



Shelter Watch



Our Mission:

We are committed to saving lives and reducing suffering of homeless dogs and cats through education, advancement of knowledge and shelter outreach.

Program Staff:

- Dr. Elizabeth Berliner, Janet L. Swanson
Director of Shelter Medicine
- Dr. Holly Putnam,
Instructor of Shelter Medicine
- Dr. Jan Scarlett,
Professor of Epidemiology
- Ms. Anne Marie McPartlin, LVT,
Teaching Support Specialist
- Mrs. Amanda Grace,
MS, Program Coordinator
- Ms. Sue Honig, MS,
Computer Technician

Contact Information:

Shelter Medicine Program
Cornell University
College of Veterinary Medicine
SI-066 Schurman Hall
Ithaca NY 14853

(607) 253-3349

sheltermedicine@cornell.edu

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From the Director's Desk

What a productive summer it has been, not the least of which was hosting our most successful shelter medicine conference here at Cornell!

The ASPCA/Cornell Maddie's® Shelter Medicine Conference was held July 13th and July 14th at the veterinary college. Attendees totaled 310 people -- the highest number of attendees, speakers, and volunteers in the ten year history of this conference. We continue to be thrilled to provide such a high quality educational experience right here in central NY and, although the majority of participants were local, we had participants travel from as far away as Texas, Utah, and Canada to attend.

This two day event encompassed a variety of presentations that were made by nationally known experts. The 3-track option allowed veterinarians, veterinary technicians and assistants, executive directors, board members, shelter staff and volunteers, and students the advantage of seeing a number of topics:

- Non-Surgical Sterilization
- Veterinary Forensics
- Fundraising and Grant-writing
- Infectious disease
- Behavior
- Small Mammal Care
- Birds & Reptiles Care
- Successful TNR Programs
- Shelter Renovations
- Shelter Management

Additionally, this year we were able to offer two wet labs: one on Zeuterin, a non-surgical sterilant for male dogs; and another

on Necropsy Techniques for Shelter Veterinarians.

Continuing education credits were approved by the New York State Education Department, Office of the Professions, the Registry of Approved Continuing Education (RACE), and Certified Animal Welfare Administrator (CAWA).

This was the 10th year of the ASPCA/Cornell/ Maddie's® Shelter Medicine Conference. As always, our goal is to enhance the quality of life for shelter animals and animals within the community and beyond.

In this issue of the newsletter, we have attempted to highlight several of the topics. Additionally, several of the lectures will soon be featured at the Maddie's® Institute website: http://www.maddiesfund.org/Maddies_Institute/Videos.html.

Keep an eye to the website, or log on for their ongoing webcast series available at no charge to shelter staff and volunteers.

A big thanks to all of our speakers and attendees who made such an event possible!

*Elizabeth Berliner, Janet L. Swanson
Director of Shelter Medicine*

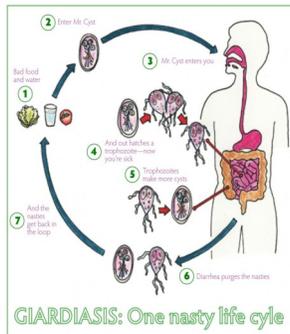
Amanda Grace, Program Coordinator



Why Panic Over Protozoa? Dr. Tiva Hoshizaki

What is *Giardia* and *Coccidia*?

Giardia and coccidia are common parasitic protozoa which can cause gastrointestinal disease in dogs, cats and humans. Common species of coccidia include *Isospora*, *Sarcocystis*, *Toxoplasma* and *Neospora*. Animals become infected after ingesting protozoal cysts which are shed in the feces of infected animals. Infective cysts contaminate the animal's fur, environment, food, water and other fomites. Both *Giardia* and coccidian cysts are hardy in the environment, resistant to cleaning and difficult to remove.



“Common causes of treatment failure include reinfection and inadequate medication (dose, duration, frequency).”



Who is affected and what are the clinical signs?

