

Undoing Disney

Disney reigns supreme at superb customer service, but does it work for veterinary medicine?

page 30



SEE GI ISSUES IN A NEW LIGHT WITH MICROBIOME SCIENCE

NEW Hill's® Prescription Diet® Gastrointestinal Biome's groundbreaking **ActivBiome+ Technology** revolutionizes the way you tackle fiber-responsive GI issues by putting microbiome health at the forefront of GI care.

FORMULATED TO UNIQUELY WORK IN TWO WAYS:

- 1** Breakthrough synergistic blend of natural fibers promotes regular healthy stool
- 2** Shown to **nourish and activate gut microbiome** to support digestive health and well-being¹



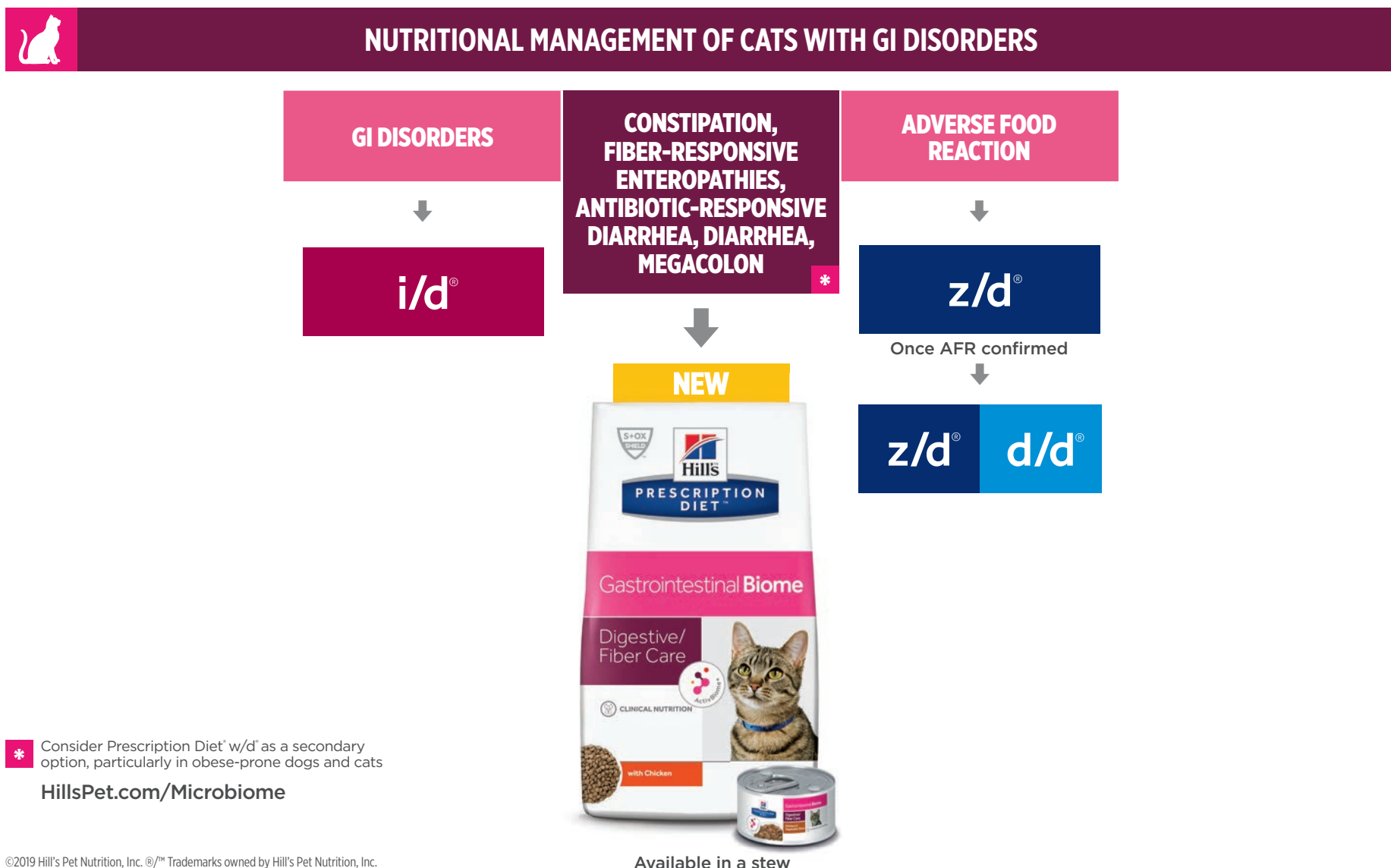
Ask your Hill's rep about this revolutionary, great-tasting nutrition — also available in an irresistible stew.

Learn More: HillsPet.com/Microbiome

¹Hill's data on file. Clinical study on microbiome changes in cats.
©2019 Hill's Pet Nutrition, Inc. ®/™ Trademarks owned by Hill's Pet Nutrition, Inc.



LET'S STAY AHEAD OF EVERY GI ISSUE



Undoing Disney

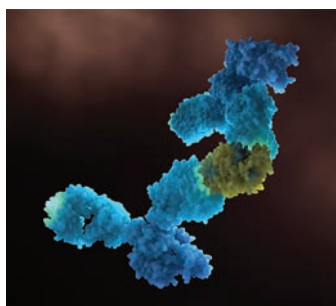
Disney reigns supreme at superb customer service, but does it work for veterinary medicine?
page 30



Mission: Nutrition

The internet is rife with arguments about what to feed pets. There's mythmongering, fear and irrationality. But there are some bright spots, too. And some weird ones (vegan diets for cats?). We dig in and offer some tools for you to dig into the wild world of pet nutrition.

- » The dark side of pet nutrition **page 18**
- » Can pets eat vegan? **page 22**
- » Look on the bright side of pet nutrition **page 24**
- » What's in the bag? A checklist for evaluating diet options **page 25**
- » Food for thought: New data on nutrition for veterinary clients **page 26**



Purina says it's cracked the code on feline allergens
page 10



FDA targets peas, lentils, potatoes in grain-free diets
page 11



How feline-friendly handling saved lives in the California fires
page 14



Heartworm hotspots: When pet travel is trouble
page M7

Confidence,

in every chew.



NexGard®
(afoxolaner) Chewables

What one little chew can do

- ✓ The #1 flea- and tick-killing chew preferred by dogs¹
- ✓ No second-guessing – effective when given with or without food
- ✓ A monthly routine that's easy for clients to remember

IMPORTANT SAFETY INFORMATION: NexGard is for use in dogs only. The most frequently reported adverse reactions include vomiting, pruritus, lethargy, diarrhea and lack of appetite. The safe use of NexGard in pregnant, breeding, or lactating dogs has not been evaluated. Use with caution in dogs with a history of seizures or neurologic disorders. For more information, see the full prescribing information on page 3 or visit www.NexGardClinic.com.



NexGard® is a registered trademark, and FRONTLINE VET LABS™ is a trademark, of the Boehringer Ingelheim Group.
©2019 Boehringer Ingelheim Animal Health USA Inc., Duluth, GA. All rights reserved. PET-1447-NEX0419.

¹Data on file.

Mission

Through its extensive network of news sources, **dvm360** provides unbiased multimedia reporting on all issues affecting the veterinary profession.

Content

- News Channel Director | **Kristi Reimer Fender**
kfender@mmhgroup.com
- Business Channel Director | **Brendan Howard**
- Content Marketing Director | **Adrienne Wagner**
- Associate Editorial Director | **Maureen McKinney**
- Associate Content Specialists | **Katie James, Hannah Wagle**
- Clinical Techniques Course Manager | **Jennifer Vossman, RVT, CMP**
- Digital Content Director | **Jessica Zemler**
- Digital Design Director | **Ryan Kramer**
- Associate Art Director | **Nichollette Haigler**
- Content Marketing Manager | **Gabrielle Roman**

Contributing Authors | Advisory Board

- Christopher J. Allen, DVM, JD | Jan Bellows, DVM, DAVDC**
- Bo Brock, DVM | Jeremy Campfield, DVM**
- Ed Kane, PhD | Robert M. Miller, DVM**
- Michael Paul, DVM | Marc Rosenberg, VMD**

Sales

- Account Manager | **Angie Homann**
(913) 871-3917 | ahomann@mmhgroup.com
- Account Manager | **Kelly Main**
(913) 871-3872 | kmain@mmhgroup.com
- Account Manager | **Emma Pierce**
(913) 871-3873 | epierce@mmhgroup.com
- Account Manager | **Terry Reilly**
(913) 871-3871 | treilly@mmhgroup.com
- Account Manager | **Yousef Elhusseini**
(609) 716-7777 | yelhusseini@mmhgroup.com
- Sales/Projects Coordinator | **Anne Belcher**
(913) 871-3876 | abelcher@mmhgroup.com
- Books/Resource Guide Sales | **Kristina Bildeaux**
(507) 895-6758 | kbildeaux@mmhgroup.com

MultiMedia Healthcare LLC

- President | **Tom Ehardt**
- Vice President & Managing Director | **Christie McFall**
913-871-3810 | cmcfall@mmhgroup.com
- Vice President, Digital Product Management | **Mark Eisler**
- Executive Creative Director | **Marnette Falley**
- Medical Director | **Theresa Entriken, DVM**
- Fetch dvm360 Director | **Peggy Shandy Lane**
- Business Manager | **Chris Holston**

Subscriber Services: Visit dvm360.com to request or change a subscription, or call our Customer Service Department toll-free at (888) 527-7008. **Reprints:** Call 877-652-5295 ext. 121, or write to bkolb@wrightsmedia.com. Outside the U.S. and U.K., direct-dial (281) 419-5727 ext. 121. **Books and Resource Guides:** Visit industrymatter.com. **List Rental Sales:** Call Anne Belcher at (913) 871-3876, or write abelcher@mmhgroup.com. **Editorial Offices:** MultiMedia Healthcare LLC, 11140 Thompson Ave., Lenexa, KS 66219; 913-871-3800. **Websites:** dvm360.com; fetchdvm360.com.

Drs. Mary Gardner and Sue Ettinger to give KC keynote

Lauren, ap of Love co-founder Mary Gardner, DVM, and best-selling author Sue Ettinger, DVM, DACVIM (oncology), have been announced as keynote speakers for the upcoming Fetch dvm360 conference in Kansas City. Their keynote, “Under Pressure: Surviving Work Life Imbalance,” will take place Aug. 24. Dr. Gardner loves gray muzzles and writes and speaks on all aspects



Dr. Mary Gardner



Dr. Sue Ettinger

of end-of-life care. Dr. Ettinger, also known as Dr. Sue Cancer Vet, has been instrumental in raising pet cancer awareness, creating the “See

Something, Do Something, Why Wait? Aspirate” initiative to promote early cancer detection. Both doctors are frequent contributors to *dvm360*. Fetch dvm360 in Kansas City takes place Aug. 23-26 at the Kansas City Convention Center, featuring leading veterinary CE as well as relaxation and fun with yoga, meditation, game nights and laid-back evening sessions. To register, visit fetchdvm360.com.

NexGard® (afoxolaner) Chewables

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

Description: NexGard® (afoxolaner) is available in four sizes of beef-flavored, soft chewables for oral administration to dogs and puppies according to their weight. Each chewable is formulated to provide a minimum afoxolaner dosage of 1.14 mg/lb (2.5 mg/kg). Afoxolaner has the chemical composition 1-Naphthalenecarboxamide, 4-[5- [3-chloro-5-(trifluoromethyl)-phenyl]-4, 5-dihydro-5-(trifluoromethyl)-3-isoxazoly]-N-[2-oxo-2-[(2,2,2-trifluoroethyl)amino]ethyl].

Indications: NexGard kills adult fleas and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*), and the treatment and control of Black-legged tick (*Ixodes scapularis*), American Dog tick (*Dermacentor variabilis*), Lone Star tick (*Amblyomma americanum*), and Brown dog tick (*Rhipicephalus sanguineus*) infestations in dogs and puppies 8 weeks of age and older, weighing 4 pounds of body weight or greater, for one month. NexGard is indicated for the prevention of *Borrelia burgdorferi* infections as a direct result of killing *Ixodes scapularis* vector ticks.

Dosage and Administration: NexGard is given orally once a month, at the minimum dosage of 1.14 mg/lb (2.5 mg/kg).

Dosing Schedule:

Body Weight	Afoxolaner Per Chewable (mg)	Chewables Administered
4.0 to 10.0 lbs.	11.3	One
10.1 to 24.0 lbs.	28.3	One
24.1 to 60.0 lbs.	68	One
60.1 to 121.0 lbs.	136	One
Over 121.0 lbs.	Administer the appropriate combination of chewables	

NexGard can be administered with or without food. Care should be taken that the dog consumes the complete dose, and treated animals should be observed for a few minutes to ensure that part of the dose is not lost or refused. If it is suspected that any of the dose has been lost or if vomiting occurs within two hours of administration, redose with another full dose. If a dose is missed, administer NexGard and resume a monthly dosing schedule.

Flea Treatment and Prevention: Treatment with NexGard may begin at any time of the year. In areas where fleas are common year-round, monthly treatment with NexGard should continue the entire year without interruption. To minimize the likelihood of flea reinfestation, it is important to treat all animals within a household with an approved flea control product.

Tick Treatment and Control: Treatment with NexGard may begin at any time of the year (see **Effectiveness**).

Contraindications: There are no known contraindications for the use of NexGard.

Warnings: Not for use in humans. Keep this and all drugs out of the reach of children. In case of accidental ingestion, contact a physician immediately.

Precautions: Afoxolaner is a member of the isoxazoline class. This class has been associated with neurologic adverse reactions including tremors, ataxia, and seizures. Seizures have been reported in dogs receiving isoxazoline class drugs, even in dogs without a history of seizures. Use with caution in dogs with a history of seizures or neurologic disorders (see **Adverse Reactions** and **Post-Approval Experience**).

The safe use of NexGard in breeding, pregnant or lactating dogs has not been evaluated.

Adverse Reactions: In a well-controlled US field study, which included a total of 333 households and 615 treated dogs (415 administered afoxolaner; 200 administered active control), no serious adverse reactions were observed with NexGard.

Over the 90-day study period, all observations of potential adverse reactions were recorded. The most frequent reactions reported at an incidence of > 1% within any of the three months of observations are presented in the following table. The most frequently reported adverse reaction was vomiting. The occurrence of vomiting was generally self-limiting and of short duration and tended to decrease with subsequent doses in both groups. Five treated dogs experienced anorexia during the study, and two of those dogs experienced anorexia with the first dose but not subsequent doses.

Table 1: Dogs With Adverse Reactions.

	Treatment Group			
	Afoxolaner	Oral active control		
	N ¹	% (n=415)	N ²	% (n=200)
Vomiting (with and without blood)	17	4.1	25	12.5
Dry/Flaky Skin	13	3.1	2	1.0
Diarrhea (with and without blood)	13	3.1	7	3.5
Lethargy	7	1.7	4	2.0
Anorexia	5	1.2	9	4.5

¹ Number of dogs in the afoxolaner treatment group with the identified abnormality.

