakebite on one of the southern Caribbean islands. The woman was bitten while walking through tall grass and died a couple days later.

ECHINODERMS (sea urchins, hedgehogs, etc.) and other things that poke. Most important is PREVENTION - keep the dog out of urchin-infested water. Very painful. If he steps on one, soak in hot water and remove the spines. They soften up rapidly once in the tissues and can work their way in. Use a hot water soak (as hot as you or the dog can stand - but don't scald him) or compresses for 30 to 60 minutes which should help relieve the pain, and then remove any spines you can find. If you miss any, they have a tendency to migrate. If the spines are in or near a joint, nerves, or tendons they can cause long term problems. Cleanse the wound with antiseptic solution (preferably not iodine-based) and start the dog on trimethoprim-sulfa or a quinolone antibiotic (*Cipro*, *Baytril*, *Orbax*, etc.) for 3 days.

MEDICATIONS

Medications that are 'safe' in humans are not necessarily safe in animals. 'Natural' and 'organic' products are not necessarily safe. Acetaminophen (*Tylenol* and other brands) is toxic to both dogs and cats - especially so in cats. Ibuprofen (*Advil* and other brands) is less so, but still dangerous. Aspirin, on the other hand, is quite safe in both dogs and cats. Cats metabolize aspirin very slowly, so the dosing is very important. An overdose can kill your cat. ½ an aspirin tablet in a small dog, 1 tablet in a 40 pound dog, 2 tablets in an 80 pound dog twice a day is a good anti-inflammatory or analgesic dose. In a cat, give 1/4 tablet no more often than once every 3 days and it should help without harming.

FOODS AND FEEDING

Things (bacteria included) grow rapidly and profusely in the heat and humidity of the tropics. Keep food and water bowls religiously clean. (And scoop the litter box daily. A weak solution of bleach [about 1 tsp in a gallon of water] makes an excellent disinfectant for bowls or litter pans.)

This is probably the most difficult subject to address out here in the land of water. I have never been a major proponent of brand name dropping and certainly cannot support ANY particular brand name of pet food in the world of Madison Avenue hype that exists surrounding the subject. There are three important words to remember - "complete and balanced." In the U.S. this is generally assured by the AAFCO (American Association of Feed Control Officials) blurb on the bag or can. In some exotic locations where labelling is less of an issue, it may be a little tougher. Under those conditions, freshness is probably more important than anything else. I certainly do not recommend buying premium priced pet foods in an area or in a country where the local people cannot afford to buy them. If they sit on the shelf in this climate for six months (and a warehouse somewhere else for just as long) with nobody buying them, they are probably inferior to the cheapest food in the store. Buy what the locals buy and see if it looks and smells fresh. If it does, then that's probably your best bet. The product that sells the fastest is logically the most likely to be freshest. Beyond that, look for major brands - Purina, Waltham, Alpo, Pedigree. (Contrary to what you may have heard, Purina, Pedigree, Alpo, and other common name-brand foods are excellent foods. There is very little NUTRITIONAL difference between a good name-brand of food from the grocery or pet store and the 'designer diets' such as Iams, Nutro, Pro Plan, and Science Diet. You should understand that there IS a difference between many of these so-called 'premium' pet foods and the grocery store foods; however that difference is, for most dogs, not NUTRITIONALLY significant. For the vast majority of dogs a regular type food is probably fine.) If you insist on buying the most expensive stuff you can find, go to a veterinarian and find out if you can bring it back if it's wormy or moldy. Worms and weevils in the food, although they are gross, are not near as bad as you might think, (Although I certainly don't want to bring those things aboard my boat and have them end up infesting my galley - flour, cereal, etc.) Euphemistically speaking, remember they have simply converted the protein in the food to a fresher form! Mold and fungus, on the other hand, can present a serious health issue and the food should be thrown out. (Try not to give in to the urge to feed people food. You may think you can match the pet food company. Other opinions to the contrary, YOU CAN'T.) You spend a substantial sum of money for a

good bag of pet food. When you buy a bag of food you are paying for the research and scientific expertise that went into formulating that diet to be complete and perfectly balanced. Nutritionally speaking, you and I should eat as balanced a diet. Sometimes it's nice to give some extra goodies just to make US feel good. If you feel that you must give table food, you may give small amounts of vegetables, fruit, or an occasional small piece of cooked meat, but try not to let these goodies amount to more than 10% of the meal and, if your dog develops a preference for the table food, stop giving it immediately - and - NO JUNK FOOD!

