Are your patients getting the canine osteoarthritis (OA) pain and inflammation relief they need?

Recommend Galliprant as first-line treatment

- **FIRST-IN-CLASS** non-COX inhibiting NSAID
- **MODE OF ACTION** targets canine OA pain and inflammation while reducing the impact on GI, kidney, and liver homeostasis
- **FOR ALL STAGES** of OA from the earliest clinical signs

*Approved for use in dogs older than 9 months of age and greater than 8 pounds. Monitoring is recommended if used long-term.

Go to GalliprantVet.com for more information

INDICATION
Galliprant is an NSAID that controls pain and inflammation associated with osteoarthritis in dogs.

IMPORTANT SAFETY INFORMATION
Not for use in humans. For use in dogs only. Keep this and all medications out of reach of children and pets. Store out of reach of dogs and other pets in a secured location in order to prevent accidental ingestion or overdose. Do not use in dogs that have a hypersensitivity to galliprant. If Galliprant is used long term, appropriate monitoring is recommended. Concurrent use of Galliprant with other anti-inflammatory drugs, such as COX-inhibiting NSAIDs or corticosteroids, should be avoided. Concurrent use of other anti-inflammatory drugs or protein-bound drugs has not been studied. The safe use of Galliprant has not been evaluated in dogs younger than 9 months of age and less than 8 lbs (3.6 kg), dogs used for breeding, pregnant or lactating dogs, or dogs with cardiac disease. The most common adverse reactions were vomiting, diarrhea, decreased appetite, and lethargy. For full prescribing information see Galliprant package insert.


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GALLIPRANT® (grapiprant tablets)

For oral use in dogs only
20 mg, 60 mg and 100 mg flavored tablets
A prostaglandin E<sub>1</sub> (PGE<sub>1</sub>) EP4 receptor antagonist; a non-cyclooxygenase inhibiting, non-steroidal anti-inflammatory drug

Caution:
Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

Before using Galliprant, please consult the product insert, a summary of which follows:

Indication:
GALLIPRANT (grapiprant tablets) is indicated for the control of pain and inflammation associated with osteoarthritis in dogs.

Dosage and Administration:
Always provide “Information for Dog Owners” Sheet with prescription.

Use the lowest effective dose for the shortest duration consistent with individual response.

The dose of GALLIPRANT (grapiprant tablets) is 0.9 mg/lb (2 mg/kg) once daily.

Only the 20 mg and 60 mg tablets of GALLIPRANT are scored. The dosage should be calculated in half tablet increments.

The 100 mg tablet is not scored and should not be broken in half.

See product insert for complete dosing and administration information.

Contraindications:
GALLIPRANT should not be used in dogs that have a hypersensitivity to grapiprant.

Warnings:
Not for use in humans. Keep this and all medications out of reach of children and pets. Consult a physician in case of accidental ingestion by humans.

For use in dogs only. Store GALLIPRANT out of reach of dogs and other pets in a secured location in order to prevent accidental ingestion or overdose.

Precautions:
The safe use of GALLIPRANT has not been evaluated in dogs younger than 9 months of age and less than 8 lbs (3.6 kg), dogs used for breeding, or in pregnant or lactating dogs.

Adverse reactions in dogs receiving GALLIPRANT may include vomiting, diarrhea, decreased appetite, mucoid, watery or bloody stools, and decreases in serum albumin and total protein.

If GALLIPRANT is used long term appropriate monitoring is recommended.

Concurrent use with other anti-inflammatory drugs has not been studied. Concomitant use of GALLIPRANT with other anti-inflammatory drugs, such as COX-inhibiting NSAIDs or corticosteroids, should be avoided. If additional pain medication is needed after a daily dose of GALLIPRANT, a non-NSAID/non-corticosteroid class of analgesic may be necessary.

The concomitant use of protein-bound drugs with GALLIPRANT has not been studied. Commonly used protein-bound drugs include cardiac, anticonvulsant and behavioral medications.

Drug compatibility should be monitored in patients requiring adjunctive therapy. Consider appropriate washout times when switching from one anti-inflammatory to another or when switching from corticosteroids or COX-inhibiting NSAIDs to GALLIPRANT use.

The use of GALLIPRANT in dogs with cardiac disease has not been studied.

It is not known whether dogs with a history of hypersensitivity to sulfonamide drugs will exhibit hypersensitivity to GALLIPRANT. GALLIPRANT is a methylbenzenesulfonamide.

Adverse Reactions:
In a controlled field study, 285 dogs were evaluated for safety when given either GALLIPRANT or a vehicle control (tablet minus grapiprant) at a dose of 2 mg/kg (0.9 mg/lb) once daily for 28 days. GALLIPRANT-treated dogs ranged in age from 2 yrs to 16.75 years. The following adverse reactions were observed:

Table 1. Adverse reactions reported in the field study.

<table>
<thead>
<tr>
<th>Adverse reaction*</th>
<th>GALLIPRANT (grapiprant tablets) N = 141</th>
<th>Vehicle control (tablets minus grapiprant) N = 144</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vomiting</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>Diarrhea, soft stool</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Anorexia, inappetence</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Lethargy</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Buccal ulcer</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Immune mediated hemolytic anemia</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

*Dogs may have experienced more than one type or occurrence during the study.

GALLIPRANT was used safely during the field studies with other concurrent therapies, including antibiotics, parasiticides and vaccinations.

To report suspected adverse drug events and/or to obtain a copy of the Safety Data Sheet (SDS) or for technical assistance, call 1-888-545-5973.

For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.fda.gov/AnimalVeterinary/SafetyHealth

Information for Dog Owners:
Owners should be advised of the potential for adverse reactions and be informed of the clinical signs associated with drug intolerance. Adverse reactions may include vomiting, diarrhea, decreased appetite, and decreasing albumin and total protein. Appetite and stools should be monitored and owners should be advised to consult with their veterinarian if appetite decreases or stools become abnormal.

Effectiveness:
Two hundred and eighty five (285) client-owned dogs were enrolled in the study and evaluated for field safety. GALLIPRANT-treated dogs ranging in age from 2 to 16.75 years and weighing between 4.1 and 59.6 kgs (9 – 131 lbs) with radiographic and clinical signs of osteoarthritis were enrolled in a placebo-controlled, masked field study. Dogs had a 7-day washout from NSAID or other current OA therapy. Two hundred and sixty two (262) of the 285 dogs were included in the effectiveness evaluation. Dogs were assessed for improvements in pain and function by the owners using the Canine Brief Pain Inventory (CBPI) scoring system. A statistically significant difference in the proportion of treatment successes in the GALLIPRANT group (63/131 or 48.1%) was observed compared to the vehicle control group (41/131 or 31.3%). GALLIPRANT demonstrated statistically significant differences in owner assessed pain and function. The results of the field study demonstrate that GALLIPRANT, administered at 2 mg/kg (0.9 mg/pound) once daily for 28 days, was effective for the control of pain and inflammation associated with osteoarthritis.

Storage Conditions:
Store at or below 86° F (30° C)

How Supplied:
20 mg, 60 mg and 100 mg flavored tablets in 7, 30 and 90 count bottles
NADA 141-455, Approved by FDA
Manufactured for:
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Greenfield, IN 46140
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November 2018
All Insulins Are Not Created Equal

PROZINC® (protamine zinc recombinant human insulin) treatment for diabetes mellitus is the only FDA-approved animal insulin made with recombinant technology. It’s also the only product with protamine zinc, which supports optimal glycemic control and appropriate duration of action. To learn more, contact your Boehringer Ingelheim Sales Representative.

IMPORTANT SAFETY INFORMATION: PROZINC® (protamine zinc recombinant human insulin) is for use in dogs and cats only. Keep out of the reach of children. Owners should be advised to observe for signs of hypoglycemia (low blood sugar). Signs may include weakness, depression, behavioral changes, muscle twitching, and anxiety. In severe cases of hypoglycemia, seizures and coma can occur. Hypoglycemia can be fatal if an affected animal does not receive prompt treatment. PROZINC should not be used during episodes of hypoglycemia (low blood sugar). Appropriate veterinary monitoring of blood glucose, adjustment of insulin dose and regimen as needed, and stabilization of diet and activity help minimize the risk of hypoglycemic episodes. The attending veterinarian should evaluate other adverse reactions on a case-by-case basis to determine if an adjustment in therapy is appropriate, or if alternative therapy should be considered. The safety and effectiveness of PROZINC in puppies, kittens, or breeding, pregnant, and lactating animals has not been evaluated. For more information, see full prescribing information.
ProZinc®
(protemine zinc recombinant human insulin)

40 IU/mL
Caution: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

Description: PROZINC is a sterile aqueous protemine zinc suspension of recombinant human insulin.

Each mL contains: recombinant human insulin 40 International Units (IU), protemine sulfate 0.445 mg, zinc oxide 0.0846 mg, glycine 16.00 mg, dibasic sodium phosphate, heptahydrate 3.78 mg, phenol (added as preservative) 2.50 mg, hydrochloric acid 1.63 mg, water for Injection (maximum) 1005 mg, pH is adjusted with hydrochloric acid and/or sodium hydroxide.

Indication: PROZINC (protemine zinc recombinant human insulin) is indicated for the reduction of hyperglycemia and hyperglycemia-associated clinical signs in cats with diabetes mellitus.

Contraindications: PROZINC is contraindicated in cats sensitive to protemine zinc recombinant human insulin or any other ingredients in PROZINC. PROZINC is contraindicated during episodes of hypoglycemia.

Warnings:
User Safety: For use in cats and dogs only. Keep out of the reach of children. Avoid contact with eyes. In case of contact, immediately flush eyes with running water for at least 15 minutes. Accidental injection may cause hypoglycemia. In case of accidental injection, seek medical attention immediately. Exposure to product may induce a local or systemic allergic reaction in sensitized individuals.

Animal Safety: Owners should be advised to observe for signs of hypoglycemia. Use of this product, even at established doses, has been associated with hypoglycemia. A cat with signs of hypoglycemia should be treated immediately. Glucose should be given orally or intravenously as dictated by clinical signs. Insulin should be temporarily withheld and, if indicated, the dosage adjusted. Any change in insulin should be made cautiously and only under a veterinarian’s supervision. Changes in insulin strength, manufacturer, type, species (human, animal) or method of manufacture (DNA versus animal-source insulin) may result in the need for a change in dosage.

Appropriate diagnostic tests should be performed to rule out other endocrinopathies in diabetic cats that are difficult to regulate.

Precautions: Cats presenting with severe ketoadidosis, pancreatitis, lethargy, and/or vomiting should be stabilized with short-acting insulin and appropriate supportive therapy until their condition is stabilized. As with all insulin products, careful patient monitoring for hypoglycemia and hyperglycemia is essential to attain and maintain adequate glycemic control and to prevent associated complications. Overdose can result in profound hypoglycemia and death.

Glucocorticoids, progestogens, and certain endocrinopathies can have an antagonistic effect on insulin activity. Glucocorticoid and progestogen use should be avoided.

The safety and effectiveness of PROZINC in breeding, pregnant, and lactating cats has not been evaluated.

The safety and effectiveness of PROZINC in kittens has not been evaluated.

Adverse Reactions: In a 45-day effectiveness field study, 176 cats received PROZINC. Hypoglycemia (low blood sugar) was the most common reported adverse event. Clinical signs of hypoglycemia were generally mild in nature described as lethargic, sluggish, weak, trembling, uncoordinated, groggy, glassy-eyed or dazed.

In severe cases of hypoglycemia, seizures and coma can occur. Hypoglycemia can be fatal if an affected cat does not receive prompt treatment.

Local transient injection site reactions may occur.

Information for Cat Owners: PROZINC, like other insulin products, is not free from adverse reactions. Owners should be advised of the potential for adverse reactions and be informed of the associated clinical signs.

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Local transient injection site reactions may occur.

Appropriate veterinary monitoring of blood glucose, adjustment of insulin dose and regimen as needed, and stabilization of diet and activity help minimize the risk of hypoglycemic episodes. The attending veterinarian should evaluate other adverse reactions on a case-by-case basis to determine if an adjustment in therapy is appropriate, or if alternative therapy should be considered.

Effectiveness: A total of 187 client-owned cats were enrolled in a 45-day field study, with 176 receiving PROZINC. One hundred and fifty-one cats were included in the effectiveness analysis. The patients included various purebred and mixed study, with 176 receiving PROZINC. One hundred and fifty-one cats were included in the effectiveness analysis. The patients included various purebred and mixed

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Effectiveness was based on successful control of diabetes which was defined as improvement in at least one blood glucose variable (glucose curve mean, nadir, or fructosamine) and at least one clinical sign (polyuria, polydipsia, or body weight). 

Based on this definition, 115 of 151 cases (76.2%) were considered successful. 

The current report describes an efficacy and safety study of PROZINC in insulin-dependent diabetic cats. The study was performed from December 2018 to March 2019. In total, 176 cats were enrolled, with 151 being included in the effectiveness analysis. The patients included various purebred and mixed breed cats ranging in age from 3 to 19 years and in weight from 4.6 to 20.8 pounds. 

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Based on this definition, 115 of 151 cases (76.2%) were considered successful. 

Approved by FDA under NADA # 141-297
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A look at dvm360®'s upcoming webinar opportunities, and more

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dvm360® empowers learners with a 360-degree solution for flexible learning anytime, anywhere—in print, on-demand, live, and in-person for convenient learning with you in mind!

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And, along with our CE content, we have multiple non-CE programs on the horizon including podcast episodes with some familiar faces. Check them out at www.dvm360.com.

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LIVE WEBINARS

Polyps, Pain & Pus-Yuck: Treating & Preventing Recurrent Ear Disease
Facility: Joya Griffin, DVM, DACVD
Sponsor: Vetoquinol
Date: October 26, 2022
RACE-approved: 1.0 CE credit hour

Learn how to diagnosis and treat ear otitis externa and what to do in recurrent cases.

Look for upcoming Live Webinars at ce.dvm360.com/pages/calendar

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ON-DEMAND WEBINARS

The medicinal magic of functional mushrooms
Facility: Robert J. Silver, DVM, MS
Sponsor: Real Mushrooms for Pets
RACE-approved: 1.0 CE credit hour

This class covered in-depth, the life cycle of the mushroom, cultivation practices, and mushroom potency. The 2 classes of mushrooms and their important members will be discussed. The scientific evidence that supports their use medicinally will also be covered, including a recent study on hemangiosarcoma in dogs, and vaccination titers in immunosuppressed puppies.

---

Improving communication between specialists and primary care clinicians
Facility: Philip J. Bergman, DVM, MS, PHD, DACVIM (Oncology), and Craig A. Clifford DVM, MS, DACVIM (Oncology)
Sponsor: VCA Animal Hospital
RACE-approved: 1.0 CE credit hour

The primary goal of this lecture is to discuss ways to improve communication between specialty medicine and primary care medicine. We will discuss the current challenges from each side and how we can overcome these to provide better total care for our patients.

---

The Nu.Q Vet Cancer Test: accessible and affordable cancer screening for dogs
Facility: Sue Ettinger, DVM, DACVIM (Oncology), and Heather Wilson-Robles, DVM, DACVIM (Oncology)
Sponsor: Volition Veterinary
RACE-approved: 1.0 CE credit hour

This lecture discussed the science behind cancer screening using nucleosomic quantification (Nu.Q) technology and the importance of implementing screening into wellness visits. We discussed the current impact of cancer on the veterinary community, how nucleosomic quantification can potentially catch cancer early, and peer-reviewed papers/abstracts/posters that validate the process. Case studies were presented including what to do once results are received.

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There’s more than one way to treat a cat: a practical approach to the spectrum of care
Facility: Kaitlyn Boatright, VMD
Sponsor: Nationwide
RACE-approved: 1.0 CE credit hour

Do you find talking about money stressful? In school, we learn gold standard medicine, but in practice, we must balance client financial limitations with the best interest of our patients. There are flexible ways to get the information we want and need while still working within a client’s means by embracing the concepts of spectrum of care and incremental care.

---

CONFERENCES

Join us December 2-4 in San Diego, California, for another engaging, face to face, educational experience. Our safety protocols mean that you can earn CE credits plus interact and network in person with peers, friends, and faculty. Join keynote speakers Phillip Nelson, DVM, PhD, Peter Weinstein, DVM, MBA; Courtney Campbell, DVM, DACVS-SS; Molly McAllister, DVM, MPH; and Mariana Pardo, BVSc, MV, DACVECC, as well as countless other industry leaders to learn more about dermatology, internal medicine, practice management, exotics, sports medicine and rehabilitation, and more!

Upcoming Vet Blast Podcast episodes* (non-CE)
- October 4, 2022: Patricia White, DVM, MS, DACVD, discusses her career in as a heart-centered veterinarian in dermatology and her transition to veterinary coach
- October 6, 2022: Valerie Marcano, DVM, PhD and Seth Andrews, PhD, the cofounders of Pawsibilities will be discussing diversity, equity, and inclusion within the veterinary profession.
- October 11, 2022: Marcy A. Bliss, chief executive officer of Wedgewood Pharmacy, on what you need to know with the changing landscape of compounding medicine
- October 13, 2022: Paul Kline, describes what it is like being the chief medical officer at CityVet
- October 18, 2022: Gianluca Bini, DVM, teaches listeners how to anesthetize a fish
- October 20, 2022: Gaemia Tracy, DVM, DACVIM (Neurology), on how percutaneous laser disc ablation is a proactive approach to minimizing intervertebral disc disease in canines.
- October 25, 2022: Angela Ardolino dives into the world of integrative medicine

*Please note that our program dates are tentative and subject to change.

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CONTACT US

Have ideas for future continuing education opportunities or wish to educate fellow colleagues as one of our faculty? Contact CEinfo@dvm360.com.
Meet the Smart Device Making Proactive Care Possible

The Petivity Smart Litterbox Monitor System uses innovative AI technology to transform data about a cat’s litterbox behavior and weight into insights about their well-being.

The result? Actionable data that helps cat owners know when a vet visit is needed—enabling earlier intervention and better outcomes for pets.

Petivity identifies behavior and weight changes that may be associated with a health condition requiring veterinary diagnosis, including:

- Urinary Tract Diseases
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Flexadin® Advanced with UC-II® Extra Strength is once-a-day joint support for dogs and cats that’s so powerful it is only available from a veterinarian.

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1. Based on a 120-day clinical study comparing 30 mg active Type II Collagen to 2,000 mg glucosamine and 1,000 mg chondroitin (Skalli et al., Tendinopathy Mechanisms and Methods, 2007).

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Tune in!
The Vet Blast Podcast, a weekly series hosted by veterinarian, author, and social media personality, Adam Christman, DVM, MBA.
www.dvm360.com/podcasts
Introducing Barrier® (imidacloprid + moxidectin) Topical Solution for Dogs and Cats -- a low-cost generic Advantage Multi® designed to make you money and your clients happy.

Barrier is the once-a-month topical solution for the prevention of heartworm disease your clinic has been requesting. Besides proven heartworm prevention, Barrier economically treats:

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- Adult fleas and flea infestations
- Sarcoptic mange
- Intestinal parasite infections in dogs and cats

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For more information call 1-800-345-1793 or visit: www.aurorapharmaceutical.com
Barrier for Dogs and Cats (imidacloprid + moxidectin) 
Topical Solution 

BRIEF SUMMARY: Before using Barrier for Dogs (imidacloprid + moxidectin) or Barrier for Cats (imidacloprid + moxidectin), please consult the product insert, a summary of which follows:

CAUTION: Federal (U.S.A.) Law restricts this drug to be used by or on the order of a licensed veterinarian.

Barrier for Dogs: WARNING
• DO NOT ADMINISTER THIS PRODUCT ORALLY.
• For the first 30 minutes after application ensure that dogs cannot lick the product from application sites on themselves or other treated animals.
• Children should not come in contact with the application sites for two (2) hours after application. (See Contraindications, Warnings, Human Warnings, and Adverse Reactions for more information.)