² Number of dogs in the control group with the identified abnormality.

In the US field study, one dog with a history of seizures experienced a seizure on the same day after receiving the first dose and on the same day after receiving the second dose of NexGard. This dog experienced a third seizure one week after receiving the third dose. The dog remained enrolled and completed the study. Another dog with a history of seizures had a seizure 19 days

after the third dose of NexGard. The dog remained enrolled and completed the study. A third dog with a history of seizures received NexGard and experienced no seizures throughout the study.

Post-Approval Experience (July 2018): The following adverse events are based on post-approval adverse drug experience reporting. Not all adverse events are reported to FDA/CVM. It is not always possible to reliably estimate the adverse event frequency or establish a causal relationship to product exposure using these data.

The following adverse events reported for dogs are listed in decreasing order of reporting frequency for NexGard:

Vomiting, pruritus, lethargy, diarrhea (with and without blood), anorexia, seizure, hyperactivity/restlessness, panting, erythema, ataxia, dermatitis (including rash, papules), allergic reactions (including hives, swelling), and tremors.

Contact Information: For a copy of the Safety Data Sheet (SDS) or to report suspected adverse drug events, contact Merial at 1-888-637-4251 or www.nexgardfordogs.com.

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>.

Mode of Action: Afoxolaner is a member of the isoxazoline family, shown to bind at a binding site to inhibit insect and acarine ligand-gated chloride channels, in particular those gated by the neurotransmitter gamma-aminobutyric acid (GABA), thereby blocking pre- and post-synaptic transfer of chloride ions across cell membranes. Prolonged afoxolaner-induced hyperexcitation results in uncontrolled activity of the central nervous system and death of insects and acarines. The selective toxicity of afoxolaner between insects and acarines and mammals may be inferred by the differential sensitivity of the insects and acarines' GABA receptors versus mammalian GABA receptors.

Effectiveness: In a well-controlled laboratory study, NexGard began to kill fleas four hours after initial administration and demonstrated >99% effectiveness at eight hours. In a separate well-controlled laboratory study, NexGard demonstrated 100% effectiveness against adult fleas 24 hours post-infestation for 35 days, and was ≥93% effective at 12 hours post-infestation through Day 21, and on Day 35. On Day 28, NexGard was 81.1% effective 12 hours post-infestation. Dogs in both the treated and control groups that were infested with fleas on Day -1 generated flea eggs at 12- and 24-hours post-treatment (0-11 eggs and 1-17 eggs in the NexGard treated dogs, and 4-90 eggs and 0-118 eggs in the control dogs, at 12- and 24-hours, respectively). At subsequent evaluations post-infestation, fleas from dogs in the treated group were essentially unable to produce any eggs (0-1 eggs) while fleas from dogs in the control group continued to produce eggs (1-141 eggs).

In a 90-day US field study conducted in households with existing flea infestations of varying severity, the effectiveness of NexGard against fleas on the Day 30, 60 and 90 visits compared with baseline was 98.0%, 99.7%, and 99.9%, respectively.

Collectively, the data from the three studies (two laboratory and one field) demonstrate that NexGard kills fleas before they can lay eggs, thus preventing subsequent flea infestations after the start of treatment of existing flea infestations.

In well-controlled laboratory studies, NexGard demonstrated >97% effectiveness against *Dermacentor variabilis*, >94% effectiveness against *Ixodes scapularis*, and >93% effectiveness against *Rhipicephalus sanguineus*, 48 hours post-infestation for 30 days. At 72 hours post-infestation, NexGard demonstrated >97% effectiveness against *Amblyomma americanum* for 30 days. In two separate, well-controlled laboratory studies, NexGard was effective at preventing *Borrelia burgdorferi* infections after dogs were infested with *Ixodes scapularis* vector ticks 28 days post-treatment.

Animal Safety: In a margin of safety study, NexGard was administered orally to 8 to 9-week-old Beagle puppies at 1, 3, and 5 times the maximum exposure dose (6.3 mg/kg) for three treatments every 28 days, followed by three treatments every 14 days, for a total of six treatments. Dogs in the control group were sham-dosed. There were no clinically-relevant effects related to treatment on physical examination, body weight, food consumption, clinical pathology (hematology, clinical chemistries, or coagulation tests), gross pathology, histopathology or organ weights. Vomiting occurred throughout the study, with a similar incidence in the treated and control groups, including one dog in the 5x group that vomited four hours after treatment.

In a well-controlled field study, NexGard was used concomitantly with other medications, such as vaccines, anthelmintics, antibiotics (including topicals), steroids, NSAIDs, anesthetics, and antihistamines. No adverse reactions were observed from the concomitant use of NexGard with other medications.

Storage Information: Store at or below 30°C (86°F) with excursions permitted up to 40°C (104°F).

How Supplied: NexGard is available in four sizes of beef-flavored soft chewables: 11.3, 28.3, 68 or 136 mg afoxolaner. Each chewable size is available in color-coded packages of 1, 3 or 6 beef-flavored chewables.

NADA 141-406, Approved by FDA
Marketed by: Frontline Vet Labs™, a Division of Merial, Inc.
Duluth, GA 30096-4640 USA
Made in Brazil.

©NexGard is a registered trademark, and
™FRONTLINE VET LABS is a trademark, of Merial.
©2018 Merial. All rights reserved.

1050-4493-07
Rev. 05/2018





GET THE BEST VETERINARY CE



Connect with like-minded animal care professionals!

A Fetch dvm360® conference offers you the opportunity to network, brainstorm and learn from expert speakers and other veterinary professionals. With evidence-based continuing education opportunities and hundreds of exhibitors, Fetch dvm360® has something for everyone in your practice.

San Diego, CA | Dec. 12-15



REGISTER TODAY! fetchdvm360.com



NEWS

8 | Veterinary headlines

- » Penn Vet to conduct cannabis clinical trial
- » Dr. Andy Roark says ‘4 eyes’ on drug box could save lives

10 | Feline research

Purina scientists say they’ve cracked the (egg) code on cat allergens

11 | Nutrition

FDA targets peas, lentils, potatoes in grain-free diets

12 | Products

- » Proheart 12 approved for veterinary use in U.S.
- » Canine diabetes pilot study now underway at Tufts

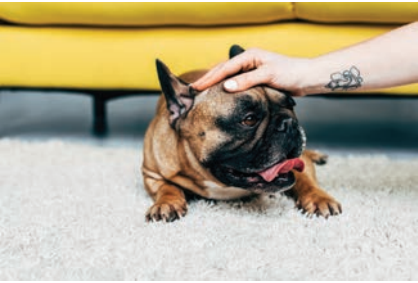


14 | Animal welfare

How feline-friendly handling saved lives in the California Camp Fire

28 | Hospital design

Slow growth to a freestanding hospital



39 | Industry trends

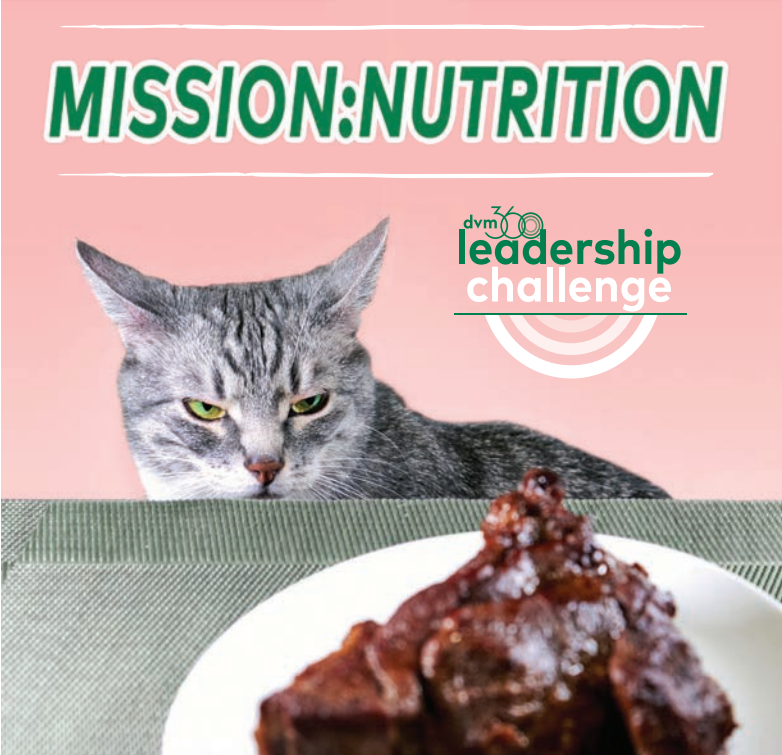
Think you understand millennials? Brace yourself for Gen Z

40 | Research

- » Human stress can transfer to dogs
- » Lawmakers aim to fight zoonotic disease with new One Health law

41 | Student debt

House increases funding for debt relief



dvm360 LEADERSHIP CHALLENGE

- » The dark side of pet nutrition **page 18**
- » Can pets eat vegan? **page 22**
- » The bright side of pet nutrition **page 24**
- » What’s in the bag? A checklist for evaluating pet food options **page 25**
- » Food for thought: New data on nutrition for clients **page 26**

MEDICINE360

The small animal section begins after **page 34**.

M1 | Oncology

Take the offensive fighting cancer and inappetence
Sue Ettinger, DVM, DACVIM (oncology)

M4 | Clinical tips

- » When it comes to learning, share and share alike
- » Help clients register their pet’s microchip information

M6 | Pain Management

Rehab recommendations

M7 | Parasitology

Heartworm hotspots: When pet travel is trouble
Natalie Stilwell, DVM, MS, PhD

PRODUCTS360

43 | The latest veterinary products



COMMUNITY

30 | Commentary

Undoing Disney
Melissa Detweiler, DVM

SPECIAL CONTRIBUTORS

32 | Can We Talk?

Does it spark joy?
My take on Marie Kondo
Mike Paul, DVM

34 | The Dilemma

Sunday hours: Worth it or the wrong fit?
Marc Rosenberg, VMD



35 | AVMA Eye on Economics

Pin the competition: How to make market share work for you
Charlotte Hansen, MS

50 | Stampede

‘Say cheese, Mr. Vice President!’
Bo Brock, DVM

READER SERVICES

49 | Calendar

WHAT IF...

A PROBIOTIC COULD HELP ANXIOUS DOGS FEEL CALMER?

Introducing Purina® Pro Plan® Veterinary Supplements Calming Care with *Bifidobacterium longum* (BL999), a probiotic strain shown to help dogs maintain calm behavior. In a blinded crossover design study, **90% of dogs showed an improvement** in displaying anxious behaviors such as jumping, pacing, and spinning*.



Helps dogs cope with external stressors like separation, unfamiliar visitors, novel sounds, or changes in routine and location



Helps dogs maintain positive cardiac activity during stressful events, promoting a positive emotional state



Helps blunt cortisol response to anxious events and supports a healthy immune system

LEARN MORE ABOUT NESTLÉ PURINA'S PROBIOTIC RESEARCH AT **PURINAPROPLANVETS.COM**.

1-800-222-8387 (8:00 AM - 4:30 PM CST M-F) | Talk to your Purina Veterinary Consultant

*McGowan, R. T. S. (2016). "Oiling the brain" or "Cultivating the gut": Impact of diet on anxious behavior in dogs. Proceedings of the Nestlé Purina Companion Animal Nutrition Summit, March 31-April 2, Florida, 91-97. Purina trademarks are owned by Société des Produits Nestlé S.A.



PURINA

Your Pet, Our Passion®

Penn Vet to conduct **cannabis** clinical trial

This veterinarian-backed scientific study will be among the first studies of cannabinoid therapy for pets.

In an effort to relieve symptoms of joint immobility in dogs, a new clinical trial will evaluate the effectiveness of a hemp-based natural supplement, a recent release states. The University of Pennsylvania School of Veterinary Medicine (Penn Vet) will be using canine supplement products provided by Therabis, a subsidiary of Dixie Brands, one of the cannabis industry's leading consumer packaged goods (CPG) companies.

The clinical trial, led by principal investigator Kimberly Agnello, DVM, MS, DACVS, DACVSMR, will study dogs known to be suffering from in-

flammation secondary to osteoarthritis to determine whether the supplement achieves better outcomes in these dogs than those that are left untreated, the release states. To accomplish this, a group of 20 dogs will be targeted: one group will receive cannabidiol alone, while others will receive the formula for a proprietary veterinary-specific formula Therabis product.

"As dogs age," the release states, "discomfort from osteoarthritis, back issues and joint immobility can become increasingly common. Larger and heavier breeds can be especially prone to these issues. It is estimated

that more than half of dogs older than 7 years suffer from arthritis."

Believed to be the largest-scale trial to date, this is among the first scientific studies of cannabinoid therapy for pets, according to the release. To establish quantitative measures of effectiveness, the study incorporates physical tests. And since the inflammatory process is equivalent, researchers will study dogs' front leg joints rather than studying the hips, the release states.

Results are anticipated to come within 12 months and are expected to be published in a veterinary medicine journal, according to the release.

Dr. Andy Roark says '4 eyes' on drug box could **save lives**

Popular website is asking the nation's veterinary hospitals to take one extra step in accessing certain pharmaceuticals.



DrAndyRoark.com offered just one article for users to read Wednesday, June 12.

Titled "What do we do about suicide? It's time to limit access to the methods," the article by Andy Roark, DVM, a popular veterinary speaker and writer, cites statistics that have pointed him down a path to a solution (already in place in human hospitals) to help lessen the number of veterinarian suicides:

- > Veterinarians are more at risk of dying by suicide than the general population.
- > Female veterinarians' No. 1

method of dying by suicide is "pharmaceutical poisonings."

> A 2014 study found that many suicides are the result of "sudden desires."

> In a survey Dr. Roark conducted of more than 8,000 individuals, 71% said they could access the controlled drugs in their clinic with no other person present.

Dr. Roark's proposed "4-eyes" system—which would require two people (four eyes) to access certain drugs—would help control access to drugs commonly used in suicide attempts. Implementing the system can be as elaborate as a multi-thousand-dollar drug cabinet and RFID key fob or as simple as a two-key lockbox.

Whatever the solution, Dr. Roark suggests the protocol change needs to be seen not as a mandated hassle but a way to save colleagues' lives.

"If our employees believe these systems are a mandate from the DEA

or OSHA, or a program brought down 'from corporate,' they'll bypass them. They will leave keys at the clinic instead of taking them home, and they will share fobs for easy access," he writes. "If, however, they know that this system exists to prevent one of their teammates from taking his or her own life, and that sharing fobs or leaving keys at work will result in losing access, then I believe they will step up to keep their friends and coworkers safe." In addition, he writes, "Every drug box should have the National Suicide Prevention phone number posted on it to serve as a reminder."

The article features at least one example of a veterinary practice using a multiperson-access system for particular drugs. Dr. Roark says he is now seeking support from the veterinary industry and others in the community to publicize this better management of drugs used in deaths by suicide.



