Congratulations are in order! We have two new board-certified veterinary toxicologists!

We are proud to announce that Dr. Sherry Welch and Dr. Donna Mensching successfully passed the American Board of Veterinary Toxicology (ABVT) exam this past July. Of our 28 veterinarians at the ASPCA Animal Poison Control Center, 15 are board-certified (have passed ABVT or the American Board of Toxicology- ABT), and 8 are double boarded (ABVT and ABT)! We have 3 veterinarians who will be sitting for the ABT general toxicology boards in October.

Meet the Toxicology Team:

**Hope Lopez, DVM**
Dr. Lopez grew up in Steger, Illinois, a suburb of Chicago on the south side. She currently lives in Champaign, Illinois with her husband, Pedro, and their really cool cat, Lynxso. Dr. Lopez attended the University of St. Francis in Joliet, Illinois and obtained a B.S. in biology with chemistry minor. She then obtained her Doctorate of Veterinary Medicine from the University of Illinois in 2000. Dr. Lopez practiced in small animal and emergency medicine in Bloomington and Champaign, Illinois. After doing relief work in the Chicago area, Dr. Lopez joined the ASPCA in February of 2007.

**Carrie Lohmeyer, Certified Veterinary Technician**
Carrie has been working as a Certified Veterinary Technician at the poison center since February 2007. She graduated from Parkland College's Veterinary Technology program in 2003 and earned her CVT license in 2004. After completing her degree at Parkland, Carrie transferred to the University of Illinois to earn a Bachelor’s degree in Natural Resources and Environmental Science. While at the U of I, she worked part time in a small animal hospital and also assisted with numerous research projects involving fish and crayfish ecology. When not busy with her work, Carrie enjoys spending time with her spunky cat named Tae.

**Alexandra Pintea, Veterinary Assistant**
Alexandra is from Romania. Before moving to the United States, she studied veterinary animal science for 4 years and worked in a small animal practice. Alexandra joined the ASPCA in December of 2007. Alexandra has an American Bulldog named Jessica, a Balinese cat, and a Guinea pig that she misses every day because they are living overseas with her mother. She has always had pets around and cannot imagine life without them. Good thing we are able to bring pets to work at the poison center, so Alexandra can get her animal ‘fix.’

Who’s New at the Poison Control Center?
Please welcome the poison center’s newest veterinarian—Dr. Susanna Hawkins. Susanna actually worked at the center as a veterinary student a number of years ago, and decided to return after several years in private practice. We are happy to have her as part of our team!

We are also pleased to announce that we have hired 3 new certified veterinary technicians: Emily Paulin, Jennifer McGregor, and Frank Davis. Natalie Martin is our newest veterinary assistant.

Poison Center Phone System Upgrade
We appreciate your patience through the summer as we experienced increased call volume, coupled
with an antiquated phone system that occasionally resulted in long wait times. We are excited to announce the launch of our new phone system in November 2008.

*What does this mean when you call the poison center?*
If you call from your clinic’s main line number, your call will be routed directly to one of our veterinarians/toxicologists.

Until all clinic phone numbers are entered into our system, if you call on a back line you may initially not have your call routed directly to a veterinarian; you may instead be greeted by a member of our highly trained support staff of veterinary assistants and certified veterinary technicians, as is our current process.

Because we have designed this as a means for your veterinary staff to directly reach our veterinarians, please be sure to have your clients contact us from their own phone line whenever possible. We appreciate your patience during this time of transition and hope this new process will help us answer calls as quickly and efficiently as possible and ultimately serve you better.

**Opportunities for CE**
Mark the dates for the next Toxicology Short Course, to be held at the ASPCA Midwest Regional Office in Urbana, Illinois: March 26-27, 2009. More information will be provided in the next newsletter.

**What’s New on the Poison Center Website?** [www.aspca.org/apcc](http://www.aspca.org/apcc)
In the [Pet Care Tips](http://www.aspca.org/apcc) section, there is information on air and car travel as well as automobile safety tips that are especially important when families start to plan for holiday traveling.

As always, there are a variety of other pet care topics including nutrition tips, going green for pets, and tips on finding lost pets. On our main page, clients can watch a video, featuring our own Dr. Steven Hansen, illustrating the [17 most common potentially dangerous plants](http://www.aspca.org/apcc).

Resources available for veterinary professionals include over [70 fact-filled articles from Veterinary Medicine and Veterinary Technician](http://www.aspca.org/apcc). These articles feature a wide variety of toxicology subjects ranging from acetaminophen to zinc and quite a bit in between. You can also find selected articles from Exotic DVM and Journal of Veterinary Emergency and Critical Care here. Most articles are authored by veterinary staff from the Animal Poison Control Center.