INDICATIONS:
Barrier for Dogs is indicated for the prevention of heartworm disease caused by Dirofilaria immitis and the treatment of Dirofilaria immitis circulating in heartworm-positive dogs. Barrier for Dogs kills adult fleas and is indicated for the treatment of flea infestations (Ctenocephalides felis). Barrier for Dogs is indicated for the treatment and control of sarcoptic mange caused by Sarcoptes scabiei var. canis. Barrier for Dogs is also indicated for the treatment and control of the following intestinal parasites species: Hookworms (Ancylostoma caninum) (Uncinaria stenocephala), Roundworms (Toxocara canis) (Toxascaris leonina) and Whipworms (Trichuris vulpis).

Barrier for Cats is indicated for the prevention of heartworm disease caused by Dirofilaria immitis. Barrier for Cats kills adult fleas (Ctenocephalides felis) and is indicated for the treatment of flea infestations. Barrier for Cats is also indicated for the treatment and control of ear mite (Otodectes cynotis) infestations and the intestinal parasites species Hookworm (Ancylostoma tubaeforme) and Roundworm (Toxocara cati). Ferrets: Barrier for Cats is indicated for the prevention of heartworm disease in ferrets caused by Dirofilaria immitis. Barrier for Cats kills adult fleas (Ctenocephalides felis) and is indicated for the treatment of flea infestations in ferrets.

CONTRAINDICATIONS: Do not administer this product orally. (See WARNINGS). Do not use the Dog product (containing 2.5% moxidectin) on Cats.

WARNINGS:
Barrier for Dogs: For the first 30 minutes after application:
Ensure that dogs cannot lick the product from application sites on themselves or other treated dogs, and separate treated dogs from one another and from other pets to reduce the risk of accidental ingestion. Ingestion of this product by dogs may cause serious adverse reactions including depression, salivation, dilated pupils, incoordination, panting, and generalized muscle tremors. In avermectin sensitive dogs, the signs may be more severe and may include coma and death.

Barrier for Cats: Do not use on sick, debilitated, or underweight cats. Do not use on cats less then 9 weeks of age or less than 2 lbs. body weight. Do not use on sick or debilitated ferrets.

HUMAN WARNINGS: Not for human use. Keep out of the reach of children. Dogs: Children should not come in contact with the application sites for two (2) hours after application. Cats: Children should not come in contact with the application site for 30 minutes after application.

Cats may experience hypersalivation, tremors, vomiting and decreased appetite if Barrier for Cats is inadvertently administered orally or through grooming/licking of the application site. The safety of Barrier for Cats has not been established in breeding, pregnant, or lactating cats. The effectiveness of Barrier for Cats against heartworm infections (D. immitis) after bathing has not been evaluated in cats. Use of this product in geriatric cats with subclinical conditions has not been adequately studied. Ferrets: The safety of Barrier for Cats has not been established in breeding, pregnant, and lactating ferrets. Treatment of ferrets weighing less than 2.0 lbs. (0.9kg) should be based on a risk-benefit assessment. The effectiveness of Barrier for Cats in ferrets weighing over 4.4 lbs. (2.0 kg) has not been established.

ADVERSE REACTIONS: Heartworm Negative Dogs: The most common adverse reactions observed during field studies were pruritus, residue, medicinal odor, lethargy, inappetence and hyperactivity. Heartworm Positive Dogs: The most common adverse reactions observed during field studies were cough, lethargy, vomiting, diarrhea (including hemorrhagic), and inappetence. Cats: The most common adverse reactions observed during field studies were lethargy, behavioral changes, discomfort, hypersalivation, polydipsia and coughing and gagging. Ferrets: The most common adverse reactions observed during field studies were pruritus/scratching, scabbing, redness, wounds and inflammation at the treatment site; lethargy; and chemical odor.

For a copy of the Safety Data Sheet (SDS) or to report adverse reactions call Aurora Pharmaceutical, Inc. at 1-888-215-1256 or www.aurorapharmaceutical.com.

Ad000167 07/2022
Approved by FDA under ANADA # 200-714 and ANADA # 200-718
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NORTHFIELD, MN 55057
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As the weather is cooling, our thoughts are turning to the things we enjoy most about autumn and the coming winter. Pumpkin-flavored lattes, apple cider doughnuts, and Halloween candy are just some things that already come to mind.

Although we all deserve to indulge in autumn’s cornucopia of seasonal treats, the start of a new season is also a good time to educate and remind clients about seemingly harmless foods and decorative items that can be toxic to their pets. In fact, the Pet Poison Helpline typically sees an approximate 12% increase in calls to its veterinarians during the week of Halloween, which is the call center’s busiest time of year.1

Candy is a known toxin to pets, with chocolate being one of the most harmful. Other toxicity culprits are grapes, raisins, candy wrappers, glow sticks, glow jewelry, candles, and small costume pieces such as beads and hair dye, according to the hotline. Clients can be advised to keep these items out of reach of their pets, and to call the hotline (855-764-7661) to reach a veterinarian for emergency assistance with a pet showing signs of being in distress or that is known to have ingested a toxin.

This month is also a reminder to treat our animal care paraprofessionals with a little extra appreciation. There’s no better time to recognize their work and compassion than during National Veterinary Technician Week, which is from October 16 to October 22.

As outlined by Adam Christman, DVM, MBA, on page 12, National Veterinary Technician Week provides an important opportunity to thank and celebrate these valuable paraprofessionals. Consider a variety of ways to show support and gratitude for these hard-working colleagues, such as treating the staff to lunch, organizing a team-building activity outside the clinic, or gifting small treats.

For more ideas on how to celebrate National Veterinary Technician Week, read the article on page 54 about team building. Author Sabrina Beck, CVT, practices in the trenches and has first-hand knowledge about team building and the affect that a show of appreciation can have on the staff.

Veterinary technicians can also find valuable career information in this month’s issue. On page 44, a report on career changes in veterinary medicine focuses on advice presented by Amanda M. Shelby, BSc, RVT, VTS (Anesthesia & Analgesia) at the 2022 American Veterinary Medical Association Convention in Philadelphia, Pennsylvania. Shelby offers potential career path suggestions, from government roles to laboratory research, that are outside traditional practices.

However you care for animals in practice and keep pets safe, we hope you enjoy this issue of dvm360® and all that autumn has to offer. Thank you for reading!

—Mike Hennessy Jr
President & CEO,
MJH Life Sciences®
Have you ever walked into the clinic just as someone yells out, “Oh yeah! The Dream Team is on today!”? Nothing gives you greater pleasure than hearing those words because then you know that things will go smoothly regardless of any emergency, hiccup, or nuisance that may present itself.

Veterinary medicine is truly a team-based discipline, and we need empowered team members who feel appreciated. As we celebrate National Veterinary Technician Week, we need to celebrate the entire team—from the customer service representative who communicates bad news to the manager who ensures that the hospital is being steered in the right direction. The veterinary technicians, technician specialists, and assistants triage patients, provide care, and communicate with the numerous players in our profession. Groomers, kennel assistants, and students contribute great insight and expertise to the field. Veterinary medicine is vast and wide, and offers something for everyone.

But I want to give a special shout-out to our technician specialists and technicians. Having been a technician myself before becoming a veterinarian, I appreciate the amount of physical and emotional strain it can place on a person. I recently witnessed the fortitude and strength of the veterinary technicians at NorthStar VETS, in Robbinsville, New Jersey, when my dog Carl went down in the back end. (Yes, he unfortunately got the dachshund memo). I was heartbroken to see him so confused and in such pain, and immediately went from doctor to dog dad in need of consolation. The love and empathy the technicians showed me and Carl were unparalleled. They comforted me even without knowing how much I needed it.

When Carl was able to go home after his hemilaminectomy, the technician said, “I’m going to let Carl take the lead on this, Dr. C.” She opened the treatment door slowly, and out came Carl in all his glory, wiggling his butt and strutting down the hallway! I hugged the technicians and thanked them and the whole team for their support.

I am glad that this year’s theme is self-care and work-life integration. I have said this before, but it’s worth saying it again: self-care is not self-indulgence, it is self-preservation. We must make sure that we’re taking care of ourselves so that we can do our best for the animals that need us. Please look after yourselves and look out for one another. And take some time to show your gratitude and appreciation.

Thank you to all veterinary paraprofessionals for your fortitude and hard work. Thank you to the technicians and assistants for the care you provide patients and the support you give to clients and coworkers. As longtime NBA coach Phil Jackson said, “The strength of the team is each individual member. The strength of each member is the team.” And that is the beauty of veterinary medicine.
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The dangers of performative allyship

When it comes to diversity, equity, inclusion, and belonging, actions speak louder than words

To pass the time at an airport, I was scrolling through my LinkedIn feed when I suddenly saw a graphic about a veterinary conference. At the top, it featured a Spanish word, but the announcement made no reference to a cultural event. Maybe it was a malapropism, I thought. In fact, it was a tasteless and inappropriate use of the Spanish word for celebration. I asked some trusted colleagues and received unanimous support. They all agreed the post was out of line. I politely messaged the person who had shared it, but he dismissed my concerns, claiming my energy would be better spent tackling “bigger problems” in the world.

I was flabbergasted. Considering that guests of his podcast include people who volunteer and work in the diversity, equity, and inclusion space, I expected a certain level of understanding. Should I have? Perhaps he had never considered himself an ally, or did he absolve himself of responsibility because he wasn’t the primary author of the post?

ALLYSHIP

To fully understand the dangers of performative allyship, we must first discuss genuine allyship: an active, consistent, and arduous process of unlearning and reevaluating, whereby a person in a position of privilege and power seeks to work in solidarity with a marginalized group. The Multicultural Resource Center of the University of California, San Francisco defines the following as acts of allyship: educating oneself and others about equity, encouraging and supporting friends and colleagues from marginalized communities, and taking action to ensure their voices are heard.

Allies advocate for marginalized groups, especially in the face of discrimination. Many individuals self-identify as allies, but allyship cannot be self-proclaimed. Although I have not read Mia McKenzie’s Black Girl Dangerous (It’s on my list, I promise!), Jamie Utt summarized the book’s message in So You Call Yourself an Ally: 10 Things All “Allies” Need to Know:

1. Being an ally is about listening.
2. Stop thinking of ally as a noun.
3. “Ally” is not a self-proclaimed identity.
4. Allies don’t take breaks.
5. Allies educate themselves constantly.
6. You can’t be an ally in isolation.
7. Allies don’t need to be in the spotlight.
8. Allies focus on those who share their identity.
9. When criticized or called out, allies listen, apologize, act accountability, and act differently going forward.
10. Allies never monopolize the emotional energy.

PERFORMATIVE ALLYSHIP

Years ago, my husband and I participated in a hackathon. Following the event, participants submitted what was supposed to be anonymous feedback. Not long after, a facilitator emailed my husband (the only white man on our team) to say that “Valerie’s feedback indicated that your team was ‘shocked and disgusted’ by our mentorship and called us ‘hostile event leadership’, and she would not recommend anyone to do a hackathon, nor would she do it again if we were there.” This is a short excerpt from an email that went on for several paragraphs. For context, I was the only person of color on the team. I had not written the feedback.

I contacted the instructor who had helped organize the event, a self-proclaimed ally, and explained the situation: The facilitator had gone to the only white man our hackathon group and assigned this “anonymous” feedback to the only BIPOC person in the group. The facilitator was unaware that we were a couple or that we had completed the feedback together. The instructor never followed up with me to address my concerns. I have never forgotten this incident, always thinking back to the damage it could have caused to my reputation and how in a different team, I may never have become aware of the email.

Performative allyship, a form of superficial activism, takes place when someonepretends to be an ally for personal gain. On the surface, performative allies appear to support the cause. They may post signs on their lawns, share posts on social media, or use associated hashtags. They don’t, however, engage, educate themselves, act, or acknowledge personal responsibility. The instructor I approached about the incident at the hackathon continues to share support for different causes on social
media, but their lack of action is a perfect example of performative allyship.

Performative allyship ruins relationships. I have never reached out to that instructor again and I never will. At a societal level, performative allyship gives the impression that a company or organization is acting, when, in reality, it reinforces the status quo. Performative allyship is detrimental to equity and belonging efforts because through it, misinformation is spread, tone is policed, messaging is diluted, and systems already in place are reinforced.3,7

ALLYSHIP IN VETERINARY MEDICINE

Many of us in veterinary medicine consider ourselves allies. I challenge us all to think about allyship through the lens of Utt’s article. Have you ever dismissed people’s concerns about an issue that affects them and their demographic group? Has someone called out a joke or comment you made as sexist or racist? Did you dismiss the feedback? Did you justify or minimize your comments because you consider yourself an ally, support BIPOC communities, or share supportive comments on social media?

On a broader scale, have you made sure that your staff represents the community you serve, that there is no pay gap at your clinic that disproportionately affects women or individuals from marginalized communities, and that you take microaggression concerns seriously?

Allies play a crucial role in the advancement of diversity, equity, inclusion, and belonging in veterinary medicine. The well-being of the whole team—veterinarians, vet technicians, assistants, receptionists, managers, and all support staff—depends on it.  

REFERENCES


People often ask me how they can help. I suggest they check out some of these groups and organizations, which are doing the work in our profession, and get involved by donating time and money. Being an ally is more than mere words; it is authenticity in action.

• Association of Asian Veterinary Medical Professionals
• BlackDVM Network
• BLEND
• Diversity Veterinary Medicine Coalition
• Latinx Veterinary Medical Association
• Multicultural Veterinary Medical Association
• National Association for Black Veterinarians
• Native American Veterinary Association
• North Carolina Association of Minority Veterinarians
• Pride Veterinary Medical Community
• Veterinarians as One Inclusive Community for Empowerment
• Vets of All Colors
• Veterinary Professionals Instilling Black Excellence
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CONFERENCEINSIDER

Our Fetch dvm360® Conference is returning to San Diego, California, December 2-4, 2022, and is scheduled to feature an array of topics from equine cardiology to the human-animal bond to hands-on laboratory opportunities. The keynote session on the second day will be presented by Courtney Campbell, DVM, DACVS-SA, a veterinary surgeon at VetSurg, and Molly McAllister, DVM, MPH, chief medical officer at Banfield Pet Hospital. Titled, “The Veterinary Health Gap: How Veterinary Health Inequity Affects Us All,” the session will focus on societal inequity/social justice, health disparities, and the role veterinary medicine does, can, and should play in promoting a more diverse, inclusive, and equitable profession and society.

Campbell and McAllister, board members of the Diversify Veterinary Medicine Coalition, hope to shed light on inequity in the veterinary field and bring more awareness to the issue. “I’ve seen health inequity play out from my own days of clinical practice, where we struggled to provide care to animals without transportation or financial means, to my more recent focus on population medicine, where we see pets in veterinary deserts subject to a higher risk of being diagnosed with very preventable diseases," McAllister told dvm360®.

Campbell also shared his experience with inequity. “Unfortunately, I have witnessed veterinary inequities at multiple levels throughout the veterinary industry. Low-cost veterinary facilities in economically disadvantaged areas typically suffer from being short-staffed. Tertiary veterinary care can often feel inaccessible to diverse clients because of implicit bias among veterinary health care providers, and the newest medications and free drug samples are not offered to the communities with the greatest need,” he said.

Campbell and McAllister also shared what they are excited about and looking forward to at Fetch. “The energy and buzz surrounding a Fetch conference is powerful. The innovation, creative storytelling, and cutting-edge research on display is one of the many reasons I am looking forward to the conference," Campbell said. “The connection and bond you share with your colleagues is undeniable. The ability to luxuriate in the abundance of veterinary talent is awe-inspiring. There is no doubt this experience will leave me wanting more.”

McAllister said, “Fetch [is] a chance to reconnect with friends and colleagues, learn from inspiring new thought leaders, and energize myself with new ideas and knowledge about everything from clinical medicine to well-being to leadership and more. It’s a place for passionate vet professionals and game changers to share ideas and excitement, and I always leave feeling recharged and inspired.”

Be sure to register now for the Fetch dvm360® Conference to join Campbell and McAllister during the keynote presentation.
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In case of accidental oral intake or self-injection, seek medical advice immediately and show the package insert to the physician. DO NOT DRIVE as sedation, loss of consciousness, and changes in blood pressure may occur.

Persons with cardiovascular disease (for example, hypertension or ischemic heart disease) should take special precautions to avoid any exposure to this product.

Pregnant women should exercise special caution to avoid exposure. Uterine contractions and decreased fetal blood pressure may occur after accidental systemic exposure.

Persons with known hypersensitivity to any of the ingredients should avoid contact with Zenalpha.

Caution should be exercised when handling sedated animals. Handling or any other sudden stimuli, including noise, may cause a defense reaction in an animal that appears to be heavily sedated.

Note to physician: Zenalpha contains medetomidine, an alpha2-adrenoceptor agonist, in combination with vatinoxan, a peripherally selective alpha2-adrenoceptor antagonist. Symptoms after absorption or accidental self-injection may include dose-dependent sedation, respiratory depression, bradycardia, tachycardia, and hypotension.

Animal Safety Warnings
Zenalpha should not be administered in the presence of pre-existing hypotension, hypoxia or bradycardia. Due to the pronounced cardiovascular effects of alpha2-adrenoceptor agonists, only clinically healthy dogs (American Society of Anesthesiologists [ASA] classes I and II) should be administered Zenalpha. Dogs should be monitored frequently for cardiovascular function and body temperature during sedation.

Zenalpha is not intended for use in cats. The use of Zenalpha in cats has been associated with hypotension.

PRECAUTIONS: Dogs should be monitored frequently during sedation for changes in heart rate, blood pressure, respiratory rate and body temperature. Tachycardia may occur in some dogs after recovery from sedation.

In the event of hypoxia or apnea, supplemental oxygen should be administered.

Following administration of Zenalpha, a decrease in body temperature may occur and an external heat source may be needed to maintain body temperature. Hypothermia may persist longer than sedation and analgesia.

The analgesic effect of Zenalpha will not last longer than the sedative effects. Additional analgesic(s) should be administered as needed.

Nervous, excited or agitated dogs with high levels of endogenous catecholamines may exhibit a reduced pharmacological response to Zenalpha (ineffectiveness). The onset of sedative/analgesic effects could be slowed, or the depth and duration of effects could be diminished or nonexistent. Therefore, allow the dog to rest quietly for 10 to 15 minutes after injection.

With the alpha2-adrenoceptor agonist drug class, including Zenalpha, the potential for isolated cases of hypertension, including paradoxical response (excitation) exists. Repeat dosing with Zenalpha has not been evaluated.

Zenalpha has only been evaluated in fasted dogs; therefore, the effects on fed dogs (for example occurrence of vomiting) have not been characterized.

The concurrent use of anticholinergic medications and Zenalpha has not been evaluated.

Zenalpha may decrease serum glucose in healthy dogs and this effect may persist longer than sedation.

The safe use of Zenalpha has not been evaluated in dogs with hepatic or renal impairment, dogs younger than 4.5 months old, or dogs that are pregnant, lactating, or intended for breeding.

ADVERSE REACTIONS: The most common adverse reactions observed in the field study were decreased body temperature (requiring external heat support), reduced respiratory rate, diarrhea, muscle tremor, signs of coitus, hypothermia (requiring external heat support).

To report suspected adverse events, for technical assistance or to obtain a copy of the SDS, contact Dechra Veterinary Products at (866) 933-2472. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.fda.gov/reportanimalae.

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Agriculture and Agri-Food Canada invests $3 million in animal welfare and tracking

To improve animal welfare and tracking in the country, Agriculture and Agri-Food Canada announced in an organizational release it will distribute $3 million across 3 national organizations. With funding from the AgriAssurance Program, the organizations will use new research to update industry standards for the care and handling of animals. The organizations will also evaluate technology to track farm animals more efficiently in the production system in the event of a disease outbreak. Agriculture and Agri-Food Canada hopes this work will support the highest standards of farm animal care. The recipients of these funds include the following:

• Animal Health Canada, located in Elora, Ontario, will receive up to $2.9 million to update national codes of practice for the livestock sector, including the code for safe and humane transportation of livestock. The organization has also developed and introduced a code of practice for the aquaculture sector covering farmed salmon, trout, and Arctic char.

