PET POISON HELPLINE®

Nationwide®

Common Household Toxins During Quarantine:
Household Cleaners, Products and Plants that Cause Toxicity in the Household



Dominic Tauer, DVM, DABT
Consulting Veterinarian, Clinical Toxicology
Pet Poison Helpline

November 10th, 2020

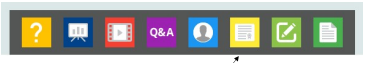
1

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800.213.6680
petpoisonhelpline.com

CE and Widget Information

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The green "resource" widget contains downloadable presentation slides, instructions on how to download your CE certificate, a link to take our survey, and links to further information about Pet Poison Helpline.



The yellow "certification" widget is where you will be able to download your CE certificate after you have attended the live presentation for 45 minutes.

2

What is Pet Poison Helpline?



Email us for more information:
info@petpoisonhelpline.com

PET POISON HELPLINE®

- **24/7 animal poison control center**
- **Veterinary & human expertise**
  - 20+ DVMs, 75+ CVTs
    - DABVT, DABT
    - DACVECC
    - DACVIM
  - 10 PharmDs
  - 2 MDs
- **Case fee of $59 includes:**
  - Unlimited consultation
  - Fax or email of case report
- **Educational Center**
  - Free webinars (archived)
  - Wheel of Vomit
  - Textbook
  - Newsletters for vet professionals
  - Free resources for clinics
    - Videos
    - Electronic material
    - Clings
    - Social media graphics

3


Nationwide
is on your side
Pet Poison Helpline®
and Nationwide®

4


Nationwide® & Pet Poison Helpline®
working together
Shared mission in highlighting the importance of preparing for accidents and poisonings in small animals
Addressing the cost of veterinary care:
Nationwide® covers the $59 Pet Poison Helpline® fee when an insured pet is brought in to your hospital for care
Enabling best medicine:
Pet owners with Nationwide® spend twice as much on their pets than those without pet insurance

5


Complete confidence
More than 35 years of experience protecting pets
Pet insurance that offers more coverage than any other pet plan
Pet insurance plans for every pet and every budget
Coverage includes:
Accidents and injuries
Common illnesses
Serious illnesses
Chronic conditions
Hereditary conditions
Diagnostics and imaging
Procedures and surgeries
Holistic and alternative medicines
Wellness visits
Some policy exclusions may apply. Wellness, routine and preventive care covered with wellness policies.
Additional member perks
24/7 vethelpline for any pet question
Convenient mobile claim submissions
Fast electronic reimbursements
Discounts and special offers on pet products

6

Pet insurance plan options for coverage

	whole pet with wellness	whole pet	major medical	pet wellness
Accidents, such as poisonings and snake bites	✓	✓	✓	
Injuries, such as ACL, bite wounds, and broken bones	✓	✓	✓	
Illnesses, such as ear infections, vomiting, diabetes and cancer	✓	✓	✓	
Exams, including treatment and prescribed medications	✓	✓	✓	
Hospitalization, including x-rays, blood work, and surgeries	✓	✓	✓	
Hereditary and congenital conditions	✓	✓	Limited	
Wellness exams, including vaccinations, flea control and more	✓			✓
Reimbursement type	90%	90%	Benefit schedule	Benefit schedule

All plans include a one-time annual deductible

Annual deductible must be met before reimbursement

90% reimburses all eligible services on invoice

Benefit schedule reimburses based on a published list

7

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8

Household Toxins



- General household cleaners
- Corrosive products
  - Acid vs alkali cleaners
  - Phenols
  - Detergents
- Objects around the home
- Common household plants







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Household Cleaners

- Multi-surface cleaners, glass cleaners, floor cleaners, etc.
- Surfactants: typically non-ionic or anionic
- Alcohols: ethanol, rubbing alcohol
- Mild irritants: dermal and gastric



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Aerosolized Products

- Mild irritants
  - If large amount sprayed on a patient, then potential for more severe clinical signs.
- Serious concern for avian patients
- Consider ventilation or fresh air



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Acids

- Toilet bowl cleaners, carpet cleaners, tub and tile cleaners, mold removers, drain openers, rust stain removers.
- Immediate pain-may limit exposure
- Damage seen at <pH 2, potentially pH 3
- Mechanism: Coagulation type necrosis with destruction of surface epithelium and submucosa.