BONES

You are in an area where a serious emergency can mean death to your pet. At home a situation requiring a major emergency surgery may mean a major insult to your bank account. Here it can be the death of your pet. Even if you can find someone to do a major surgery, adequate facilities for doing that type of procedure are few and far between, and your ability to make a fast, emergency trip under pressing conditions, is extremely limited. Unsupervised chewing of bones is NEVER a good idea. If you feel you simply must give your dog a bone, make certain it is a large, freshly cooked bone. Never give poultry or steak or chop bones or small circular (e.g. roundsteak) or splintery bones, and never give old or uncooked bones. (And remember that bones picked up from the ground or from a dead carcass can harbor Clostridial spores - yes, folks, that is Botulism! Very deadly and virtually untreatable.) Be prepared to closely supervise the chewing (If you can't supervise it or your pet growls when approached, don't give him the bone. Simple solution to a complex problem.) and when you hear the first solid crack of breaking bone, immediately take the bone away. Chewed up bone can be deadly to your dog and may require surgical removal to avoid serious complications from lodging in the intestinal tract. Your dog may chew bones routinely its whole life with no problem and then suddenly require \$2000 worth of surgery to save its life (Out here that might as well be \$2 million because you probably won't be able to find a place where you can get that sort of major surgery done, period - end of discussion.) all because of a totally unnecessary bone. Remember, your dog can eat bones every day and never have a problem. But it's just a matter of time. Oh yea, and avoid FABRIC toys of any type. They too can cause serious intestinal blockage.

IDENTIFICATION

If you don't already have one, get some type of identification tag with your name, boat name, home address, and phone number on it. Better yet is some sort of small, waterproof container on the pet's collar containing a paper or card with as much information as possible to help get your pet back in the event it's lost. Include boat information, home contact information, etc. - everything and anything that might help. It should contain information that will allow someone who finds your pet to understand that you LIVE aboard a boat and are cruising the area. Remember, most people have no idea whatsoever that people actually live aboard boats and travel the oceans. There is still no better insurance than a leash.

Another system that works is microchip identification. Be certain that the microchip supplier you use is the most universally identifiable one available in the region you are cruising. The question is: how many individuals in the area you are cruising have microchip readers for that chip, and will they call? 800 numbers are worthless. A microchip implant is as quick and simple as a vaccination, but the real question remains, will it get your pet back to you? In all probability, no. But do check it out.

NEUTERING AND SPAYING

Traveling pets should be spayed or neutered - no question about it. The reproductive organs represent unnecessary organ systems that are prone to pathology. It is wonderful when we can completely eliminate the possibility of something going medically wrong. That is entirely the case when you neuter your pet. The entire organ system is surgically eliminated and so is the chance of problems associated with it. In people, some cruisers advocate prophylactic appendectomy. Neutering your pet is the veterinary equivalent, but with much greater justification.

SKIN and COAT CARE

Excessive baths are the enemy of a healthy skin and coat. If you remember this, you will be far less likely to end up with serious skin and coat problems. Certain breeds (especially Spaniels) tend to have skin and coat problems anyway. Excessive bathing only aggravates this trouble. However, whenever your pet is allowed to swim, salt water or fresh water, no matter how clean the water appears to be, do a thorough fresh water rinse (That's a fresh water *rinse*, not a bath. i.e. no soap.) when done. There are often a tremendous number of micro organisms present in the water (also salt, when in salt water) your pet swims in. Allowed to incubate on your pet's skin under tropical conditions, these organisms (or salt) can cause some serious skin pathology. This type of skin disease is easily and entirely avoided by simple rinsing of the coat after swimming. However,

once it is allowed to occur it can be very difficult to treat and eliminate. Remember, an ounce of prevention...