It is estimated that 10% of shelter cats and 25% of shelters dogs have *Giardia*; and over 50% of these can be zoonotic. Up to 38% of shelter cats and dogs can have coccidia, but the only zoonotic species is *Toxoplasma*. Protozoa most commonly affect young, stressed or immune-compromised animals. Clinical signs include diarrhea, weight loss, anorexia, and lethargy. Co-infection with other parasites can make clinical signs worse. However, many infections are asymptomatic and animals are clinically healthy.

What is the preferred method of treatment?

Diagnosis is by fecal flotation (coccidia, more difficult for *Giardia*) or by SNAP Elisa (*Giardia*). Coccidia species can be treated with sulfadimethoxine, trimethoprim-sulfa or ponazuril. *Giardia* is treated with fenbendazole, febantel-praziquantel-pyrantel or metronidazole.

What environmental conditions are essential when killing *Giardia* and *Coccidia*?

While no disinfectant is effective on coccidia, *Giardia* cysts can be killed using quaternary ammonia compounds. In both cases thorough drying of the environment is essential to desiccate and kill the cysts. Prevent reinfection by picking up feces, washing the animal and moving them to a clean environment after treatment. Use disposable litter boxes and kennel furnishings or ones which can be easily cleaned. Protozoa are readily spread in play yards and group housing; by limiting access to communal areas disease transmission can be reduced.

What protocol should be enforced to ensure complete clearance?

Recheck fecal samples in two weeks to see if infection has cleared. Common causes of treatment failure include reinfection and inadequate medication (dose, duration, frequency). Animals that are infected but not clinically ill can still shed parasites and can pose a threat to humans or other animals. It is up to the individual shelter to decide how to manage the risk adopting out clinically healthy animals with protozoal infections.

The Latest and Greatest Information on Parvoviruses

Holly Putnam, DVM

Dr. Miranda Spindel, of the ASPCA, addressed the most current information on canine and feline parvoviruses. Her presentation provided an overview of canine parvovirus and feline panleukopenia, as well as strategies for management and prevention within the shelter environment.

Where It's Been and Where It's Going
Since the 1970s, parvoviruses continue to produce life-threatening disease in individual animals. Their highly contagious and durable nature, make these viruses a challenge to manage in shelter environments.

Dr. Spindel reported that canine parvovirus (CPV) and feline panleukopenia (FPLV) virus are closely related and antigenically stable. This means that unlike influenza viruses, CPV and FPLV do not mutate very often.

Although several variants exist, Dr. Spindel reported that CPV-2c is becoming the most common variant throughout the United States. It is similar in virulence to the other strains and can affect cats, wolves and fox. It is therefore very important to house cats and wildlife separately from dogs within shelters.

To Treat or Not To Treat

Treatment of parvoviruses within a shelter depends largely on available resources and the risk to the general shelter population. Dr Spindel recommends attempting treatment only if appropriate isolation of the affected animal can be provided. Once an affected animal appears to have recovered, it can continue to shed the virus for an additional 2-3 weeks, acting as a source of infection to other animals. Antigen tests are available to help determine if the animal has

safely returned to the general population

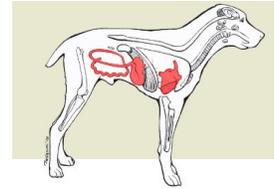
The Big Picture

Unfortunately, affected animals can begin shedding parvoviruses 3-4 days before showing any symptom of disease. This can easily contribute to confusion over how to handle potentially exposed animals in an effort to prevent a shelter-wide outbreak.

In order to move as many animals through the shelter as possible, Dr. Spindel recommends utilizing antibody titers for any exposed animal who is not showing symptoms of disease. Antibody titers measure the level of antibodies an animal has for a particular disease pathogen. High antibody titers indicate the animal is most likely protected against the parvovirus and is therefore at low risk of developing disease. These animals can be moved through the shelter as any healthy animal normally would. Low antibody titers indicate the animal is at high risk for developing the disease. Any animal with low antibody titer should be quarantined for 10-14 days beyond recovery of the last clinically ill animal.

One More Consideration

Lastly, Dr. Spindel discussed a treatment option for shelters with limited resources provided the shelter can appropriately isolate the affected animal. This option included subcutaneous fluids, cefovecin as an antibiotic and maropitant as an antiemetic. It has a reported 80% success rate.

