

**RECOMMENDED INTAKE PROTOCOL FOR SHELTERS RECEIVING
DISPLACED HURRICANE KATRINA ANIMALS
10/03/05 VERSION**

This protocol is intended as a supplement to the AVMA/CDC guidelines for hurricane animal health, which can be found at <http://www.bt.cdc.gov/disasters/hurricanes/katrina/animalhealthguidelines.asp>. Animals affected by the hurricane are at extra risk for infectious and behavioral issues as a result of trauma, exposure to toxins and contaminated food and water, and holding and/or transport in crowded facilities. Protecting human as well as animal health is of utmost importance; disease outbreaks or human illness as a result of transportation programs could jeopardize future rescue efforts. Please emphasize to all staff and volunteers that protecting their *own* health is as important to the success of the program as caring for the animal's health.

These guidelines are my *suggestions*, based on reading, discussion and personal experience. They are by no means exhaustive or definitive. Feel free to call or email me if you have any questions, concerns or suggestions. I can be reached at kfhurley@ucdavis.edu .

Three short check lists and a shopping list follow. These cover animal intake, caretaker and environmental precautions, and suggested supplies to have on hand. The reasons for these recommendations and some of the finer points are elaborated upon in the subsequent document for those of you with time and curiosity ☺

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Intake protocol for dogs: short check list

- Written medical and observation record
- Identification check
- Identification band or tag and microchip
- Exam by a veterinarian
- Vaccinations:
 - DHLPP (yes, including Leptospirosis)
 - Bordetella
 - rabies
- Panacur ®: 50 mgs/kg orally once daily for 4-5 consecutive days (Strongid or Nemex may not be adequate)
- Consider prophylactic coccidia treatment for all high risk animals if coccidia is found on fecal exam in some animals.
- Flea and tick control
- Heartworm tests
- Heartworm preventative for all, including heartworm positive
- Fecal float and smear especially if diarrhea persists after prophylactic deworming
- A bath
- Additional testing as indicated by symptoms: especially parvo, ringworm, skin scraping
- Quarantine period: Minimum 1 week
- Behavioral/mental health care: Bedding and toys
- Behavioral assessment: initial assessment of CAUTION or not; clear labeling as such if assessed as bite risk; full assessment as per normal shelter policy after 5 day adjustment period

Intake protocol for cats: short check list

- Written medical and observation record
- Identification check
- Identification band or tag and microchip
- Exam by a veterinarian
 - Careful skin exam; Woods lamp and fungal culture for ALL lesions
 - Careful oral exam
- Vaccinations:
 - FVRCP modified live subcutaneous
 - +/- intranasal FVRC
 - rabies
 - consider FeLV vaccine and booster
- Panacur ®: 50 mgs/kg orally once daily for 4-5 consecutive days (preferred over Strongid/Nemex)
- Consider prophylactic coccidia treatment for all high risk animals if coccidia is found on fecal exam in some animals.
- Flea and tick control
- FeLV/FIV tests
- Fecal float and smear especially if diarrhea persists after prophylactic deworming
- A bath if odd smell, skin lesions, visible soiling
- Additional testing as indicated by symptoms: especially parvo (for panleukopenia), ringworm
- Quarantine period: Minimum 1 week
- Behavioral/mental health care: Bedding and toys
- Behavioral assessment: initial assessment of CAUTION or not; clear labeling as such if assessed as bite risk; full assessment as per normal shelter policy after 5 day adjustment period

Caretaker precautions:

- Protective clothing: including gloves, long sleeved tops and pants, goggles and masks
- Protective animal handling equipment: including muzzles in a variety of sizes, sturdy leashes, and control poles.
- Hand washing: including liquid soap and paper towels
- Hand sanitizer: if handwashing not available
- Change of clothes: Before leaving shelter or handling other animals
- Non-contaminated area for breaks and snacks.
- Information: regarding zoonotic disease risk, provided verbally and via clearly visible posted signs.
- Rabies vaccination: pre-exposure vaccines, particularly if working with bite-quarantine dogs or those showing evidence of open wounds and/or neurological disease.

Environmental precautions:

- Isolation area: physically separate holding area
- Feces pick up and careful disposal
- Designated garbage cans for feces and other waste
- Broad spectrum disinfectant and cleaner active against parvovirus
- Foot baths at run (for symptomatic dogs) and ward entrances.