• The Canadian Cattle Identification Agency, located in Calgary, Alberta, will receive up to $52,140 to evaluate the use of ultra-high frequency scanners to read cattle identification tags. These funds signify Canada’s commitment to the international community to quickly trace the movement of animals in the event of a disease outbreak. Tag readings are recorded in a database, making it possible for government and industry to rapidly contain the scope of a potential outbreak and protect animal and human health.

• The Canadian Poultry and Egg Processors Council (CPEPC), located in Ottawa, Ontario, will receive up to $35,750 to update its animal welfare program for hatcheries and meet the requirements of the National Farm Animal Care Council’s Codes of Practice for the care and handling of hatching eggs, breeders, chickens, and turkeys.

Melanie Barham, DVM, MBA, PMP, executive director of Animal Health Canada, said in the release, “We’re pleased to continue working collaboratively with industry, government, veterinary, and animal welfare professionals to continue developing the Codes of Practice through the National Farm Animal Care Council, a division of Animal Health Canada. Evidence-based code development is a cornerstone of how the Codes [of Practice] are created and updated, and we are excited to lead this project into its final year of funding.”

Jean-Michel Laurin, president and CEO of CPEPC, stated in the release: “This important financial contribution allowed CPEPC to convene a group representing poultry producers, breeders, hatcheries, veterinarians, academics, retailers, and animal welfare association representatives. Together, this group reviewed Canadian hatcheries’ animal care program, [ensuring its] alignment with the Codes of Practice and [fostering] compliance across Canada’s hatchery sector.”

REFERENCE
Mini donkey receives pacemaker for fatal heart condition

Three-month-old Nix, a miniature donkey, was regularly collapsing because of a severe heart condition. To treat this usually fatal ailment, veterinarians at Cornell University Hospital for Animals, in Ithaca, New York, successfully implanted a pacemaker in her.

Nix’s owners, Mindy and Carlton Lockwood, struggled as they watched her suffer. “It was either do nothing and Nix would continue to get worse and possibly have a painful death—or the pacemaker,” said Mindy Lockwood, in a university news article.1

Beginning in fall of 2020, Nix experienced collapsing episodes and lethargy when just a few months old. The Lockwoods had their regular veterinarian, Joan K. Ayers, DVM, of Genesee Valley Veterinary Hospital, examine the miniature donkey on their farm in Canandaigua, New York, where Nix resides.

Ayers collaborated with Lockwood and Barbara Delvescovo, DVM, MRCVS, DACVIM, a clinical fellow in the Large Animal Internal Medicine Section at Cornell, to diagnose Nix’s condition. Initially they thought she might have epilepsy or have suffered a traumatic injury to her neck or skull, but then ruled out these conditions.

In February 2022, Nix was falling again, now from a standing position, and she staggered even more when walking. “When she fell, she was dazed for a few seconds and then would get back up. Several times she fell and rolled out of the pasture fence, which caused us even more concern for her safety,” Carlton Lockwood said.

Nix was referred to Cornell, where veterinarians did an echocardiogram and placed an ECG on her to record her heart’s rhythm. The donkey’s care team diagnosed her with third-degree atrioventricular block, meaning her atria and ventricles weren’t communicating, so her heart’s rhythm was very slow and irregular. There were frequent pauses of 20 to 30 seconds with no heartbeat or blood flow to her body, enlarging her heart. With a lack of blood to her brain or around her body for long periods, Nix was experiencing the clinical signs of this condition (ie, collapse, episodes of weakness, and severe exercise intolerance).

There are 2 types of arrhythmias: physiological, which happen normally when horses are relaxed but go away with stress, excitement, or exercise, and pathological, which are abnormal, dangerous, and can cause poor performance. Nix had pathological arrhythmia.

“This is a pathological arrhythmia that we see pretty uncommonly in horses, but a little more occasionally in donkeys and especially mini donkeys,” noted Katharyn Mitchell, DVM, PhD, BVSc, ACVIM (LAIM), an assistant professor in the Section of Large Animal Internal Medicine, who oversaw Nix’s case at Cornell. “Given the severity of the arrhythmia and the frequency of collapse, medication will not be effective, so we only had the choice of placing a pacemaker or euthanasia, given the high risk of continued self-trauma.”

Because of Nix’s young age and as she had no underlying problems, she was an excellent candidate for a pacemaker. After the Lockwoods discussed the options with all concerned, they agreed on giving Nix the pacemaker. In a collaborative effort between Mitchell, Delvescovo, Lawrence Santistevan, DVM, a cardiology resident at Cornell, members of the Large Animal Soft Tissue Surgery Service and the Anesthesiology Service, and various hospital staff members, the complex procedure was successfully carried out.

“There are a few mini donkeys around the world with pacemakers, but certainly it’s not common,” Mitchell said. “It was great teamwork.”

Nix quickly improved after surgery and now has enough blood flow to her brain to walk normally, without fainting or lethargy. After 7 to 9 years, the pacemaker will need to be replaced. In the meantime, it is important that Nix stays calm and has limited exercise. Dangers can arise if the pacemaker lead pulls out of the heart muscle or becomes infected. “We will keep her calm for the first month to lower these risks, and if everything looks okay, then we will increase the pacemaker’s rate a little bit so she can get up some speed and play with her mom in the paddock,” Mitchell added.

Nix will visit Cornell annually for rechecks, but is currently in a small pasture with her mother to keep her activity low while she gets better, Lockwood said. “She has been much more alert, she’s vocal, and has her spunk back.”

At Nix’s recheck appointment in August, the pacemaker was working well and she had only a slight reaction to the pacemaker lead. She did have some skin problems, likely associated with biting flies, so stayed in the hospital for a few days to receive intravenous antibiotics. Her next recheck will be next month, but for now the Lockwoods are celebrating Nix’s second birthday.

REFERENCE

Nix, the miniature donkey (Photo courtesy of Darcy Rose via Cornell University College of Veterinary Medicine)

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October 2022 dvm360® 19
Oldest lion at AZA-accredited institution dies at age 23

The North Carolina Zoo has announced the death of Reilly, a 23-year-old African lion that had been fighting renal disease for a number of years. Because of his weakened state, the animal care team made the devastating decision to euthanize him.

“He was so tolerant of his rambunctious offspring and...fiercely devoted to his lady lion, Mekita,” said zookeeper Beth Malott, who worked with Reilly for 8 years, in an organizational release.1 “Reilly was a one-of-a-kind soul, and his morning roars will be greatly missed.”

According to Jo Minter, chief veterinarian and director of Animal Health, “Renal disease is not uncommon for a cat of Reilly’s advanced age, be it a domestic...[one] sitting on your chair at home or a lion at the zoo.” The institution, he added, had been “extremely fortunate to be able to monitor...Reilly’s renal disease...using operant conditioning to get blood from his tail, but unfortunately, the progression of the renal disease, along with his previously diagnosed spinal disease, proved to be too much.”

Reilly was born on February 7, 1999, at Lincoln Park Zoo in Chicago, and arrived at the North Carolina Zoo on March 23, 2001. He was father to 9 offspring: 3 males and 6 females. Mekita is now the only lion remaining at the North Carolina Zoo. Future mates and pride members will be chosen based on recommendations from the Association of Zoos and Aquariums (AZA).1

Lions live 10-15 years in the wild, and males under human care have a median life expectancy of 17 years.1 Male African lions weigh up to 570 lb, and females up to 277 lb. In his prime, Reilly weighed 440 lb and at the time of his death, he weighed 394 lb. With approximately 23,000 African lions left in the wild, the animals are classified as a “vulnerable” species by the International Union for Conservation of Nature (IUCN). Their populations are continually decreasing as a result of poaching and habitat loss.

Facts about lions1

- They are the only big cats that are social.
- They live in prides consisting of a dominant male, several females, and their cubs.
- They may sleep for up to 20 hours per day.
- They are native to the savannahs and grasslands of Africa.
- They can reach speeds of up to 50 mph in very short bursts.

REFERENCES


North Carolina State University College of Veterinary Medicine recently published a study investigating the connection between cognitive function, quality of life, and hearing loss in aging companion dogs.

“The connection between physical and neurological decline is clear for humans,” said corresponding author Natasha Olby, PhD, VetMB, in an organizational release, and the NC State study indicates “that the same connection is at work in aging dogs.” But because “we can potentially treat hearing loss in dogs, we may be able to alleviate some of these other issues,” she pointed out, and better yet, “by quantifying neurological and physiological changes in elderly dogs, we’re not only improving our ability to identify and treat these issues in our pets, we’re also creating a model for improving our understanding of the same issues in humans.”

Olby and colleagues performed auditory and cognitive tests on a total of 39 geriatric dogs and asked the pet parents to complete the canine dementia scale (CADES) and canine owner-reported quality of life (CORQ) questionnaire, which included questions about the dogs’ vitality and companionship.2 Afterward, age, cognitive test results, and scores on CADES and CORQ were compared among the 3 canine groups.

An “average” dog can hear tones at 50 decibels without a problem. In the study, 19 dogs could hear at 50 dBo, 12 at 70 dBo, and 8 at 90 dBo. The average age in each group was 12, 13, and 14 years, respectively. When investigators compared auditory findings with questionnaire answers, they found that the quality of life scores related to companionship and vitality declined notably as hearing deteriorated. Investigators ranked as abnormal all 8 dogs in the 90 dB group, 9 of the 12 in the 70 dB group, and 8 of the 19 in the 50 dB group. The results of cognitive tests also showed that as hearing decreased, so did canine ability to perform a variety of tasks.

REFERENCES

Petco unveils customer-centric plan for next phase of growth

Petco Health and Wellness Company, Inc recently announced an evolution in its organizational structure and new roles to foster growth by maximizing its end-to-end ecosystem for customers. The company’s business model features over 200 veterinary hospitals and over 1000 veterinary clinics as well as grooming, training, and proprietary and exclusive brands to serve its more than 24 million customers.

According to a company release, to further support its leadership team in executing Petco’s strategy to put customers first, the company made these appointments:

- **Amy College**, chief merchandising officer, will be responsible for demand planning. She and her team will drive a sharper, integrated view of product and customer demand. College’s background in omnichannel business management and demand planning at Best Buy will help her succeed in this position.
- **Jason Heffelfinger**, senior vice president of services, has been promoted to chief services officer. Heffelfinger has been key to the build-out of the company’s owned veterinary model, including the acquisition of its Thrive Pet Healthcare joint venture and smaller veterinary hospitals. He also spearheaded the rapid advancement of Petco’s grooming business.
- **Darren MacDonald**, chief digital and innovation officer, is taking an expanded role as chief customer officer. In addition to his digital team, MacDonald will lead customer-focused teams, including marketing, membership, loyalty, enterprise analytics/data science, and customer service. In the new role, MacDonald will add to his prior experience leading customer-centric organizations at Jet.com, Walmart.com, and IAC/Pronto.
- **Justin Tichy**, chief pet care center officer, has been named chief operating officer. He will take on additional responsibility for company-wide logistics, including management of the company’s distribution centers. He will also run more than 1400 Petco pet care centers in the United States. By strengthening the connection between distribution and pet care centers, he will ensure inventory is in the right place to meet customer demand. Tichy will rely upon his experience with Walmart, Target, and Best Buy to advance pet care centers and distribution.

Additionally, Petco announced that Mike Nuzzo, chief operating officer and president of services, will be leaving the company after 7 years. “I want to express my deep thanks to Mike who has served in many leadership roles at Petco, from CFO to COO and president of services, and who has left an indelible mark on our company,” Petco CEO Ron Coughlin said in the release. “These appointments and our organizational design are emblematic of our focus on putting the customer and data at the center of everything we do as we meet the customer need of a single partner for the health and wellness of their pet. It also manifests our dedication to driving operational excellence. Lastly, it highlights the tremendous talent we have at Petco and our focus on developing that talent.”

**REFERENCE**

Lear’s macaw reintroduced into wild and flourishing

The first Lear’s macaw chick was born in its natural habitat in Brazil from birds born and raised outside its natural habitat at the Loro Parque Fundación (Loro Park Foundation). Over 40 birds have been born and raised by people at the institution’s breeding center in Tenerife and 19 have been sent to Brazil, 8 of which were successfully introduced into the wild.

The foundation has succeeded in updating the category of this species on the Red List of the International Union for Conservation of Nature from “critically endangered” to “endangered.” The foundation has done the same for 10 species to date.

Protecting and preserving the Lear’s macaw has been an extensive process. The Brazilian government transferred 2 pairs of these birds to the Loro Park Foundation 16 years ago, with the goal of breeding and saving a species on the brink of extinction. There are now more than 1200 Lear’s macaws, up from an estimated 60 in 1983.

ASPCA and emergency management agencies team up to help animals in Kentucky

The American Society for the Prevention of Cruelty to Animals (ASPCA) was recently asked by the Hazard Area Command to help support the Animal Care Branch at the Emergency Operations Center in Kentucky. The ASPCA team is also helping to conduct search and rescue throughout Knott, Letcher, Perry, and Breathitt counties for any animals that were victims of the flood in late July.

Along with rescue, the ASPCA is supporting pet owners impacted by the flooding by providing supplies and pet food for displaced animals within the affected counties. According to an organizational release, the ASPCA will communicate with emergency management agencies as well as animal welfare organizations across the state, ready to provide support when requested.

“In emergency situations like this, the ASPCA’s priority is to provide the critical support and resources needed to assist animals and pet owners impacted by these deadly floods,” Tim Rickey, vice president, ASPCA National Field Response, said in the release. “The ASPCA Disaster Response team is grateful to collaborate with local agencies to ensure we are bringing animals to safety.”

Along with its rescue efforts, the ASPCA will help move over 25 unowned cats from the Kentucky Humane Society to MSPCA-Angell and unowned dogs to the Dumb Friends League in Colorado and the Connecticut Humane Society. These animals were in shelters before the flooding in Kentucky and will be ready for adoption in the coming weeks.

ASPCA disaster response efforts have been made possible by the support of the Alex & Elisabeth Lewyt Charitable Trust.

Chewy debuts CarePlus, exclusive suite of pet wellness and insurance plans

Chewy, Inc, an online retailer of pet products, has expanded its insurance and wellness offerings with CarePlus, a suite of pet-first plans available in 31 states and expected to expand to all states by late 2022.

“The launch of CarePlus is a significant step forward in our mission of making pet healthcare more affordable and accessible,” said Chewy Health Vice President Mita Malhotra in a company release. “Innovating to improve customer experience is the cornerstone of our customer strategy. Our thoughtfully designed and customized selection of wellness and insurance plans will empower pet parents to always say ‘yes’ to [the] high-quality care that will help…pets live longer, healthier and happier lives,” she added.

CarePlus provides pet owners interested in insurance with 24/7 access to Chewy Health’s customer care team, puts them immediately in touch with veterinarians through the company’s telehealth service Connect with a Vet, and covers all costs of eligible prescription medications, supplements, and diet foods purchased at chewy.com. The offerings were combined to allow for a more comprehensive approach to pet health care.

CarePlus also offers seamless veterinarian-client interactions and the option for clients to make direct payments at participating clinics with Trupanion software, thus reducing out-of-pocket expenses.

Wellness plans start at $20 a month and cover such preventive care as annual exams, vaccines, and parasiticides. Insurance plans start at $20, $60, and $100 a month and offer financial assistance and peace of mind in case of accidents and unexpected illnesses or surgeries. Pet parents seeking complete protection can purchase wellness/insurance bundles.
Veterinarians reflect on Queen Elizabeth II’s legacy and love of animals

The veterinary community is mourning the loss of Queen Elizabeth II of the United Kingdom (UK) and remembering her as an advocate for animals and a patron of veterinary organizations. The UK’s longest-reigning monarch, who was well known for her enjoyment of equestrian sports, the care of horses, and companionship of her beloved corgis, died on September 8, 2022, at Balmoral Castle, the royal residence in Scotland, according to the royal family.1

The Royal College of Veterinary Surgeons (RCVS) and the British Veterinary Association (BVA)—both of which called the late queen their longtime patron—were among organizations around the world that expressed their appreciation of her in public statements.2,3

The RCVS said that its president, councils, and staff were devastated by the loss of Queen Elizabeth II, who was a loyal patron and benefactor since 1952. “Throughout her 70-year reign, the Queen, as a renowned animal-lover, was a steadfast supporter of both the college and the veterinary professions as a whole,” the RCVS statement said.3

In a statement released by the BVA, president Justine Shotton said everyone there was deeply saddened by the queen’s death. “A dedicated public servant and a lifelong animal lover, as our Patron for more than 7 decades she helped build the UK’s international reputation for high standards of animal welfare, supported the vital work of our veterinary professionals, and improved the lives of animals both here in the UK and across the world. We are eternally grateful for her service and our hearts and thoughts are with her family, her friends, and the nation,” said Shotton.2

The RCVS also reflected on the late queen’s visit to its headquarters in 1994 for celebrations marking the 150th anniversary of the College’s original royal charter. During the visit, she granted permission for her name and likeness to be used for the RCVS Queen’s Medal, the highest honor the organization can bestow upon a veterinary surgeon, according the statement.3

“We reflect upon her extraordinary legacy, service and contribution with both awe and sadness, and, along with all in the veterinary professions, our thoughts are with the Royal Family on this very difficult day,” the RCVS statement said.3

REFERENCES
The 5 deadliest zoonotic diseases and pathogens

These organisms frequently endanger veterinary professionals

When asked to name the most dangerous occupations, most individuals would probably mention such jobs as a Hollywood stunt double, deckhand on Deadliest Catch, or lion tamer. Most wouldn’t think of veterinary professionals. But it may not be so shocking to discover just how close to the proverbial cliff’s edge many of us walk every day.

Veterinarians and their staff file occupational health claims 2.7 times as often as human health care workers. According to a paper published in 2005, when only severe accidents leading to a loss of more than 3 days of work were analyzed, that figure rose to 9.2 times. Scratches, bites, and kicks made up almost 66% of the accidents reported by veterinary professionals, who filed claims for skin (39%), respiratory (30.5%), and infectious (19.1%) diseases.1

In a 2012 survey of practitioners in Minnesota, 27% reported having been infected with a zoonotic disease during their career.2 Documented zoonotic infections among veterinary personnel include salmonellosis, cryptosporidiosis, sporotrichosis, methicillin-resistant Staphylococcus aureus (MRSA), and psittacosis. Most veterinary personnel (57.4%) are exposed to pathogens via hand contact—we’re touching gross stuff—whereas 21.7% of veterinary personnel (57.4%) are exposed to pathogens via hand contact—we’re touching gross stuff—whereas 21.7% of those pathogens exposure occurs orally. Another fun fact? Cats are the most frequently reported source of zoonotic infection among veterinary personnel.3

So which are the most dangerous zoonotic diseases and pathogens? In ascending order of deadliness, they are:

unsuspecting dogs may become infected on their daily walks. The farm dog is no longer the animal at highest risk; it is now the city dog weighing less than 15 lb. Fortunately, leptospirosis can be treated with antibiotics and supportive care, based on symptom severity and organ system affected.

4. TICK-BORNE DISEASES

Several tick-borne diseases combine for a human mortality rate of 7% to 30%, including Lyme disease, Crimean-Congo hemorrhagic fever (CCHF), and a grab bag of rickettsial diseases that constitute an entire group of uncomfortable possibilities.4-6 Except for CCHF, all these zoonoses require a tick bite for transmission. CCHF can be transmitted via tick bite or direct contact with the blood of an infected mammal. Named for the Connecticut town where it was initially identified, Lyme disease is caused by Borrelia burgdorferi. A handful of states account for 95% of reported cases in the United States. The arachnids of interest are Ixodes scapularis (black-legged or deer tick) and Ixodes pacificus (Western black-legged tick). Although other types, like Dermacentor variabilis (American dog tick), and some insects have been documented as carrying B burgdorferi, transmission of Lyme disease through them has not been proven. Most infected dogs and cats are asymptomatic, but those that manifest symptoms almost always present with arthritis.