Regular GROOMING is important to pets which are prone to matting - both dogs and cats. It's not simply a matter of a foo-foo for Fifi. Matted hair can lead to dermatitis of the skin underlying the matts. If this skin somehow gets wet, the matt prolongs drying time. The damp, macerating skin becomes infected, and attracts flies. Before you are even aware that you have a problem, you can have gangrenous skin and a maggot infestation (flystrike). This condition is often fatal. It is particularly common on the backs of the thighs of collies and collie-type dogs in hot, moist weather (kind of like we have here in the tropics). This problem is entirely avoidable with proper grooming. Maybe another ounce of prevention.

Do not try to remove matts from your pet's coat with scissors. It is difficult to remove a matt with a good set of electric clippers - almost impossible with scissors. What you will accomplish is you will cut a hole in the skin about the size of a nickel or a quarter which will 1) hurt the pet, 2) require antibiotics and some sort of repair, 3) make you feel really stupid for not paying attention to this information. Get some electric clippers or hire someone to groom your pet.

For minor wounds and cuts, bloody toenails, etc. carry a tube or two of crazy glue. It burns when you apply it but can be used as the sole means for closing some minor wounds where tension is not an issue. Use only on a fresh, clean wound. Also, for bleeding toenails you can use a styptic pencil (for shaving) or powdered alum, flour, or cornstarch can be used, or try poking the bleeding nail into a bar of soap.

Carry an Elizabethan collar aboard for your pet for those times when you need to actively prohibit chewing of the skin or coat. You can make one from an appropriately sized plastic bucket (usually larger is better). Cut a circular hole in the bottom of the bucket just large enough to slip over the dog's head. Use duct tape and fabric or roll cotton to tape a cushion around the cut edge for padding. Then punch four or five holes, equidistant apart in the plastic around the circular hole. Then slip the bottom of the bucket over the dog's head so that the dog's head is *inside* the bucket. Now use some small line, shoelaces, etc. through the holes you punched, to tie the bucket snugly to the dog's collar. Make certain the collar is snug (one finger snug but comfortable under the collar) on the dog's neck. The dog's head should be well inside the bucket. This device should be left on 24 hours a day when necessary. For cats you can make a similar device from a large piece of plastic or heavy cardboard wrapped around the base of the neck in the shape of a cone with the cat's head inside. Tape it together in the proper size and shape and tie to the collar in similar fashion. These devices are often a very effective treatment for problems that would require dangerously high doses of medication to treat. They may seem cruel or uncomfortable but they are much safer and more effective than drugs for a number of problems.

EAR CARE

A close relative of skin problems is ear trouble. Ear disease often accompanies inflammatory or allergic skin conditions in addition to frequently occurring in dogs with normal, healthy skin. Don't put anything in your pet's ears that you wouldn't put in your own. If you think it's necessary to treat your dog's ears, think before you treat. Improper or excessive treatment of the ears can lead to permanent pathological changes in the ear canal. If your dog scratches a lot at the ears, rubs them on the floor, whines, or cries when the ears are handled, or if the ears smell bad or have a noticeable discharge, then try to have them checked. Don't delay. It's difficult to recommend anything, since most ear problems look similar, yet the treatments are not necessarily the same.

Swimming is a good activity and exercise for us and it is probably just as good for your dog. However, after swimming hose the ears with copious amounts of clean water. Then dry them thoroughly and put a few drops of swimmer's ear solution (human type from pharmacy) in each ear to dry any residual water.

TOENAILS

Keep the toenails trimmed on dogs. Musculoskeletal problems can develop in the feet and ankles of dogs when their nails are too long. In older dogs with minor arthritic problems, letting the nails overgrow is cruel and unusual punishment for your old friend. Cats generally just need a good scratching post. Trimming their nails just makes them get stouter and heavier and capable of inflicting greater damage.