Precautions for other pets in the household of foster parents and adopters:

- Check to make sure protection against DHPP and FVRCP is current (vaccine record or titers)
 - a. Consider booster vaccines for Bordetella and Leptospirosis in dogs prior to bringing home a hurricane refugee dog if vaccination is more than 6 months ago
 - b. Consider vaccination of pet cats for FeLV if cats of unknown or questionable status are being added to household (remember recently exposed cats may not test positive for 1-3 months)
- All pets in household started on flea and tick control
- All pets in household on heartworm preventive if caring for heartworm positive dog
- Keep new animals separate in easily cleaned area for minimum 7 days if quarantine and initial deworming has not already been performed at a shelter
- As always, pets in foster households should be in good health and tested negative for heartworm (dogs) and FeLV/FIV (cats)

Shopping list: are you ready?

Here are some supplies it would be good to have on hand in preparation for care of hurricane refugee animals. This is just a start; please let me know what needs to be added.

- Liquid hand soap
- Paper towels
- Plenty o' garbage cans, suitably labeled for feces, other waste if applicable
- Fully stocked hand sanitizers, if applicable
- Gloves in a variety of sizes
- Gowns, smocks, big shirts or other long sleeved protective garments
- Goggles
- Surgical masks
- Long sleeved jumpsuits or Tyvek® suits for heavily contaminated areas
- Muzzles in a variety of sizes
- Control poles for each dog housing area
- Microchips
- Digital camera
- Stethoscopes
- Thermometers and disposable thermometer covers
- ID bands or tags
- DHLPP vaccines
- FVRCP vaccines
- FeLV and FIV tests
- Rabies vaccines
- Bordetella vaccines
- Panacur, lots of it
- Topical flea/tick control product
- Syringes and needles
- Serum and EDTA blood tubes
- Heartworm tests
- Parvo tests
- Heartworm preventative
- Fecal exam supplies (depending on preference)
- Skin scrape supplies
- Ringworm diagnostics: Woods lamp, fungal culture plates, sterile toothbrushes
- Trifectant® or equivalent disinfectant
- Bleach
- Disinfectant spray bottles for exam surfaces, carriers, etc.
- Shampoo or Dawn dish detergent
- Pans for foot baths
- Pre-printed signs and information sheets
- Blankets and beds for animals
- Disinfectable toys
- Dog crates to send home with foster parents or for control of activity following heartworm treatment, if applicable

Animal intake protocol (annotated version):

1. **Written medical and observation record:** Each animal needs a written medical record, including a description of the animal, identification, vaccinations received and date, results of any exams or tests, and a daily observation and treatment log. This should be posted on the animal's cage (ideal) or if that is not possible, maintained in a binder in the animal housing area. Daily observations of appetite, stool, urine, respiratory health, and attitude should be maintained for all animals for at least the first week in the shelter.
2. **Identification check:** Each animal should be scanned for a microchip and checked for ID including tags, collars and tattoos. Choke chains should be noted, then removed for the safety of the animal.
3. **Identification:** Each animal should be digitally photographed, microchipped, and given an ID band or other external identification. Animals should be given collars and temporary ID tags when sent to foster care.
4. **Exam by a veterinarian:** Examination of all body systems with follow up diagnostics as need. Skin scrape (for mange) and *ringworm diagnostics* should be performed if suspect lesions are noted. (Ringworm may be more common in these animals, dogs as well as cats, than we are used to in some areas of the country.) Any problems requiring follow up exams or treatment should be clearly listed.
5. **Canine vaccinations:** All dogs *at intake*: **DHLPP, Bordetella and rabies** vaccines, unless reliable documentation exists that these vaccines have already been provided. Puppies should receive booster DHLPP vaccines every two weeks while in a shelter, or every 3-4 weeks while in foster care, until the age of 16 weeks.
 - a. Why Lepto? Although vaccination against leptospirosis is not part of our usual shelter dog recommendations, Katrina refugee dogs are likely to have been exposed to contaminated water and are therefore at increased risk for leptospirosis infection. Although vaccination will not protect the dogs that are already infected, it may protect other dogs housed in the same area should some dogs be shedding lepto in their urine. NOTE that vaccination does not prevent infection or shedding, and therefore does NOT necessarily prevent human infection.
 - b. Why rabies? Many shelters vaccinate dogs for rabies at the time of adoption rather than at intake. This is a fine choice in most situations, because risk of exposure to rabies within a shelter is very low. However, many of the hurricane dogs will be going to foster care, where there is more possibility of exposure. NOTE that vaccination will have no effect on a previous exposure. If these dogs were infected with rabies prior to vaccination, they can still transmit the disease to humans. Follow state guidelines regarding minimum age of administration for rabies vaccines (3-4 months).
6. **Feline vaccinations:** All cats *at intake*: **FVRCP modified live subcutaneous vaccine** and **rabies** vaccine unless reliable records exist that these vaccines have