CCHF is not a disease many Americans are familiar with, but it merits a mention as it can be found in humans, birds, ticks, domestic animals, rodents—and mosquitoes. Caused by Nairovirus, CCHF is found in Africa, Eastern Europe (particularly the former Soviet Union), Southern Europe, the Mediterranean, the Middle East, northwestern China, central Asia, and the Indian subcontinent. Ixodid ticks of the genus Hyalomma, including Amblyomma variegatum, Boophilus decoloratus, and Rhipicephalus sp are vectors for CCHF, and animals such as cattle, goats, sheep, hares, and hedgehogs serve as amplifying hosts. Although many birds are resistant to infection, ostrich are susceptible. Clinical presentation in humans begins with nonspecific symptoms like headaches and joint pain, but by the fourth day it has typically progressed to more
advanced illness with uncontrolled bleeding. Only humans and newborn mice succumb to CCHF.  

3. MRSA  

Although MRSA does not typically colonize animals (ie, animals are not routine carriers), it does have a 30% mortality rate in humans. Because animals can have MRSA infections, contact exposure is possible. But why doesn’t MRSA colonize animals? Because it is a human-adapted, gram-positive bacteria found in our skin and nasal passages. MRSA colonization in cats and dogs normally ranges from 0% to 4%; however, rates in specific populations can be higher (7%-9%). The primary risk factors for MRSA colonization in pets is contact with MRSA-infected humans, repeated courses of antibiotics, going to the veterinarian, having surgery, or being hospitalized for several days. Veterinary personnel have a higher risk (4%-18%) of MRSA colonization than the general population (1%-3%). So, wash your hands thoroughly after touching that super-disingusting, so-ugly-it’s-cute pet.

Staphylococcus pseudintermedius is the pet’s answer to MRSA. S pseudintermedius is a host-adapted commensal organism in dogs and cats that can be resistant to meticillin. However, colonization of humans by meticillin-resistant S pseudintermedius (MRSP) is typically only transient, and human MRSP infections are rare. Highly pathogenic A (H5N1) avian influenza has a mortality rate of 53% to 56% in humans. These bad bugs have a mortality rate of up to 40% in humans.  

The primary definitive host of B procyonis is the raccoon. In the United States, the infection rate for adult raccoons is high in the northeastern, midwestern and West Coast regions, varying from 66% to more than 90%. Thus, it may be prudent to presume that all are infected. B procyonis has the typical roundworm life cycle. A couple of things to remember are that roundworm eggs take 2 to 4 weeks to become infected once passed out in raccoon feces and that dogs don’t just ingest fecal matter, they roll in it. Because B procyonis eggs are quite sticky, they can get stuck in pet fur, enter the house at night, and jump into bed with you.  

On the farm where I grew up, T gondii was known as the parasite “that pregnant women get it shouldn’t.” Today, toxoplasmosis is a leading cause of foodborne–related death in the United States, but is nevertheless considered a “neglected parasitic disease.” Cats are the only definitive host for T gondii. Because any feld species can serve as host, if T gondii is present in an area, it means that cats also are, or were, present there.  

1. AVIAN INFLUENZA A VIRUSES  

Highly pathogenic A (H5N1) avian influenza has a mortality rate of 53% to 56% in humans. Dabbling ducks are the origin of all influenzas and thus all influenzas are zoonotic. Since the early 2000s when canine flu emerged, veterinarians have joined the frontlines of influenza detection. Although no cases of dog-to-human transmission have been documented, cat-to-human transmission has occurred in close-contact, high-exposure environments like shelters. Influenza’s superpower is its ability to mutate because any mutation can increase its transmissibility. In fact, flu mutation merits its own vocabulary. Antigenic drift is the small mutation that causes seasonal flu changes, and antigenic reassortment the larger one that can produce flu of pandemic proportions. A flu can drift from bird to bird or season to season and then reassert to cause illness in a new species including humans. Finally, random mutation of a recently reassorted avian virus can make it readily transmissible among the new host species. Many bird species have been confirmed to have avian influenza, including flamingos, ostriches, pelicans, parrots, and macaws.  

CONCLUSION  

With such deadly zoonoses potentially sneaking into clinics, how can veterinarians and their staff stay healthy and avoid taking home unwanted bugs? These practical (and potentially obvious) tips have to do with the fact that most transmissions involve putting something disgusting in your mouth. So, to stay safe at work:  

- Close your mouth.  
- Wash your hands, thoroughly and often.  
- Keep food where it should be and not where it shouldn’t.  
- Use an appropriate disinfectant.  
- If you don’t already have one, get an infection control plan for your practice. You can find a template on the website of the National Association of State Public Health Veterinarians.  

REFERENCES  

Dogs spent abundant time with their families during the COVID-19 pandemic, as children and adults attended classes via video chat and worked from home, respectively. However, pets’ fantasy worlds—where their owners were home more indefinitely—came to a halt when everyone returned to in-person activities. According to Steve Dale, CABC, in a lecture delivered at the 2022 Fetch dvm360® Conference in Kansas City, Missouri, humans’ return to life outside the home led to an emergence of canine separation anxiety, as dogs’ routines were turned upside down.1

Dale began his talk by defining separation anxiety. “Essentially, it is separation from a specific person, isolation distress…and many times it is, frankly, a panic attack. These dogs are panicked. There’s no other gentle way to say it,” he said. Dale further discussed the ins and outs of this condition, providing tips on diagnosing the condition and offering solutions, as well as debunking certain myths.

**DIAGNOSING SEPARATION ANXIETY**

According to the American Society for the Prevention of Cruelty to Animals, some common signs of separation anxiety when dogs are left alone include the following2:

- Urinating and defecating
- Barking and howling
- Chewing, digging, and causing destruction
- Escaping
- Pacing
- Coprophagia

Dale said there isn’t a certain number of signs a dog must have to receive a diagnosis of separation anxiety, as “it depends on the dog.” Signs of separation anxiety can also be indicative of another condition. For example, if a dog is barking when they’re home alone, it may indicate that they are bored, or if they are having accidents, it could
be because of cognitive dysfunction syndrome, according to Dale. Anxiety can also arise from a dog experiencing chronic pain. This doesn’t mean separation anxiety is mutually exclusive to an alternate condition, but the primary condition must be considered.

An excellent method for veterinary professionals to discover whether a dog is experiencing separation anxiety is by reviewing footage from cameras in clients’ homes that monitor the dog when they are away. “An expert like yourself can look at that video and say, ‘This really isn’t separation anxiety. This is a dog barking at the mailman [or] the individuals walking down the street—that’s not separation anxiety.’ Or you can say, ‘Yes, this dog is clearly anxious,’” Dale said.

Dale also advised to be mindful when categorizing the severity of a dog’s separation anxiety. “You can be just as anxious as [someone else] but you may express it very differently. You may scream and yell [or] you may say nothing and just sit there but be feeling the same anxiety. If that’s the case in [humans], that might that be the case in dogs, too. Dogs assumed to have mild separation anxiety may be feeling just [as] or more anxious than the dog that clearly is expressing anxiety in all sorts of different ways,” he said.

**DEBUNKING SEPARATION ANXIETY MYTHS**

During his presentation, Dale highlighted some common misconceptions clients have surrounding canine separation anxiety, including the following:

- **“It’s my fault.”**
  Clients may believe this if they felt they haven’t been enough of a “pack leader,” or if they let the dog sleep with them or spend too much time with them, for instance.

- **“Separation anxiety isn’t treatable.”**
  These pet owners are often averse to medication or view it as a last resort for separation anxiety.

- **“The dog is spiteful.”**
  This is the myth Dale said he hears most from clients, that the dog is displaying the signs of separation anxiety on purpose because of spite.

- **“The dog isn’t well trained enough.”**
  Separation anxiety isn’t a reflection of how well trained a dog is or of intelligence. Both well-trained and not well-trained dogs can experience this just the same.

- **“Crating the dog will stop the problem.”**
  This will likely make it worse, as the dog can be injured while panicking in the crate.

- **“Getting another cat or dog will solve the problem.”**

Although this can work for some, it is not a guaranteed fix, as dogs often experience separation anxiety because humans or a specific individual are leaving the house.

**SEPARATION ANXIETY TREATMENT OPTIONS**

Dale outlined some methods that veterinarians can inform clients about to combat canine separation anxiety. He also noted the significance of an individualized approach. “What works for one person in one situation doesn’t necessarily work for another,” he said.

**Traditional treatments**

Dale shared that there are food options for dogs that contain probiotics that claim to ease anxiety, and because the brain and stomach are connected, this can calm a dog. There are also nutraceuticals available on the market, but it’s important to choose those with demonstrated scientific efficacy. Additionally, there are anxiety wraps for dogs that can offer relief for a variety of anxieties.

**Doggie day care**

If it is in a client’s budget, they can consider taking their dog to day care several times a week, or they can have a friend, neighbor, or dog walker regularly check on their pup when they are out to break up their day.

**Graduated departures**

Dale said encouraging independence through graduated departures could also be helpful. He advises to tell clients to first put a dog bed, yoga mat, or blanket in one room and direct the dog to lie there when the client is in the same room. Then the client should gradually go farther away from the dog to separate rooms until their pet becomes accustomed to the feeling of being alone. “It’s like the dog [is] going to college. [But] certainly give the dog something to do while the dog is there, [such as] something safe [for them] to chew on that can occupy them,” he said.

**Background noise**

Certain background noise can also be soothing to dogs while a pet parent is gone, such as a fan or air conditioner that can provide white noise. There is also music available on streaming platforms specifically for dogs, or they can turn on the radio or television to keep the dogs entertained and at ease. “[This is] important because a lot of these dogs have anxiety to noise, as well. Things are happening outside that, depending on where that client lives, may exacerbate the anxiety,” Dale said.

**REFERENCES**

1. Dale S. How to mess with separation distress. Presented at: Fetch dvm360® Conference; August 26-28, 2022; Kansas City, MO.


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**THE EVIDENCE IS IN: DECLAWING IS HARMFUL TO CATS**

I authored “Pain and Adverse Behavior in Declawed Cats,” which was recently published in the Journal of Feline Medicine and Surgery. My team reported statistically-significant findings that directly contradict the claims made in the AVMA position statement on declawing. Declawed cats are more likely to have back pain, inappropriate litter box habits, and biting behavior. The risks of chronic pain and adverse behaviors in declawed cats were increased regardless whether the entire P3 bone was removed, which surgical technique was used, or the experience level of the operator.

My private practice has received positive client feedback regarding our decision to stop declawing. Our staff’s morale and commitment to client education has increased. People can learn to live with, care for, and appreciate cat claws.

The Paw Project has free resources available to assist you in making the transition to a “no-declaw” practice. “We’re Proud We Don’t Declaw” window clings are free for your practices when you make the No-Declaw pledge. If you choose not to declaw, please email us and we will gladly add you to our No-Declaw List (bit.ly/nodeclawvets).

Let us celebrate your no-declaw pledge by sharing it with our 500,000+ followers.

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Nicole Martell-Moran, DVM, MPH, DABVP (Feline)
Managing atopic dermatitis (AD) in dogs starts with finding the allergen that causes the flare-up and ends with administering the best treatment. Darren Berger, DVM, DACVD, an associate professor at Iowa State University College of Veterinary Medicine in Ames, addressed the correlation between allergens and AD and management of the condition at the 2022 Fetch dvm360® Conference in Kansas City, Missouri. “Allergy management is allergy control,” he said, and if clients think they’re “never going to [see a] flare, that’s an inappropriate expectation.” The “realistic goals” are to decrease AD severity, space out flares, and make long-term treatment less expensive.

**ALLERGENS**

An inflammatory condition, AD is the second most common allergic skin disease in dogs, behind flea allergy dermatitis, and can be caused by food, parasitic, and environmental allergens.1,2

**Parasites**

“It’s fleas and it’s microscopic mites,” Berger said, but flea preventives can deter onset of AD signs and symptoms.

**Food**

“We have to stop talking about expensive diets...[and] fancy foods...[and]...start talking about diagnostic testing,” Berger added, pointing to the benefits of an elimination diet as a diagnostic tool to ascertain whether food is causing a dog to itch or show other signs of AD.

**Environment**

Pollen and dust mites are among the environmental allergens that may cause a skin reaction in dogs.

**TREATMENTS**

Because AD is multifaceted, treatments should be tailored to the individual patient and combined interventions should be used to improve outcomes. Condition stage and severity plus lesion distribution should be considered when creating a treatment plan.3 Once the cause of a flare has been established, the following treatments may be explored.

**Diet**

One way to prevent or manage flares is by eliminating a known allergen from a dog’s diet. Increasing the fatty acids in the diet can help prevent flares, Berger said, although the practice is not as useful for managing signs and symptoms.

**Bathing**

Bathing with a nonirritating shampoo can relieve mild signs and symptoms.3 The International Committee on Allergic Diseases of Animals (ICADA) recommends formulations containing complex sugars and antiseptics (Allermyl; Virbac), phytosphingosine, raspberry oil, or lipids (Douxo Calm; Ceva). “It needs to be soothing,” Berger said, noting that clients who don’t see relief in pets after bathing are often using warm water and do see a change after switching to cool water.

**Medications**

According to ICADA, topical and oral glucocorticoids, oral cyclosporin, oral oclacitinib, and injectable recombinant interferons effectively reduce pruritis and skin lesions, whereas topical glucocorticoids and immunotherapy that targets specific allergens can prevent or delay AD recurrence.3 Antihistamines are also an option when environmental allergens are the trigger: they “do not stop itch; they prevent it,” Berger said.

**TAKEAWAY**

Communication is essential. “I involve [clients] in the decision-making process,” Berger said, to help them understand why they’re doing what they’re doing and ensure treatment adherence and better long-term outcomes. Client input is also important because not all dogs respond to treatments in the same way. If the condition appears to be seasonal, for instance, food allergens can be eliminated. Likewise, cost must be discussed: if treatments are unaffordable, dogs will go without. “It’s our job to educate [clients], to give them options,” Berger concluded.

**REFERENCES**

Clinically proven strong on *Malassezia*, soft on skin¹⁻³

81% of dogs achieved a normal *Malassezia* count¹⁻³ after 3 weeks

Chlorhexidine can cause rare, but serious allergic reactions in humans. If you experience allergy symptoms, discontinue use immediately and seek medical treatment. Do not use DOUXO® S3 PYO Mousse on cats. Do not use DOUXO® S3 PYO Pads between the toes of the cats.

4. BIOSAT multi-sponsor study report dermatological products, small animal veterinarians, USA, Dec 2021.
Developmental orthopedic disease: a clinical approach
Part I: nonsurgical diseases

Developmental orthopedic disease (DOD) refers to a group of conditions caused by congenital and environmental factors that affect the appendicular skeleton of young dogs and result in lameness.1,2 They can be identified by considering the patient’s signalment and history and conducting a complete physical and orthopedic examination and a differential diagnosis. Although the diseases that fall under the umbrella term vary within the literature, this article focuses on the common developmental conditions that result in lameness: panosteitis, hypertrophic osteodystrophy, and endochondral ossification disorders. Hip dysplasia, patellar luxation, and angular limb deformities are beyond the scope of this series.

**PANOSTEITIS**

Panosteitis is a self-limiting inflammatory disease of the marrow of long bones that historically has been referred to as eosinophilic panosteitis, juvenile osteomyelitis, enostosis, and shifting leg lameness.2,3 Its etiology is unknown, but it appears that protein accumulation (from diet or inflammation), vascular proliferation, and local bone formation at nutrient foramina lead to increases in intraosseous pressure and clinical signs.2 The incidence of panosteitis has been estimated at 2.6 cases per 1000 patients,2-3 and is highest in the Northeast and North Central United States, with cases more common in summer and fall.3

Panosteitis primarily affects large and giant canine breeds but can affect smaller ones as well. Most patients present with clinical signs at between 5 and 12 months of age,2,3 and males are more commonly affected than females (4:1 ratio).2 Patients that present with panosteitis are often reported to have a shifting leg lameness. Lameness can vary from mild and transient to nonweightbearing lameness, and the forelimbs are more commonly affected than the hindlimbs (4:1 ratio).2,3

Varying degrees of lameness may be observed upon examination, and sometimes the lameness shifts because multiple long bones are affected.2 All long bones should be palpated and care taken to avoid compressing muscular or nervous structures. Patients typically have marked discomfort on palpation of affected bones. The most commonly affected are the ulna (42%), radius (25%), humerus (14%), femur (11%), and tibia (8%).2,3,5

Radiographs should be taken to differentiate panosteitis from other DODs. Radiographic findings vary based on the stage of the disease.2,4 The changes occur in the diaphysis/metaphysis.2,4 In early stages (Figure 1), films may be normal, or there may be a decrease in radiodensity near the nutrient foramen.2,4 As the disease progresses (Figure 2), there is an increase in medullary opacity with a granular pattern or loss of normal trabecular pattern; some patients also exhibit periosteal new bone formation.2,4 Later on, the medullary canal becomes more diffuse and homogeneous.2,4 After 4 to 6 weeks, the densities regress, and the bone appears to have a courser trabecular pattern.2,4 There is no correlation between radiographic severity of lesions and clinical severity of disease.2,4

Eosinophilia was frequently reported in early descriptions of panosteitis, but subsequent studies indicate that only 1% to 5% of panosteitis patients have eosinophilia.2,5 Treatment (exercise restriction and analgesics) is palliative only and does not influence probability of recovery. There is 1 report in which the use of benzopyron, a proteolytic substance not available in the US, resulted in normalization of interosseous pressure and clinical signs within days of administration, but the findings have not been validated.7 Panosteitis episodes can recur, but severity usually decreases and intervals increase with recurrence.2,5 Overall, the prognosis is excellent, with most dogs making a complete recovery.2,3

On the craniocaudal projection of the left femur belonging to a 5-month-old Labrador diagnosed with multifactorial lameness, panosteitis, in its early stage, can be viewed as patchy areas of increased opacity associated with the proximal aspect of the femoral diaphysis in the region of the vascular channels. (Radiograph Courtesy of Katherine Morris, DVM, DACVS-SA)
Entyce supports dogs facing long-term health challenges by addressing inappetence, which is essential for improving nutrition. Almost seven out of ten* owners reported their dog’s appetite increased in just four days and dogs can safely take Entyce throughout their treatment journey.

INDICATION: For appetite stimulation in dogs.

IMPORTANT SAFETY INFORMATION: For use in dogs only. Do not use in dogs that have a hypersensitivity to capromorelin. Use with caution in dogs with hepatic dysfunction or renal insufficiency. The safe use of Entyce has not been evaluated in breeding, pregnant or lactating dogs. The most common adverse reactions included diarrhea, vomiting, elevated blood urea nitrogen, polydipsia, and hypersalivation. Please see accompanying brief summary for prescribing information.

*Compared to 45/10 control dogs. Study enrolled client-owned dogs (N=264) with decreased appetite for at least 2 days, including dogs with a variety of comorbid conditions. The dogs were randomized 2:1 to receive Entyce 3 mg/kg (n=177) or vehicle control (n=73) for 4 days. 177 inappetent dogs were assessed for effectiveness. All dogs enrolled in the study were evaluated for adverse reactions throughout the study.

Entyce™
(capromorelin oral solution)

30 mg/mL
For oral use in dogs only
Appetite Stimulant

Caution:
Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian. Before using Entyce, please consult the product insert, a summary of which follows:

Indication:
ENTYCE (capromorelin oral solution) is indicated for appetite stimulation in dogs.