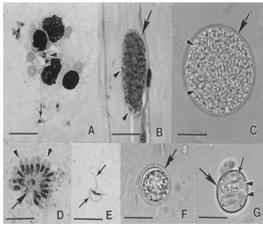


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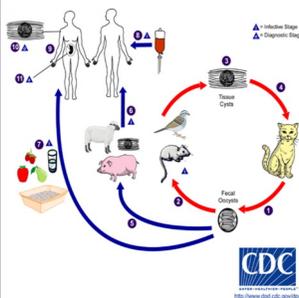


Toxoplasmosis and Your Shelter

Elizabeth Berliner, DVM



“Cats are only one source of human infection; uncooked meat, unwashed produce, and contaminated water are thought to be more widespread.”



Lifecycle of *Toxoplasma gondii*: the cat is considered the definitive host, but *T. gondii* can be attained by eating undercooked meat or unwashed fruits and vegetables.

Toxoplasmosis has been popping up in the mainstream news lately. A Czech researcher Jaroslav Flegr has made headlines discussing a possible association between Toxoplasmosis infection and schizophrenia in student and prison populations; he has also found associations between positive antibody status and increased recklessness and car accidents. These are associations – not necessarily cause and effect relationships – but the headlines are making people pause when it comes to outdoor cats and their potential role as a source of human infection. Furthermore, several large scale exposures to Toxoplasmosis oocysts have occurred via contaminated water sources internationally, resulting in high antibody prevalence in several cities internationally.

Cats are only one source of human infection; uncooked meat, unwashed produce, and contaminated water are thought to be more widespread. During our 10th Annual Conference, I attempted to review the facts of what we know about Toxoplasmosis, and introduce some of the newer concerns, all with the goal of discussing humane solutions to what may be an emerging problem.

Understanding titers: A complete discussion of titer testing is beyond the scope of this newsletter. The basic gist is that a positive antibody titer proves past exposure to Toxoplasmosis, and likely ongoing subclinical infection, which has been presumed to be harmless. This is by far the most common form of the disease. An active infection with Toxoplasmosis is diagnosed based on clinical signs and subtleties of testing, and is much less common. It is possible in the face of immune

compromise that a subclinical infection can emerge to cause clinical disease in both companion animals and people.

Epidemiology: The CDC estimates that 22.5% of the human population who are 12 years and older in the US have been infected with Toxoplasmosis. In cats in the US prevalence is estimated at 30-40%, and in dogs 20%.

Human risk in animal shelters: Oocysts are shed by cats for a very short period of time: on average 10 – 14 days. In most cases, cats only shed once in their lifetime. Oocysts are infective only after sporulating after defecation, which takes 1-5 days. Thus, the current recommendation is to dispose of cat feces daily or multiple times per day.

Testing Cats: It makes no sense to test every cat for Toxoplasmosis, either by titer or fecal flotation. If Toxoplasmosis shedding is discovered during a routine fecal analysis, then treatment should be instituted with antibiotics under the guidance of a veterinarian, and proper biosecurity enforced. If a cat is demonstrating clinical signs, antibody testing can be helpful in diagnosis, and again, treatment enacted. Rather than investing in testing, shelters are advised to develop standard controlled protocols for frequent disposal of feces, effective cleaning and disinfection, and proper use of personal protective equipment by shelter staff. This is especially important for those most at risk (i.e. pregnant women and immune-compromised individuals).

The full lecture on Toxoplasmosis will be available soon at Maddie’s Institute:

http://www.maddiesfund.org/Maddies_Institute/Videos.html

One Cat, Two Cat, Red Cat, Blue Cat: What’s New in the Realm of Animal Hoarding?

Dr. Danielle Boes

World-renowned animal hoarding expert, Dr. Gary Patronek from Tufts University, gave a thought-provoking lecture series to a packed room at this year’s conference. Dr. Patronek touched on a variety of topics including definitions of animal hoarding, the different types of hoarders, the varying severities of hoarding situations and case examples. Finally, the lectures wrapped up with a discussion surrounding the recent implications of listing animal hoarding as a new disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-V).