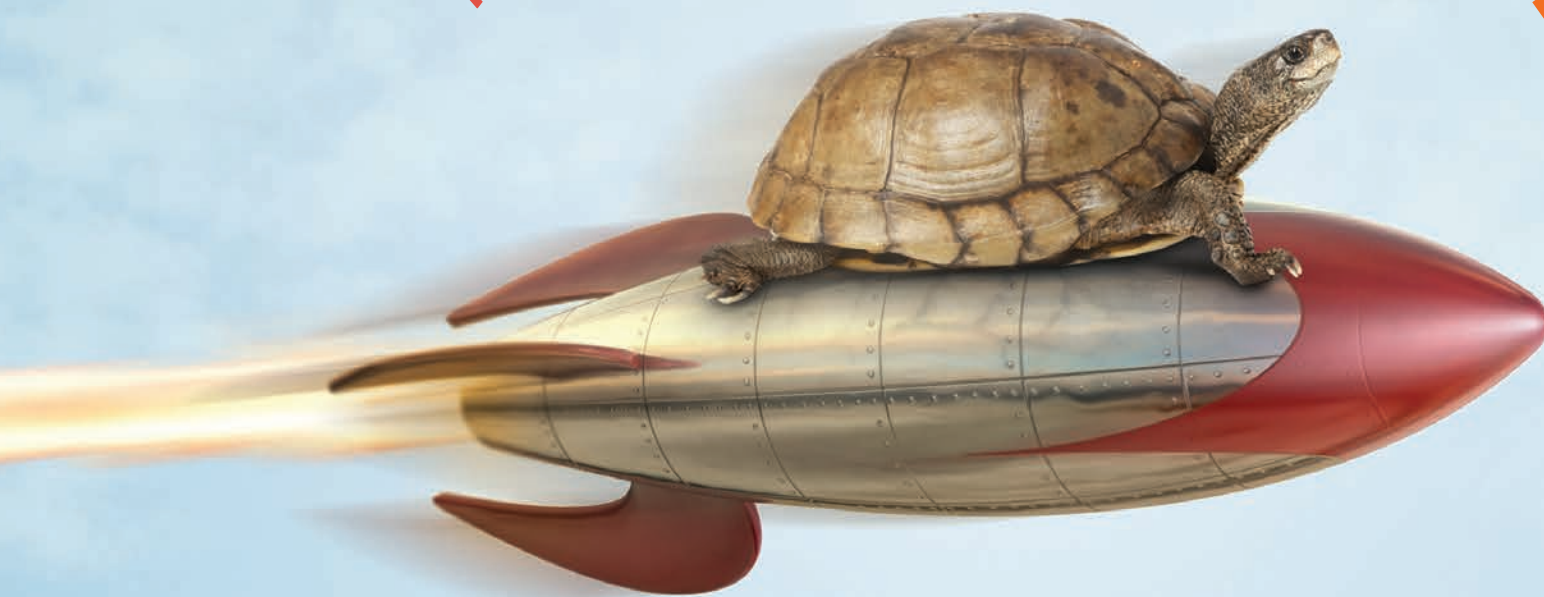
Responding to Dr. Roark

Some veterinarians think the "4 eyes" approach doesn't hit the mark. Read their response at dvm360.com/4eyes.

FLEX4

VETSCAN® FLEX4 RAPID TEST

ARRIVE AT YOUR DIAGNOSTIC RESULTS ON TIME



Nothing should get in the way of a quick, accurate diagnosis. That's why Zoetis has designed the VETSCAN Flex4 Rapid Test to make your journey fast and easy.

Vector-borne testing made easy.



 zoetisUS.com/dx

VETSCAN is a registered trademarks of Abaxis, Inc. All trademarks are the property of Zoetis Services LLC or a related company or a licensor unless otherwise noted. ©2019 Zoetis Services LLC. All rights reserved. RPD-00032

zoetis

Purina scientists say they've cracked the (egg) code on cat allergens

Company announces that a diet coated in egg powder can neutralize the protein causing people to experience allergic reactions to cats. *By Kristi Reimer Fender*

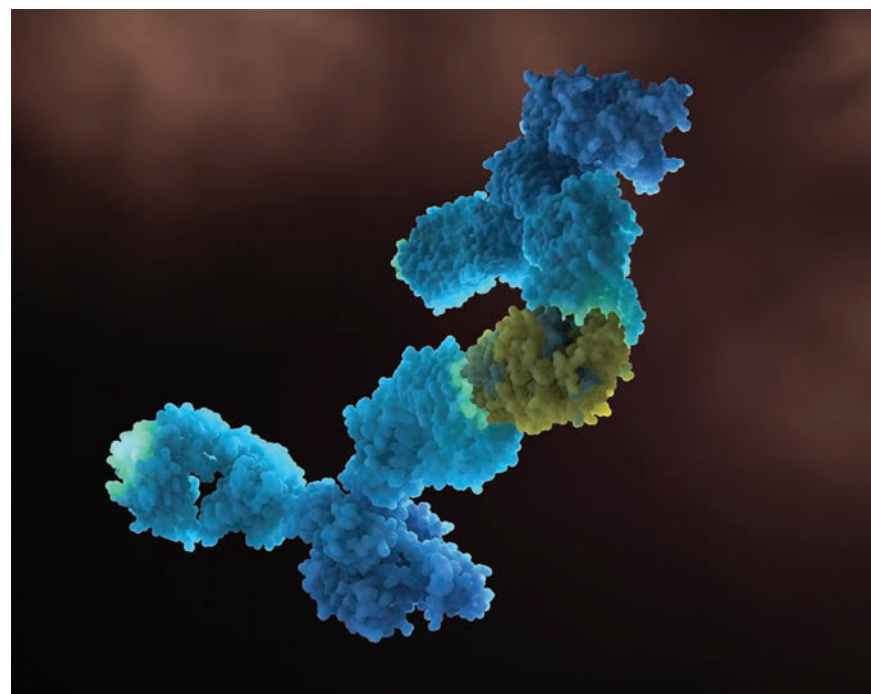
Feeding cats a diet coated in a specially formulated egg powder product can neutralize the feline allergens that trigger symptoms in people, Purina scientists announced recently.

In a conversation with dvm360, researchers explained that the major feline antigen present in cats' saliva is a protein called Fel d1, and while scientists don't know exactly what the protein does for the cat, they do know it's responsible for 95% of cat allergies in people—and that one in five people are allergic to cats. All cats, even those that are hairless, produce Fel d1, although

levels vary from cat to cat and in the same cat over the course of a year.

When a cat grooms, it transfers Fel d1 from its saliva and sebaceous glands to its fur. The antigen then spreads into the environment attached to shed hair and dander. It's known to be fairly "sticky," Purina folks say, clinging with a vengeance to blankets, carpet and curtains in the home and even making its way into public places.

When a sensitive person comes into contact with Fel d1, the allergen binds with IgE molecules in the immune system, triggering mast cell degranulation and an immune response—the misery



The Fel d1 protein (yellow) bound by IgY antibodies (blue).

of sneezing, itching, watery eyes and so on. Cat owners who talk to their doctors about these symptoms often hear that the best remedy is to get rid of the cat; in fact, 18% of cats that end up in shelters are relinquished because of allergies, Purina representatives say. Other allergy-control options include antihistamines, immunotherapy, meticulous cleaning, confinement of the cat to a limited area or some combination of the above. The problem: None of these solutions are especially appealing or foolproof.

Enter this new study by Purina. In a decade-long research effort recently published in *Immunity, Inflammation and Disease*, scientists found that the IgY molecule present in egg yolk (an antibody passed from hens to their chicks) can block specific sites on the Fel d1 molecule, keeping it from binding with IgE and thereby neutralizing the allergen. When cats were fed a diet coated with a specially formulated egg powder product containing IgY, 97% of cats showed decreased levels of active Fel d1 on their hair and dander compared with baseline. On average, there was a 47% reduction of active Fel d1 on cats' hair after three weeks of

feeding the diet, with a range of 33% to 71% reduction.

Purina scientists report that there was no difference in health parameters between the control cats and the cats eating the special diet, which seems to indicate that the product is safe for cats to consume. They also emphasize that the egg product does not suppress or destroy Fel d1—that protein may play an important role in cats' physiology. Rather, the product neutralizes its allergenic effects, which means there's a greater chance that allergen levels in the environment will stay below the threshold that would trigger symptoms in people.

"These allergens have created a huge barrier to cat ownership and may limit the loving interactions between cat lovers and cats," says immunologist Ebenezer Satyaraj, PhD, director of molecular nutrition at Purina and lead investigator on the research. "Our discovery has the potential to transform how people manage cat allergens."

More results from the research will be shared by the Purina Institute, an organization that serves as the global voice of Purina's scientific communications, as they become available.

GlucaMune Forte

NEW

Leading Edge Immune Modulator

In-vivo testing of this proprietary formulation demonstrates that **the synergistic combination of beta glucan, astragalus root, and licorice root is more potent than any individual ingredient** in terms of significant increases in measured macrophage phagocytosis and cytokine IL-2 release. Capsules are easy-to-administer and can also be opened and mixed with food for those difficult-to-pill patients.

For more information or to place an order please call:

**800-792-2222 or
914-592-2323
RxVitamins.com**



Formulated by **ROBERT J. SILVER DVM, MS, CVA**



Ninety-three percent of "grain-free" products reported to the FDA in regard to DCM cases contains peas and/or lentils (pictured above).

FDA targets peas, lentils, potatoes in grain-free diets

Agency looks for links between certain ingredients, specific brands and veterinarian-diagnosed cardiac issues in the 500-plus case reports it has received.

The FDA recently issued an update to its investigation into the potential connection between certain diets and dilated cardiomyopathy (DCM) in dogs. The agency is particularly targeting diets that list peas, lentils, other legume seeds and potatoes within the first 10 ingredients on the label. Also included in this update is a list of pet food brands most commonly named in DCM cases reported to the FDA.

Between Jan. 1, 2014, and April 30, 2019, the FDA reports, it received 524 reports of DCM as diagnosed by a veterinarian—515 for dogs and nine for cats. Because some reports include more than one affected animal in the same house, the total number of pets affected is greater than 524, according to an FDA release.

The FDA has been examining the labels of products associated with these DCM cases to determine the ingredients used and whether the products counted

as "grain-free" (which the agency defines as not containing corn, soy, wheat, rice, barley or other grains). According to the release, "More than 90 percent of products were 'grain-free,' and 93 percent of reported products contained peas and/or lentils. A far smaller proportion contained potatoes."

The FDA also analyzed the reports for pet food brands named at least 10 times in the 524 reports, although the agency emphasizes that no causal links have been identified. Here are the brands linked to at least 10 cases of DCM:

- > Acana (67 cases)
- > Zignature (64 cases)
- > Taste of the Wild (53 cases)
- > 4Health (32 cases)
- > Earthborn Holistic (32 cases)
- > Blue Buffalo (31 cases)
- > Nature's Domain (29 cases)
- > Fromm (24 cases)
- > Merrick (16 cases)
- > California Natural (15 cases)
- > Natural Balance (15 cases)
- > Orijen (12 cases)

- > Nature's Variety (11 cases)
- > NutriSource (10 cases)
- > Nutro (10 cases)
- > Rachael Ray Nutrish (10 cases)

Some dog breeds have a genetic predisposition to DCM, but the reports received by the FDA span a wide range of breeds, including those with no genetic predisposition, according to the release. The FDA has not yet established why these diets may be associated with the development of DCM. See the FDA's DCM investigation page at fda.gov for more information.

In the meantime, the agency is asking pet owners to work directly with veterinarians or veterinary nutrition specialists to choose an appropriate diet for their pets. Both pet owners and veterinary professionals should continue to report cases of dogs and cats with DCM that could be linked to diet. To report, use the online Safety Reporting Portal (safetyreporting.hhs.gov) or call your state's FDA consumer complaint coordinator.

JORVET SPECIALTY PRODUCTS

Icare® TonoVet Plus

The new generation of tonometer for quick and easy veterinary IOP measuring.



Why the TONOVET Plus?

- It is easy to use and fully automated
- Faster results
- More comfortable for the patient, no topical anesthetic
- Positioning Indicator Lights
- Clear User Interface
- Automatic Measuring Option
- Higher accuracy at higher and lower IOP
- Two year warranty!
- Held upright in a natural, ergonomic position like an ophthalmoscope for optimal readings.
- FDA approved for human medical use (iCare model)



Jorgensen Laboratories, Inc.

Loveland, CO 80538

(800) 525-5614

www.JorVet.com Info@JorVet.com



ProHeart 12 approved for veterinary use in U.S.

Injectable heartworm preventive is approved for dogs 12 months of age and older and provides one year of protection. *By Gabrielle Roman*

The FDA’s Center for Veterinary Medicine announced July 2 its approval of ProHeart 12 (moxidectin) extended-release injectable suspension for dogs 12 months of age and older. ProHeart 12 prevents heartworm disease caused by *Dirofilaria immitis* and also treats existing larval and adult hookworm infections. Its formulation gives 12 months of protection for dogs.

The moxidectin compound in ProHeart 12 has been previously approved in ProHeart 6 (which lasts for six months) but with three times the concentration of moxidectin. ProHeart 6 has a troubled history—it hit the

U.S. veterinary market in the early 2000s but was voluntarily removed from shelves in 2004 after thousands of adverse events, including death, were reported to the FDA.

After Fort Dodge Animal Health, the manufacturer at the time, made changes to how the drug was manufactured and worked with the FDA to create a Risk Minimization Action Plan (RiskMAP), the product was relaunched in 2008. The RiskMAP set several conditions, including requirements that veterinarians complete training and certification and provide informed consent forms to pet owners before administering treatment, and

that the product label include additional safety and risk information. Investigators evaluated the safety of ProHeart 12 in laboratory studies as well as field studies in client-owned dogs. In total, safety was evaluated in 404 animals, including 297 client-owned dogs, according to the FDA release. Furthermore, the FDA reviewed adverse event data from foreign markets, including Australia, and adverse event data for ProHeart 6 in the U.S., according to the release. Studies showed ProHeart 12 to be 100% effective in preventing heartworm disease for one year. The product is available in two sizes—10 ml and 50 ml.

entyce® (capromorelin oral solution)

30 mg/mL
BRIEF SUMMARY: Before using this product, please consult the full product insert for more information.
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.
Description: ENTYCE® (capromorelin oral solution) is a selective ghrelin receptor agonist that binds to receptors and affects signaling in the hypothalamus to cause appetite stimulation and binds to the growth hormone secretagogue receptor in the pituitary gland to increase growth hormone secretion.

Indication: ENTYCE (capromorelin oral solution) is indicated for appetite stimulation in dogs.
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: Field safety was evaluated in 244 dogs. The most common adverse reactions were diarrhea and vomiting. Of the dogs that received ENTYCE (n = 171), 12 experienced diarrhea and 11 experienced vomiting. Of the dogs treated with placebo (n = 73), 5 experienced diarrhea and 4 experienced vomiting.

To report suspected adverse drug events and/or obtain a copy of the Safety Data Sheet (SDS) or for technical assistance, call Aratana Therapeutics at 1-844-640-5500.