Dosage and Administration:
Administer ENTYCE orally at a dose of 3 mg/kg (1.4 mg/lb) body weight once daily. To administer ENTYCE, gently shake the bottle, and then withdraw the appropriate amount of solution using the provided syringe. Rinse syringe between treatment doses.

The effectiveness of ENTYCE has not been evaluated beyond 4 days of treatment in the clinical field study (See Effectiveness).

See product insert for complete dosing and administration information.

Contraindications:
ENTYCE should not be used in dogs that have a hypersensitivity to capromorelin.

Warnings:
Not for use in humans. Keep this and all medications out of reach of children and pets. Consult a physician in case of accidental ingestion by humans. For use in dogs only

Precautions:
Use with caution in dogs with hepatic dysfunction. ENTYCE is metabolized by CYP3A4 and CYP3A5 enzymes (See Clinical Pharmacology). Use with caution in dogs with renal insufficiency. ENTYCE is excreted approximately 37% in urine and 62% in feces (See Adverse Reactions and Clinical Pharmacology). The safe use of ENTYCE has not been evaluated in dogs used for breeding or pregnant or lactating bitches.

Adverse Reactions:
In a controlled field study, 244 dogs were evaluated for safety when administered either ENTYCE or a vehicle control (solution minus capromorelin) at a dose of 3 mg/kg once daily for 4 days. Enrolled dogs had a reduced or absent appetite for a minimum of 2 days prior to day 0 and had various medical conditions: arthritis (40); gastrointestinal disease (24); allergy (22); dental disease (22); cardiovascular disease (16); renal disease (13); and others. Some dogs may have experienced more than one of the adverse reactions during the study. The following adverse reactions were observed:

Table 1: Adverse Reactions reported in dogs administered ENTYCE oral solution compared to vehicle control

<table>
<thead>
<tr>
<th>Adverse Reactions</th>
<th>ENTYCE (n = 171)</th>
<th>Vehicle Control (n = 73)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>GASTROINTESTINAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhea</td>
<td>12 (7.0 %)</td>
<td>5 (6.8 %)</td>
</tr>
<tr>
<td>Vomiting</td>
<td>11 (6.4 %)</td>
<td>4 (5.5 %)</td>
</tr>
<tr>
<td>Hypersalivation</td>
<td>4 (2.3 %)</td>
<td>0 (0.0 %)</td>
</tr>
<tr>
<td>Abdominal discomfort</td>
<td>2 (1.2 %)</td>
<td>0 (0.0 %)</td>
</tr>
<tr>
<td>Flatulence</td>
<td>2 (1.2 %)</td>
<td>0 (0.0 %)</td>
</tr>
<tr>
<td>Nausea</td>
<td>2 (1.2 %)</td>
<td>0 (0.0 %)</td>
</tr>
<tr>
<td>CLINICAL PATHOLOGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elevated blood urea nitrogen</td>
<td>7 (4.1 %)</td>
<td>2 (2.7 %)</td>
</tr>
<tr>
<td>Elevated phosphorus</td>
<td>4 (2.3 %)</td>
<td>1 (1.4 %)</td>
</tr>
<tr>
<td>Elevated creatinine</td>
<td>1 (0.6 %)</td>
<td>1 (1.4 %)</td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polydipsia</td>
<td>7 (4.1 %)</td>
<td>1 (1.4 %)</td>
</tr>
<tr>
<td>Lethargy/depression</td>
<td>2 (1.2 %)</td>
<td>0 (0.0 %)</td>
</tr>
</tbody>
</table>

The following adverse reactions were reported in < 1% of dogs administered ENTYCE: hyperactivity, increase fecal volume, increase gut sounds, and polyuria.

To report suspected adverse events, for technical assistance or to obtain a copy of the Safety Data Sheet (SDS), contact Elanco US Inc. at 1-888-545-5973. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or http://www.fda.gov/reportanimalae.

Effectiveness:
Laboratory Effectiveness Study: Twenty four healthy Beagle dogs (6 dogs per sex in each group) with normal appetite were randomized into two groups and dosed daily with ENTYCE (capromorelin oral solution) at 3 mg/kg/day or vehicle control (solution minus capromorelin) to compare food intake over a 4-day period. The dogs were 13 months of age and weighed between 6.5 and 12.5 kg at the time of randomization. Six dogs administered ENTYCE repeatedly exhibited salivation post dosing and two dogs administered vehicle control exhibited salivation only one time on study day 0. Emesis was observed in one dog administered ENTYCE on study day 1. Dogs administered ENTYCE at a dose of 3 mg/kg/day for 4 consecutive days had statistically significantly increased food consumption compared to the vehicle control group (p < 0.001).

Clinical Field Study: Effectiveness was evaluated in 177 dogs (121 dogs in the ENTYCE group and 56 dogs in the vehicle control group) in a double-masked, vehicle controlled field study. Dogs with a reduced appetite or no appetite, with various medical conditions, for a minimum of 2 days prior to day 0 were enrolled in the study. The dogs ranged in age from 4 months to 18 years. Dogs were randomized to treatment group and dosed once daily for 4 days with ENTYCE at 3 mg/kg or vehicle control. Dogs were assessed for appetite by owners on day 0 and day 3 ± 1 using an “increased”, “no change” or “decreased” scoring system. Dogs were classified as a treatment success if the owner scored their dog’s appetite as “increased” on day 3 ± 1. The success rates of the two groups were significantly different (p = 0.0078); 68.6% (n = 83) of dogs administered ENTYCE were successes, compared to 44.6% (n = 25) of the dogs in the vehicle control group.

Storage Conditions:
Store at or below 86° F (30° C)

How Supplied:
30 mg/mL flavored solution in 10 mL, 15 mL and 30 mL bottles with measuring syringe
Approved by FDA under NADA # 141-457

Manufactured for:
Elanco US Inc.
Greenfield, IN 46140, USA

Revised: September 2020

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HYPERTROPHIC OSTEODYSTROPHY

Hypertrophic osteodystrophy (HOD)—also known as metaphyseal osteopathy, Moeller-Barlow disease, osteodystrophy II, and skeletal, infantile, or juvenile scurvy—is seen in young dogs that are growing rapidly.2,6-8 Its incidence is 2.8 cases per 100,000 patients and is higher in the US Northeast.2,6 Most commonly, it presents in the fall and least commonly in the winter.2

Its etiology is incompletely understood. Vitamin C deficiency, overnutrition, heredity, inflammation/infection, and vaccination have all been proposed, but not validated, as sole causes.2,7-10 Although HOD predominantly affects large and giant breeds, any breed may be affected.2-8 Males are 2.3 times more likely to be affected than females.2

Patients have varying degrees of lameness, from mild to severe, which presents as reluctance to stand and walk.2,7 Prolapse of the long bones typically reveals raw, painful swelling of the metaphyseal region.2 The distal radius, ulna, and tibia are most commonly affected, but HOD has also been found throughout the axial/appendicular skeleton.2 It is common for multiple bones to be affected.2,7 Systemic signs (inappetence/anorexia, depression, hyperthermia, and diarrhea) may accompany orthopedic signs.2,7,8

Radiographs confirm the diagnosis, but clinical signs may appear 48 to 72 hours before radiographic abnormalities.2 Films (Figure 3) reveal a double physis line, a radiolucent line in metaphysis parallel to a narrow zone of increased radiodensity immediately adjacent to the physis.2,7,8 Periosteal/endosteal proliferation may occur.2,7,8

In more advanced cases, radiographs may show excessive enlargement of the metaphyses or, less commonly, irregular widening of the physes.2 HOD is typically self-limiting and resolves within days to weeks, but it can persist for months.3,11 The prognosis is good to excellent in mild cases, but death can occur in severe cases.9 Therapy for the former includes a balanced diet, oral analgesics, and home care; for the latter, hospitalization and more intensive care may be required. Weimaraners may respond better to steroids than to NSAIDs. In 1 study, 100% of Weimaraners treated with oral prednisone (0.75-1.5 mg/kg every 12 hours) achieved clinical remission within 48 hours, whereas only 45.5% of those treated with NSAIDs had clinical resolution within the same time period.10

One or more recurrences of HOD can develop weeks to months after the first episode. Weimaraners with HOD-affected littermates are more likely to relapse than those without.2,7,10,11

ENDOCHONDRAL OSSIFICATION DISORDERS

In growing animals, cartilage within the epiphysis and growth plates becomes bone through a process of matrix mineralization, chondrocyte death, vascularization, and ossification.3,12-14 In patients with osteochondrosis, the process fails to occur normally.1,11-13 Risk factors for the disorder include heredity, fast bone growth, diet, and trauma.1,11-13

Although the terminology describing osteochondrosis is controversial, in broad terms, it can be focal or multifocal, unilateral or bilateral, and associated with the growth plates or the epiphyses.1,11 It is classified according to severity.1,12 Osteochondrosis latens lesions are very early microscopic abnormalities that can resolve spontaneously without causing significant disease.13 Osteochondrosis manifesta lesions are macroscopically and radiographically apparent but don’t typically result in clinical disease.1,12 Osteochondrosis dissecans lesions occur when the deformed cartilage separates from the underlying bone and creates flaps in the joint.13 These lesions, which cause pain and lameness, are conventionally referred to as osteochondritis dissecans because of ensuing synovitis.1,11,13

Osteochondrosis latens does not require surgical management. Treatment of osteochondrosis manifesta may be more debatable, but as a sole lesion, it is not typically an indication for surgery.1,12 Osteochondritis dissecans is typically a surgical disease and will be discussed in Part II of this series.2,12,13

REFERENCES

Choosing CBD for canines

There are multiple factors to consider when selecting the right veterinary cannabis product for each patient.

Are you interested in using clinical cannabidiol (CBD) responsibly? If so, after you’ve taken a few entry-level courses in veterinary cannabis, you must find a product that is pure, potent, and consistent, which may not be easy.

As more research about veterinary cannabis is published, it becomes increasingly clear that the use of CBD and similar hemp-derived products in pets and veterinary patients is quite safe.1-3 Although only a few conditions have been examined in published studies (arthritis being the one most commonly improved by CBD), anecdotal reports show that CBD and analogous molecules from the cannabis plant can also be useful as adjuncts to conventional protocols for other complaints.

First, you should become acquainted with the cannabis policy of your state’s veterinary medical board, as they vary from state to state. The American Veterinary Medical Association (AVMA) has published guidelines for the use of CBD and other cannabinoids in animals, urging clinicians to follow accepted standards of care when prescribing CBD after conventional treatments have failed.4 AVMA also cautions against the use of CBD because the FDA hasn’t completed its quality and safety review of these products in humans or veterinary species.

Second, you should ask yourself these questions as you review a product for clinical use.

1. **Does the manufacturer provide a certificate of analysis (COA) for it?**

   The COA tells you how potent and how clean a product is and what percentage of THC, CBD, and other cannabinoids it contains. Some COAs include a special analysis for terpenes. The COA also specifies whether there are mycotoxins, heavy metals, pesticides, and solvent residues in the product and whether it has been contaminated by microbes.

   Pesticides are commonly used to increase the yield of hemp plants, and the plants can absorb them. In addition, cannabinoids are usually extracted using strong hydrocarbon solvents. You need to know that the final product does not contain either solvents or residual pesticides.

   Make sure that the lot number on the bottle matches the lot number on the COA and check the amount of active ingredients on the COA against the label. The amounts should be the same, and ideally there should be more active ingredients like CBD measured than are listed on the label. This “overage” gives the product a longer shelf life and makes it more resistant to potency loss after exposure to excessive heat for an extended period.

2. **Does it contain THC?**

   Hemp products are allowed to contain less than 0.3% Δ-9-tetrahydrocannabinol (THC). It is important to ascertain that the THC concentration is indeed below 0.3%, which is considered nonintoxicating. CBD with less than 0.3% THC is considered a full-spectrum product. Some dogs are very sensitive to THC and may react even to low levels of it. If you don’t want to take a chance with THC, look for the following:

   - **Broad-spectrum CBD** contains only trace amounts of THC because the substance has been removed either through selective breeding or industrial chemical technology.
   - **Isolate CBD** is pharmaceutically (99.7%) pure and contains no THC. Study results show that it is effective, but higher doses of CBD isolate are required than of full and broad spectrum CBD for it to be equally efficacious. Isolate is also associated with milder adverse events than broad-spectrum CBD.

3. **Has the label been approved by the NASC?**

   In conjunction with the FDA’s Center for Veterinary Medicine, the National Animal Supplement Council (NASC) sets standards for animal CBD products, demanding that suppliers follow high quality assurance and control procedures and Current Good Manufacturing Practice standards, and that such compliance is verified by third parties. When a supplier passes its third-party audits, it can display the NASC seal on product labels. The presence of the seal tells you the product has met NASC standards and you can use it with confidence.

4. **Is it labeled for animal use?**

   Veterinarians should use only products labeled for animal use, if available. The labels should contain warnings, precautionary statements, indication for specific...
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species, species-specific or condition-specific administration guidance, and manufacturer contact information.

5. WHAT DOES IT TASTE LIKE?

Some of the more highly concentrated hemp extracts, especially acidic cannabinoids like cannabidiolic acid (CBDA) and cannabigerolic acid (CBGA), are not very palatable, particularly to dogs and cats. Administration aids—pilling devices, soft and hard chews, pellets, capsules, flavored liquids, treats, and paste—may need to be employed for adequate adherence with these extracts.

6. DOES IT HAVE A GRADUATED DROPPER TO FACILITATE ACCURATE ADMINISTRATION?

Ideally, CBD should be dosed by volume to body weight, with food and twice daily. A graduated dropper facilitates accurate measurements for more precise dosing. The tincture can easily be placed on food or on a hard biscuit. When given like this, with small amounts of food before their daily meals, absorption may increase as much as 5-fold.

7. DOES IT WORK?

If a study has been published, a company has invested a great deal of money in the research, and that can give you peace of mind. Go with the company that has done so much research, and that can give you peace of mind. Go with the company that has so much confidence in its product’s effectiveness that it proves it in an unbiased study.

8. DOES IT CONTAIN THE EXTRACT TYPE, PRODUCT FORMAT, AND CHEMICAL FINGERPRINT YOU WOULD LIKE?

It’s not your mother’s CBD anymore. Products can contain other cannabinoids in addition to CBD. Select them based on what you want them to address. For instance, those containing cannabind (CBN) or cannabigerol (CBG) will be more calming than those with CBD alone, and those with acidic cannabinoids will have greater anti-inflammatory potential than those without it.

9. IS IT COMPETITIVELY PRICED?

The CBD market is slowing down, so you may be able to negotiate a good price in return for loyalty. If you can’t price the product competitively, your clients may source their CBD from companies that have compromised quality to achieve lower costs/higher sales.

STARTING DOSE

A good starting dose is 0.5 mg/kg CBD twice daily, given with a small amount of food just before meals. Administering the dose with food ensures that the patient receives it (ie, that it doesn’t go to other dogs in the house or to a small child sampling the dog bowl). Results of studies in dogs, horses, humans, rats, and other species have found that giving CBD with food increases blood levels at least 5 times. Soft chews and biscuits for dogs and pellets for horses and birds provide the food matrix as well as the CBD and offer better absorption and serum levels.

Pharmacokinetic studies suggest that it will take about 10 to 14 days for a dog’s serum to reach a steady state if given the same dose orally twice daily, with or without food. So in most cases, it will take that long or longer for the patient to respond to CBD at the starting dose. Behavioral problems and anxiety often require lower starting doses and patients may respond more rapidly than those being treated for pain. Response time depends on the individual animal and its condition.

If your patient shows no improvement and you are still prescribing CBD after 14 days, double the dose. A higher dose may manage chronic pain better. Of course, some patients will not respond to CBD. If their condition is not related to the endocannabinoidome, it is unlikely to be helped by CBD.

The results of safety studies show that doses of 0.5 mg/kg twice a day are quite safe. At 1 mg/kg or higher, 20% to 30% of dogs will have dose-dependent, transiently high serum alkaline phosphatase levels.

Because of its anti-inflammatory nature, CBD may help with hepatopathies, but in some cases it may cause problems that are impossible to anticipate. In patients with hepatic issues, liver values should be checked again after 2 weeks on CBD to ascertain that the substance is not contributing to the hepatopathy rather than helping it.

Caution should also be exercised when prescribing CBD to a patient with uncompensated or decompensated heart failure. CBD and THC will affect receptors in the myocardium and in the brain centers that regulate blood pressure and heart rate in the dog.

REFERENCES
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Nutrition specially formulated to support skin health in puppies.

1. Nutrition formulated to help reduce allergic responses, including licking, scratching, headshaking and skin redness

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SCIENCE DID THAT.
Diversity is the key to success with reptile diets

Insectivores and herbivores alike need variety to get maximum nutrients
Reptile ownership continues to rise in popularity, making it more likely that you will have a client with a scaly pet. Although reptile medicine has evolved significantly over the past 3 decades, there remains much we do not know about best practices for managing these animals in captivity, including meeting their nutritional needs.

Much of the attention on reptile diets is singularly focused on calcium content, which results in many animals being undercompensated for other important nutrients such as protein, fat-soluble vitamins, and trace elements.

If we want to provide the best nutrition for captive reptiles, we need to look no further than our own diets. How many humans have diets limited to 1 or 2 food types? Unfortunately, this is common for captive reptiles, which are commonly offered only 1 type of insect. Although there are some humans with limited diets, many of us ensure our good health by diversifying our diets. By expanding the dietary offerings provided to captive reptiles, we can ensure they are exposed to a broader range of nutrients, as well as limit the likelihood of the pets developing a nutritional disease.

Historically, herbivorous species such as green iguanas (Iguana iguana) or sulcata tortoises (Centrochelys sulcata) may have had a limited diet of a single lettuce type (eg, iceberg) or fruits (eg, strawberries), leading to the development of secondary nutritional hyperparathyroidism (SNHP). Attempts to correct these diets were made by adding calcium dust to the food.1 This may have altered the calcium concentration in the diet, but it did nothing to diversify it or to provide more protein (eg, for growth), fat-soluble vitamins (eg, A to limit the likelihood of squamous metaplasia and D to help with increased calcium absorption), or trace elements (eg, zinc for improved skin health and immune function)—let alone any of the other essential nutrients these reptiles need to thrive. Instead, by diversifying the diet and including a variety of greens and grass hays, we can reduce the likelihood of common diseases such as SNHP as well as other underlying nutritional deficiencies that are more insidious. These animals have evolved for over hundreds of millions of years and are more than capable of maximizing their absorption of nutrients. It’s important to provide these nutrients so that their bodies can do their jobs.

Ultimately, evidence-based research is key to increasing our understanding of the nutritional needs of reptiles. Unfortunately, research is limited. In our laboratory, we have spent a significant amount of time and energy expanding our knowledge on the subject, especially as it relates to insectivorous diets. It is well known that most prey insects have an inverse calcium-to-phosphorus ratio; exceptions include black soldier fly larvae (Hermetia illucens) and earthworms (Lumbricus terrestris).

Because of this, reptiles fed poorly prepared insects (eg, not gut loaded or dusted) can develop SNHP. But overall, prey insects are a good source of nutrition. They are not perfect, but no natural food item should be considered complete. The idea that 1 or 2 food types (eg, house crickets [Acheta domesticus] and mealworms [Tenebrio molitor]) are sufficient to meet the needs of a reptile is short-sighted. Instead, we should consider that prey insects are an important source of hydration with moisture contents ranging from 60% to 75%; offer an appropriate amount of protein (20% to 28%) for growth and maintenance of body condition; and contain 5% to 20% fat, allowing diets to vary according to the animal’s calcium needs (ie, juveniles need more for growth, and adults need less for maintenance).