already been given. Shelters may consider FeLV vaccination for cats going into group housing. This vaccine must be boosted in 3 weeks.

- a. Why FeLV? Vaccination against FeLV is not part of our usual shelter cat vaccine recommendations. The risk of transmission via fomites is very low, and investment in testing is generally preferable. However, hurricane refugee cats may have been previously indoor cats exposed only recently to FeLV. Infection may not be detected until 1-3 months later. Therefore, if these cats are going to be placed together in group housing, vaccination may be prudent.
7. **Panacur ®:** 50 mgs/kg orally once daily for 4-5 consecutive days; repeat monthly for three months in dogs (for treatment of whipworms). In addition to roundworms and hookworms, Panacur ® (fenbendazole) is effective against whipworms and most cases of Giardia. Neither of these parasites is reliably diagnosed by commonly used methods of fecal floatation. Therefore it may be best to assume that they are present (both whipworm and Giardia in dogs, Giardia in cats) and treat accordingly. Strongid or Nemex are not sufficient to treat whipworm or Giardia. Whipworm eggs are extremely durable in the environment, so dogs should be kept off grass or other un-cleanable areas until the first round of treatment has been completed.
8. **Flea and tick control:** Ideally all animals should be treated. If this is impractical, then treat on an as-needed basis as external parasites are recognized. Bear in mind that environmental control may be necessary to prevent reinfestation, depending on the product used.
9. **Heartworm tests** for all if possible. Although heartworm disease does not pose a big threat for direct transmission (worms must mature for at least a couple of weeks in a mosquito before they can be transmitted to another dog), knowledge of the heartworm status of the dogs will help prognostically, and allow foster parents to anticipate whether treatment will be required. *Mosquito control* in areas where infected dogs are sheltered will help prevent transmission as well. Note that recently acquired infections will not be picked up by the heartworm test; all dogs should be retested in 4-6 months.
10. **Heartworm preventive product** for all dogs, *including heartworm positive dogs and pet or shelter dogs housed in the same environment – from a mosquito’s point of view - with refugee dogs*. See additional notes on heartworm for further information and recommendations.
11. **Fecal exams:** ideally for all, but is this is impractical, at least for dogs with diarrhea. For dogs with diarrhea, this should include a fresh fecal smear and stained rectal swab. Look for white blood cells, *Campylobacter* (“gull” shaped bacteria), and *Clostridium spp* (“safety pins”). Ideally, fecal culture should be performed if a bacterial infection is suspected; if this is not practical, empirical treatment can be initiated targeted at the suspected pathogen.
 - a. Coccidia may be common in these stressed animals. Unthrifty young animals with persistent soft stools should be considered candidates for Coccidia even in the face of negative fecal exams and treated accordingly.

12. **A bath:** Animals should be bathed using Dawn® detergent or any mild animal shampoo. Bathing is particularly important for animals that may have been exposed to toxins or are showing signs of skin irritation.
13. **Additional testing:** All shelters receiving hurricane refugee dogs should be equipped with parvo snap tests, and any questionable case tested immediately.
14. **Quarantine period:** New intakes should be held for a minimum of 1 week prior to being mixed with the general population of the shelter or sent to foster homes to mingle with family pets. This allows time for deworming and exams to be completed, and at least a short period to monitor for signs of more severe disease such as parvo. If serious disease problems are identified in a group of dogs, the quarantine may need to be extended to two weeks or more.
15. **Behavioral/mental health care:** Dogs should be provided with soft bedding and toys that can be washed, discarded, or sent home with the dogs. A regular light/dark cycle should be maintained. Prior to releasing dogs to foster homes, dogs should receive a behavioral assessment as per the normal policy of the shelter.