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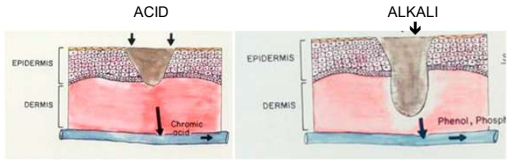
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Alkalis

- Drain openers, oven or grill cleaners, hair removal products, toilet bowl cleaners
- Sodium hydroxide
- Delayed pain can lead to more serious exposures
- Damage seen at >pH 11
- Mechanism: Forms hydroxide ions on contact with water causing liquefication necrosis

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Coagulative

(H^+ + proteins➔ amino acids)

Liquifactive

(Fat saponification; alkaline proteinate formation; dehydration)

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Drain Openers

- Sodium hydroxide pH >12
- Hydrochloric acid pH <1
- Licking shower drain
- Symptoms:
  - Holding tongue out
  - Pain
  - Ulcers
  - Salivation
  - Vomiting
  - Hematemesis



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Bleach



- Sodium hypochlorite
- Severity can depend on pH and concentration
- Household bleach 5-10%
- Industrial bleach 25%
- Local tissue damage, systemic symptoms not expected
- Inhalation is general irritant
- Combining with acidic or ammonia based cleaners produces chlorine and chloramine gas, respectively

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Phenols

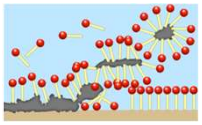


- Carbolic acid, hexachlorophene, chlorophenol, phenylic acid, phenyl hydroxide, hydroxybenzene, oxybenzene
- Household disinfectants, medicated shampoos, throat sprays, mouth wash
- Corrosive injury at >5% dermal exposure. Some degree of dermal absorption
- Water evaporates faster than phenol causing delayed toxicity as phenol concentrates
- Mechanism: Rapidly denatures proteins, exact mechanism is unknown

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Quaternary Ammonia Compounds



- Detergents, fabric softeners, liquid potpourri, hot spot sprays
- Cationic surfactants have a neutral pH
- Mechanism: Cationic detergents cause local irritation or corrosive effects by disrupting the lipid bilayer of cellular membranes
- Systemic toxicity with CNS depression has been reported but uncommon in veterinary patients.

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Pod Detergents



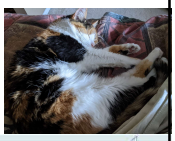
- pH ranges from 7 to 11
- Burst when bitten; leading to vomiting and bubbling in the back of the throat with soap bubbles getting into lungs
- Treatment for aspiration is supportive
- Ulcerative damage is not expected but reports of esophageal erosion have been noted.

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Dryer Sheets

- Can contain cationic detergents causing irritation and potential for corrosive injury when ingested
- When used in a dryer the components deteriorate with heat
- Ingestion of used dryer sheets is considered nontoxic
- FBO risk possible but low



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20

Treatment of Corrosives

- Oral
  - Do not induce emesis
  - No Activated Charcoal or UAA gel
  - Dilution such as flushing the mouth if asymptomatic and recent
  - GI protectants and antibiotics
  - Pain management
  - Endoscopy if severe
- Dermal
  - Dilution with tepid water for 15-20 minutes
  - Do not neutralize

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21

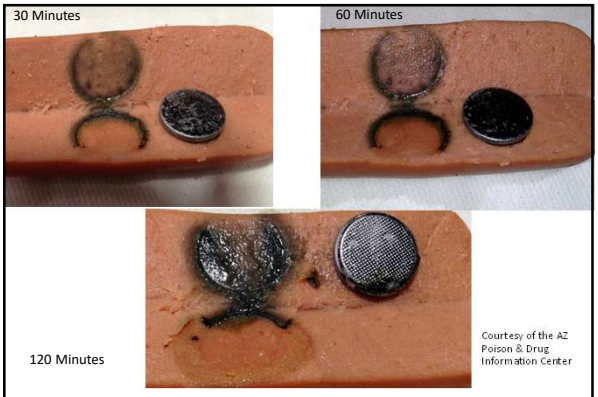
Batteries



- Alkaline batteries: AA, AAA, C, D, 9v
  - Black material present when punctured
  - Metal casings-often pass through GIT fast enough to avoid toxicity.
- Lithium Ion Batteries
  - Not corrosive
  - Risk of lodging in esophageal folds
  - Current between battery and tissues can cause tissue damage, erosion, and possible perforation
- Treatment
  - Radiographs with neck views
  - Dilution and GI protectants

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Glue



- Diisocyanate vs cyanoacrylate
  - Diisocyanate continues to expand in the stomach following ingestion.
  - Cyanoacrylate are local irritants but nonexpanding
- Not all Gorilla Glues are diisocyanates
- Treatment for diisocyanates
  - Radiographs: Mass visible 3-12 hours after ingestion has ingesta appearance.
  - Mass stops expanding after 12 hours

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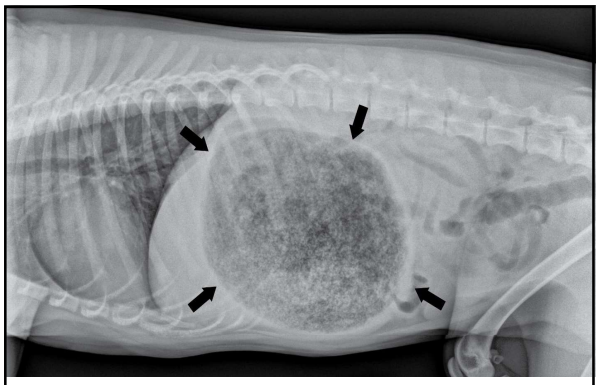