KITTY LITTER

You can try using beach sand in a pinch. Make certain it doesn't contain fleas. MANY beaches do. That is about the only reason I can think of for taking up space aboard a boat for storing commercial kitty litter. I like clay better than clumping, but that's a personal preference. Perhaps your cat feels otherwise. Whatever you use, scoop it frequently. Remember, everything grows faster (bacterial odors included) in the tropics.

FLEAS

Very frankly, if I were forced to choose, I'd take cockroaches over fleas. Living aboard a boat in the

tropics with a pet, one of the most challenging problems is fleas. Each additional pet you have compounds the difficulty geometrically. A little common sense goes a long way here. If you have multiple pets, don't take ANYBODY ashore, ever. The simplest solution is to not allow your pets to be exposed in the first place. Avoid the local dogs, and the places where the local dogs hang out. Unfortunately sand fleas (and regular old fleas, living in the sand) are frequently present on beaches - and, when you are cruising, it's pretty difficult to avoid beaches. Just remember, if your dog gets fleas, your boat gets fleas; and there is no easy solution to that problem.

One of the most effective deterrents to fleas is a drug called lufenuron, marketed by itself as *Program*, but when combined with milbemycin for heartworm prevention, is marketed as *Sentinel*. These products are expensive, but can be priceless in their capacity to sterilize any fleas that get on your pet, and thus avoid an infestation of your boat. If you have the opportunity to pick some up while in the U.S. or Europe, get a year or more supply. Once you have a flea problem, most products are marginal at best. If you end up with a flea problem in spite of your efforts to the contrary, my recommendation is to use lufenuron (as either *Program* or *Sentinel*) once each month, combined with *Top-Spot (Frontline)*. A similar product, called *Advantage*, is also quite effective, but I prefer *Top-Spot (Frontline)*. Sprays, dips, and baths for the most part are a waste of time and, more often than not, do more harm to the pet's skin and coat than do the fleas. If your pet chews and scratches itself to the point of hair loss, raw spots, and bleeding, then there is probably a sensitivity problem (most likely to the fleas, but possibly to inhalant allergens - [i.e. hay fever] also). This makes eradication of the flea problem more urgent, and may require additional medication (such as antihistamines or corticosteroids) to control the allergy symptoms. For cats, there is an injectable form of *Program* available. One injection is good for six months. Keep in mind that, aside from the above products, all other flea control methods are obsolete. Old wives tales to the contrary, brewers yeast, garlic, salt, and other home remedies, do NOT work. Brewers yeast was actually so popular at one time that scientific research was done. Garlic is potentially toxic, especially to cats, and causes a very specific form of anemia. Remember that most animals do NOT have fleas. So somebody who makes claims for ineffective, natural products either doesn't know they have fleas (A very common occurrence, and very likely to be the case, especially if they claim their pet has 'never had a flea.'). They may very simply not have fleas because they don't have fleas, period. No magic there.

DISEASES

Watch your pet for signs of disease. Weight loss, changes in eating habits or in bowel or urinary habits, changes in the skin and coat, discharge from the eyes or ears, lethargy and depression; all are evidence of a possible health problem. If there is a noticeable change in your pet's behaviour or appearance, you should find a veterinarian. Do not bathe your pet before the examination, particularly if it has a skin problem, and bring in a stool sample (and even a urine sample) for testing. Hopefully the facility you visit will be able to do diagnostic procedures to determine the problem. Bloodwork and radiographs (x-rays), just like at the doctor's office, are often the only way to get the important clues needed to make an accurate diagnosis. And, just like with health problems in people, early detection and treatment usually means a much better likelihood of successful treatment and a quick return to health.