Caretaker precautions (annotated version)

Depending on how much history is available, it may be necessary to assume that all animals are potentially harboring zoonotic infections and may have toxins contaminating their fur. Until exams, initial diagnostics, and baths have been completed, these animals should be handled with particular care. Saliva, feces, urine, and hair from these animals may all contain germs that can be transmitted to humans or other animals. Remember, protecting human health is the best way we can ensure the continued success of rescue/transport programs.

1. **Protective clothing:** Wear protective gear when handling new intakes, including gloves, long sleeved tops and pants. Change gloves between animals, and change tops after handling animals in which a contagious condition is suspected (e.g. ringworm, scabies, parvo). Wear goggles and surgical masks when bathing contaminated animals (or any animal that smells odd or is covered with feces). Make sure protective gear is readily available in a variety of sizes.
2. **Protective animal handling equipment:** Extra caution should be used when handling these dogs. Muzzles in a variety of sizes, sturdy leashes, and control poles should be available.
3. **Hand washing:** Make sure hand washing stations are as readily available as possible and are well stocked with liquid soap and paper towels. Even if gloves are worn, hands should be washed before and after handling animals, and before eating, taking breaks, smoking, or leaving the shelter.
4. **Hand sanitizer:** Although less ideal than gloves and/or handwashing, hand sanitizer is preferable to nothing. When hand washing is not available, hand sanitizer should be provided.
5. **Change of clothes:** Caretakers should change clothing before leaving the shelter OR before going to work with other animal populations within the shelter. If clothes are not going to be laundered at the shelter, they should be bagged and washed at home. No special laundry precautions are required, but hot water, soap and bleach are recommended.
6. **Non-contaminated area for breaks and snacks.** Do not allow eating or drinking in animal care areas. If separate refrigerators are not available, store food and beverages away from any drugs or vaccines. Do not store fecal or tissue specimens in the same refrigerator with food.
7. **Information:** Caretakers should be aware of the importance of zoonotic disease prevention, including means of transmission and signs of the most common or serious infections (including rabies). People at extra risk include pregnant women, children, the elderly, people suffering from immunosuppressive diseases or being treated with chemotherapy. Information should be provided verbally and via clearly visible posted signs.
8. **Rabies vaccination:** Ideally, caretakers should have received pre-exposure vaccination, particularly if working with bite-quarantine dogs or those showing evidence of open wounds and/or neurological disease.
9. **Professional medical attention** for wounds or other signs of illness. Do not self medicate. Minor scratches or bites can become infected or cause serious illness.

Special environmental precautions (annotated version)

Shelters are used to taking precautions to prevent spread of infectious disease, so caring for hurricane refugee animals should not present a terribly unusual challenge. For the most part, normal cleaning and disinfection procedures should be adequate. Because of the great concern about preventing spread of disease from refugee animals to local populations, an extra level of caution is warranted.

1. **Isolation:** Hurricane refugee dogs should be held in a separate area of the shelter for at least the first week of quarantine. This is important to limit public/staff access as well as to prevent spread of disease to other animals. Separate air supply is not required.
2. **Feces pick up:** Feces should be picked up as often as possible, and disposed of in such a way as to prevent contamination of drinking water and other animal areas.
3. **Designated garbage cans:** Plenty of trash cans available for disposal of feces, gloves, etc. Labeled if separate cans are to be used for separate purposes.
4. **Broad spectrum disinfectant and cleaner:** Animal housing areas should be cleaned with a detergent and disinfectant (or combination there-of) that will reliably inactivate all likely pathogens, including parvovirus. A quaternary ammonium disinfectant with good detergent activity, followed by application of bleach diluted at 1:32, represents one effective combination. Potassium peroxymonosulfate (Trifectant® or Virkon-S®) is another product that has good detergent activity and inactivates parvoviruses. Trifectant and company are particularly useful for areas contaminated by organic matter, such as play yards, foot baths, and mop water.
5. **Foot baths:** Trifectant® foot baths should be placed at the entrance to all animal areas, and at the entrance to individual cages for dogs with diarrhea or other signs of infectious disease. Foot baths should be deep enough to cover shoe treads, and should be changed once daily.