It is possible to characterize the type of prey insects a reptile needs to meet its nutritional requirements. For example, an adult male bearded dragon (Pogona vitticeps) would benefit more from a low-fat diet (eg, house crickets, black soldier fly larvae, hornworm [Manduca quinquemaculata]), whereas a growing juvenile beard dragon might benefit from a higher fat diet (eg, mealworms) because the 9 kcal/g gained from fat provide more energy for growth than the 4 kcal/g gained from protein. The amount of food offered is also an important consideration. Ad lib eating can lead to obesity. Evidence suggests that providing diets based on metabolic ratios, which can often be estimated to be 2% to 4% of body weight every other day or 1% to 2% daily, is an excellent starting point. Of course, activity level and body condition should also be considered when deciding how much to feed a captive reptile. Allowing the animal to exercise in a protected environment (eg, not outside where it can escape, but in an area where other pets can’t attack them) and addressing biosecurity concerns (eg, Salmonella shedding) are important to minimize risks to reptiles and humans in the household.

Commercial diets are another potential source of nutrition for captive reptiles. However, although there are commercial diets in the form of kibble for dogs and cats that appear meet their needs, such diets don’t exist for reptiles. Certainly, there are commercial diets available for reptiles that are intended to be complete, with many manufacturers claiming their products meet the nutritional needs of reptiles, but these diets have not been proven using evidence-based research as has been done with dog and cat diets. I expect the day will come when these diets are capable of providing complete nutrition, but they will require rigorous research.

At this point, based on the limited research, limiting commercial reptile food to no more than 20% to 40% of the reptile diet is recommended. These diets can provide a variety of vitamins, minerals, and trace elements that are naturally lacking in live insect prey but should not be fed exclusively.

In addition, there is value in the reptile needing to locate and acquire its food (eg, active hunting an insect), rather than having it provided in a bowl. This form of stimulation is an important type of enrichment for captive reptiles.

Ultimately, the path to success with reptile nutrition is no different from our own. Develop an understanding of the nutritional value of the foods being offered, diversify the diet to increase the types of nutrients provided, and offer an appropriate amount of food to meet the physiological needs of the animal (eg, more if the reptile is growing or reproducing; less if it is geriatric).

Veterinarians can play an important role in educating clients about their reptiles and what they should monitor (eg, routinely weigh their pet to monitor body weight). A veterinarian’s relationship with clients is key to the long-term success of these long-lived animals and their human caretakers.
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VTS-00743
Veterinary practice leaders remember early in the COVID-19 pandemic when many clients turned to online sources to obtain veterinary medications and other products. And the growth of online purchases of veterinary medications has only accelerated since then. According to a 2020 report, online pet medication purchases increased by 13% that year, contributing to a growth rate of more than 9% in the past 5 years.¹

Rising competition from online veterinary pharmacies and large retailers seems inevitable with the lower prices they charge. Although veterinarians were still responsible for 72% of all medication purchases in 2020,¹ pharmacy competition has forced a turning point for veterinary practices with onsite offerings. Should these clinics maintain the status quo? Or should they think strategically about how to move forward with a business entity that may account for 20% or more of their costs² and take veterinarians and staff away from patients and clients in exam rooms?

The arrival of electronic prescribing (e-prescribing), which veterinarians have never had before, further complicates the issue. At first glance, e-prescribing may appear as a competitive threat. But this advancement, along with other changes in the industry, could help clinics operate more efficiently while improving pet health, client satisfaction, and clinician experience.

A LONG-DEBATED ISSUE

Although practices continue to fill most medications for their patients, the concern over pet prescription portability and competition has been debated for over a decade. In 2012, the US Federal Trade Commission...
TECHNOLOGY DRIVES CHANGE

Indeed, consumer demand has been the biggest change in the decade since the FTC’s public workshop. The consumerization of health care—both veterinary and human—has changed consumer expectations about convenience, price transparency, and provider responses to their questions and concerns. Running cash-driven businesses not beholden to health insurance networks, most veterinary practice owners were ahead of the consumerist trend and in some cases have been more responsive to client expectations than human health care providers.

Technology continues to further drive this evolution. Approximately 90% of pet owners research a veterinary practice online before scheduling an appointment and 30% purchase pet food and supplies online.² With the introduction of e-prescribing to veterinary medicine, price-conscious clients will certainly be excited, but practices, even those with onsite pharmacies, are likely to benefit as well.

For example, if a client wants to fill their pet’s prescription elsewhere, they need to call community pharmacies that fill veterinary prescriptions or search online for the most affordable option. Although this creates more work for the client, it also adds to the clinician’s burden because the clinician must confirm the prescription with the pharmacy and in some cases notify the client of the confirmation. If the practice fills the prescription with its online pharmacy, it requires the veterinarian or technician to enter data twice: once in the pharmacy online portal and a second time in the practice information management system (PIMS).

E-prescribing would eliminate these inefficiencies on both ends of the transaction. Instead of asking pet owners to find the most affordable prices for their pet’s medications, the veterinarian could share that information at the point of prescribing. Drug pricing information helps the pet owner, but it also supports the veterinarian with the onsite pharmacy by showing how competitively they price their drugs.

In some cases, clinics with onsite pharmacies may not need to lower their prices to compete with an online source, especially for medications that manage acute conditions. Many pet owners would be willing to pay more for a medication they can take home and give to their pet immediately as opposed to waiting several days for a package from an online pharmacy or driving to a community pharmacy.

STREAMLINING WORKFLOWS

Likewise, for veterinary practices that want to eliminate the overhead of dispensing medications onsite (tracking inventory, adjusting for price fluctuations, disposing of expired medications, and complying with regulations), e-prescribing would offer an opportunity to phase out drugs that most patients prefer to buy elsewhere. For example, drugs for acute infections or pain may make sense to fill onsite, but chronic or preventive medications that pets need all year, such as those for arthritis or allergies, could be more affordably obtained online.

Opening veterinary medications to a competitive e-prescribing market encourages growth and competition for technology developers and pharmacies by leveling the playing field among all participants. PIMS companies, for example, are always looking for ways to distinguish their solutions in the market. With e-prescribing, PIMS companies or other software developers can create new solutions for veterinarian and technician workflows. With seamless access to processes and data they need to choose optimal medications, veterinarians could also answer clients’ questions and direct prescriptions to the most appropriate pharmacies based on clients’ convenience or spending goals.

STRENGTHENING LOYALTY AND CARE QUALITY

Although some drug sales revenue would shift to third-party pharmacies, veterinary practices could increase appointment volume thanks to less time spent coordinating and communicating prescription information. These practices would also gain stronger client loyalty and trust. Loyalty is crucial given that 55% of pet dogs are 7 years or older, up from 45% in 2014.³ Pet owners tend to want their older pets to stay with the same doctor and appreciate a veterinarian who helps them save money on care. More importantly, client loyalty and greater affordability can encourage improved adherence to preventive and follow-up care, yielding longer, healthier lives for the animals to whom veterinarians have dedicated their careers.

REFERENCES

Following a nontraditional career path

A veterinary technician outlines the opportunities available to these professionals, empowering them to pursue their passion

Written by Julia Burke, Assistant Editor

Like many other veterinary professionals, Amanda M. Shelby, BSc, RVT, VTS (Anesthesia & Analgesia), knew from a young age she loved animals and wanted to pursue a career in animal health care. This passion led her to becoming a veterinary technician, and as she gained experience in the field, she realized the array of career paths within this division both inside and outside the clinic.

During her presentation at the 2022 American Veterinary Medical Association (AVMA) Convention in Philadelphia, Pennsylvania, Shelby highlighted potential career opportunities. She encouraged fellow technicians who are interested in a career change to reevaluate what they are searching for and explore their options.1

“No one defines success except for you. Really think about what you want out of your career. And you need to reevaluate that from time to time and pursue your goals,” she told AVMA attendees. “We have a lot of opportunities within our career. I hope that I encourage you to pursue that in a direction that brings you satisfaction and ultimately, for a selfish reason, keeps you in this profession.”

VETERINARY TECHNICIAN CAREERS

Clinic setting

Most veterinary technicians will work in a clinic, although Shelby argued this doesn’t have to look the same for everyone. “We work in emergency referral institutions, we work in corporate health institutions, we work in academic institutions, we work with large animals, we work with exotic pets, we work with small companion animals, we work with food animals,” she said.

So if you are looking for a change of scenery but still enjoy the clinic setting, you can try something new in this realm. Shelby advised going to an animal hospital that offers what you would like to specialize in. For example, if you are interested in exotics, go to an exotics-only clinic. She recommended asking to shadow people in the field to see if it is something you want to pursue.

It’s also important to decide whether you want to work for a privately owned practice or a corporation by weighing what matters most to you. Shelby noted that privately owned hospitals can't necessarily provide all the benefits corporations do, but this may not be important to someone who is on their spouse's health care plan, for instance. She added that, in some states, veterinary technicians can even own a referral practice, which is something to think about if you are interested in the business route. “Think about [it] as you develop your career and the direction you want to go; nothing is off the table. Yes, it must be in a state that allows a nonveterinarian to own the practice, but those do exist, and you need to look into that,” she said.

Government agencies

Roles within government agencies for veterinary technicians include both permanent positions and temporary jobs with shorter contracts. Shelby shared that the Army is the only US military branch with a technician division and discussed a friend who is a technician. “She is active military and has been deployed to Guam recently to head the emergency room for an Army base. There are veterinarians and veterinary staff for the military families that work on the base. They work with the military dogs and other critters...so there is opportunity there,” Shelby said.

The government also has opportunities for technicians to work in disaster response positions, such as in the Federal Emergency Management Association. This can be a rewarding path to help animals in dire situations, such as those exposed to hurricanes, fires or other traumatic events. Disaster response trainings are available, both free and paid, so you can become certified to do this kind of work.

Some advantages of veterinary technician government jobs are that the benefits are usually significant and you are informed of the rate at which you can move up for a clear career path. Plus, you will typically be federally protected from losing your civilian job while you are deployed. Shelby noted that it’s important to be open to travel if you are interested in government work.

Research

For those intrigued by the scientific element of veterinary medicine, pursuing research can be a great avenue. “[Y]ou have to think about how drugs will impact the body and how the body is going to impact your drug choices. [T]he nice thing about research is it's cause and effect, and you really have to think critically about those causes and effects,” Shelby said.

Working in research also allows technicians to have an authorship opportunity that might not typically present itself, which can then open more doors. In the research world, there are careers where that can be your focus, but there are also jobs where you can navigate in and out of research if you prefer remaining on the clinical side. However, Shelby warns that in some research studies, the animals have terminal conditions. That is something to consider based on what you can handle emotionally.

Going forward

These are just some of the career paths Shelby mentioned during her lecture, but she recommended reflecting on your passions and interests and using your experience to sell yourself for your desired role.

“Within the technician role, you can find opportunity anywhere you really want to pursue it. Don’t be afraid to say, ‘Hey, I’m interested in that, could I assist you?’” she said. “Think creatively about what your skill set is and how you can apply it to the job that you would like to go for. And these are all opportunities that do exist for veterinary technicians. If you’re not [being creative with] job searches, you have to be creative about how you write your cover letter and position yourself in that.”

REFERENCE
Shelby A. Clinics and beyond: where are vet techs? Presented at: American Veterinary Medical Association Convention; July 29-August 2, 2022; Philadelphia, PA.
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You can navigate motherhood and be a veterinary professional

Support in the workplace and beyond is important to ensure you don’t have to sacrifice your career or time with your children.

Managing a family along with a veterinary career is undoubtedly a challenge. According to a 2020 American Veterinary Medical Association survey, approximately 30% of companion animal veterinarians said they wanted to work fewer hours to improve work-life balance and mental health.1 In the Royal College of Veterinary Surgeons 2019 Survey of the Veterinary Profession, 23.4% of veterinary surgeons were working part-time, and nearly half of veterinary surgeons taking a career break were on parental leave or looking after children. For female veterinarians, this is the main reason for a career break.2

Returning to work after maternity leave can be tricky. New parents can find it difficult to predict what will be manageable around childcare. On-call rotations, increasing workloads, and lack of flexibility from employers can challenge new mothers. They may still be nursing and experiencing new circumstances in their home lives, and they might feel they have changed substantially as individuals. “I feel constantly guilty that I’m compromising either my job or my children,” says Fiona, an English equine vet with 2 young children. “It feels awful if I’m leaving earlier than the rest of the team but equally awful if I don’t see my kids because of a long shift.” It can also be daunting to return to practice when coworkers, procedures, and drugs may have changed. As children get older, school and extracurricular activities can add to the pressure along with the omnipresent challenge of finding suitable childcare during the school year and school holidays.

WHAT CAN YOU DO TO MAKE IT EASIER?

Finding an employer who offers flexibility—whether part-time hours, shorter shifts, reduction of off-hours work, or school year contracts—can make it easier to manage a family and enjoy a rewarding work life. It is vital to find a practice that embraces a positive culture and values employees. “My practice was really accommodating when my children were small. They allowed me to work flexibly, doing blocks of consults in the middle of the day,” says Katy, a small animal vet from Suffolk. “That was balanced by me being as flexible as possible and offering to cover whenever possible. My practice manager made it clear that making temporary accommodations while children were small was worth it to keep valued staff.”

Many organizations and continuing professional development providers offer learning tailored toward veterinarians returning after maternity leave or a career break, both to gain confidence about managing a family alongside a veterinary career and to update on changes in practice and refresh skills and knowledge in key clinical areas.

Support is not just about the practicalities of ensuring children are safe and cared for, but also about coping with the mental load, gaining emotional support, and facilitating personal time to maintain health and well-being. “It’s really important that practices respect that work is work and home is home,” says Fiona. “Managers can help by ensuring that everyone is aware of staff’s working hours and needs.”

Katy sums up: “In our practice there was a real atmosphere of teamwork so that we all supported each other and worked together to cover the workload. It’s so important to have that attitude that we can make it work for everyone.”

REFERENCES
The real gold standard is an individualized client relationship

Veterinarians must learn to empathize with clients over a spectrum of care

BY BOB ALABURDA, SENIOR EDITOR

In a perfect world, all animals would receive the gold standard of veterinary care. In reality, many clients cannot afford the highest level of care for their pets. The results of a 2018 survey conducted by the Access to Veterinary Care Coalition found that 28% of pet owners experienced a barrier to care in the past 2 years, the vast majority of which were financial barriers, across all types of veterinary care.

Ryane E. Englar, DVM, DABVP, joined dvm360® Live! to discuss the concept of spectrum of care. Englar leads the clinical and professional skills curriculum at the University of Arizona College of Veterinary Medicine and is the author of several textbooks, including Common Clinical Presentations in Dogs and Cats and Performing the Small Animal Physical Examination. Her current research projects focus heavily on examining how clinical communication drives relationship-centered care. Englar shared with host Adam Christman, DVM, MBA, how veterinarians can learn to offer options of care on a spectrum that best meets client needs and expectations.

EMPATHY IN COMMUNICATING CARE OPTIONS

Christman pointed to rising costs with inflation and supply chain issues leading to medicines and supplies being on back order for long periods of time. He asked Englar about the importance of recognizing challenges these issues present to clients and how veterinary teams can empathize with pet owners.

“I think that our clients need to feel heard, respected, valued, and understood,” Englar said. “There’s nothing worse than when we’re standing in that room and the client wants to do everything and can’t….It’s gut wrenching.” She explained that clients may not be able to articulate that they can’t afford to give their pets the best care possible, and so clinicians must treat clients with empathy and “unconditional positive regard” while reserving judgment. She said that in these situations she communicates clearly with the client that she understands they wish they could do everything for their pet, but they can still work together to consider the path forward that best helps their animal.

THE GOLD STANDARD VS SPECTRUM OF CARE

“The gold standard has a place in terms of pet care and safety, because we want to make sure we’re not assuming clients do not want to proceed with certain options,” Christman said. “But the question then becomes, ‘What is the best?’ Who defines that? And should our client have a say in that?”

Englar agreed that clients should have a say, and she added her perspective: “Spectrum of care is really looking at an acceptable continuum of options to give our clients.” She said that veterinarians often view it through a financial lens, but she reminded the audience that spectrum of care is about more than whether clients can afford a certain treatment. Client expectations also play a part. For example, she said, the owner of a pet with a brain tumor may want to prioritize quality of life over surgery or radiation therapy. Defining what is best in this situation requires communication between both parties and may have nothing at all to do with money.

“I think that we...lose sight sometimes of each other in that mix,” Englar said. “And for years, we had that paternalistic view of medicine, that doctor knows best, that we call all the shots, and we were very comfortable with that. And now we’ve moved into that relationship-centered care where our client is a partner...which means we have to actually work hard to understand them.”

REFERENCE


The question then becomes ‘What is the best?’ Who defines that? And should our client have a say in that?”

—Adam Christman, DVM, MBA
Monitoring pet health in a digital world

Wearable technology is taking the veterinary space by storm

Written by Julia Burke, Assistant Editor

With wearable technology becoming more common in human health care, it’s no surprise that it is emerging in veterinary care as well. Popular products for pets include collars and collar attachments like Whistle, Fi, FitBark, Link, and Petpuls. Connecting through a smartphone app, they have an array of functions, from GPS tracking to the monitoring of activity, sleep, health-related behaviors, and even emotional states. As they evolve, these products become more lightweight and include more features.

Wearable technology for pets started trending during the COVID-19 pandemic, according to Kirsten Oliver, VN, ADVN, CVT, CCRP, CVPP, VTS, because that was when we began “using digital technology to connect with the rest of the world.” Now that things are getting back to normal, “people are wanting to know what their pets are doing at home,” she told dvm360® in an interview.

THE PROS

“Let’s face it, if it’s on an app or...on our phone, we want it,” Oliver said, explaining that wearable technology lets pet owners know when their fur babies should go to the vet and helps clinicians assess the animal. If a client says their dog has been pacing for the past 5 nights, for example, “that’s an indication of pain. What can we do? And what sort of diagnostics can we run...It’s taking a little bit of the guesswork out of things. It’s good information to start with,” she said.

Fear Free founder Marty Becker, DVM, told dvm360® that wearable technology helps veterinarians make a diagnosis. “You could tell why a pet was wetting at a certain time or detect if a pet is lame,” he said.

Oliver also said that it’s great to see innovative products being designed to benefit animals. They are excellent monitoring tools for cats and dogs that experience chronic diseases, she noted, and come in handy when owners are away because they can log in to keep an eye on their pets. There are also in-clinic devices like MeasureON! and PainTrace. MeasureON! measures temperature, cardiac electrical signals, heart and respiratory rates, and activity levels, and PainTrace measures chronic and acute pain levels and is especially helpful in the veterinary rehabilitation setting, Oliver said. Becker pointed out that these tools are transforming veterinary care. They are extremely accurate and can check an animal’s vitals while it sleeps. That’s important because, according to Becker, “when you sleep, you heal faster.”

THE CONS

Although wearable technology has many benefits, it is expensive and can lead to “helicopter pet parenting,” Oliver said. “You don’t want [clients] checking...vitals every 5 minutes and being like, ‘Has it been a 2-beat change in his heart rate? Do I need to bring him to the veterinarian?’”

She suggested that physicians tell pet parents what is normal and abnormal so they know when a visit to the vet is required. For his part, Becker noted that wearable technology often indicates whether a concern is legitimate.

THE FUTURE

What’s in store for these devices? According to Oliver, the sky’s the limit. Today’s digital kids will become tomorrow’s digital adults and will want this kind of gear. On the veterinary side, Becker expressed the hope that current students learn to use wearable technology in the same way that he learned to use a stethoscope and his eyes, ears, and sense of smell to diagnose disease. Such knowledge will not only help them when they go into practice but also enable them to advance pet care.
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Indications
For single-dose infiltration into the surgical site to provide local postoperative analgesia for cranial cruciate ligament surgery in dogs. For use as a peripheral nerve block to provide regional postoperative analgesia following onychectomy in cats.