FIRST AID

First aid procedures in pets are similar to those in people. CUTS and ABRASIONS require cleansing and sometimes a wrap or sutures. To adequately clean and treat a wound on your pet, it needs to have the hair clipped around the lesion. This should be done with electric clippers. Scissors will often end up doing more damage to the skin. Active bleeding requires pressure. Pressure should be applied manually until the bleeding has stopped. If you apply a dressing, use care not to apply too much pressure, particularly on the limbs, and watch for swelling of the limb and foot beyond the dressing, indicating that the wrap is too tight. Not a bad idea to give oral antibiotics for 5 days or so. Amoxicillin, cephalexin, and doxycycline are good. Should stay out of the water until skin wounds are adequately healed.

PUNCTURE wounds should be allowed to bleed enough to clean them and should not be wrapped. Start on antibiotic. As above amoxicillin, cephalexin, or doxycycline are all good. Unless there is serious infection potential (coral cuts, deep penetrating wounds, burns) quinolones (*Cipro*) are overkill.

SEIZURES require that you get the pet away from any objects which might be damaged or which might injure the patient. Watch closely, don't panic, and wait for it to end. Keep away from the mouth. Note any asymmetry to the seizure, whether the whole body is involved or just part of the body, whether the patient remains conscious, etc. If seizures begin to occur regularly, write down dates, times, possible contributing factors, etc.

A suspected FRACTURE requires professional attention. If none is available, you can try to carefully splint the limb, etc. as you would for a person, but be prepared for much resistance, biting, etc. and the likelihood that the pet will try to remove any device that you apply, sometimes causing a much more severe problem (e.g. an intestinal obstruction from chewing off and swallowing a bandage or splint - or, worse yet, chew off the limb). Keep patient quiet and inactive.

POISONINGS require immediate treatment:

CAUSTIC AGENTS and PETROLEUM and AROMATIC products should be diluted with milk and or the whites of 2 to 4 eggs. DO NOT INDUCE VOMITING for acids (muriatic, battery, phosphoric, [bleach acts like and is treated like an acid], etc.), alkalis (lye, ammonia), and petroleum products. RULE NUMBER 1 OF POISONINGS - if it has FUMES, NO VOMITING. The fumes can do a lot more damage to the lungs and respiratory tract on the way back up, than the damage that's likely to be done by diluting it out and letting it pass through. After diluting, give milk of magnesia for acids or bleach, give diluted lemon juice or vinegar for alkalis. And with any of these volatile products, remember to clean any residue off the skin and coat. The fumes are what is most harmful.

ETHYLENE GLYCOL ANTIFREEZE/COOLANT - Animals like the sweet taste, very deadly. Act quickly INDUCE VOMITING with apomorphine (tablet orally or under the eyelid), or use common hydrogen peroxide (2-3%) 1 tsp to 2 tbsp orally, or some salt in the back of the throat. (Antifreeze is generally brightly colored so you can see it in the vomit.) If no vomiting occurs, or after vomiting, give activated charcoal if available. The next step is to get the pet rip-roaring drunk on whatever alcohol you have aboard (vodka or rum), and keep it rip-roaring drunk for 2 to 3 days. Sounds funny but it's really not. Obviously you want to do this old-fashioned but often effective treatment ONLY IF you are just about certain the pet has consumed a significant amount (more than about 5 ml/kg body weight in the dog, or more than about 1.5 ml/kg body weight in the cat is potentially deadly) of antifreeze and only if you start within about 18 to 24 hours after ingestion of the antifreeze.

CHOCOLATE - Not really as toxic as rumours have it, unless it's baker's chocolate. Baker's chocolate can cause some more serious problems. Induce vomiting and then treat orally with activated charcoal or kapectate. Other types of chocolate in moderate amounts will probably make your dog hyper and cause some GI distress. If vomiting and/or diarrhoea persists, treat symptomatically.

OTHER POISONINGS - If it burns or has fumes, do not induce vomiting. If it doesn't burn and has no fumes (i.e. it won't do any harm coming back up), then induce vomiting. Then treat with activated charcoal or kapectate. If you feel it will help to dilute the poison, dilute with milk, which also coats to some extent. Do your best and apply common sense. If there is poisoning information on the label, as on most commercially available products, read the label. Generally it helps to read the labels of all products you have aboard once in a while, so you have an idea where to find this information sometime when the time you save might be valuable.