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>

NADA 141-457, Approved by FDA
US Patent: 6,673,929
US Patent: 9,700,591

Made in Canada



Manufactured for:
Aratana Therapeutics, Inc.
Leawood, KS 66211
ENTYCE is a trademark of Aratana Therapeutics, Inc.
© Aratana Therapeutics, Inc.

AT2-051-1
February 2018

Canine diabetes pilot study now under way at Tufts

A Tufts trial is evaluating whether a long-acting insulin can control diabetes in dogs more effectively. *By Maureen McKinney*

Diabetes in small animals is a very treatable condition. What’s not so easy is managing the disease on a day-to-day basis. Like people, most pets with diabetes require at least daily injections of insulin to process glucose.

It’s a big commitment on the owner’s part, notes Orla Mahony, MVB, DACVIM, a clinical assistant professor at Cummings School of Veterinary Medicine at Tufts University, in a June 25 Tufts blog post. “Diabetic pets typically require an insulin injection twice daily, and those injections are timed—they are not just given whenever you happen to be at home,” she says.

A new clinical trial from Tufts University Cummings Veterinary Medical Center may change all that. The trial is evaluating the effectiveness of an ultra-long-acting insulin in controlling glucose levels in dogs using only a



Olaf, the first dog enrolled in the clinical trial at Tufts, is examined by Dr. Mahony as his owner looks on.

single weekly injection. “If it’s successful, owners could give their pets an injection just once a week, removing the need to be home at the same time every day,” Dr. Ma-

honey says in the blog post. It would also help improve the quality of life for pets who really fight shots and the owners who administer them. To enroll in the trial—which is part of a multi-institutional study that includes the University of Georgia, Louisiana State and the University of California, Davis, along with Tufts—dogs must have stable diabetes and no other health concerns. After a week of glucose monitoring, eligible dogs will receive up to four weekly injections of the new insulin, with a final study visit a week after the last injection. If it’s effective in the pet, owners will have the option of continuing to use the insulin at home for a year after the trial ends.

Dr. Mahony tells dvm360 that one dog, Olaf, has completed the study and is staying on the long-acting insulin for now, while another is just starting the trial and others are being screened.

WITH REDUCED APPETITE, THERE'S
**MORE THAN
MEETS THE EYE**

entyce®
(capromorelin oral solution)



Don't wait for weight loss.
Stimulate appetite early to treat the whole picture.



Long before you see physical changes, small reductions in eating can deprive patients with chronic medical conditions of the essential nutrition they need to support strength and energy, healing and immune response.

Add ENTYCE® (capromorelin oral solution) at the first sign of decreased eating as part of your overall treatment plan.

- ✓ Proven safe for long-term use¹
- ✓ Effectively stimulates appetite to help improve food consumption
- ✓ The ONLY FDA-approved appetite stimulant for dogs

Take a closer look at [entyce.aratana.com](https://www.entyce.aratana.com)

¹ Zollers B, Huebner M, Armintrout G, Rausch-Derra LC, Rhodes L. Evaluation of the safety in dogs of long-term, daily oral administration of capromorelin, a novel drug for stimulation of appetite. *J Vet Pharmacol Ther.* 2017 Jun;40(3):248-255. doi: 10.1111/jvp.12358. Epub 2016 Sep 25.

IMPORTANT SAFETY INFORMATION: ENTYCE® (capromorelin oral solution) is for use in dogs only. Do not use in breeding, pregnant or lactating dogs. Use with caution in dogs with hepatic dysfunction or renal insufficiency. Adverse reactions in dogs may include diarrhea, vomiting, polydipsia, and hypersalivation. Should not be used in dogs that have a hypersensitivity to capromorelin. Please see the full Prescribing Information on page 12 for more detail.



Firefighters battling the Camp Fire blaze in the town of Paradise, California.

How feline-friendly handling **saved lives** in the California Camp Fire

Veterinary professionals who understand the way cats think and accommodate their needs can prevent illness and save lives—even under the worst of circumstances. *By Elizabeth Colleran, DVM, DABVP (feline practice)*

At 6:33 a.m. on Nov. 8, 2018, Pacific Gas & Electric was alerted to an error message involving a piece of equipment in a remote area of the Sierra foothills. Downed wires at the source ended up igniting a fire that at one point was traveling as fast as 60 football fields per minute.

The town closest to the origin of the fire, Concow, was not alerted until after the fire had already reached it. State fire control services could not reach the blaze until later in the afternoon—the roads were too narrow for fire engines to navigate and high winds hampered air resources.

Paradise lost

In the meantime, the fire raced toward Paradise, a small town in the foothills above the Sacramento River Valley, arriving there by 8 a.m. Alert systems everywhere failed. Paradise was overrun with fire, and residents ran for their lives. In the end, 153,336 acres burned, 85 people died, and 13,972 residences and 528 businesses were destroyed. Four of the seven veterinary practices in and around Paradise burned to the ground.

People lucky enough to escape had little with them—family members, some pets and, less likely, important papers. There were only



Smoke covered the region for weeks as the fire raged on.

two roads out of town, and both led to Chico.

Fear and sadness reached devastating levels as deaths began to be reported. By midmorning, people started appearing at our practice



NO TIME TO WASTE WHEN CARE IS CRITICAL



NUTRITIONAL SUPPORT CAN SPEED UP RECOVERY AND IMPROVE PATIENT OUTCOMES*

Introducing the most comprehensive range of liquid diets designed for tube feeding.

✓ EASY TO USE

Start feeding in less than a minute—no mixing, reconstituting or blenderizing for NE and NG tubes

✓ INNOVATIVE CAP DESIGN

Specialized cap for quick and easy syringe withdrawal and usage

✓ CRITICAL NUTRITION

Also includes EPA+DHA and an antioxidant complex

*Brunetto MA et al. Effects of nutritional support on hospital outcome in dogs and cats. *J Vet Emerg Crit Care*. 2010; 20: 224–231. Mohr AJ et al. Effect of early enteral nutrition on intestinal permeability, intestinal protein loss, and outcome in dogs with severe parvoviral enteritis. *J Vet Int Med*. 2003; 17: 791–798.

with cats in tow. Our evacuated staff members brought their own animals, at least the ones they could find.

One of our assistants who had been trained in Cat Friendly Practice handling techniques declared he would never have been able to rescue his cats had he not known to be slow, calm, quiet and deliberate.

Implementing a feline-friendly strategy

As we began to rearrange our hospital to become an emergency shelter, we used these same rules to work with our already considerably stressed guests. We used all the space we could muster to keep the cats from seeing one another. As the fire burned on, we



One of the rooms set up for evacuees at Chico Hospital for Cats.

Heartgard® Plus

(ivermectin/pyrantel)

CHEWABLES

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

INDICATIONS: For use in dogs to prevent canine heartworm disease by eliminating the tissue stage of heartworm larvae (*Dirofilaria immitis*) for a month (30 days) after infection and for the treatment and control of ascarids (*Toxocara canis*, *Toxascaris leonina*) and hookworms (*Ancylostoma caninum*, *Uncinaria stenocephala*, *Ancylostoma braziliense*).

DOSAGE: HEARTGARD® Plus (ivermectin/pyrantel) should be administered orally at monthly intervals at the recommended minimum dose level of 6 mcg of ivermectin per kilogram (2.72 mcg/lb) and 5 mg of pyrantel (as pamoate salt) per kg (2.27 mg/lb) of body weight. The recommended dosing schedule for prevention of canine heartworm disease and for the treatment and control of ascarids and hookworms is as follows:

Dog Weight	Chewables Per Month	Ivermectin Content	Pyrantel Content	Color Coding On Foil Backing and Carton
Up to 25 lb	1	68 mcg	57 mg	Blue
26 to 50 lb	1	136 mcg	114 mg	Green
51 to 100 lb	1	272 mcg	227 mg	Brown

HEARTGARD Plus is recommended for dogs 6 weeks of age and older. For dogs over 100 lb use the appropriate combination of these chewables.

ADMINISTRATION: Remove only one chewable at a time from the foil-backed blister card. Return the card with the remaining chewables to its box to protect the product from light. Because most dogs find HEARTGARD Plus palatable, the product can be offered to the dog by hand. Alternatively, it may be added intact to a small amount of dog food. The chewable should be administered in a manner that encourages the dog to chew, rather than to swallow without chewing. Chewables may be broken into pieces and fed to dogs that normally swallow treats whole.

Care should be taken that the dog consumes the complete dose, and treated animals should be observed for a few minutes after administration to ensure that part of the dose is not lost or rejected. If it is suspected that any of the dose has been lost, redosing is recommended.

HEARTGARD Plus should be given at monthly intervals during the period of the year when mosquitoes (vectors), potentially carrying infective heartworm larvae, are active. The initial dose must be given within a month (30 days) after the dog's first exposure to mosquitoes. The final dose must be given within a month (30 days) after the dog's last exposure to mosquitoes.

When replacing another heartworm preventive product in a heartworm disease preventive program, the first dose of HEARTGARD Plus must be given within a month (30 days) of the last dose of the former medication.

If the interval between doses exceeds a month (30 days), the efficacy of ivermectin can be reduced. Therefore, for optimal performance, the chewable must be given once a month on or about the same day of the month. If treatment is delayed, whether by a few days or many, immediate treatment with HEARTGARD Plus and resumption of the recommended dosing regimen will minimize the opportunity for the development of adult heartworms.

Monthly treatment with HEARTGARD Plus also provides effective treatment and control of ascarids (*T. canis*, *T. leonina*) and hookworms (*A. caninum*, *U. stenocephala*, *A. braziliense*). Clients should be advised of measures to be taken to prevent reinfection with intestinal parasites.

EFFICACY: HEARTGARD Plus Chewables, given orally using the recommended dose and regimen, are effective against the tissue larval stage of *D. immitis* for a month (30 days) after infection and, as a result, prevent the development of the adult stage. HEARTGARD Plus Chewables are also effective against canine ascarids (*T. canis*, *T. leonina*) and hookworms (*A. caninum*, *U. stenocephala*, *A. braziliense*).

ACCEPTABILITY: In acceptability and field trials, HEARTGARD Plus was shown to be an acceptable oral dosage form that was consumed at first offering by the majority of dogs.

PRECAUTIONS: All dogs should be tested for existing heartworm infection before starting treatment with HEARTGARD Plus which is not effective against adult *D. immitis*. Infected dogs must be treated to remove adult heartworms and microfilariae before initiating a program with HEARTGARD Plus.

While some microfilariae may be killed by the ivermectin in HEARTGARD Plus at the recommended dose level, HEARTGARD Plus is not effective for microfilariae clearance. A mild hypersensitivity-type reaction, presumably due to dead or dying microfilariae and particularly involving a transient diarrhea, has been observed in clinical trials with ivermectin alone after treatment of some dogs that have circulating microfilariae.

Keep this and all drugs out of the reach of children.

In case of ingestion by humans, clients should be advised to contact a physician immediately. Physicians may contact a Poison Control Center for advice concerning cases of ingestion by humans.

Store between 68°F - 77°F (20°C - 25°C). Excursions between 59°F - 86°F (15°C - 30°C) are permitted. Protect product from light.

ADVERSE REACTIONS: In clinical field trials with HEARTGARD Plus, vomiting or diarrhea within 24 hours of dosing was rarely observed (1.1% of administered doses). The following adverse reactions have been reported following the use of HEARTGARD: Depression/lethargy, vomiting, anorexia, diarrhea, mydriasis, ataxia, staggering, convulsions and hypersalivation.

SAFETY: HEARTGARD Plus has been shown to be bioequivalent to HEARTGARD, with respect to the bioavailability of ivermectin. The dose regimens of HEARTGARD Plus and HEARTGARD are the same with regard to ivermectin (6 mcg/kg). Studies with ivermectin indicate that certain dogs of the Collie breed are more sensitive to the effects of ivermectin administered at elevated dose levels (more than 16 times the target use level) than dogs of other breeds. At elevated doses, sensitive dogs showed adverse reactions which included mydriasis, depression, ataxia, tremors, drooling, paresis, recumbency, excitability, stupor, coma and death. HEARTGARD demonstrated no signs of toxicity at 10 times the recommended dose (60 mcg/kg) in sensitive Collies. Results of these trials and bioequivalency studies, support the safety of HEARTGARD products in dogs, including Collies, when used as recommended.

HEARTGARD Plus has shown a wide margin of safety at the recommended dose level in dogs, including pregnant or breeding bitches, stud dogs and puppies aged 6 or more weeks. In clinical trials, many commonly used flea collars, dips, shampoos, anthelmintics, antibiotics, vaccines and steroid preparations have been administered with HEARTGARD Plus in a heartworm disease prevention program.

In one trial, where some pups had parvovirus, there was a marginal reduction in efficacy against intestinal nematodes, possibly due to a change in intestinal transit time.

HOW SUPPLIED: HEARTGARD Plus is available in three dosage strengths (See DOSAGE section) for dogs of different weights. Each strength comes in convenient cartons of 6 and 12 chewables.

For customer service, please contact Merial at 1-888-637-4251.

©HEARTGARD and the Dog & Hand logo are registered trademarks of Merial.
©2015 Merial, Inc., Duluth, GA. All rights reserved.

borrowed enclosures and carriers from wherever we could find them. All told, we had 66 feline guests, about three times the number we accommodate during the peak holiday season.

Because cats are very connected to “place,” being moved from their home range is challenging. Cats are solitary hunters supremely attuned to assess danger in their environment, including the fear their caregivers are experiencing. Predictability is key to feeling safe, and these circumstances were anything but. As people began to find shelter, many reported that they couldn't pick up their cats until they were in accommodations that allowed cats. This was going to take a while.

We know from work done in shelters that hospital length of stay is a strong predictor of stress-related illness in cats, as is the size of the shelter space and the ability to see other cats. Our circumstances were not ideal. There were no medical records for many cats, and the health, vaccination history and lifestyle of these animals were largely unknown to us.

It took 17 days to fully contain—but not extinguish—the fire. As the media stories diminished, our challenges grew. Our primary goals were to get the cats to eat (except that no one had brought food and we didn't know their typical diets) and to prevent disease outbreak by careful nursing care and stress reduction.

We implemented all the feline-friendly handling guidelines we had always used religiously—quiet voices, slow movement, covered enclosures for stressed cats. We plugged in

Feliway, played classical music and coached each other to stay focused on the way cats think. Some of our vendors, including Kindred Bio, Zoetis, Ceva and Purina, provided us with calming products for cats.



This encampment was set up during and remained for about two months after the Camp Fire.

True success

Within the first 30 hours, all the cats were eating at least something. Housing continued to be a challenge for people. There were large outdoor encampments; every motel and inn was packed; friends and family were imposed on. Insurance premiums took time, and permanent housing did, too.

Finally, after nearly four months, the last of the 66 cats that appeared on Nov. 8 was discharged to its caregiver. Despite admitting cats with various stress-related illnesses due to evacuations, being left behind or being kept in other emergency shelters, we did not have a single case of stress-related illness—no herpes conjunctivitis, no respiratory signs. Our length of stay varied from one to four months.

Dr. Elizabeth Colleran is owner and hospital director of two exclusively feline practices and is an ABVP diplomate in feline practice.