Animal hoarding can be defined by four main characteristics:

- 🐾 Failure to provide minimum standards of sanitation, space, nutrition, and veterinary care for animals.
- 🐾 Inability to recognize the effects of this failure on animals, humans and the environment.
- 🐾 Obsessive attempts to accumulate a collection of animals.
- 🐾 Denial or minimization of these issues.

Additionally, Dr. Patronek stated that animal hoarders generally fall into one of several categories: overwhelmed caregiver, rescuer hoarder and finally exploiter hoarder. How one approaches managing a hoarding case is directed by the type of hoarder that is involved, as different strategies are required for the best chance of success.

Dr. Patronek also discussed the newest development in the world of animal hoarding, the addition of this disorder to the DSM-V. The DSM-V is a manual that

lists categories and criteria to assist health care professionals in dealing with these disorders. Dr. Patronek emphasized that the inclusion of animal hoarding as an individual syndrome to the DSM-V will result in a better understanding of the mental health issues strongly associated with animal hoarding. It is hoped that this new development will be a missing crucial link in successfully addressing the underlying psychological issues that are prevalent with this condition.

While the field of animal hoarding is a relatively innovative realm in and of itself, Dr. Patronek and his colleagues have worked tirelessly over the years to ensure continued advancement in this specialty. Those of us in the veterinary community look forward and anticipate many new and exciting developments in the years to come!

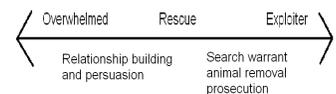
For a great deal more information about animal hoarding, please visit ‘The Hoarding of Animals Research Consortium’ website via Tufts University at <http://vet.tufts.edu/hoarding/index.html>.



“Dr. Patronek emphasized that the inclusion of animal hoarding as an individual syndrome to the DSM-V will result in a better understanding of mental health issues strongly associated with animal hoarding.”

Typology of animal hoarding		
Overwhelmed caregiver <ul style="list-style-type: none"> ✓ Some awareness, more reality-based ✓ More passive acquisition ✓ Problems often triggered by change in circumstance ✓ Unable to problem-solve effectively ✓ Likely to be socially isolated ✓ Self-esteem linked to role as caregiver ✓ Fewer issues with authorities 	Rescuer Hoarder <ul style="list-style-type: none"> ✓ Mission leading to unavoidable compulsion ✓ Fear of death ✓ Active vs. passive acquisition ✓ S/he is the only one who can provide care ✓ Rescue-followed-by adoption becomes rescue-only care ✓ May have extensive network of enablers or be a group activity 	Exploiter Hoarder <ul style="list-style-type: none"> ✓ Tends to have sociopathic characteristics ✓ Lacks empathy for people or animals ✓ Indifferent to harm caused ✓ Rejects outsiders' concerns ✓ Superficial charm and charisma ✓ Lacks guilt or remorse ✓ Manipulative and cunning ✓ Adopts role of expert with need to control

From: Animal Hoarding: Structuring interdisciplinary responses to help people, animals, and communities at risk. Patronek, Usar, Nathanson, eds. 2006



Catering To Your More “Exotic” Shelter Animals

Anne Marie McPartlin, LVT

Discovering the next intake exam on a Ball Python can be daunting (not to mention downright terrifying), especially when the shelter is unprepared to house animals other than dogs and cats. More and more shelters are being faced with stray, surrendered, and seized avian and exotic species making snake wrangling, among other things, a hot topic at the next board meeting. Dr. James Morrisey, Cornell’s avian and exotic specialist helped to dispel some of the mysteries surrounding exotics at our 2013 Shelter Medicine Conference with lectures on handling, husbandry and clinical techniques. Here’s some food for thought in determining capabilities for accepting avian and exotics into the shelter:

Husbandry is by far the most challenging obstacle when dealing with the health and welfare of exotic pets. Location in the shelter, substrate, cage type/size, housing enrichment, UVB requirements, prey/predator separation, individual versus group housing, food and water dispensing and ventilation are all important considerations.