FISH HOOKS - If the barb has penetrated into the tissue, DO NOT try to back it out. This takes guts, no time to wimp out: push it through. If it is in the lip or the tongue (quite common) and you are nowhere near help, you may have to resort to something dangerous, like getting the animal drunk, or giving some sedatives or something else creative in order to get the thing out. Whatever you do, it's important not to get bit, or just as likely, not get the hook stuck in you. You can't help your pet when you both have a treble hook of the same fishing lure stuck in your tissue. Work the barb through to the outside, and then clip off the barb (Wear safety glasses and be careful. That barb will go zinging across the cockpit and take out someone's eye.) with a pair of diagonal cutters or pliers.

EYE INJURY - Eye injuries can be serious. Treated incorrectly, you can quickly lose an eye. Carry with you a bottle of eye irrigation solution. When you first have a spastic and/or discharging eye, flush it out and look at it. If there is no visible damage, flush it again and watch it for a few hours or a day. (I was once presented with a beagle with a squinty eye. Upon opening the eye, a large stick [size of my finger] popped out of the cul de sac in the lower eyelid where it was lodged. It didn't damage the eye other than some minor bruising.) A small amount of debris in the eye can cause a lot of squinting and discharge. If you have flushed it out, that's great - end of problem. If still a problem, flush again with the irrigating solution and treat with triple antibiotic or gentamicin drops or ointment - no Visine (to 'get the red out') and especially no steroids! Keep patient out of the bright light and treat 4 to 6 times a day with drops or 3 to 4 times a day if using ointment. As long as your medication does not contain steroids you can continue to treat while seeking professional help. If

the eyelids are very squinty and spastic, you can apply atropine ointment or drops once a day to help relieve pain and relax the eye. Never put anything else in the eye. Never put *Visine* or similar symptomatic treatment in an eye. It is designed to remove redness - nothing more. Redness is a sign that there is a problem - either a sick pet, or a sick eye. You need to address the *problem*, not the *symptom*. And remember that eye medication containing corticosteroids and be very dangerous.

HEAT EXHAUSTION and HEAT STROKE - Under conditions of high ambient temperature and high humidity, it is very possible for your pet to suffer from dehydration and heat stress. Generally confinement in an area with no circulation or being caught in the sun with no access to shade are the usual causes. Normal rectal temperature of a dog or cat should be about 101°F (38°C) to 102°F (38.5°C) give or take. More than 103°F (39.2°C) is definitely above normal. Cats are much less prone to heat stress than are dogs. Excessive panting caused by the overheating leads to serious electrolyte imbalances, and the problem can rapidly escalate into a cascade effect which can kill in a short time. When rectal temperature exceeds 105°F (40.5°C), we have the makings of a serious problem. Other symptoms to look for: initially, panting, rapid heart rate, bright red oral cavity. As the condition progresses you may find the body (especially the extremities) feels hot to the touch, the oral mucosa begins to turn pale and may be dry. Watery diarrhoea which may become bloody may occur in the advanced stages before it progresses to coma and respiratory arrest. Caught in time, you can hose the animal down with the coldest water you can find - immersion in a tub full of ice is even better - until rectal temperature drops to under 103°F (39.5°C), thereby avoiding a swing into the hypothermia range. Brain damage is possible.