Heartgard[®] 
(ivermectin/pyrantel) **Plus**

THE PROTECTION DOGS COME RUNNING FOR.

The only Real-Beef Chewable isn't just the #1 choice of dogs,¹ owners,² and veterinarians³ - it's the one dogs look forward to. HEARTGARD Plus:

- ✓ Protects dogs from heartworm disease and treats and controls 3 species of hookworms and two species of roundworms
- ✓ Is approved for puppies as young as 6 weeks of age
- ✓ Over 30 years of trusted prevention



¹ Freedom of Information: NADA140-971 (January 15, 1993).

² Data on file at Boehringer Ingelheim.

³ Data on file at Boehringer Ingelheim.



HEARTGARD[®] and the Dog & Hand logo[®] are registered trademarks of Boehringer Ingelheim Animal Health USA Inc. ©2019 Boehringer Ingelheim Animal Health USA, Inc., Duluth, GA. All rights reserved. PET-1309-HGD0319.

IMPORTANT SAFETY INFORMATION: HEARTGARD[®] Plus (ivermectin/pyrantel) is well tolerated. All dogs should be tested for heartworm infection before starting a preventive program. Following the use of HEARTGARD Plus, digestive and neurological side effects have rarely been reported. For more information, please see full prescribing information or visit www.HEARTGARD.com. Please see Brief Summary on page 16.



The dark side of pet nutrition

In the exam room, you see mythmongering, irrationality and passionate devotion. When your clients hold fast to their deepest beliefs about what's best (and worst) for their pet to eat, you may think they're crazy—but it's also because they care. *By Rachael Zimlich, BSN, RN*

Sometimes pet owners can take an idea on pet nutrition and run with it—far into left field and then out into the extreme fringes. From raw food diets to gluten-free kibble, we asked the experts about the top myths when it comes to pet nutrition and how veterinarians can help set the record straight.

The making of the myths

Many pet food myths that are circulating aren't necessarily myths but concerns rooted in past events—such as recalls—or human nutrition fads. Donna M. Raditic, DVM, DACVN, CVA,

of Nutrition and Integrative Medicine Consultants in Athens, Georgia, says she fields a lot of questions about specific ingredients, what “byproduct” means on food labels, concerns about certain toxins or preservatives, and how much pet food is processed. These questions originate in mainstream media, social media, advice from friends and even generational differences, Dr. Raditic says.

“Some of it is just how millennials think,” Dr. Raditic says. “They are very interested in and proactive about health and exercise. They see a disparity between nutritional recommenda-

tions for us to eat fresh, wholesome, organic, GMO-free, unprocessed foods and what they're feeding their pets.”

Millennials are fast becoming the majority of veterinary clients, Dr. Raditic says, and they're typically well-educated, have higher incomes and are more aware of health issues for both themselves and their pets than the average consumer.

“A survey done awhile ago showed that pet parents think ‘wellness care’ means nutrition, exercise and supplements, whereas veterinarians think it means vaccines and flea, tick and heartworm prevention,” Dr. Raditic

INFLAMMATION RUNNING WILD?



Why stock up? Only Duralactin helps tame inflammation throughout the whole body with MicroLactin®, a protein that helps manage inflammation and helps support joint health. Minimal side effects make Duralactin products suitable for high-risk patients under veterinarian care. Add this valuable tool to your treatment arsenal and save! Ask your sales representative for details.

SATISFACTION GUARANTEED

Duralactin® products come with a risk-free, 100% money-back guarantee. If your clients are not completely satisfied with any of the products, they are eligible for a refund or product replacement.

BUY ANY 3 Canine or Feline Duralactin® Products & GET ONE FREE!

Now is the perfect time to stock up on Duralactin® products. From **July 1, 2019 – August 31, 2019**, buy any three canine or feline Duralactin products and get one free. Mix and match all you want, as long as the free product is of equal or lesser value than the ones you buy.



Promotional Terms and Conditions: This promotion is restricted to veterinary practices where the veterinary-client-patient relationship (VCPR) exists as defined by the AVMA's Principles of Veterinary Medical Ethics. Other veterinary accounts such as shelters, animal care/control agencies and veterinary partner pharmacies, may be eligible on a case-by-case basis. Accounts with direct-to-consumer sales via internet website, catalog or other over-the-counter channels are ineligible. Qualifying orders must be on a single invoice. Free goods will be fulfilled by distribution. Free goods may not be returned for credit. PRN Pharmacal reserves the right to modify or withdraw this promotion at any time. Purchases must be invoiced between July 1, 2019 and August 31, 2019. Promotion excludes Canada and equine Duralactin products.

This product has not been approved by the FDA nor is it intended to diagnose, treat, cure, or prevent any disease. Should only be used through consultation of a veterinarian and in conjunction with an overall wellness program.

MicroLactin is a registered trademark of Stolle Milk Biologics, Inc. Duralactin is a registered trademark of Pegasus Laboratories, Inc. ©2019 PRN Pharmacal, Inc. All rights reserved.

Duralactin.com
800-874.9764

UniversityPRN.com
CE as needed, when needed.



says. “There’s a real disparity here that we need to address to meet our clients’ expectations for veterinary care.”

Pet owners look for alternative or unconventional pet foods because conventional diets don’t look like real food, and these people view their pets as family members, Dr. Raditic says.

“So why wouldn’t they want their family members to eat better diets, just like they would want for their human child?” she says.

My pet can’t eat that!

Sarah J. Wooten, DVM, CVJ, a small animal practitioner in Colorado and Fetch dvm360 speaker on leadership and client communication topics, says a common assumption she hears from pet owners is that organic pet food is better than conventional.

“The fact is that there’s a very limited quantity of organic meat and produce available. Good-quality organic ingredients are very hard to come by for pet food producers because there’s such a high demand for organic products in the human market,” she says. “What’s left over for the pet food market is often low-quality, whereas conventional ingredients, while not organic, are better-quality. ... It’s sad when consumers think they’re buying a better-quality product for their pet just because it says ‘organic’ on it.”

Another myth is that gluten-free products are better for pets. “Besides one line of Irish setters, most pets don’t really benefit from gluten-free food,” Dr. Wooten says.

Dr. Wooten says she also hears a lot of questions about corn and wheat aller-

gies, which she says are not an issue for most pets.

“The most common food allergies in pets are protein allergies—beef, chicken, pork, soy. Wheat and corn allergies are much less common,” Dr. Wooten says. “Sometimes corn and wheat can be moldy, which can be a problem because aflatoxins are toxic; however, the grains themselves are usually fine for pets.”

Fact or fiction?

While some might call these beliefs about pet nutrition “myths,” Dr. Raditic says they technically can’t be myths when there isn’t a deep enough understanding of the truths of pet nutrition.

“Right now we don’t have enough long-term, well-designed studies on pet diets,” she says. “We don’t have tons of clinical studies that use evidence-based medicine to tell us that our current, conventional, traditional pet foods are the best nutrition for pets, just as we don’t have data to support that feeding them nontraditional diets is the best nutrition.”

There are some studies on pet food ingredients, Dr. Raditic says, mostly because pet food companies want to understand how to use those ingredients in pet foods. There are also some studies on purified diets to determine which exact nutrients—and at what levels—dogs and cats need.

“We do not have a large amount of information about our traditional pet foods and how they impact the long-term health of dogs and cats,” Dr. Raditic says. “This is what we need

to move pet nutrition forward to improve the lives of cats and dogs.”

There has been more research in nutrition for production animals, because these studies translate to the human food supply. Outcomes are not as easily measured when it comes to small animal nutrition, Dr. Raditic says, and the economics aren’t

there to support investment in large-scale research for pets.

“Instead, there is a huge amount of money put into marketing pet foods,” Dr. Raditic says. And that marketing breeds confusion.

Pet owners do have reason to be concerned about ingredients, Dr. Raditic says, recalling issues with melamine and toxins such as mycotoxins and pentobarbital finding their way into pet food.

“Those who eat the ‘right’ way are possessed, in their minds, of a more virtuous constitution. What we see in the pet food industry is just an extension of what happens already on the human side.”

—Dr. Jessica Vogelsang

“I try to give clients perspective because these issues happen in our foods, as well,” she says. “But still, their concerns have been validated to some extent.”

It can be difficult for both pet owners and veterinarians to sort through the massive marketing noise to find out the truth about pet foods, Dr. Raditic says, and this has resulted in some pushback from consumers seeking more transparency.

“In my opinion, this is a good thing,” Dr. Raditic says. “If we don’t keep demanding more science, more research on pet nutrition, pet foods are not going to improve. And although outcomes such as quality of life and longevity for pets might seem lofty, it is what we—pet parents, veterinarians and the pet food industry—need to strive for to improve pet nutrition.”

Misleading marketing and well-meaning pet parents

While some myths are rooted in human nutrition, Dr. Wooten says, there’s also the classic “I read it on

the internet” origin story for many nutrition fallacies. Pet owners can be impressionable and want an expert’s confirmation that they’re providing the best care possible for their pets. And unfortunately, the internet is rife with “experts.”

“If pet owners see advertising that leads them to believe a nutrition myth, or information on the internet from a website that purports to be a leading authority in pet nutrition, then they’re likely to believe what they read,” Dr. Wooten says. “Millennial pet owners are an easy target because they often have less experience caring for a pet, and a wide open heart that cares deeply and will do anything for that pet.”

Many of these invested pet owners feel a heavy burden of responsibility to select the best diet, and walking down the aisle with so many choices can be daunting.

“There’s so much social media, advertising, pet food expertise, marketing and more marketing,” Dr. Raditic says. “It can be very frustrating and difficult for pet parents and even veterinarians to sort through all this information.”

Owners of pets with chronic disease are also a population where nutrition myths run rampant. These people are already searching for answers to their pet’s problems, they may want to avoid long-term medication for their pet and they would like food to be medicine, Dr. Wooten says.

“People are searching for answers to help their pets live long and live well. If they see something that promises either of these things, they’re likely to try it because they think the food can meet a felt need,” Dr. Wooten says. “Pet owners also make emotional decisions long before they make a logical decision with their higher brain—it’s just how we are wired.”

Clearing the confusion

Veterinary commentator and advocate Jessica Vogelsang, DVM, CVJ, of the blog Pawcurious, says pet owners’ food quirks really aren’t as much about food as they are about psychology.

“It’s not just about the food. Honestly, it never has been. For a lot of people, food has a moral component, thus all the emphasis on ‘good eating’ versus ‘bad eating,’ or on ‘clean food,’” Dr. Vogelsang says. “Those who eat the ‘right’ way are possessed, in their minds, of a more virtuous constitution.





whole pet[®]
with wellness

A pet insurance plan that does its job so you can do yours

Nationwide's Whole Pet with Wellness[®] plan is the only pet insurance plan that pays back up to 90% on virtually everything*—including preventive care.

If it doesn't cover preventive care, it doesn't cover the whole pet.

To learn more or to order materials for your practice, contact us today.

866-838-4874 • vets.petinsurance.com



Nationwide[®]
is on your side

*Some exclusions may apply. Certain coverages may be subject to pre-existing exclusion. See policy documents for a complete list of exclusions. Plans may not be available in all states.

Insurance terms, definitions and explanations are intended for informational purposes only and do not in any way replace or modify the definitions and information contained in individual insurance contracts, policies or declaration pages, which are controlling. Such a and availability may vary by state and exclusions may apply. Underwritten by Veterinary Pet Insurance Company (CA), Columbus, OH, an AM Best A+ rated company (2018); National Casualty Company (all other states), Columbus, OH, an AM Best A+ rated company (2018). Agency of Record: DVM Insurance Agency. Nationwide, the Nationwide N and Eagle, and Nationwide is on your side are service marks of Nationwide Mutual Insurance Company. ©2019 Nationwide. 19VET5903

Can pets eat vegan?

As more and more Americans shift to a plant-based diet, some of them are bringing up the big question in the veterinary exam room: "I'm vegan. Can my pet be vegan?"

Especially in the case of cats, typically considered obligate carnivores, the answer is a hard "no"—right? Ernie Ward, DVM, who's spent years thinking about animal nutrition and founded the Association for Pet Obesity Prevention, says, "Not so fast."

Dr. Ward says first we've got to get the terminology right.

"Vegan" is a loaded term that belongs to people, not animals.

"I don't think the term 'veganism' applies to dogs and cats," Dr. Ward says. "That's an ideology with an ethics structure and political implications," he says. "We need to get past that and ask whether cats and dogs can survive without eating other animals."

"The way physiologies work, we need certain nutrients, not ingredients," he says. "But we have ingredient bias based on our own experiences."

"What happens as soon as you put a whole food or particular ingredients in your mouth?" Dr. Ward asks. "It starts being reduced to its constituent nutrients. How we access those nutrients is what makes all the difference."

And that's where pets' individual differences come into play. No matter how great a product is, he says, not every diet will ever be appropriate for every animal.

Science is advancing rapidly in this arena of personalized nutrition, according to Dr. Ward. So, if a pet can get the nutrients it needs from a nontraditional protein source—do the ingredients matter?

Read more at dvm360.com/veganpets

What we see in the pet food industry is just an extension of what happens already on the human side."

Everyone has that friend who boasts the virtues of their diet, be it keto, vegan, paleo or Whole30, she adds. Whether or not their devotion is grounded in nutritional truth, they are nonetheless devoted.

"If someone truly embraces a belief about a certain type of food—be it raw or grain-free or organic—you can no more shake them out of their faith with factual arguments than you could argue someone out of a religious belief with science," Dr. Vogelsang says. "The faith wasn't born out of science to begin with."

It's a slippery slope, however, from good intentions to bad mistakes, Dr. Vogelsang says.

"Where you have good, you also must have evil. So instead of ignoring a company that makes a type of nutrition you don't choose to purchase, you have people talking about 'Big Kibble' and the '4 Ds' [a belief that pet food diets contain meat from dead, dying, diseased and disabled animals], shady people in dark suits trying to swindle you, and vets who clearly know less than you based on your exhaustive internet education," she says. "The narrative suits their belief system, so it's very easy to accept. Remember when fat was bad and we all ate margarine for a decade? And then sugar became bad and everyone started choking down Sweet'N Low? These extreme beliefs always exist in a universe of equally extreme consequences."

The challenge is in trying to correct these hard-held beliefs or misinformation, especially when a pet owner is emotionally invested.

"Once a decision has been made to believe something, everything in a person will move to defend that decision, even if facts tell a different story," Dr. Wooten says. "If a client is rigid and not open to accurate or beneficial information about their pets, then that pet won't receive the proper nutrition or treatment because the held belief is in the way."

Sometimes the key to understanding is in finding what inspired a certain belief in the first place.

"You can acknowledge that it's OK to hold that belief," Dr. Wooten says. "Ask the client why they believe what they do—nicely, not defensively. Above all, don't be defensive," Dr. Wooten suggests. "Ask them in a way that says, 'Help me understand what you're thinking so I can best advise you.'"

Respect these clients' beliefs, even if you disagree, and understand that the pet owner thinks they're right, Dr. Wooten says. After they share their opinion, acknowledge it, then ask if you may also share your knowledge on the matter, she adds.