**Hot Links for the Fall and Holiday Seasons**
As summer fades away and the warm summer days turn into cool fall nights, animals continue to find ways of getting into trouble through exposures to potentially toxic agents. Below are links to articles that you may find useful when answering pet owners’ questions.

- [Snake Bite Safety and Prevention Tips](http://www.aspca.org/apcc)
- [How Dangerous are Winter and Spring Holiday Plants to Pets?](http://www.aspca.org/apcc)

With Halloween approaching, it’s time to remind your clients about the hazards of candies, especially chocolate, to pets. Refresh your knowledge by perusing the [Toxicology Brief on Chocolate Intoxication (PDF)](http://www.aspca.org/apcc).

**Did you know?**
This year marks the 30th anniversary of the Animal Poison Control Center! We’ve come a long way from 1978, when the toxicology service was started at the University of Illinois by Dr. Bill Buck. In those days, calls were taken out of a converted chicken coop and toxicology residents wore beepers to handle after-hours calls.

And did you know?
We are also celebrating the 10th anniversary of the Animal Poison Control Center website! We’re in the process of revamping our website, which will make it even more informative and user-friendly. Stay tuned!

Fall Hazards for Pets
Low toxicity (may cause gastrointestinal upset, but unlikely to cause serious problems unless very large amounts are ingested):

- Glow jewelry, glow sticks (can cause intense taste reaction)
- School glues, epoxy glues
- Pencils
- Magic markers
- Charcoal briquettes
- Mosquito Dunks containing Bacillus thuringenesis

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

- Liquid potpourri
- Batteries
- Charcoal lighter fluid
- DEET

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

- Expandable wood glues (e.g. Elmer’s ProBond, Gorilla Glue—even small amounts can form large gastric foreign bodies requiring surgical removal)
- Antifreeze/coolants
- Chocolate
- Rodenticides
- Human medications (cold and flu medications, decongestants)
- Alcoholic beverages
- Homemade “play-dough” (high sodium content)

Practice Tips 1
We realize that this is a repeat from your recent Summer E-Newsletter but it is so important that we thought it deserved an immediate reprint - especially in light of our upcoming phone system upgrade.
We value you and want your clients to have a good experience when calling the ASPCA Animal Poison Control Center. We want to help your clients 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 calling 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 the 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 it needs.

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 that 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 in 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. If the first time they hear about the fee is on our recording, they may be surprised. They may even hang up prior to speaking with someone here, which could delay the ultimate goal of obtaining immediate management information for their pet.

Practice Tips 2
We also want you, the veterinarians and other veterinary team members who call us, to have a good experience when seeking assistance from the ASPCA Animal Poison Control Center. We also know that your clinics are very busy and that often times the call to us is begun or completed by a staff member other than the veterinarian on the case. Some helpful hints for efficiently providing us with the information that we will be asking are worth noting. The more detail you give us, the better information we will be able to provide you with for your individual case.

Have information about the agent the pet was exposed to. The best way to get this is to have the owner bring in the original packaging/label information. Many products such as rodenticides, lawn care products and cleaning supplies 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 which can help use accurately identify the product in question. If the product is a pill, most pills have codes on them that can also help us to identify them.

Have the patient’s medical record (or the signalment) at hand when calling. We always ask important questions about the patient, which includes the breed, sex, reproductive status (altered, pregnant, lactating), age and weight of the patient. Also, pre-existing medical conditions about the patient are important and could potentially dictate possible concerns and treatment recommendations.

Have as detailed a history of the exposure as possible. Information such as when and where the exposure occurred and what is the worst case scenario
situation (example: how many possible pills are missing or how much fertilizer might be missing) will all impact the assessment and treatment recommendations for that individual pet.

Know what signs the patient is showing and when they 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, or one that has already vomited).

Toxicant Update Sago Palm

Palm trees have long been icons of the tropics, evoking images of an island paradise. The Sago Palm (Cycas revoluta) — a stocky, spiky leaved member of the Cycad family of plants — is a beautiful addition to residential landscapes in the sunny climates of the Southern United States. In recent years, miniature or “bonsai” versions of sago palm have also found their way into the homes of people living in the cooler, drier northern parts of the country. Unfortunately, these attractive plants are quite toxic if ingested.

Over the past five years, the ASPCA Animal Poison Control Center has recorded a significant increase in sago and other cycad palm toxicoses: from 35 cases in 2003 to over 100 in 2008 to date. According to poison center data from 2007 to the present, 52 out of 211 cases involving ingestion of sago palm resulted in fatalities, further illustrating the serious danger that these plants pose. Because pet owners, and possibly veterinarians in northern regions of the country where these plants are becoming more popular may not be as familiar with the toxic effects of cycad palms, we feel that it is critical to get information out about their toxic potential.