DEHYDRATION - This is a close relative of the above - much less dramatic but more insidious. In hot climates, pets may have difficulty or be reluctant to drink enough water. Or they may 'fall behind' on their drinking and have difficulty catching up. Periodically check your pet's hydration status - especially if they seem less active than usual or seem to be urinating less than what you feel is normal. Normal water consumption should be in the neighborhood of 60 to 80 ml/kg of body weight each day (24 hours). Symptoms of dehydration start with dry mucous membranes (mouth, eyes, tongue, sometimes nose leather). At this point we consider the animal to be about 4 or 5% dehydrated. When the eyes become sunken and you start to see the normally difficult to see inner eyelid become more noticeable we are more like 5 to 6% dehydrated. When the skin loses its normal turgor (Pick up a "tent" of skin on the back, just behind the shoulders. When you let go it should quickly return to its normal position, assuming it's not a Shar Pei or some other type over endowed with skin.), we are at 8% dehydration and urgently in need of medical treatment. In the initial stages of dehydration, you can rehydrate your pet orally using a syringe and water several times a day (10 to 20ml every 2 to 3 hours). In a large dog you can use a large syringe or a turkey baster. Very often you will notice an increase in activity by the end of a day of treatment, and an increase in urination. This sort of supplementation of fluids orally, as long as one takes care to avoid getting water into the airway, is never harmful. If the patient is conscious and swallowing, you can always safely give supplemental oral fluids. In cases of severe dehydration, one can purchase a bag (or bottle) of sterile fluids at a pharmacy, with a fluid administration set and some needles, and administer those fluids under the skin on the back of the neck. 75cc under the skin on a cat or a small dog done once a day for two successive days, will often do wonders. Three or 4 times that amount on a larger dog - often given at 2 or 3 separate sites. (And remember to supplement orally, too.) This treatment can literally be a lifesaver. Be careful and keep a watch out for this type of sneaky dehydration. In an older cat or dog, on the verge of kidney failure, this sort of problem could easily push them over the edge and bring on a uremic crisis ending in death.

Also remember, if your pet gets only deionized water (from your watermaker), you should probably supplement salt and electrolytes - not a lot. Lightly salt the food once or twice a week. Perhaps some occasional *Gatorade* or *Pedialyte*. Even chicken or meat broth provides a substantial amount of electrolytes.

DROWNING - No magic here. If they're on deck, they really should wear a life jacket and, just like the kids or grandkids, they should never be unsupervised. Cats should have a long piece of canvas or very heavy nylon or manila line draped from the toe rail or the lifelines into the water. It gives a cat something to grab, cling to, or even a means to climb back aboard, if they go overboard. Oh, and don't forget to teach them how to use it. If you don't throw them in and show where it is, they aren't going to know which way to go when the inevitable finally happens. Throw the cat overboard amidships (or from some point on deck where he spends a lot of time) and then lead him around to his 'ladder.' Be ready to rescue. He may panic and take on water! If he doesn't know how to get back aboard, he shouldn't be out there. Dog or cat, a periodic pet overboard drill is a very good idea.

A WORD ABOUT ANTIBIOTICS and MEDICATIONS

For many individuals, if you or your pet gets sick, the first thought is - drugs!!! We come from a Madison Avenue society. We have been indoctrinated by the advertising media to expect and demand instant gratification. A day of diarrhoea and/or vomiting may be unpleasant and it may be inconvenient. It is a symptom of a problem. It is not a disease and it is not necessarily dangerous. Many health symptoms are just the body's way of curing itself. Diarrhoea and vomiting are nature's way of eliminating toxins or irritants so that the GI tract can become healthy again. Medication to stop it prematurely can often simply prolong the actual illness. A minor laceration does not require a major antibiotic. Minor pain and/or lameness does not require a muscle relaxant or a narcotic analgesic. Very often minor problems will resolve if we just treat them with common sense. Vomiting - take away the food for 24 hours, then very *gradually* reintroduce a bland diet and, over 2 or 3 days return to normal feeding. If your pet wants to consume large quantities of water, then vomits. Limit the water to very small amounts but very frequently - 1/4 or 1/2 cupful every 1/2 hour. A minor laceration should be cleansed and kept clean - maybe some *Neosporin* might be good, but not *Cipro*. Major antibiotics that worked miraculously just 20 years ago are now much less effective, because of indiscriminate use by both doctors and lay people. Save the major antibiotics for the major problems. A limp does not necessarily mean you need bone surgery or joint replacement, but it does mean that you should rest the body and/or the affected limb and watch it for 24 hours to see if it gets better. If it does, continue to rest it. Our bodies and our pets' bodies are designed to heal, if we just follow nature's rules. If you jog 5 miles and have chest pains and lameness, the answer is not necessarily a trip to the cardiologist and a joint replacement, perhaps it's just a message from your body telling you that 1 or 2 miles is plenty. Get the picture?