"It's their pet, and they have every right to care for their pet in the way that seems best to them," Dr. Wooten says. "You are just there as a trusted advisor."

Sometimes the client will hold fast to their belief, and the veterinarian has to be OK with that, Dr. Vogelsang says.

"I don't argue with people who've gone down that road, because there's no point. I do think it's important to acknowledge that obviously they care very deeply and want to do what's best for their pets, and then empathize that

I do as well, even though the path isn't the same for me," she says. "No one likes it when you imply they're ignorant or uneducated; it's just not an effective tool to convert people's thinking. You have to accept that in some people's minds, we aren't the experts—then cut them loose."

"The psychology is easy to understand," Dr. Raditic agrees. "Pet parents are passionate about their pets."

And those pet parents with the most fear and distrust—who are so adamant about what is right or what is wrong with

pet food—are actually your best, most passionate pet parents."

Can myths motivate change?

When does a veterinarian stop trying to correct pet owners, and when do they push for better data?

"In my opinion, the only time pet parents' beliefs harm pets is when they jump to extremes. They get blinded or overwhelmed with these issues and become afraid, distrustful and are no longer logical. Fear is not the emotion you want pet parents to have, as it results in poor decision-making," Dr. Raditic says. "We work very hard to try to reassure pet parents who are overwhelmed with fear and guide them to make better decisions. But it certainly doesn't help that the pet food industry has had some real issues with recalls, contaminations and ingredient substitutions. You cannot blame pet parents that they're becoming more and more skeptical and less trusting of the pet food industry."

Sometimes, admitting and acknowledging what you don't know and providing information about what you do know is the best approach when informing pet owners about nutrition, Dr. Raditic says.

"We need to empathize that selecting pet diets is not easy, but we will work with them to try and sort it out to find a pet diet that works for their pet and its lifestyle," she says.

More than anything, Dr. Raditic says, veterinarians need more information about pet nutrition and ideal diets.

"We all need to become more educated, ask the right questions and make demands for more transparency and truthful information about pet diets. Pet labels and websites give some information, but it's not enough to determine ingredient quality and thus the overall quality of the pet food," Dr. Raditic says. "And yes, we do need more unbiased studies of dog and cat nutrition and long-term studies looking at different types of diets to improve and develop pet foods that we know can improve quality of life and longevity."

Rachael Zimlich, RN, BSN, is a former reporter for dvm360. In addition to freelance writing, she works as a registered nurse at the Cleveland Clinic in Cleveland, Ohio.



Hidden Disease. Visible Answer.



As your experts in endocrinology, Dechra Veterinary Products is proud to offer **ZYCORTAL® Suspension (desoxycorticosterone pivalate injectable suspension)**

- Replacement therapy for mineralocorticoid deficiency in dogs with primary hypoadrenocorticism (Addison's Disease)
- FDA approved for subcutaneous use
- 4mL vial of 25mg/mL suspension
- Available direct from your preferred distributor
- Three year shelf life from the date of manufacture

FREE CE ON ADDISON'S DISEASE

Learn how to diagnose and treat Addison's Disease from one of the top minds in the field of Veterinary Endocrinology, Dr. Audrey Cook. This course is approved by the AAVSB RACE to offer a total of 2.00 CE Credits for both veterinarians and technicians. Each module earns you 1.00 CE Credit in the Scientific category. This course is free to veterinarians and technicians through Dechra Academy at dechra-us.com/CE.



NADA 141-444, Approved by FDA

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

Dechra is a registered trademark of Dechra Pharmaceuticals PLC. Zycortal is a registered trademark of Dechra Limited.

ZYCORTAL® SUSPENSION (desoxycorticosterone pivalate injectable suspension)

Mineralocorticoid for subcutaneous use in dogs only.

Brief Summary (For Full Prescribing Information, see package insert)

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

DESCRIPTION: Desoxycorticosterone pivalate is a mineralocorticoid hormone. Zycortal Suspension contains 25mg/ml of desoxycorticosterone pivalate.

INDICATION: For use as replacement therapy for mineralocorticoid deficiency in dogs with primary hypoadrenocorticism (Addison's disease).

CONTRAINDICATIONS: Do not use ZYCORTAL Suspension in dogs that have previously had a hypersensitivity reaction to desoxycorticosterone pivalate.

WARNINGS: Use ZYCORTAL Suspension with caution in dogs with congestive heart disease, edema, severe renal disease or primary hepatic failure. Desoxycorticosterone pivalate may cause polyuria, polydipsia, increased blood volume, edema and cardiac enlargement. Excessive weight gain may indicate fluid retention secondary to sodium retention.

HUMAN WARNINGS: Not for human use. Keep this and all drugs out of the reach of children. Consult a physician in case of accidental human exposure.

PRECAUTIONS: Any dog presenting with severe hypovolemia, dehydration, pre-renal azotemia and inadequate tissue perfusion ("Addisonian crisis") must be rehydrated with intravenous fluid (saline) therapy before starting treatment with ZYCORTAL Suspension. The effectiveness of ZYCORTAL Suspension may be reduced if potassium-sparing diuretics, such as spironolactone, are administered concurrently.

ADVERSE REACTIONS: The field safety analysis included evaluation of 152 dogs. The most common adverse reactions reported are polyuria, polydipsia, depression/lethargy, inappropriate urination, alopecia, decreased appetite/anorexia, panting, vomiting, diarrhea, shaking/trembling, polyphagia, urinary tract infection, urinary tract incontinence and restlessness. Reports of anaphylaxis and anemia have been associated with a different desoxycorticosterone pivalate injectable suspension product.

Distributed by:
Dechra Veterinary Products
7015 College Boulevard, Suite 525
Overland Park, KS 66211

ZYCORTAL is a trademark of
Dechra Ltd © 2015,
All rights reserved
NADA 141-444,
Approved by FD



01AD-ZYC50104-0119



A look at the bright side of pet nutrition



Mealtime and treats are a huge source of warm fuzzies for people and their pets—a positive we should celebrate. But there's danger lurking in the shadows: obesity, pancreatitis and overindulgence. *By Rachael Zimlich, BSN, RN*

There's a reason we associate food with comfort. Eating—or preparing a meal for someone—can bring about a sense of peace and connection and deepen a bond. This is no different for people and their pets.

The act of feeding can nourish the human-animal bond, but it's also possible to have too much of a good thing.

Owners of obese pets often lament their companions' portliness, but they're hesitant to say no to the plaintive meows or the soft, hopeful eyes of their furry friend.

Deborah Linder, DVM, DACVN, head of the Tufts Obesity Clinic for Animals, has written extensively on the relationship between people and their pets and how they connect over food—and how sometimes this bond can

reach a breaking point. Obesity is at epidemic proportions in pets, Dr. Linder writes, and can have a negative physical and emotional impact on animals. Even when counseled on responsible feeding and diet control, many pet owners find it difficult to stay compliant.

Tony Buffington, DVM, PhD, DACVN, clinical professor of medicine and epidemiology at the University of California, Davis, School of Veterinary Medicine and emeritus professor of veterinary clinical sciences at The Ohio State University, says food is an important part of the human-animal bond, but it's also not the only way pet owners can show their pets they care.

"As we know, there are many ways to express love, of which food is only one. In my

experience, owners may need help imagining other ways," Dr. Buffington says, suggesting that veterinarians offer pet owners an easy, trustworthy guide. "A quick internet search for 'show love for pets' yielded more than 25,000 hits. Practices can create a reasonable menu of options for pets and then provide recipes for whatever the client chooses. This approach supports the client's perception of control, and they always know more about their pet than I do."

For pet owners who want to offer foods their pet enjoys,

Dr. Buffington recommends that pet owners choose Association of American Feed Control Officials (AAFCO)-approved diets that line up with their beliefs about food, then purchase some options to offer to their pets, allowing the pet to select which one it prefers.

"I believe this approach enhances both the owner's and the pet's preferences and perception of control," Dr. Buffington says.

As far as feeding strategies, Dr. Buffington says it's up to the owner to make sure pets are able to eat in a safe, nonthreatening context without competition or distraction. There are also many ways to keep things fun for pets, he adds, without overindulging.

Sometimes, having pets "work for food" using food puzzles can provide important mental and physical stimulation, he says. The danger lies in focusing too much on food and creating behavioral issues.

"With regard to feeding, allowing competition, begging or 'holding out for something better' can all become problematic, as can owner anxiety about their competence to provide for their pet," Dr. Buffington says. "We and our pets survived evolution; as long as we stay within our animal's adaptive capacity with regard to nutrition, our pets will do fine."

Rachael Zimlich, RN, BSN, is a former reporter for dvm360. In addition to freelance writing, she works as a registered nurse at the Cleveland Clinic in Cleveland, Ohio.

✓ The most researched and trusted hemp CBD product in veterinary medicine.

ElleVet™

SCIENCES

Hemp CBD Products for Pets

ElleVet™ is the only hemp CBD product tested by Cornell Vet School and recommended by vets.



SUMMER SPECIAL
on your 1st order
**BUY 5,
GET ONE
FREE!**

This offer expires on 8.31.19

For details, email: info@ellevetsciences.com  ellevetsciences.com

What's in the bag?

A checklist for evaluating pet food options to tell quality from quackery. *By Kristi Reimer Fender*

Lindsey Bullen, DVM, DACVN, a veterinary nutritionist with Veterinary Specialty Hospital of the Carolinas, fields lots of questions about pet food. One of the top queries: What's the best diet for x pet? Or, a variation: Is x diet a good diet?

"How the heck do you evaluate all these diets that are on the market?" Dr. Bullen asked her audience at a recent Fetch dvm360 conference.

Here's what it comes down to, she says: A diet is only as good as its formulation. And to understand that, you have to do some digging. Here are Dr. Bullen's criteria for a high-quality diet:

> **The diet is made by a reputable, longstanding company.** There are reasons many of these companies have been around awhile, Dr. Bullen says.

> **The company participates in active nutrition research—and shares its findings.** If a manufacturer swears it's done research on a diet but won't share it because it's "proprietary," "What—am I supposed to just take their word for it?" asks Dr. Bullen.

> **There are veterinary or PhD nutritionists on staff.** The more the better, Dr. Bullen says, because it shows nutrition is a top priority. Oh, and these aren't "consultants" but on-the-payroll employees. With consulting, "guess what—these companies don't always do what you recommend," she says.

> **The diet has gone through feeding trials.** While feeding trials conducted by the the Association of American Feed Control Officials are not the "be-all and end-all" of quality, "they do help," Dr. Bullen says.

> **Quality control processes are rigorous.** Does the company test ingredients before they get to the facility? Are the tests looking at nutrient profile or just microbial contamination? Is every batch tested? Does the manufacturer conduct post-manufacturing analysis?

> **The company keeps a "diet vault."** This way if there's a problem, the manufacturer can pull a sample from the diet to analyze. Remember the Hill's recall? The company was able to respond quickly because it had the diet readily accessible, Dr. Bullen says.

> **There are no unverified claims.** "If a diet cures cancer, I'm going to eat that," Dr. Bullen says. Short answer—it

doesn't, and the manufacturer should not be claiming it does.

> **There's no promotion of nutritional myths.** "If a company says grain-free diets are superior, that's a myth,"

Dr. Bullen says. "I don't trust them." > **The company doesn't bash other manufacturers.** "If you have to spend your marketing money bashing somebody else to sell your product, it makes

me think it's not as good," Dr. Bullen says.

It may take some leg work to collect all this info, but once you do, you can more confidently decide whether to recommend a diet (or not) to your clients.



**ONE
INJECTION.**
LASTING RELIEF.

For dogs with allergic or atopic dermatitis,

CYTOPOINT® offers 4-8 weeks of relief with a single in-office injection¹



TARGETED

Targets and neutralizes interleukin (IL)-31, a key itch-inducing cytokine²



WORKS FAST AND LASTS

Begins working within 1 day and delivers 4 to 8 weeks of relief*; in-office administration ensures compliance¹



SAFE

Safe for dogs of all ages, with lasting control that leads to fewer treatments for dogs to tolerate³

To learn more, please visit www.CYTOPOINT.com

Indications: CYTOPOINT has been shown to be effective for the treatment of dogs against allergic dermatitis and atopic dermatitis.

*Repeat administration every 4 to 8 weeks as needed in individual patients.

References: 1. Data on file, Study Report No. C863R-US-12-018, Zoetis Inc. 2. Gonzales AJ, Humphrey WR, Messamore JE, et al. Interleukin-31: its role in canine pruritus and naturally occurring canine atopic dermatitis. *Vet Dermatol.* 2013;24(1):48-53. doi:10.1111/j.1365-3164.2012.01098.x. 3. Data on file, Study No. 16SORDER0101, Zoetis Inc.

All trademarks are the property of Zoetis Services LLC or a related company or a licensor unless otherwise noted.

© 2019 Zoetis Services LLC. All rights reserved. CYT-00097R5

ZOETIS PETCARE

CYTOPOINT®

See more coverage
in our sister
publications



Even though it can be endlessly frustrating to deal with the misinformation and strange questions clients bring into the exam room, declaring war on nutritional hotbeds like raw or homemade diets is not the answer. Vetted gives you tools to find common ground and ways to work together.



With all that's up and coming in the world of pet nutrition (they're feeding their pet what?!), the veterinary team could use all the help they can get. In Firstline, we run through nutritional support basics for hospitalized patients, talk you through how to be the best source of pet food info for your clients, and give you a few tips and tricks in between.

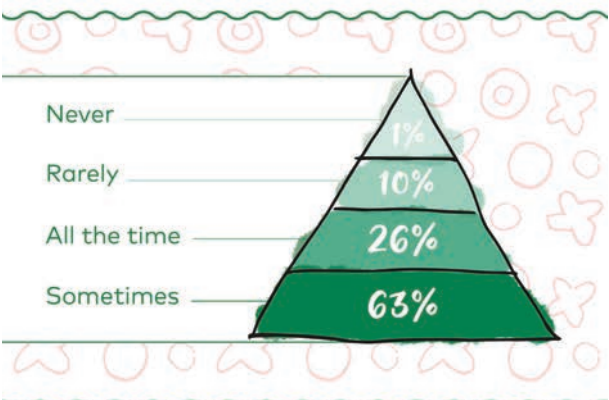
Food for thought: New data on nutrition for clients

Find out how often veterinarians discuss nutrition with clients, how often clients ask and the biggest prompt for discussion in this data from the 2019 dvm360 Nutrition Study. *By Brendan Howard*

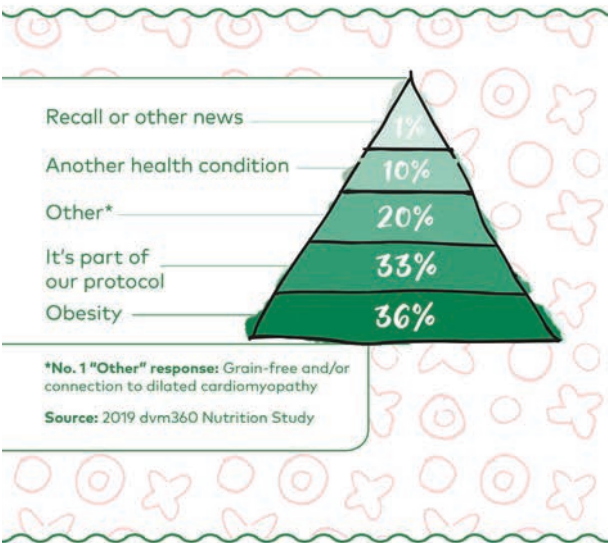
How often do you talk about
nutrition with clients?