- Exotics should be housed in a quiet, low traffic area away from dogs and cats.
- Newspaper is cheap and easy to clean, and is a great substrate for most species. Substrates like corn cob bedding can harbor bacteria and fungus.
- When housing multiple exotic species, remember to keep prey and predators separate. The ferret should not be eye-balling the hamster.
- Cage size should allow for nor-

mal behaviors such as wing expansion, vertical and horizontal movement, and hiding.

- Cage type needs to account for humidity/temperature control, foot health, ventilation, and escape prevention.
- Birds and reptiles require UVB light supplementation for adequate production of vitamin D.
- Avian and exotics require forms of enrichment to combat stress and boredom. They can be smart and destructive so careful investigation is necessary.
- Rodents and small mammals may prefer sipper bottles instead of water bowls. Ferrets and rabbits can be litter trained.
- Sanitation is a lost art when there’s an impulse to avoid dealing with some species. A bleach solution (1:32) is usually adequate, but rinsing is even more necessary to avoid severe respiratory irritation. Water and food receptacles should be washed with antibacterial soap daily and all objects within the enclosure should be disinfected every two weeks.

Everybody has to eat. Recognizing the species type and determining whether it is carnivore, herbivore, or omnivore are the first steps in coming up with a diet plan. This is especially true when managing reptiles.

{Continued on next page}



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Catering To Your More “Exotic” Shelter Animals {Continued}

Anne Marie McPartlin, LVT

- Some exotics require vitamin and mineral supplementation.
- Frequency of feedings vary greatly among species.
- Location and accessibility of food within the enclosure can have a dramatic effect on some species.
- Ferrets need canine distemper and rabies vaccines, and can often have vaccine reactions.

Adoptability, as with dogs and cats, is an issue to consider before accepting exotics.

- Understanding the community and developing a relationship with species specific rescue groups is a must.
- Ferrets are illegal in some states.
- Screening potential adopters is more difficult and requires staff or volunteers who are skilled in managing avian and exotics.

All animals should have a **physical exam** on intake. Denial or avoidance will not make the blue and gold macaw with the very large beak go away, or serve his/her welfare needs appropriately. Learning how to humanely handle other species for medical procedures is paramount to working in a shelter.

- Towels are the power tool of restraint.
- Ferrets respond incredibly well to being gently scruffed.
- Every animal is different, so have a good reference book at hand.
- Sexing of birds and reptiles can be difficult if not impossible in some species and may require instruments or blood work to confirm.
- Cranial vena cava on ferrets, right jugular on birds, and tail veins on most reptiles are commonly used for phlebotomy.
- Fecal flotation, direct smears, and gram stains can offer a wealth of information.
- Rabbits can and should be spayed or neutered.

Increasing popularity of avian and exotic pets has made their presence in most shelters inevitable. They are deserving of the same care and compassion that is provided to dogs and cats. Therefore it is imperative to determine a shelter’s capabilities of accepting avian and exotics, and when doing so, research the presenting species. Enlisting the help of local avian and exotic veterinarians will also make the situation a lot less overwhelming.



“Learning how to humanely handle other species for medical procedures is paramount to working in a shelter.”



Events Calendar

August 2013

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3 Shelter Club Clinic
Interns @ Community Cat Workshop					RAVS Trip	
4	5	6	7	8	9	10
			RAVS Trip			
					Shelter Club Surgery	Shelter Club Clinic
11	12	13	14	15	16	17
		Forensic Course	Southside Clinic			
					Shelter Club Surgery	Shelter Club Clinic
18	19	20	21	22	23	24
		Interns @ Playing for Life Workshop				
			Veterinary Students Return			
25	26	27	28	29	30	31
Cat Behavior Lecture	Program Shelter Visit	Forensic Course	Southside Clinic			



Cornell University
College of Veterinary Medicine
Maddie's Shelter Medicine Program



Maddie's® Shelter Medicine Program is underwritten by a grant from Maddie's Fund®, The Pet Rescue Foundation (www.maddiesfund.org), helping to fund the creation of a no-kill nation.