There are three toxins in cycads. Cycasin is thought to be responsible for the hepatic damage (centrilobular necrosis) seen with cycad ingestion. Cycasin is also carcinogenic, mutagenic and teratogenic. Beta-methylamino-L-alanine (BMAA) is a neurotoxic amino acid implicated in Guam disease of humans. An unidentified toxin has caused hind limb paralysis in cattle due to axonal degeneration of the CNS, but this syndrome has not been reported in dogs. All plant parts are toxic, but the nuts (seeds) contain a higher amount of cycasin than do other plant parts, and are most dangerous when the seed pod is punctured.

The most common signs in cats and dogs are vomiting (+/- blood), diarrhea (+/- blood), depression, weakness, anorexia, and liver failure. Seizures and death are also possible. Treatment includes decontamination (emesis, repeated doses of activated charcoal), baseline blood work, and monitoring of liver enzymes in asymptomatic animals. Animals with signs may require treatment with antiemetics, GI protectants, and fluids containing dextrose. The patient should also be monitored for seizures, which may be controlled with diazepam. Blood transfusions may be necessary if gastrointestinal tract hemorrhage is severe. Additional treatments may include denosyl and silymarin for liver support, and a low protein diet such as k/d®. The prognosis is good if caught early and aggressively decontaminated; animals showing clinical signs beyond mild GI upset have a more guarded prognosis.

Case study

A frantic owner arrives with his 2 year old beagle mix who chewed up a partially full antifreeze container just before lunchtime. He thinks that the exposure was about an hour ago. The owner left the chewed up bottle on the floor at home in the garage. The amount ingested is unknown, and the dog is mildly ataxic and depressed.
**What is the first action that should be taken in this case?**
a. Induce vomiting and administer Toxiban with sorbitol
b. Run an ethylene glycol test after decontaminating
c. Have owner go back home for the container
d. No treatment is necessary since signs are mild

**Answer:** The best answer is c. It is essential to know (if possible), what type of antifreeze the dog was exposed to. The 3 basic types include ethylene glycol, methanol, and propylene glycol, all of which differ in risk and approach to treatment. Generally alcohols are absorbed quickly, and decontamination may be of minimal benefit at this point. Toxiban with sorbitol should not be given prior to drawing blood for the ethylene glycol test, as it can cause a false positive.

The owner returns with the bottle, and tells you that what the dog had ingested is Prestone Gas Line Antifreeze containing 100% methanol. You call the ASPCA Animal Poison Control Center and reach Senior Toxicologist, Dr. Charlotte Means, who will be able to provide you with rapid and accurate treatment recommendations.

**What treatment will Dr. Means likely recommend?**
a. Administer fomepizole (4- methylpyrazole; Antizol-Vet), a specific antagonist of alcohol dehydrogenase immediately to prevent blindness and neuronal necrosis.
b. Admit dog for monitoring on fluids
c. Both a and b
d. None of the above

**Answer:** b. If significant quantities of methanol are ingested, metabolic acidosis may develop due to the formation of metabolites such as formaldehyde and formic acid. In some primates (including humans), ingestion of methanol can cause blindness and neuronal necrosis. Treatment of methanol toxicosis with fomepizole is necessary in humans to prevent these effects, but is not indicated in non-primates, as they do not develop ocular or neurologic lesions due to differences in metabolism of methanol. Because the amount this beagle ingested is unknown, admitting the dog for monitoring and treating symptomatically would be the most appropriate management approach.

**What signs would you monitor for?**
Answer: Vomiting, salivation, ataxia, inebriation, tremors, dyspnea, hypothermia, arrhythmias, coma, seizures, respiratory depression, aspiration pneumonia, hypoglycemia, and metabolic acidosis.

**Discussion:**
Methanol (also known as methyl alcohol or wood alcohol) is found most commonly in windshield washer fluid where it can vary in concentration from 20-100%. In general, alcohols are rapidly absorbed from the gastrointestinal tract. The most common exposures occur with dogs and usually involve chewing on containers or lapping up spills. Signs typically begin within 30-60 minutes of exposure and peak effect is generally within 2 hours of exposure. With small exposures in dogs and cats, only mild gastric upset is seen. A recent small ingestion, when the patient is asymptomatic, is treated with dilution (milk, water) that may help minimize gastric upset. In the case of a large ingestion, the animal should be monitored and treated for acidosis. Treatment may include IV fluids (diuresis), thermoregulation, respiratory support, correction of acidosis and hypoglycemia, and diazepam for seizures. In patients with severe CNS and respiratory depression, yohimbine or flumazenil may be beneficial. Fortunately, most exposures of dogs and cats to methanol result in full recovery.
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.

Authors:
Linda Dolder, DVM, APCC Consulting Veterinarian in Clinical Toxicology
Sharon Welch, DVM, APCC Consulting Veterinarian in Clinical Toxicology

Editor:
Sharon Gwaltney, DVM, PhD, DABT, DABVT, Vice President/Medical Director