How often do clients
bring up **nutrition**?



What is the most common prompt
for a **nutrition** discussion?



The 2019 dvm360 Nutrition Study was sent by email to subscribers of dvm360 magazine, Vetted and Firstline. The survey generated 252 responses from veterinarians, creating a margin of error of about 3 percentage points (although sample sizes—and statistical reliability—on individual questions may be considerably lower). Numbers may not equal 100% due to rounding.

The chew dogs love.

THE SCIENCE YOU CAN TRUST.



Fight plaque, calculus and halitosis with
ORAVET® Dental Hygiene Chews - *the only
chew with the power of delmopinol!*

- Unique dual-action mechanism
- Highly palatable¹
- Designed to provide an extended chew duration¹
- Proven technology^{1, 2, 3}

UNIQUE DUAL-ACTION MECHANISM

1. Delmopinol creates a protective barrier against the bacteria that cause bad breath and are the basis for plaque
2. The scrubbing action of the chew works in parallel with the delmopinol to effectively remove plaque and calculus

¹ Data on file.

² Data on file.

³ Data on file.

Slow growth to a freestanding hospital

With 15 years at two previous strip-mall locations under his belt, Dr. Bradley Petersen turned Petersen Pet Hospital into the AAHA-certified, Fear Free practice of his dreams. By Sarah A. Moser

By the numbers

Petersen Pet Hospital

Owner: Dr. Bradley Petersen

Number of doctors: 4 full-time

Exam rooms: 7

Total cost: \$1,983,981

Cost per square foot: \$273.86

Square footage: 9,580

Structure type: New, freestanding

Architect: Solum Lang, Cedar Rapids, Iowa

Exterior: The stone-and-wood exterior, with a sloped roof and a view of the lobby trusses, fits right into the natural surroundings of this Iowa practice. Bits of copper in the exterior design tie into the copper in the hospital logo.

Third time's the charm for Dr. Bradley Petersen and Petersen Pet Hospital. This 1998 Iowa State University graduate built his first practice in 2003, just five years out of veterinary school. Petersen Pet Hospital started as a 1,200-square-foot strip mall facility in Hiawatha, Iowa. Just four years later, business had grown so much he more than doubled the size to 3,000 square feet, still in a leasehold strip-mall space.

Dr. Petersen was able to gain AAHA certification, practice Fear Free medicine (with most of his employees being Fear Free certified) and earn a name as an AAFC Cat-Friendly Practice in this small space. Still, he wanted something more for his staff and clients and their pets. On his third iteration of the practice, Dr. Petersen took the leap to a freestanding building and says this is his last time to build.

"I wanted a freestanding practice that would show the community we are serious about practicing good medicine," says Dr. Petersen. He aimed for a facility that offered comfort to employees, clients and pets as well as space to practice high-quality medicine

and a calming, Fear Free atmosphere. In 2018, he built a brand new facility, with 9,500 square feet of space, jumping up to four associates and from three to seven exam rooms, with plenty of special features.

These changes did the trick for Dr. Petersen, giving him a practice to be proud of. And the new building earned Petersen Pet Hospital a Merit Award in the 2019 dvm360 Hospital Design Competition. The competition judges praised the practice for the variety of seating options in the reception area, natural colors and lighting throughout, features designed to lower patient stress and clear traffic flow.

Creating comfort and calm

Creating calm starts the moment clients pull into the parking lot. A large lawn offers space to walk dogs before they ever enter the building. And if a client prefers, he or she can sit at one of two outdoor benches until their appointment time, giving nervous or rowdy dogs room to roam. A large green space around the clinic offers space for dogs to eliminate before they hit reception.

The primary design touch in the exterior that avoids jarring clients' sensibilities is the stone-and-wood facade that fits in with its Iowa surroundings. Natural colors mimic the lodge style of the chiropractic office next door. The wood trusses in the lobby were a must-have for Dr. Petersen and can be seen from outside. The use of soothing colors and natural materials sets the tone for the hospital visit.

The spacious lobby, trusses and all, welcomes pets and their owners, with a variety of seating options to keep pets separated and give clients the choice whether to interact or have space to themselves. High-top tables and barstools offer a spot for cat owners to sit and put the cat carrier on the table, out of reach of dogs, reducing cats' stress.

"The lobby is my favorite spot in the hospital," says Dr. Petersen. "It feels welcoming and airy, and the 130-gallon fish tank, TV and hospitality station give clients something to do while waiting." The fish tank also serves to entertain and distract anxious cats.

The calming features don't stop at the lobby. Exam rooms have Stat-Mats,



Lobby: Wooden trusses lead the way into the reception area at Petersen Pet Hospital. They fit right into the decor of wood and stone and natural colors, all part of the plan to provide a calm environment. Clients get a variety of seating options, including high-top tables that put cat carriers out of dogs' reach, a hospitality station with snacks and drinks, and a retail area.

1-inch-thick foam pads on exam tables to prevent slipping.

"Cats and dogs seem much more comfortable on the mat than on stainless steel or laminate," he says. Pet-friendly music is piped into the exam rooms and wards via a streaming service developed just for pets. A window in the cat-ward door gives staff members a way to peek in on the cats without disturbing them, and dimmable lights help set a calming tone.

Creature comforts, human edition

While Dr. Petersen did spend a lot of energy designing a practice that appeals to clients and patients, he says he didn't forget about his staff members.

"Offering a nice, spacious work environment for my staff ties right back to our biggest goal of providing great medicine to our clients and



A 130-gallon fish tank in the lobby is meant to entertain kids (and cats!) while they wait.

patients," says Dr. Petersen. "A better work environment will help them do their jobs and feel good about what they're doing."

In his previous facilities, the break room consisted of a card table set up next to the washer and dryer. Now, team members enjoy a large room with



Exam rooms: These are 100 to 150 square feet in size and decorated in natural, calming colors. The exam tables are a variety of fold-down, fold-up or stationary tables, all with slip-proof pads on them. The rooms have dual entry, from the staff and client sides, and the doors all have transom windows.



With space to board up to eight dogs at a time, Dr. Petersen doesn't make boarding a big part of his business, but he does make sure the few dogs he boards are as comfortable as can be. Raised beds, natural lighting, glass-front doors and calming music piped in help comfort pets during their stay.



Dental suite: A dedicated dental suite is new to Petersen Pet Hospital, and is greatly valued for the space it provides to work away from the hustle of the rest of the practice and to keep noise contained. While Dr. Petersen loves this space, he does wish he had built it a bit bigger to give team members more room to navigate. The space does enjoy natural lighting as well as windows overlooking the treatment area.

a wall of windows, a full kitchen, tables and seating on wheels to rearrange the space as needed. The associates' office is mostly windows, giving them a view to treatment to keep an eye on things while finding a bit of quiet.

Speaking of quiet, he also made sure to include a dedicated dental suite,

something he didn't have before: "It can get really loud, so it's nice to have a dedicated room where they can close the door, keeping noise to a minimum, and work more efficiently."

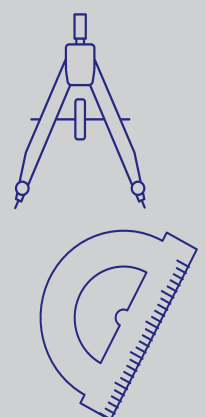
Sarah A. Moser is a freelance writer in Lenexa, Kansas.



Cat boarding: This room overlooks the outdoors, with bird feeders providing entertainment. The units are configured to give cats separate eating, sleeping and eliminating spaces, and a bit of room to roam.

Attack your project from every angle at HospitalDesign360

Plan to attend the 2019 HospitalDesign360 conference in Kansas City, Missouri, Aug. 21-23. Gather ideas, learn from the profession's most noted veterinary design experts, and compare your options for design, construction, equipment, financing and more in our exclusive hospital design exhibit hall. Visit fetchdvm360.com/hd for more information.



Get in touch

Contact us on
Twitter:
@dvm360,
on Facebook:
facebook.com/
dvm360, via
e-mail: dvm360news
@mmhgroup.com
or online at
dvm360.com/
community.



CONSUMER BRIEF SUMMARY FOR TRIFEXIS

Information for Dog Owners – You should read this information before starting your dog on TRIFEXIS. The risk information provided here is not comprehensive. Talk with your veterinarian if there is something you do not understand or if you want to learn more about TRIFEXIS. **Always follow your veterinarian’s instructions for giving your dog TRIFEXIS.** Ask your veterinarian, call 1-888-545-5973 or visit www.trifexis.com to obtain the full FDA-approved drug labeling.

What is TRIFEXIS?

- TRIFEXIS is a monthly chewable tablet, available by prescription only, used to:
 - Prevent heartworm disease caused by *Dirofilaria immitis*.
 - Kill fleas (*Ctenocephalides felis*) and prevent flea infestations.
 - Treat and control adult hookworm (*Ancylostoma caninum*), adult roundworm (*Toxocara canis* and *Toxascaris leonina*) and adult whipworm (*Trichuris vulpis*) infections in dogs and puppies 8 weeks of age or older and 5 pounds of body weight or greater.

What dogs should not use TRIFEXIS?

- Puppies less than 8 weeks of age or less than 5 pounds of body weight.

Ask your veterinarian about the use of TRIFEXIS prior to use in breeding females or in dogs with pre-existing epilepsy. The safe use of TRIFEXIS in breeding males has not been evaluated.

How should I give TRIFEXIS?

- Prior to use, dogs should be tested for existing heartworm infections and treated at the discretion of the veterinarian.
- Administer with food for maximum effectiveness.
- To ensure heartworm prevention, observe your dog for one hour after administration. If vomiting occurs within an hour of administration, redose with another full dose. Puppies less than 14 weeks of age may experience a higher rate of vomiting.

What is the most important information I should know about TRIFEXIS?

Not for use in humans. Keep this and all medications out of reach of children.

- The use of ivermectin at higher than FDA-approved doses at the same time as TRIFEXIS can result in serious side effects.
- Treatment with fewer than three monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention.

What are the most common side effects that may occur while my dog is taking TRIFEXIS?

- Vomiting
- Depression/Tiredness
- Itching
- Decreased appetite
- Diarrhea

Other reported side effects include inflammation of the skin and redness of the skin and ear.

Tell your veterinarian if your dog experiences these or any other side effect.

To report suspected adverse reactions, call 1-888-545-5973. For additional information about adverse drug experience reporting for animal drugs, contact the Food and Drug Administration (FDA) at 1-888-FDA-VETS or <http://www.fda.gov/AnimalVeterinary/SafetyHealth>.

What if I give more than the prescribed dose of TRIFEXIS?

- Contact your veterinarian as soon as possible.

Can I give TRIFEXIS with other medications?

- Yes, TRIFEXIS has been given safely with a wide variety of products and medications. Tell your veterinarian about products that you give and/or intend to give to your dog.

Trifexis, Elanco and the diagonal bar logo are trademarks of Elanco or its affiliates.

© 2018 Elanco or its affiliates.

TFX CBS 21JUN2018

Elanco

Undoing Disney



Disney reigns supreme at delivering superb customer service, but not all customer service models can be equal. *By Melissa Detweiler, DVM*

A couple years back, my husband and I took our family on a dream Disney vacation. We spent thousands of dollars for our family of five to spend a week with Mickey and friends. Surprisingly, it was some of the easiest money I’ve ever parted with. So, what’s their secret? What exactly have they mastered that makes families so willing to dump obscene amounts of money into their brand?

One word: service.

Without question, Disney has elevated customer service to an art form. Books have been written about its service models. Other corporations hire former Disney executives to re-create Disney’s protocols and operations. It’s the stuff of legends.

Setting unrealistic expectations?

As so many other companies have striven to mimic the Disney model, it’s created an expectation among consumers that all service experiences should be at that same level—retail exchanges should be magical. Interestingly, this concept has spread throughout the veterinary industry for the past decade as well.

My own practice has paid for consultants to help us increase revenue and efficiency. Those consultants preached the importance of making each client feel unique and cherished. They gave us tips for going beyond mere “satisfaction.” We’ve been trained, essentially, in the “Disney” way.

From a revenue standpoint, it works. Initial customer reviews reflect the process. There are fewer complaints and, perhaps in some situations, patient wellbeing has improved. As we’ve become more successful at emphasizing the importance and value of advanced care, clients have consented to more diagnostics and procedures.

Seems like a foolproof method. Until it isn’t.

We’ve definitely been successful at habituating clients to larger vet bills, but what happens when the outcome isn’t a fairy tale ending?

The difference between Disney and us

Disney isn’t immune to customer complaints, but it is vastly more equipped to do *whatever it takes* to turn things around. An unhappy Disney customer doesn’t stay unhappy for long. However, there’s a gigantic obstacle the veterinary world faces that Disney does not—death, disease and suffering. With the exception of at least one parent in every Disney movie, death isn’t a challenge that Disney “cast members” (i.e. employees) have to overcome. All those pearls of wisdom go out the window as soon as fear, grief and blame arrive on the scene. An extra ride pass or a hotel room refund isn’t going to ease the pain of a family who was just given tragic news about their pet’s health. If only a complimentary stay in our boarding kennel would erase a diagnosis of a ruptured splenic tumor...

When it came to my vacation experience, I was willing to part with my money because I was confident in what I’d receive in return—my family would have countless happy memories of a fun-filled week. But a veterinary hospital isn’t a theme park, and no one wants to pay to ride our roller coasters. There simply aren’t any of those magic customer service tools at the ready when we’re matched against bad biological luck. The Disney method states that every customer should have the same great experience, every time, but can anyone tell me how Walt would handle a septic parvo puppy in a family with no money? How can I possibly make *that* great?

Delivering Disney our way

Please understand, I don’t fault Disney for its brilliantly effective methods. But in attempting a version of this “customer first” model, the biggest things we’ve accomplished are rampant burn-out and record numbers of veterinarian suicides. We’ve sacrificed our own wellbeing in the quest to always make the customer happy.