Important Safety Information
NOCITA is for use in dogs and cats only. Do not administer concurrently with bupivacaine HCl, lidocaine or other amide local anesthetics. The safe use of NOCITA in dogs and cats with cardiac disease or with hepatic or renal impairment has not been evaluated. The safe use in dogs or cats younger than 5 months of age, that are pregnant, lactating, or intended for breeding has not been evaluated. The most common adverse reactions in dogs were discharge from incision, incisional inflammation and vomiting. The most common adverse reactions in cats were elevated body temperature and infection or chewing/licking at the surgical site. Please see accompanying brief summary for product safety information.

* In a field trial, Nocita reduced the need for post-op rescue pain treatment with opioids

**Cranial cruciate ligament

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(bupivacaine liposome injectable suspension)

13.3 mg/mL
For local infiltration injection in dogs only
For use as a peripheral nerve block in cats only
Local anesthetic
Single use vial

Caution:
Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

Before using this product, please consult the Product Insert, a summary of which follows:

**DOG Indication:**
For single-dose infiltration into the surgical site to provide local postoperative analgesia for cranial cruciate ligament surgery in dogs.

**CAT Indication:**
For use as a peripheral nerve block to provide regional postoperative analgesia following onychectomy in cats.

**DOG Dosage and Administration:**
NOCITA is for single dose administration only. A dose of 5.3 mg/kg (0.4 mL/kg) is administered by infiltration injection into the tissue layers at the time of incisional closure for dogs. A single dose administered during surgical closure may provide up to 72 hours of pain control.

**CAT Dosage and Administration:**
NOCITA is for administration only once prior to surgery. Administer 5.3 mg/kg per forelimb (0.4 mL/kg per forelimb, for a total dose of 10.6 mg/kg/cat) as a 4-point nerve block prior to onychectomy. Administration prior to surgery may provide up to 72 hours of pain control.

**Contraindications:**
Do not administer by intravenous or intra-arterial injection. If accidental intravascular administration occurs, monitor for cardiovascular (dysrhythmias, hypotension, hypertension) and neurologic (tremors, ataxia, seizures) adverse reactions. Do not use for intra-articular injection. In humans, local anesthetics administered into a joint may cause chondrolysis.

**Warnings:**
Not for use in humans. Keep out of reach of children. NOCITA is an amide local anesthetic. In case of accidental injection or accidental topical exposure, contact a physician and seek medical attention immediately. Wear gloves when handling vials to prevent accidental topical exposure.

**Precautions:**
Do not administer concurrently with bupivacaine HCl, lidocaine or other amide local anesthetics. A safe interval from time of bupivacaine HCl, lidocaine or other amide local anesthetic administration to time of NOCITA administration has not been determined. The toxic effects of these drugs are additive and their administration should be used with caution including monitoring for neurologic and cardiovascular effects related to toxicity.

The safe use of NOCITA in dogs or cats with cardiac disease has not been evaluated.
The safe use of NOCITA in dogs or cats with hepatic or renal impairment has not been evaluated. NOCITA is metabolized by the liver and excreted by the kidneys.
The ability of NOCITA to achieve effective anesthesia has not been studied. Therefore, NOCITA is not indicated for pre-incisional or pre-procedural loco-regional anesthetic techniques that require deep and complete sensory block in the area of administration.
The safe use of NOCITA in dogs for surgical procedures other than cranial cruciate ligament surgery has not been evaluated.
The safe use of NOCITA in cats for surgical procedures other than onychectomy has not been evaluated.
The safe use of NOCITA has not been evaluated in dogs or cats younger than 5 months old.
The safe use of NOCITA has not been evaluated in dogs or cats that are pregnant, lactating or intended for breeding.

**DOG Adverse Reactions:**
Field safety was evaluated in 123 NOCITA treated dogs. The most common adverse reactions were discharge from incision (3.3%), incisional inflammation (2.4%), and vomiting (2.4%).

**CAT Adverse Reactions:**
Field safety was evaluated in 120 NOCITA treated cats. The most common adverse reactions were elevated body temperature (6.7%), surgical site infection (3.3%), and chewing/licking of the surgical site (2.5%).

**Storage Conditions:**
Unopened vials should be stored refrigerated between 36° F to 46° F (2° C to 8° C)
NOCITA may be held at a controlled room temperature of 68° F to 77° F (20° C to 25° C) for up to 30 days in sealed, intact (unopened) vials. Do not re-refrigerate. Do Not Freeze.

**How Supplied:**
13.3 mg/mL bupivacaine liposome injectable suspension in 10 mL or 20 mL single use vial. 10 mL supplied in 4-vial carton. 20 mL supplied in a single vial carton and 4-vial carton.

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US Patent: 8,182,835; 8,834,921; 9,205,052

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Maintaining a pet's longevity and quality of life can sometimes require surgical intervention. All surgeries result in some degree of tissue trauma and associated pain.\(^1\)

While pain can be controlled in the clinic, there is a need to provide analgesia for pain relief through the critical 72-hour postoperative period, especially once patients return home, which is typically within 24 to 48 hours after surgery. Beyond the ethical obligation to minimize pain and suffering, unmanaged pain delays healing and return to function and can lead to chronic, maladaptive pain.\(^1\) Additionally, effective pain management creates a better client experience.

### The role of local anesthetics in perioperative pain control.

“The task force supports the International Veterinary Academy of Pain Management position that, because of their safety and significant benefit, local anesthetics should be utilized, insofar as possible, with every surgical procedure.”

— American Animal Hospital Association

Local anesthetics (LAs) are one of the most effective means of preventing transduction and transmission of pain signals,\(^2\) in part, because LAs are the only class of drug can render complete analgesia.\(^1\)

Previous formulations LAs have some limitations, primarily their relatively short duration of action (less than eight hours).

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Now you can effectively control your canine CCL\(^*\) and feline onychectomy patients’ postoperative pain with the only FDA-approved long-acting local anesthetic that helps them recover comfortably even after going home.

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*In a field trial, Nocita reduced the need for post-op rescue pain treatment with opioids.

**Cranial cruciate ligament.


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Ready to retire? 

Here’s how to prepare to sell your hospital

Maximize profit and minimize hassle by viewing your practice through an investor’s eyes

Veterinary practice sales are progressing at a rapid pace given the increases in practice valuations and the 8% to 12% growth that hospitals experienced during the COVID-19 pandemic.¹ Most of these sales are made to investment groups such as private equity firms and corporate veterinary groups, although some practices still make successful internal transitions via purchasing associates.

The question of whether to invest in real estate (ie, hospital design and construction), in the event of an upcoming sale is an interesting one. Most advice is focused on the sale of the practice rather than the treatment of real estate, and yet it is important to think of both and be prepared. Here are primary issues to consider:

• Does a separate real estate group own the real estate? These owners may have some overlap with the current practice owners, but they often do not completely overlap and their interests are often different. Thus you’ll need to consider both the practice and real estate ownership in future transactions.

• Are you trying to solidify a sale via associates or are you trying to sell to outside investment groups? Your approach to any real estate upgrades prior to sale may vary based on what you are trying to accomplish.

• If you want to sell to outside entities, will you sell the real estate with the practice? It may not make sense to hold on to real estate in the event of sale of the practice to investors for the following reasons:
  - The investors may take the practice in a different direction.
  - The real estate may need to be owned by the investment group so they can do with it what they need to remain profitable.
  - Veterinary clinics are purpose-built buildings. In many cases, there is more value in the practice than in the building, as the building ceases to be sellable without the context of the practice within it. There may be better investments for the real estate owner than an older, purpose-built building, unless the land is extremely valuable.
  - Investors consider return of investment (ROI) primarily, meaning that they care more about the potential of the practice than the earnings by themselves, or the quality of the building. If the building can be tuned up by the time you are looking to sell to turn greater profit, that is a consideration. But new investors usually don’t care much about what color your lobby is painted, unless they think they can repaint it from teal to white and turn a profit.

• The valuation of a practice is not the same as a property appraisal. The valuation of a practice typically uses the earnings before interest, taxes, depreciation, and amortization method and is modified with a multiple that considers other factors. Again, this method doesn’t consider your new reception desk or the tile you put in your lobby, except that those upgrades are expenses on your books.

With this in context, should you do any upgrades prior to a sale? There are a few important factors to consider.

IMPROVING PROFITABILITY

This is a big motivator. Whether you are selling to associates or to a corporation, your earnings and profitability matter because they can make the sale more attractive to buyers and allow you to sell at a higher price to an outside investor. Remember, however, that the outside investor is most interested in their ROI, so it’s important to invest in the areas that improve profits without increasing costs more than is advisable for the practice.

Given how expensive remodeling is, you should get solid financial advice before investing in any upgrade. That said, here are 3 of the best strategies others have used:

• Add more exam rooms. Many older hospitals have a larger ratio of back-of-house to front-of-house space than we see in newer hospitals. What about converting the spacious owner’s office to 2 new exam rooms? This move will, for most practices, immediately improve profitability, especially if it allows the practice to hire another veterinarian and/or use veterinarians’ time better.

• Add a new service. Can one of your enormous dog wards be converted into a dental space? Again, don’t do this unless it is easy and immediately relieves pressure on your practice so that you can become more profitable by using space and time more efficiently.

¹ Investors consider return of investment (ROI) primarily, meaning that they care more about the potential of the practice than the earnings by themselves, or the quality of the building. If the building can be tuned up by the time you are looking to sell to turn greater profit, that is a consideration. But new investors usually don’t care much about what color your lobby is painted, unless they think they can repaint it from teal to white and turn a profit.
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Focus on lifestyle

Since the beginning of human civilization, older generations have complained about younger generations and their lack of work ethic. The truth is these complaints are often unfounded. It is more difficult for Generation Y and upcoming Generation Z veterinarians to support their lifestyles the way previous generations could. Expenses are high, demands are many, and life is very, very complex. As a working parent and second-generation architecture practice owner, I understand some of these demands. So how do you focus on supporting those who will run your practice in the future?

- **Create flexibility with work.** This might not be an architectural idea, although it could be. You could invest in better technology to allow some select work to be done from anywhere. You could design doctor work spaces to be similar to hotel business office spaces for multiple part-time doctors rather than designated desks for full-time doctors.
- **Create perks at work.** This could mean helping your staff meet childcare or pet care demands while they’re at work. This does not necessarily mean “bring your dog or child to work,” as there are other ways to provide help, including financially. Other perks could be free snacks for those long days when they miss a lunch break. Remember to help staff with their transition back to work after having a child. A lactation room is essential to many new veterinarians new experiences. This helps bond with new veterinarians and offer other perks could be free snacks for those long days when they miss a lunch break. Remember to help staff with their transition back to work after having a child. A lactation room is essential to many new mothers and doesn’t take much space.

LE T IT GO

It’s hard to let go of your practice. You spent a tremendous amount of your life there. You raised your family around your practice. It is sentimental and painful to move on. But regardless of whether you’re turning over the reins internally or externally, letting go is part of a successful transition. Here are things you should consider:

- Declutter and get rid of junk, memorabilia, and old items. You’ll never need them again, and no one else will either. (For more information on how to declutter, see https://www.dvm360.com/view/the-organized-hospital-yes-it-is-possible.)
- Store items that don’t need to be in the hospital somewhere else, such as a storage unit. These may include inactive files (before you can legally shred them), older equipment, and seasonal decor.
- Share your space. Start ceding your space (physically and operationally) to others as a way of disconnecting yourself. Start taking on a business advisory role rather than a medical role. This will allow clients to bond with new veterinarians and offer other veterinarians new experiences. This helps motivate them to continue working at the practice and, if they are associates, invest themselves more fully.

In the end, no practice sale is like any other. You may not want to take on any personal risk, and you may wish to sell your practice as is. Or the real estate investment group may not be on board with any hospital upgrades or may be unaligned with the practice ownership group.

Regardless of the situation, ask yourself whether investment in your physical building may make sense for your ownership transition. In some cases, it can help you sell a more profitable practice to an investor or make that successful sale of stocks to associates. Consider this your last effort toward hospital design, part of your legacy to yourself and to the practice you built and love.

**REFERENCE**

Cultivating a culture of well-being

Turpin Mott, Chief Community Officer at NVA (National Veterinary Associates), helps teams tackle personal and professional challenges.

BY BOB ALABURDA, SENIOR EDITOR

A study analyzing the results from each of the AVMA Census of Veterinarians from 2016 to 2018 found that 86.7% of US veterinarians have moderate to high burnout scores. What’s more, the rate of burnout is increasing. That’s why dvm360 Live! asked Turpin Mott, Chief Community Officer at NVA (National Veterinary Associates), to discuss how NVA combats this trend with a business model that puts the well-being of the veterinary professional first.

Mott, who describes himself as a “heart-led leader,” has more than 15 years of experience as a culture and wellness expert. At NVA, he heads a team of facilitators and coaches that help vets overcome professional and personal stress. He sat down with Adam Christman, DVM, MBA, to talk about how NVA’s success is predicated on prioritizing the well-being of its employees.

RELATIONSHIPS, NOT TRANSACTIONS

According to Mott, NVA believes that establishing relationships—rather than focusing solely on transactions—is the key to success. He recalled a conversation with an NVA veterinarian who said: “I’m a doctor, and I do great medicine, but the reality is, this is an emotionally driven business. There’s nobody on social media that talks about my level of medicine because it’s great. Everything I get ranked about is how I made them feel.”

Mott understands that everyone on the veterinary team is emotionally invested in the profession. “People do this because their hearts [are] connected to it 100%,” which is why he feels a responsibility to support them and their well-being.

“We all know that if your life outside…the veterinary hospital isn’t good, the impact that you have on the… practice is compromised,” he noted. One way NVA addresses this problem is through its wellness retreats. These two- or four-day immersive retreats teach participants how to combat burnout and compassion fatigue and develop leadership, communication, and problem-solving skills. Their ultimate goal is to help attendees join colleagues from other NVA locations and learn best practices for creating a healthy and sustainable lifestyle.

In addition, Turpin hosts a monthly podcast, called NVA Pawcasts, focused on well-being and self-care.

HAPPY VET, HAPPY PET

Mott concluded by saying that veterinary medicine is a passion-driven calling but that such passion can lead many to deprioritize their needs. When he asks them to rank priorities, they often mention work, family, friends, children, and community but don’t even factor themselves into the equation. He was quick to remind clinicians how important self-care is: “That’s the best for everybody…[and] equates to the best medical care for the pet….which is why we’re all here.”

REFERENCES


Team building with vet techs
National Veterinary Technician Week can be the inspiration for creating a culture that supports individual growth all year

National Veterinary Technician Week (NVTW) was first celebrated in October 1993, and we’ve been honoring the contributions of technicians to veterinary medicine ever since. Although we have an entire week to praise technicians, it’s important to remember that a team cannot be built in 5 days: It is a long-term endeavor. NVTW applauds technicians and management alike for the success that teamwork confers on their practice. To make the yearly event more meaningful, here are a few fun, educational, and empowering activities we can do on a regular basis.

**DAILY**

**Words of the day:** Every morning, a team member picks a word that is new to them or that everyone should know but may be using improperly and writes it on a white board. Under it, the rest of the staff can write what they think, or know, the word means. The real definition is later written down, and everyone can laugh, learn, or do both. This fun exercise promotes interaction and creativity.

**Book of Things:** You can place this journal in the common area of the hospital and head each page with a topic or question for people to consider at their leisure.

**WEEKLY**

Leaves pens, markers, crayons, or anything else that allows them to creatively log their answers. Choose topics that encourage everyone to share personal interests or what they love about their work. This activity enhances memory and fosters collaboration and creativity. The journal also becomes something concrete to look at later to see how your team has grown.

**Rounds:** Rounds are an important clinical activity that determine how the day will go. Pick someone each day to do rounds, but first create a schedule so everyone is prepared. The person whose turn it is will talk about what is on the day’s schedule: what patients may be hospitalized and the care they will need. If specific doctors and technicians are assigned to work with one another, the rounder will announce that. This is a great way to bring the team together in the morning and promote a sense of ownership, build confidence, and establish flow.
to speak about what didn’t work and what did. Including a short training or information that is relevant to observations made during the previous week’s meeting is highly productive.

MONTHLY

Because clinics are currently very busy, these end-of-the-month meetings are more important than ever. It is essential to set aside time for the whole clinic to take a breath, come together as a team, and acknowledge everybody’s efforts and successes. These meetings tend to focus on how to improve or correct a problem; however, doing that at the weekly meetings is more constructive and makes for a happier meeting at month’s end. The person leading the monthly discussion should prepare a few topics that are relevant to the practice and would improve the workflow, environment, or a procedure. All sessions should be positive in nature and adhere to these guidelines:

1. Keep the meeting to 30 to 45 minutes.
2. Provide snacks or a meal, depending on when the meeting is held.
3. Reserve the first 10 or 15 minutes for an icebreaker or group activity.
4. Allow 15 to 20 minutes for the leader to announce the topics and open the discussion.
5. Set aside 5 minutes for the leader to respond with action words and a solution.

ALL YEAR

A key component of team building is investing in every person. The hospital as a whole and all its employees must have a learning and development program that will keep staff happy, healthy, and engaged. There’s no need to spend money on flying staff to a conference 5 states away when in-clinic education can be just as effective. Take advantage of online learning platforms, in-clinic sessions provided by vendors, and presentations delivered by team members. An environment that nurtures the team pushes individuals to improve their skills and contribute more to the hospital’s success.

ANNUALLY

After a year of team building, it’s appropriate to celebrate everyone’s efforts. Make no mistake: individual and team development is itself a reward and can be enjoyed all year. However, a celebration to honor those who embraced the tools provided is a great opportunity to have fun! Here’s what you need to do:

1. Create a calendar with ideas for each day of NVTW.
2. Ask vendors to bring in breakfast or lunch for the team.
3. Put together personalized goody bags. Suggestions include swag, personalized bandage scissors, items related to dog and cat breeds, gift cards, and water bottles or mugs.
4. Set aside time for daily games and team-building exercises. Trivia contests, scavenger hunts, show and tell, and silly games can create a bonding experience.

National Veterinary Technician Week is something to build towards and celebrate fully when it arrives. Team building is essential to the health and well-being of all personnel. A well-built team makes for a more productive atmosphere and inspires individuals to strive for excellence. And that, indeed, is something to celebrate. Challenge yourself to create a culture that nurtures the individual and becomes something the whole hospital is proud of—and wants to brag about.
Building a disruptor in the reference lab space

How Zoetis Reference Laboratories streamlines diagnostic services

BY BOB ALABURDA, SENIOR EDITOR

Historically, veterinary professionals have not had many options when working with reference laboratories. Zoetis Reference Laboratories (ZRL) seeks to shake up the market by offering unique benefits that differentiate it from the long-time entrenched players. Prior to launching ZRL, Zoetis already had been well-established in point-of-care diagnostics with its line of VETSCAN analyzers, as well as glucose and anesthesia monitoring systems. Over the past three years, the company built out its diagnostic offerings by acquiring and uniting three regional laboratories into a single, seamless, national laboratory.

In the latest episode of Pet Connections, dvm360’s Chief Veterinary Officer Adam Christman, DVM, MBA, sat down with the medical leadership team at ZRL to learn more about the industry’s newest full-service veterinary clinical laboratory with a nationwide network.

CLARITY IN PRICING

From a bird’s-eye view, the first things customers are likely to notice is ZRL’s streamlined approach to pricing. Working with the reference laboratory requires no commitment, no minimum orders, and no logistics fees for any customer in the US.

A TEAM OF SPECIALISTS AT YOUR FINGERTIPS

Christman’s first guest was Carolyn Grimes, DVM, DACVP (Clinical Pathology), Senior Medical Director for Zoetis, who explained that one of the core benefits of using ZRL is the ease of access to specialists who are available to consult on challenging cases. “For the consulting service, we have several internal medicine specialists,...dermatologists, exotic specialists, ophthalmology, pretty much any specialty that you would need to consult on [small animal],” Grimes said.

