Meet the Toxicology Team

**Donna Mensching, DVM**

Dr. Mensching grew up outside of Albany, NY, and lived in the same small town until attending Duke University in 1988. After graduating veterinary college at Cornell, Mensching worked in small animal practice for several years, then joined the Envirovet program in South Africa in 2004. Following the Envirovet experience, she started a veterinary toxicology residence at the University of Illinois. Mensching is currently wrapping up her master’s project that looks at potential connections between feline hyperthyroidism and the ubiquitous flame retardants known as PBDEs (polybrominated diphenyl ethers). Outside of work and school, she is interested in adventure travel, learning about other cultures, foreign languages, wine tasting and cheese. Dr. Mensching lives in Urbana with her 3 cats—Peri, Dagger and Thai—and her exuberant puppy, Kashmir.

**Christina Knutson, Veterinary Assistant**

Christina Knutson graduated from Parkland College with a degree in Equine Management and then transferred to Southern Illinois University, where she majored in Animal Science. While attending college, Christina worked at a horse farm, a humane society and a veterinary clinic. She lives with her son, Caleb, and 4 dogs, 6 cats and a gecko.

**Joyce Eisold, DVM**

Dr. Eisold grew up in Wisconsin, and moved to Illinois to work for the Illinois Environmental Protection Agency. She received her BA from Eastern Illinois University and then went on to the University of Illinois for her DVM degree. She graduated from the U of I in 1998. She has worked at a mixed animal practice in Indiana and was an emergency clinic veterinarian in Bloomington, IL, for 6 years. Dr. Eisold joined the APCC in February 2007 and shares her home with 5 cats and 3 dogs. In the future, she plans on populating her house only with red animals.

**Who’s New on the APCC Hotline?**

We have added many new faces (and voices!) to our group: Alexandra Colon, Cassandra Green, Christina Johnson, Whitney Murray, Alexandra Pintea, Breanna Ross, Jessica Wallis and Bethany Wilson. We are happy to welcome them as a part of our team!

And we have new summer staffers to help with the extra call volumes we experience during the not-so-lazy, crazy days of summer: Allison Balch, Bethany Bond, Stephanie DeRosa, Ryan Downs, Kara Escutia, Echo Love, Amanda Nargelenas, Linn Simanauskas and Ann Wu.
What’s New on the APCC Hotline?

A new phone system! We’re replacing our antiquated system with a new, much higher tech system, which we anticipate will help us answer calls in a much more efficient manner and serve you better. Our projected launch date is mid-July.

Opportunities for CE

APCC toxicologists have been working to develop online Continuing Education modules on toxicology for veterinarians. Our first module (Antifreeze and Other Glycols) is nearly complete. The modules will be available at http://www.cvm.uiuc.edu/veo/ in August of this year, with more modules to be added on a fairly frequent basis. These modules are being created in concert with the University of Illinois Veterinary Education Online, a service that provides inexpensive continuing education to veterinarians.

What’s New on the APCC Website?

Steer your clients to www.aspca.org/apcc to watch Dr. Steve Hansen discussing some of the more common toxic plants to which animals may be exposed. For interesting stories check out the section “From the APCC Files” to read about “The Case of The Fuel-Drinking Chimpanzee.” And everyone can enjoy the free ASPCA stuff on our website, like magnets and stickers!

Veterinary staff can access our website for information regarding a variety of topics. Visit ASPCAPro.org for 42 fact-filled articles from Veterinary Medicine on a variety of toxicants ranging from anti-thyroid medications to zinc toxicosis. Seasonally relevant articles as well as subjects of year-round interest are found here.

There also is an article section from Veterinarian Technician that contains 36 articles, 3 articles published in Exotic DVM Veterinary Magazine, and 4 from the Journal of Veterinary Emergency and Critical Care.

Hot Links for the Spring and Summer Season

As people continue planting their gardens and flower beds, it’s time to remind everyone of the potential hazards some plants may pose to pets. Below are some links to articles that you may find useful in answering pet owners’ questions.

How Dangerous Are Winter and Spring Holiday Plants to Pets?, December 2002 - Volume 97, Number 12
Easter Lily Toxicosis in Cats, April 1999 - Volume 94, Number 4, p 331
Spring-Blooming Bulbs: A Year-Round Problem, August 2002 - Volume 97, Number 8
Potentially Toxic Garden Plants, May 2005 - p 358

Did You Know?