Photo courtesy of Dr. Catherine A. Angle

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Common Houseplants



- Jade plant (*Crassula* sp)
  - GI irritant
  - Depression and ataxia reported but not common
- Fiddle leaf fig, Weeping fig, (*Ficus* sp)
  - Sap causes dermal irritation and burning sensation
  - Salivation, vomiting, lethargy (self limiting)
- Holly (*Ilex* sp)
  - Vomiting, diarrhea (self limiting)
- Poinsettia (*Euphorbia pulcherrima*)
  - Sap causes irritation both dermal and GI
  - Dilution for dermal signs; GI signs (self limiting)

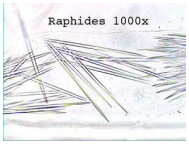


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Insoluble Calcium Oxalate Plants

- Not systemically toxic
- Examples:
  - Arrowhead vine (*Syngonium sp*)
  - Caladium (*Caladium sp*)
  - Calla lily (*Zantedeschia sp*)
  - Peace lily (*Spathiphyllum sp*)
  - Dumbcane (*Dieffenbachia sp*)
  - Philodendron (*Philodendron sp*)
  - Pothos (*Epipremnum sp*)
  - Chinese evergreen (*Aglaonoema commitatum*)
  - Umbrella plant (*Schefflera actinophylla*)
  - ZZ plant (*Zamioculcas zamifolia*)
  - Fruit salad plant (*Monstera deliciosa*)



- Plant cells contain raphides which burst forth and spear the mucosa
- Oral pain, drooling, vomiting, change in voice
- Raphides bind to calcium containing foods.

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Dracaena sp.

- Ingestion of saponins cause vomiting +/-blood, anorexia, hypersalivation, ataxia and weakness.
  - Cats: mydriatic, tachycardic and have abdominal pain.
- Examples:
  - Corn Plant
  - Lucky Bamboo
  - Madagascar Dragon Tree
  - Song of India
  - Janet Craig



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Questions?



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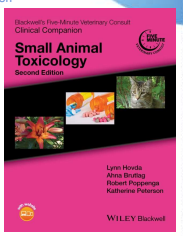
30

Blackwell's Five-Minute Veterinary Consult Clinical Companion:

Small Animal Toxicology
2nd Edition

Drs. Lynn Hovda, Ahna Brutlag, Robert Poppenga, Katherine Peterson

- Provides concise, bulleted information focused on the most important facts needed when treating a poisoned cat or dog
- Carefully organized for ease of use in an emergency, with important toxicants arranged alphabetically within categories
- Details clinically relevant information on the most common toxicants encountered by small animals
- Presents a wealth of color photographs to aid in plant identification
- Includes 14 new topics to this edition covering cyclosporine A, sleep aids, tacrolimus, bath salts, synthetic marijuana, poisonous lizards, imidacloprid, spring bulbs, and sodium monofluoroacetate



Paperback | May 2016 | 960 pages | 978-1-119-03654-8 | $109.99 · CAN $120.99
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31

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PPH World: Australia & New Zealand

Pet Poison Helpline is excited to announce our recent expansion into Australia and New Zealand!

Our services are available 24/7 to any veterinary professional in **Australia** by calling **0011-800-4444-0002** and **New Zealand** by calling **00-800-444-0002**.

For more information please visit our website:
www.petpoisonhelpline.com/pphworld

32

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33

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2020 Webinars

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2020 webinars recorded and available for non-interactive CE credit!

- Sniffing Out the Truth: Updates on the Safety of Essential Oils and Pets
- Warm Weather Toxins: A Short Review of Timely Woes
- Management of the Anti-Depressants and Anxiolytic Exposure Patient
- Worst of the Worst: Evaluating the Most Dangerous Toxins for Pets



- **Upcoming Webinar - December 3rd**
  - The Art and (Brain) Science of an Unprecedented Year

34

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Thank you for attending!

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CE credit FAQs

1. **When will I get my CE certificate?**
   Now! You can download it directly from the On24 platform. Please refer to the green "resource" widget at the bottom of your screen for detailed instructions.
2. **I attended the webinar but wasn't the person who logged in. Can I still get interactive CE credit?**
   Yes. Send your name and email address to info@petpoisonhelpline.com by 1pm central time on Nov. 11th, 2020 (strict deadline).
3. **Can I watch the recorded webinar online for CE credit?**
   Yes. You can receive non-interactive CE credit. Go to the "For Vets" page on our website, www.petpoisonhelpline.com for more info.

Comments? Questions? Email us! info@petpoisonhelpline.com



35