Laura Brandt, DVM, MS, DACVP (Clinical Pathology), Director of Clinical Pathology for ZRL, said, “Our customers can access the pathologist [contact] information directly. You don’t have to call customer service; you can just get in straight to the pathologist who’s read your report and have that interaction. Our goal is to really bring that pathologist into your practice and really make them feel [as though] they are part of what you’re doing day to day on the clinic floor.”

BASIC AND COMPREHENSIVE CBCS WITH BONUS FEATURES

Brandt expanded on ZRL’s two hematology services, explaining how each offers a key differentiator compared with other reference laboratories. The basic complete blood cell count (CBC) is recommended for wellness screenings in nongeriatric, healthy patients. Here’s how ZRL adds value to that automated report, according to Brandt: “We have some additional quality control steps with our automated CBC because we want to make sure that automated data we’re giving you—that the analyzer may not be interpreting correctly—is actually real. With our [standard operating procedures] and our more comprehensive technician training program, they’re going to run through a list of double checks on your basic automated CBC...to really confirm that that information the analyzer is giving us is correct.”

ZRL will also automatically alert the clinician if it recommends upgrading to a comprehensive CBC after review.

The comprehensive CBC, for sick or geriatric patients, comes with a complete technician blood smear evaluation and an automatic clinical pathologist review (if case criteria are met) for a simple $5 upgrade from the basic CBC. “We’re going to look at that whole blood smear and really give that patient the time and attention it needs,” Brandt said. “The analyzers aren’t picking up [everything]. They’re not seeing inclusions; they’re not going to assess toxic change; they’re not going to see a left shift; they won’t see cancer cells.”

DIAGNOSTIC AND ANTIMICROBIAL STEWARDSHIP

In the next segment, Shelley Rankin, PhD, Zoetis Global Director of Microbiology and Molecular Diagnostics, shared how ZRL is making diagnostic and antimicrobial stewardship top priorities for its laboratories. How does ZRL aim to achieve this?

Rankin walked Christman through a case study of a 4-year-old male, neutered bulldog. A customer had sent a skin swab to a second laboratory and called to ask why the other laboratory report three microorganisms, whereas ZRL only reported one. What’s more, the customer said, the other laboratory also had more antibiotics on its panel.

After review, the ZRL report identified methicillin-resistant Staphylococcus pseudintemedius. The other report did not identify this pathogen as methicillin-resistant, and it added a nonpathogenic Escherichia hermannii as well as a Bacillus species. Rankin said that although listing these microorganisms technically added more information, “there was no useful information, unless you’re of the opinion that you want to know all the drugs that you can’t use.”

Rankin added, “The 20 years I’ve been doing this, I’ve always taken that reductive approach: Find the pathogen that is clinically significant, and then report antimicrobials that veterinarians can use. That’s the approach we’re planning to take with Zoetis Reference Labs.”

INNOVATION IN DERMATOPATHOLOGY

In the final segment, Christman was joined by Katherine Gailbreath, DVM, PhD, DACVP, Anatomic Pathologist and Technical Manager for ZRL, who explained the ZRL dermatopathology panel, another differentiating feature of the laboratory. This test includes the sample going to a dermatopathologist for analysis as well as any indicated histochemical stains. “You don’t have to go to your client and ask them to pay more for it [special stain],” Gailbreath said. “It’s included with the panel.”

Additionally, Gailbreath said, once the dermatopathologist has read the case and written the report, it goes to a dermatologist who then looks through everything along with the clinical images and writes a report with additional diagnostic and treatment suggestions. Then, if the case is still unclear, they’ll contact the dermatology team to discuss it. Afterward, the clinician who submitted the samples can discuss the case directly with the dermatologist. “So, you get the special stains and a whole lot more,” Gailbreath said.
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See how Zoetis Reference Laboratories can benefit your practice.
The buzz on insect-based pet food: a new hypoallergenic protein source?

A dermatologist breaks down the state of research on insect-based diets

Although the consumption of edible insects is widespread in Africa, Asia, and South America, it is far less common in countries like the United States. Our perception of insects as harmful, dirty, and distasteful means that it may be a while before the practice of eating them becomes mainstream here. Nevertheless, insects offer numerous advantages. Breeding them requires less land, feed, and water—and emits fewer greenhouse gases—than breeding livestock. And they are high in protein, vitamins, minerals, and lipids.

Given such benefits, the feeding of insects to animals has been more widely accepted. And research has shown the efficacy and safety of black soldier fly larvae (BSFL) in the feed of poultry, swine, and aquaculture species. The addition of small amounts of insect meal to chicken diets has also been found to stimulate colonization by probiotic and commensal bacteria, which may help prevent bacterial infections.

European countries have embraced the use of insects in pet food, and several brands of dog food containing insect protein have been sold in Europe for a number of years. Recently, Mars PetCare and Nestlé Purina launched insect-based product lines.

REGULATORY APPROVAL

In January 2021, the Association of American Feed Control Officials (AAFCO) approved BSFL for use in adult dog food and treats, and thus veterinarians should expect more clients to explore diets containing BSFL, especially as a source of protein for dogs with adverse reactions to other food. Although AAFCO approved only BSFL for use in canine adult maintenance (approval in cat food is expected later this year), other promising, well-studied insects include the yellow mealworm beetle, house cricket, and silkworm.

NUTRITION AND DIGESTIBILITY

On average, the protein content of edible insects ranges from 35% to 60% (dry weight) and 10% to 25% (fresh weight), which is higher than the protein content of plants, including cereal grains, soybeans, and lentils. At the upper range, insects provide even more protein than meat and chicken eggs. Studies have shown that dogs can consume diets containing BSFL, tropical house cricket, housefly larvae, lesser mealworm, and yellow mealworm without adverse effects to their digestion or general health, even if the products are near-total replacements for common sources of protein. Higher fecal output was seen in dogs fed tropical house cricket, owing to the insect’s higher indigestible chitin content compared with chicken meal. However, no differences in fecal score or stool quality were observed.

ALLERGENICITY AND CROSS-REACTIVITY

Although allergic reactions may occur because of the insect protein itself (primary sensitization), they are more likely to occur because of cross-reactivity. Cross-reactivity takes place when IgE recognizes and binds to allergenic molecules present in different species. Tropomyosin and arginine kinase have been found to be responsible for cross-reactivity between insects and other arthropods.

A recent study demonstrated that IgE from canine sera sensitized to storage mites bound to the protein in yellow mealworm. IgE binding, however, does not mean that an allergic reaction will occur, only that it may. Many reports in human medicine also suggest the possibility of cross-reactions between insects and other arthropods. Patients with shellfish allergies were found to exhibit allergic reactions after eating cicadas and vegetable worms. In a double-blind placebo-controlled food challenge, 87% of patients allergic to shrimp—most of whom were also allergic to dust mites—displayed allergy symptoms after eating yellow mealworm.

Given that insects will probably become more widely used as a protein source in pet food, more research on the cross-reactivity between insects and arthropods is needed. It has been reported that atopic dermatitis may affect 3% to 15% of dogs, and dust mites are the allergens most commonly recognized by the circulating IgE of dogs with atopic dermatitis. Therefore, the use of insects as a protein source in dog food must be undertaken with caution.

A factor that may affect the allergenicity of insect proteins is postharvest processing. We know that thermal and high pressure processing—and/or hydrolysis—of allergy-causing proteins affect the allergenicity of feed. Incorporating such methods in the processing of harvested insects may reduce their allergenicity and cross-reactivity.

References available online at dvm360.com

Written by Jennifer Aniya, DVM, DACVD

Aniya obtained her veterinary degree from Colorado State University in 2003. After completing a small animal rotating internship in Northern California, she moved to San Diego to pursue a residency in dermatology, becoming board-certified in the specialty in 2010. Her special interests include the management of allergies and ear diseases. In addition to lecturing, Aniya shares her passion for dermatology by helping to train dermatologists in Latin America.

Away from work, she stays busy by taking care of her kids—both human and animal, and traveling, camping, and spending time outdoors.

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2022 AAFP/EveryCat Feline Infectious Peritonitis Diagnosis Guidelines
The American Association of Feline Practitioners and EveryCat Health Foundation have released the 2022 AAFP/EveryCat Feline Infectious Peritonitis Diagnosis Guidelines, which are published in the Journal of Feline Medicine and Surgery. They offer veterinarians information essential for the diagnosis of feline infectious peritonitis.


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🐶 [bil-jac.com](http://bil-jac.com)

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🐶 [calmcozykat.com](http://calmcozykat.com)

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🐶 [getjoyfood.com](http://getjoyfood.com)

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🐶 [petspemf.com](http://petspemf.com)

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🐶 [supersnoutshempcompany.com](http://supersnoutshempcompany.com)

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🐶 [acana.com](http://acana.com)
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On After Hours®, Christopher Shapley, DVM, CVA, explains how watching martial arts movies as a child inspired him to pursue kung fu as an adult. Now, with over 20 years of experience, he explains how kung fu helps him unwind after work.

Whether learning to fight burnout or destressing with kung fu, our faculty at the 2022 Atlantic Coast Veterinary Conference® in Atlantic City, New Jersey, has been featured on some of the most popular Medical World News® shows. Listen to their stories to learn more about them, and maybe even learn something for yourself along the way.

DO YOU OR DOES YOUR PRACTICE BELONG ON THESE SHOWS?

Email us at news@dvm360.com for more information and the chance to be featured in an upcoming season of Medical World News®.
Celebrating National Veterinary Technician Week!
October 16-22

Veterinary Technicians are recognized for playing an essential part in veterinary practices and play a vital role in preserving animal health and welfare.

dvm360® celebrates all Veterinary Technicians for their dedicated service and assistance in their commitment and compassion in high-quality veterinary care for all animals.

Learn more about National Veterinary Technician Week
Credentialed veterinary technicians scale teeth, monitor anesthetized patients, take radiographs, educate clients, and more. They provide high-quality care and thus are key to the smooth and efficient operation of a practice. But surprisingly, they are not part of the team at every hospital. According to data from the 2021 AVMA Census of Veterinarians and Veterinary Practice Owner Survey, only 61% of practices have credentialed veterinary technicians on staff. Veterinary assistants, including noncredentialed individuals, are far more common (88%). Technicians also work the lowest percentage of hours compared with other team members.

What’s more, those practices that employ credentialed technicians don’t leverage their skills fully. A 2016 survey by the National Association of Veterinary Technicians in America found that skill underutilization was among the “most significant problems” faced by CVTs, LVTs, and RVTs. As we celebrate their important contributions during National Veterinary Technician Week (October 16-22), we want to highlight the many ways they can reach their fullest potential and boost practice success.

## GREATER REVENUE

Perhaps the most direct evidence of their beneficial effect is the association between credentialed technicians and practice revenue. Whether shown in staff numbers or total labor hours, AVMA data have consistently demonstrated that gross revenue often increases substantially when practices employ more technicians, be it in the US or abroad.

In Ontario, Canada, for example, solo and non-solo practices that rely on technicians performing the duties they’re qualified to do are far more profitable than those that don’t. In addition, the increase in revenue associated with employing them, or their equivalent, is much greater than the cost of their salaries or wages, no matter where the practice is located.

## MORE EFFICIENCY

It’s also important to maximize profitability, minimize staff burnout and attrition, and increase affordability and access to services. When veterinarians perform tasks a credentialed technician can do, they see fewer patients, their productivity is limited, and efficiency suffers. AVMA survey data have repeatedly shown that the most efficient practices tend to employ more technicians than veterinarians. The more technicians and other non-DVM staff there are supporting each veterinarian, the more likely it is that the practice will operate efficiently.

## INCREASED WELL-BEING AND JOB SATISFACTION

Optimal engagement of technicians can also mitigate the high turnover, low satisfaction, and burnout plaguing the industry. The 2021 AVMA census found that veterinarians are working more hours on average than they did just a few years ago and that 44% have thought about leaving the profession for reasons other than retirement. As for technicians, studies show that many also feel burned out as well as underused.

Research findings offer insights into potential ways to address this problem:

- Job satisfaction among technicians appears to be strongly tied to the application of their knowledge and skills.
• Technicians who feel they’re adding value to the practice have lower cynicism and higher professional efficacy scores.
• Technicians who self-report being underused are more likely than others to indicate they don’t plan to remain in their role.

Optimal use of technicians can free veterinarians to spend more time delivering the care only they can provide, while giving technicians they opportunity to do what they do best and supporting self-competence.

The value of fully engaging veterinary technicians cannot be overstated. Besides affecting well-being at the individual, team, and industry level, burnout has a significant economic toll on the profession.4 In human medicine, dissatisfaction and burnout have been found to be contagious, directly affecting the ability of clinicians to effectively care for patients.5

ENHANCED PATIENT CARE

The quality of care is influenced by many factors, including the knowledge, skills, and well-being of caregivers. When it comes to the first two, veterinary technicians have what it takes to educate clients and provide the best possible care in many areas. They can also specialize in animal behavior, dermatology, emergency/critical care, and other areas. A simple way to enhance patient care is to match talent to tasks, enabling technicians to exercise their strengths and grow their skills and veterinarians to maximize the care they provide.

Another important component of quality care is client follow-through on recommendations, and veterinary technicians are skilled here as well. In addition to providing emotional support, technicians are particularly good at answering client questions about disease prevention, diagnosis, and treatment plans. Clients who feel they are involved in decisions about their pets are more likely to trust and adhere to veterinary recommendations.

INCREASED CLIENT SATISFACTION AND LOYALTY

Enhanced staff well-being, patient care, and communication can go a long way toward fostering client satisfaction and loyalty. The greater efficiencies that come with having technicians working to their fullest potential can also mean more time and opportunities to build trustful relationships with clients and their companion animals.

Informing clients about technician qualifications is another way to bolster their satisfaction and loyalty. That’s because expertise is 1 of the 3 main things clients value when it comes to veterinary professionals, the other 2 being a strong relationship and personal recommendations.6

A 2021 survey of pet owners conducted by the North American Veterinary Community found that they trust and have positive feelings toward credentialed veterinary technicians.7 However, most are unaware of the training and skills these technicians have, believing instead that their responsibilities are limited to cage cleaning and pet grooming, tasks typically performed by noncredentialed staff. We can change this perception and thereby help technicians feel more appreciated.

OPTIMIZING THE USE OF VETERINARY TECHNICIANS

As the data show, employing credentialed technicians and keeping them happy are important to the success of a practice. This investment promises dividends for teams, clients, patients, and the entire veterinary profession. But despite our best efforts, recruitment and retention can be a challenge. These strategies can attract and engage technicians:
• Foster a sense of autonomy, competency, and impact.
• Pay a competitive wage so that it is a reason to stay rather than to leave.
• Consider nonmonetary rewards, such as recognition on social media or extra time off.
• Maximize their opportunities to apply their diverse skill sets.
• Empower them to recognize and solve problems.
• Thank them for a job well done.
• Use language that conveys respect and fosters a sense that they’re making a difference.
• Support those interested in specialty training.
• Provide them with career advancement opportunities, like a senior technician role or practice management duties.
• Help clients understand the special training and skills required to be credentialed.
• Encourage noncredentialed assistants to become credentialed technicians.8,9

REFERENCES


Optimal engagement of technicians can also mitigate the high turnover, low satisfaction, and burnout plaguing the industry.
Every veterinarian must care about African swine fever

Worldwide disease threatens all wild and domestic pigs

By now, you’ve probably heard that the African swine fever virus (ASFV) has wreaked havoc on major pork-producing countries like China and Vietnam, severely crippling their ability to produce a much-needed source of protein for domestic use. If your practice doesn’t offer swine health consultation services, it may be easy to dismiss this nonzoonotic disease that primarily affects animals in Asia. However, ASFV threatens not only global food security but also agriculture, which is the backbone of the US rural economy.

ASFV can have serious negative impacts on animal health and welfare, international trade, national and global economies, rural development, and social and political behavior.1 Swine acutely infected with the virus have a high morbidity and mortality rate. African swine fever (ASF) is listed as a notifiable disease with the World Organization for Animal Health and recognized by the US Department of Agriculture as a high-consequence foreign animal disease.

As animal health practitioners, we share a common purpose: to prevent unnecessary animal suffering and mortality, irrespective of species. For many of you, that may mean caring for pot-bellied pigs, miniature pigs, or other members of the family Suidae that are kept as pets. Unfortunately, ASF doesn’t discriminate between farm and companion animals but affects nearly all subspecies of pigs.2,3

Common signs of acute ASFV infection are fever, reddening of the skin, anorexia, listlessness, and vomiting, which can occur after a typical incubation period of 4 to 15 days. Because the mortality rate of acute ASFV is nearly 100%, little can be done for affected animals, except mitigate their suffering. However, the mortality rate is lower with less virulent forms of ASF.3,5

In 2021, ASF was confirmed in the Dominican Republic and Haiti, within easy range of the continental US and territories like Puerto Rico. In response, this past June the USDA Animal Plant Health and Inspection Service launched Protect Our Pigs, a campaign to raise awareness about this threat and curb the risk.

Ours is a global society, and animals and animal products are transported around the world all day, every day. Controlling the threat of high-risk materials entering the United States is one of the duties of USDA Customs and Border Protection, but the agency needs our help. If you know of any animals, products, or materials coming into the US from areas where ASF is prevalent, please contact state or federal animal health officials and advise clients appropriately.

Together we can protect the national swine herd and ensure that an important source of protein continues to be available for consumers around the world. As veterinarians, we should all be supporting efforts to improve animal health and welfare and doing what is right for people, pigs, and the planet.

REFERENCES

Dusty Oedekoven, DVM, DACVPM
written by Dusty Oedekoven, DVM, DACVPM, is chief veterinarian of the National Pork Board.
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It is easy to complain about unchanging veterinary conference formats and procedures. Complaining rarely is very productive. Some reasonable suggestions directed to conference sponsors may lead to a more palatable continuing education experience. More interactive presentations with less rigid structure can be both educational and not uncomfortable. Break time with interactive encounters with experts and colleagues can lead to improving the skill base for many clinicians.

The continuing education community is starting to listen. Fetch conferences are changing the roadmap to lifelong learning. Many online courses are now tutorials that allow you to correct errors within the context of your learning experience. Hands on “wet lab training” is no longer limited to surgical or technical skills. Role-playing formats to assist with client interactions or improving the euthanasia experience are on the horizon. Be prepared to enjoy upcoming continuing education experiences, but also remember that Rome wasn’t built in a day.

Rosenberg is director of Voorhees Veterinary Center in Voorhees, New Jersey. Although many of the scenarios Rosenberg describes in his column are based on real-life events, the veterinary practices, doctors, and employees described are fictional.
DR. MELANIE GOBLE, DVM
TOGETHER FOR PETS AWARD
Congratulations to this amazing veterinarian and cofounder of Not One More Vet — a nonprofit designed to help the issues of suicide and mental health in the veterinary profession. She has received a $10,000 grant from Blue Buffalo.

WHERE DO YOU WORK?
I own Renewed Strength Veterinary Services, LLC, providing relief veterinary services in the United States and parts of Canada.

WHY DID YOU BECOME A VETERINARIAN?
I told my parents at the age of four that I was going to be a veterinarian. I believe that this is what I was made for — to help people and animals be better.

WHAT'S YOUR PASSION?
Making the world a better place for everyone, human and animal. To let people know that they are loved and cared for, that they are not alone, even when it doesn’t feel like it.

HOW DO YOU MAKE A DIFFERENCE?
I joined with colleagues to start Not One More Vet, Inc. (NOMV) in 2017 to help veterinarians and students who are struggling or considering suicide.

I also travel with Christian Veterinary Mission (CVM) to provide veterinary care and mentor veterinarians around the world.

WHAT EXCITES YOU ABOUT THE FUTURE?
Working together to facilitate change in the veterinary profession and in the world. There is so much room for growth for all of us, being a part of that change is an overwhelming blessing.

Blue Buffalo salutes the veterinarians who go above and beyond to advance the profession and improve the lives of our pets.
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