That the APCC has had a very busy year so far! Our busiest day so far was April 17, when we opened 528 new cases. We expect things will only get busier as the summer goes on—as last year our busiest day was July 24, when 510 new cases were opened.
Summertime Hazards for Pets

Summer brings days of fun in the sun, but summer can also bring hazards to our pets. Lawn and garden products, toxic plants and mushrooms, and other outdoor hazards such as charcoal lighter fluid and pool chemicals can pose problems. Below is a list of relative toxicity of various summer hazards to which a pet may be exposed.

**Low Toxicity:** (may cause gastrointestinal upset, but unlikely to cause serious problems unless very large amounts are ingested)

- Glow jewelry
- N-P-K fertilizers (no added insecticide or herbicide; iron level <1%)
- Bone meal (no added insecticide or herbicide)
- Mosquito coils (foreign body potential from coil material)
- Mosquito Dunks (Thuringiensin, Bacillus thuriniensis)
- Charcoal briquettes (unused, no added lighter fluid)
- Termite stakes, ant baits, yard insecticides and roach baits containing sulfuramid (N--ethylperfluorooctanesulfonamide) or hydramethylnon (2% or less)

**Moderate toxicity:** (may cause significant signs beyond mild gastrointestinal upset)

- Charcoal lighter fluids
- Moldy items from trash, yard or compost pile (tremorgenic mycotoxins)
- Diazinon or chlorpyrifos (Dursban) granules (>2%)
- DEET-containing insect repellants
- Citronella lamps/torches
- Spring blooming bulbs (Visit our website for more information)

**High toxicity:** (potential for very serious or life-threatening signs)

- Pool chemicals (concentrated hypochlorites, cationic detergents)
- Metaldehyde containing snail/slug baits
- Zinc phosphide-containing systemic insecticides
- Methomyl-containing fly baits
- Disulfoton-containing insecticides (found in some rose and flower care products)
- Rodenticides (anticoagulants, bromethalin, cholecalciferol)

**Practice Tips 1**

We value you and want your clients to have a good experience when calling the ASPCA Animal Poison Control Center. As we approach our busiest season, we want to help them
and their pets in the most efficient and professional way possible. In order to accomplish that goal we’ve compiled the following suggestions that we hope will help your clients feel more comfortable when you direct them to call our center.

**Ask the client if their pet is having life-threatening signs prior to getting off the phone with them.**

We often receive calls from pet owners who have been instructed to call us and get a case number prior to coming in to their vet’s clinic. While we are always happy to help these clients, occasionally their pets are already showing significant or life-threatening clinical signs that need immediate care. It may be more beneficial for you to call us while they are on their way, or call us once the patient has been stabilized. That way, the patient can get the prompt medical treatment that they need.

**Ask the client what their pet was exposed to, if their pet has prior health concerns, and if their pet is showing any signs before recommending they induce vomiting at home.**

Emesis is not recommended in cases of ingestion of caustic materials, petroleum products or products that may cause rapid, life-threatening signs. Patients with underlying problems like heart disease or seizure disorder may be at risk if emesis is induced. Inducing emesis in a patient who is already showing clinical signs is unlikely to be beneficial and may exacerbate their clinical signs or lead to other problems, such as aspiration.

Instruct the client to bring the product container or pill vial to your clinic when they bring the patient. This may allow for better identification of the product, and we will then be able to provide you with more detailed treatment recommendations.

**Please let your client know there may be a fee for the consultation.**

Human poison control centers receive government funding from tax dollars and therefore do not charge a fee. Your client may expect that an animal poison control center would be a free service as well, but we receive no state or federal funding and must charge a fee to continue operations. If the first time they hear about the fee is on our recording, they may become surprised or upset. They may even hang up prior to speaking with someone here. This will delay the ultimate goal of obtaining immediate management information for their pet.

**Practice Tips 2**

We also value you, the veterinarians and other veterinary team members who call us, and we want you to have a good experience when calling the ASPCA Animal Poison Control Center. As we approach our busiest season, some helpful hints for providing us with the information that we will be asking in the most efficient manner possible are worth noting.

**Have information about the agent to which the patient was exposed.**

The best way to ensure this is for the owner to bring in the original packaging/label information. Many products such as rodenticides, lawn care products, cleaning supplies, etc. have an EPA registration number (these are all numbers with dashes) that is tied to ingredient information. We have an extensive database of these EPA registration numbers that can help use accurately identify the product in question. If the product is a pill, most pills have imprinted codes on them that can also be used to identify them.

**Have the patient’s medical record (or the signalment) at hand when calling.**
We always ask important questions about the patient (the signalment), which includes breed, sex, reproductive status (altered, pregnant, lactating), age and weight. Also, pre-existing medical conditions are important and will potentially dictate possible concerns and treatment recommendations. Having the patient’s name (call name, last name) helps us complete our medical record and helps identify the patient on follow-up calls.