Oh, and one more thing. If you start yourself or your pet on antibiotic treatment, don't simply give it for one or two days and quit. If there is reason to start, there is reason to finish. Prophylactic antibiotic treatment should be given for at least 3 or 4 days. Antibiotic treatment to treat a given problem should be continued for a minimum of 3 days beyond the point where the problem is gone. If you are giving it prophylactically for a laceration or wound, in most cases give it for a couple of days past the point where healing is started.

GOOD LUCK

Thank you for taking the time to read this. It has taken a considerable amount of time and effort to compile this information. Obviously we can't cover every possibility in this paper. However, combine what I have given you with your common sense, and hopefully you will have some idea of how to cope. With this information, some common sense, and a little luck, your pet will enjoy a long and healthy life of living aboard.

DRUG FORMULARY:

mg = milligrams, ug= micrograms; (D) = dog; (C) = cat

PO = orally, SC = subcutaneous injection (under skin);

sid = every 24 hours; bid = every 12 hours; tid = every 8 hours; qid = every 6 hours; q = every...

Use higher end of dosage ranges for severe infection or as a loading dose.

Quinolones (Baytril, Orbax, or Cipro) you only need one of these (Do NOT use in young, growing animals and do not give it as a routine choice)

Baytril (enrofloxacin)	5mg/kg PO sid (no higher) (C); 5 - 20 mg/kg PO sid (D)
Orbax (orbifloxacin)	2.5 - 7.5 mg/kg PO sid (D, C)
Cipro	5 - 15 mg/kg PO bid
Amoxicillin	10 -20 mg/kg PO q 6 to 12 hours
Clavamox or Augmentin	13 mg/kg PO bid (D); 62.5 mg/dose PO bid (C)
Cephalexin	20 - 50 mg/kg PO q 6 to 12 hours (D, C)
Doxycycline	5 - 10 mg/kg PO q 12 to 24 hours (D, C)
Trimethoprim-Sulfa	15 - 30 mg/kg PO q 12 hr (D); 30 mg/kg PO q 12 -24 hr (C)
Metronidazole (for Giardia)	50 mg/kg sid PO (D); 10-25 mg/kg sid PO (C) (both C,D for 5 days)
(For control of diarrhea)	25 mg/kg PO bid (D); 10 mg/kg bid (C)
Metoclopramide - (for vomiting) (inject & tablet)	0.2 - 0.5 mg/kg PO or SC q 8 to 12 hours (D, C)
Eye irrigation solution	Use as needed (D, C)
Triple antibiotic or gentamicin ophthalmic ointment	Topically q 8 hours (if using drops, q 4-6hours) (D, C)
Atropine ophthalmic ointment	Topically q 24 hours (not preferred in cats - they drool)
Neosporin or triple antibiotic ointment	Topically on minor wounds q 12-24 hr as needed
Rubbing alcohol or chlorhexadine antiseptic	
Fenbendazole or albendazole	50mg/kg PO q 24 hours for 3-5 consecutive days
2 bottles of sterile 0.9N saline or lactated Ringer's solution with administration sets and needles	
Aspirin	10 - 20 mg/kg PO q 12-24 hr (D); 5-20 mg/kg PO q 72 hr (C)
Syringes (1cc, 3cc, 5cc, 20cc) for measuring.	
Ivermectin (For heartworm prevention:)	3-12 ug/kg PO q 30 days (D); 24 ug/kg PO q 30 days (C)
(For intestinal worms and sarcoptic mange:)	200-300 ug/kg PO or SC (D,C); repeat once in 2 wks.

(Do not use this high dose in possibly sensitive breeds - collie types - they can become paralyzed and often die.)