**Have as detailed a history of the exposure as possible.**

Information such as when and where the exposure took place and the worst case scenario situation (example: how many possible pills are missing or how much fertilizer might be missing) will all dictate the assessment and treatment recommendations for that individual pet.

**Know what signs the patient is showing and when the signs started.**

Depending on the patient’s current status, particular treatment recommendations like inducing vomiting may not be recommended (for example, in a patient who was recently exposed but is already showing clinical signs). To give another example, if a patient has already vomited, then we often will not recommend inducing vomiting.

**Toxicant Update - Beta Blockers**

Beta blockers are medications used for treating hypertension, angina, tachycardia, tachyarrhythmias, congestive heart failure and glaucoma. Other uses include treatment for migraine headaches, cocaine overdoses and pheochromocytomas. Beta blockers include acebutolol, atenolol, carvedilol, esmolol, metoprolol, nadolol, propranolol, and timolol. Following ingestion of these medications, the onset of action is generally within a few hours and duration of signs is variable depending on the individual beta blocker and the dose that was ingested. In general, any dose over a therapeutic dose should be of concern. Signs of toxicosis include bradycardia, hypotension and CNS depression. In clinically normal animals with a recent (last 30 minutes) exposure, emesis may be induced. Activated charcoal can be used with ingestions of fairly large numbers of pills and is especially beneficial following ingestion of extended release formulations. Treatment of patients showing evidence of significant cardiac effects is focused on managing hypotension with intravenous fluid therapy. If significant bradycardia develops, low doses of atropine (.02-.04mg/kg IV) may be beneficial. Treatment should be continued until the patient's signs have resolved and the patient has been clinically normal for at least 4 hours. The prognosis is generally good in most patients, but those with delay in treatment and/or underlying heart disease may be at increased risk for complications.

**Case study**

A client reaches you during emergency hours. She says that her healthy, 2-year-old FS cat, Lucy, is running around and “convulsing,” and needs to be seen right away. Of course she is told to come straight in with the cat. The owner explains that the signs started after the cat bit into a glow necklace that her daughter brought home from a 4th of July fair.

1. You call the ASPCA and reach Dr. Leigh Gass who can give you a rapid and accurate assessment, as well as treatment plan. What will Dr. Gass say about the toxicity of ingredients in glow necklaces?

   a. Glow necklaces contain polyethylene glycol, which is highly toxic to cats but not people.
   b. Glow necklaces contain a chemical called dibutyl phthalate, which is highly toxic to cats but not people.
   c. Glow necklaces have a sweet odor and taste, which is why cats are attracted to them.
   d. none of the above
Answer: d.

2. Which of the following clinical signs are expected to occur with ingestion of dibutyl phthalate, the chemical most commonly used in glow jewelry?
   a. Seizures
   b. Oral ulceration
   c. Hypersalivation
   d. all of the above

   Answer: c.

3. Which of the following treatments will Dr. Gass recommend in this case?
   a. Bathe the cat in mild dishwashing detergent
   b. Have ethylene glycol test run at local human hospital
   c. Give a taste treat such as milk or tuna juice
   d. a & c
   e. All of the above

   Answer: d.

Discussion:

Dibutyl phthalate, also known as n-butyl phthalate, is a nearly colorless oily liquid found in many manufactured products. In addition to being used as a plasticizer and insect repellent, it is the primary luminescent component in various glow-in-the-dark products.

With an oral LD50 exceeding 8 g/kg in rats, dibutyl phthalate is considered to have a low-order acute toxicity. One glow-in-the-dark necklace carried by a national chain of novelty stores contains 3 ml of liquid consisting primarily of dibutyl phthalate. An 8.8-lb (4 kg) cat who ingests the entire contents of one necklace would consume less than one-tenth the rat oral LD50. The unpleasant taste of dibutyl phthalate usually limits the amount that dogs or cats will ingest.

Almost all cats who bite into glow-in-the-dark jewelry exhibit a sudden onset of profuse salivation and hyperactivity. Retching and vomiting are also possible. Although the signs seem severe to the owner, complete recovery with minimal treatment is expected.

Treating cats who have ingested small amounts of dibutyl phthalate includes immediately feeding small quantities of milk, canned cat food, tuna juice or other highly palatable food to dilute the chemical in the mouth and provide a more agreeable taste. Wash drops of the chemical off the skin or coat with soap and water to prevent a recurrence of signs after grooming. In the event of ocular exposure, flush the cat’s eyes with copious amounts of water.

**Veterinary Lifeline Partner Program**

If you are not a member of the Veterinary Lifeline Partner Program and would like to join, sign up here or call (888) 332-3651 to be prepared for any poison emergency.