We’ve been counseled for years that we need to increase our prices and

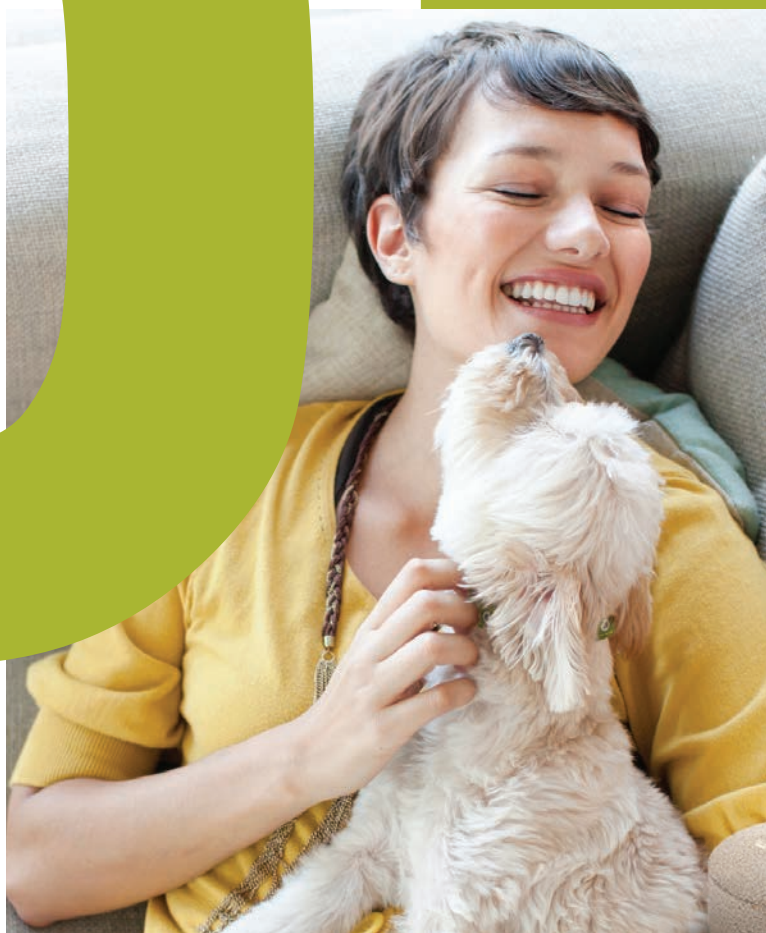
profitability. We need to sell clients on the value of our services, see more patients, run more tests. It’s all about client satisfaction and if we don’t make room in our jam-packed schedules, they’ll go somewhere else. If we don’t answer their emails and phone calls within minutes, they’ll take to their keyboards and berate us online. If we question their food and nutrition choices, we’ll be labeled as “big-kibble sellouts.” And if a pet dies while under our care? Forget it. We’re now the evil villain (more hated than Scar when he took out Mufasa in *The Lion King*), and they’ll waste no time sharing their story on social media.

So, to all of the business consultants and CEOs out there, we hear you. We get what you’re telling us. We absolutely do need to be able to communicate value to our clients. But it can’t be a one-way street. We have to balance service with boundaries. We can’t continue giving the best of ourselves to our clients and have nothing left for us and our families. I’ve been mentored countless times about how to build a client’s trust in me, but what happens when I don’t trust the client?

Perhaps it’s time to invest in an updated veterinary business model. Instead of trying to turn our clinics into luxury boutique resorts, let’s focus on communication and the psychology of triggering emotions such as fear and grief. Let’s strive to be better at delivering medical recommendations with honest and realistic expectations. Let’s be doctors and not waitstaff wearing mouse ears.

Shifting to an approach that honors not only the client and patient but the veterinary team as well may mean a few less dollars at the outset, but it might also mean one less act of despair in our profession.

Dr. Melissa Detweiler is an associate veterinarian at Bern-Sabetha Veterinary Clinic in Sabetha, Kansas. In her free time, she enjoys spending time with her husband, children and their Rottweiler mix, Lucy.



- ✓ FLEAS
- ✓ HEARTWORM
- ✓ HOOKWORM
- ✓ ROUNDWORM
- ✓ WHIPWORM

ALL-IN-ONE PROTECTION FOR THE ONE WHO COUNTS ON YOU

Close gaps in protection with all-in-one Trifexis. With one convenient tablet administered monthly, it's simple for owners, so you can continue to be confident your patients get the protection they need.

INDICATIONS

Trifexis is indicated for the prevention of heartworm disease (*Dirofilaria immitis*). Trifexis kills fleas and is indicated for the prevention and treatment of flea infestations (*Ctenocephalides felis*), and the treatment and control of adult hookworm (*Ancylostoma caninum*), adult roundworm (*Toxocara canis* and *Toxascaris leonina*) and adult whipworm (*Trichuris vulpis*) infections in dogs and puppies 8 weeks of age or older and 5 pounds of body weight or greater.

IMPORTANT SAFETY INFORMATION

Serious adverse reactions have been reported following concomitant extra-label use of ivermectin with spinosad alone, one of the components of Trifexis. Treatment with fewer than three monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention. Prior to administration of Trifexis, dogs should be tested for existing heartworm infection. Use with caution in breeding females. The safe use of Trifexis in breeding males has not been evaluated. Use with caution in dogs with pre-existing epilepsy. The most common adverse reactions reported are vomiting, lethargy, pruritus, anorexia and diarrhea. To ensure heartworm prevention, dogs should be observed for one hour after administration. If vomiting occurs within one hour, redose. Puppies less than 14 weeks of age may experience a higher rate of vomiting. For product information, including complete safety information, see page 30.



Does it spark joy?

My take on Marie Kondo

Japan's 'Queen of Tidy' helped me sort my T-shirts, my office and my garage. But what sparks joy applies to so much more.



Keep or toss—which box will we get sorted into?

I don't sleep very well some nights and find myself either scanning the web or channel-surfing on TV looking for something to pass the time. Recently, I stumbled onto a show I'd never seen before and thought it looked curious: a charming Asian woman showing me how to fold my T-shirts. Fascinating, huh?

We have too much stuff

The show was sort of a *Hoarders* lite but with less pathology. The episode was about a family whose place was cluttered but not buried. I'd just commented earlier in the day to my wife that my office and garage were a mess, so the show seemed relevant.

Some of you have likely heard of this show already (*Tidying Up With Marie Kondo* on Netflix), named for the Japanese host, author and consultant, sometimes referred to as the "Queen of Tidy." I don't know how long it stayed tidy, but the formerly cluttered house had a place for everything and everything was in its place when she left.

I decided to try Marie Kondo's system in my bedroom first. I unwaded and folded/rolled my T-shirts and shorts and wound up with space to spare in my dresser. So far so good, but the garage presented me with my first problem: how to get rid of junk without throwing away something you "might need ... someday?" It seemed overwhelming.

Does it spark joy?

That's where Kondo's system kicked in. You start by putting all your stuff in piles and handling each item. (I don't think she knows how many items I have!) Then you ask yourself if it sparks joy. Well, that might work with baby pictures and the like, but what about boxes of screws, textbooks so old the binding has dissolved and outdated proceedings books? I'd kept them all because ... well, I might need them someday. None of this stuff "sparked joy." It was just there. So I didn't ask how much joy an item brought me, but when was the last time I used it or even looked at it?

I sorted with a vengeance. More than 150 books to the local pet rescue shop. (I don't think I've ever reread a book, and with Google at hand I don't need references.) Collectibles and souvenirs on shelves went to the dump. Nothing was sacred. I eliminated hundreds of screws and bolts and rusty tools and filtered everything with a new set of questions: "What the hell is this? When did I last look for something like a rusty wrench?"

I threw away or gave away a lot of stuff. Living by the sea, everything rusts within weeks anyway. I wound up with shelf space and pegboard hanger space to spare.

So, if you need to organize, you can read Kondo's book or watch her Netflix show and try this for yourself. But maybe you want to know how this principle of tidiness fits into our whole lives. Now it gets back to the joy ...

Tidying up your life

Think about your average week and how you spend your days. What are you spending time on? What are your priorities in life? What's really worth keeping and what should you change? When I've asked people to prioritize things in their lives, the important things are obvious: They're the things that bring us joy. Family, community and friends, spirituality, health and career are probably on everyone's list of priorities. And yet looking at where we put our time and energy, you might ask why what we do with our time and energy is often in conflict with our stated priorities. Sometimes they bring us angst instead of joy.

Treat every aspect of your life like something you can keep or eliminate. Simply stated, if something makes you happy, do more of it. If something causes stress and unhappiness, do less of it. Look critically at the things that pull on you. Learn to say "no." Do you really have to be on every committee and work detail? Do you really have to stay at work late every evening? Do you need to solve everyone else's problems? Are there people in your life you really don't enjoy? Do you always need to sacrifice at the expense of your family, friends and health? Do these things bring you joy?

Start now, not later. Eliminate the negative things in your life, and invest the energy into joyful things. Acknowledge when something has a negative impact on your life. Learn to weed. Learn to eliminate. Learn to say no ... unless, of course, whatever it is brings you joy.

Dr. Mike Paul is the former executive director of the Companion Animal Parasite Council and a former president of the American Animal Hospital Association. He is currently the principal of MAGPIE Veterinary Consulting. He is retired from practice and lives in Anguilla, British West Indies.



Continue to tidy
Veterinary architect Heather Lewis, AIA, NCARB, another Kondo fan, explores how to sort and organize your practice at dvm360.com/tidy.

PUREVAX[®]

MEANS SAFE.



PURE AND SAFE **FELINE** **PROTECTION**



PUREVAX is **THE ONLY** complete line of feline vaccines with **ZERO** adjuvants.

- ✓ All PUREVAX feline vaccines utilize either modified live (ML) or recombinant canarypox-vectored technology, which stimulate both humoral and cell-mediated immune responses ^{1,2,3}
- ✓ PUREVAX offers **THE ONLY** recombinant nonadjuvanted feline rabies vaccines: 1- and 3-year duration of immunity products
- ✓ PUREVAX offers **THE ONLY recombinant** nonadjuvanted Feline Leukemia Virus (FeLV) vaccine

¹ Poulet H, Minke J, Pardo MC, Juillard V, Nordgren B, Audonnet JC. Development and registration of recombinant veterinary vaccines. The example of the canarypox vector platform. *Vaccine*. 2007;25(30):5606-5612.

² Greene CE, Schultz RD. Immunoprophylaxis. In: Greene CE, ed. *Infectious Diseases of the Dog and Cat*. 4th ed. St Louis, MO: Elsevier Saunders; 2012:1166-1169.

³ Taylor J, Meignier B, Tartaglia J, et al. Biological and immunogenic properties of canarypox-rabies recombinant ALVACRG (vCP65) in non-avian species. *Vaccine*. 1995; 13;6:539-549.



PUREVAX[®] is a registered trademark of the Boehringer Ingelheim Group. ©2019 Boehringer Ingelheim Animal Health USA Inc., Duluth, GA. All rights reserved. PET-0915-PUR0119.

A Boehringer Ingelheim Vaccine
PetVaccinesClinic.com





Sunday hours: Worth it or the wrong fit?

When this practice owner decides to extend his clinic's hours to include Sundays (after weighing the pros and cons), he's met with doubt and concern.

Adams Animal Center was growing by leaps and bounds. The practice's owner, Howard Adams, DVM, fondly remembered the days of medical challenges and fraternizing with his clients. Those days were now gone. The practice had grown to a staff of five veterinarians, 20 technicians and five receptionists.

Now, Dr. Adams was not only challenged by medical mysteries—but by human resource issues and the drive to maintain practice growth. For the time being, human resource management was being handled by his very capable administrative assistants. However, the philosophy and responsibility of practice growth was his and his alone.

Dr. Adams believed that growth was closely tied to a philosophy of uncompromising excellence and reasonable risk-taking. The opportunity arose for Dr. Adams to hire a highly skilled, charismatic veterinarian. In all honesty, the staff he had in place was meeting the clinic needs, but Dr. Adams thought to himself, “Do I turn down an expensive superstar because I’m well-staffed at the moment? Or do I jump at the chance to bring more excellence into the practice?”

After some thought, he decided to hire the new veterinarian and make the necessary adjustments for the practice to continue growing and thriving.

Dr. Adams announced the addition of the new doctor to his clients via social media. He added an additional veterinarian to several of the busiest clinic shifts. And finally, he decided to implement the dreaded “S” word.

As you may have already guessed, that word is “Sunday.” Other than 24-hour emergency care veterinary facilities, there were few practices in the area that offered routine Sunday patient appointments.

Dr. Adams weighed the pros and



cons of Sunday clinic hours before making his decision. The cons came to him quickly. There would be staff resistance. Sunday, to many, was a day of religious significance. It also broke a long-standing precedent within the profession, and the clinic would not have any downtime for maintenance and weekly “recouping.”

On the other side of the ledger, Dr. Adams felt it would provide a desirable window for clients to see a veterinarian on a non-workday. Clinic revenue would increase and it offered non-clients an option not available from their own veterinarians. Bottom line: It would maximize clinic efficiency.

Dr. Adams felt that Sunday hours would work if they were presented to the team in a fair and reasonable manner: Team members would only have to work one Sunday per month. Additional staff, such as his highly qualified new hire, would enhance the medical excellence of the clinic. After all, large specialty and emergency facilities

functioned successfully on this type of schedule, and had for years. Finally, this step was a sign of growth, offering more readily available patient care and a bright future.

With all that in mind, Dr. Adams took a deep breath and did it. Adams Animal Center would now see routine care patients seven days a week.

Was this a wise move? Do you think Dr. Adams will succeed or fail? Let us know at dvm360news@mmhgroup.com.

Dr. Rosenberg's response

In many states, certain businesses (such as car dealerships) are prohibited from being open on Sundays. Respect for “the day of rest” has been a revered business tradition for a very long time. However, the 21st century has brought a change in our community dynamics. In order to make ends meet, most household adults have busy workweeks and less discretionary time for both leisure and chores. Changing demo-

graphics and diversity have added other revered dates and days besides Sunday to the calendar.

I have always maintained that veterinary practice is a true mixture of competitive small business and medicine. If the profession is to continue to thrive, it must cater to both business and medical innovations. A well-thought-out Sunday opening schedule is certainly not inappropriate.

On the other hand, those who continue to respect Sunday for any number of reasons should be comfortable with their decision to remain closed—without judging those practices that are choose to conduct non-emergency care on Sundays.

Dr. Marc Rosenberg is director of the Voorhees Veterinary Center in Voorhees, New Jersey. Although many of his scenarios in “The Dilemma” are based on real-life events, the veterinary practices, doctors and employees described are fictional.

MEDICINE | Oncology

Take the offensive fighting **cancer** and **inappetence**

An untouched food bowl is bad for patient health and client perceptions. Here's how to partner with pet owners to catch inappetence in your oncology patients. *By Sue Ettinger, DVM, DACVIM (oncology)*

It's easy to be judgmental about pet owners—especially ones like Jeter's owners.

At presentation, the then-10-year-old cat had lost almost a third of his body weight. Jeter's owner wasn't the first to notice. The owner's mother-in-law had brought it to her attention while visiting over Thanksgiving.

Weight loss wasn't the cat's only sign, however. Jeter had also been vomiting, but because he lived in a

multicat household, his owner made excuses that intermittent vomiting was normal. The internist at our practice diagnosed him with inflammatory bowel disease (IBD).

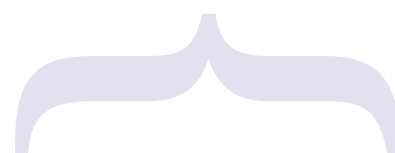
Like I said, it's easy to judge. I mean, who lets their pet lose so much weight?

Apparently I did. Jeter was *my* cat, and I'm married to the internist who diagnosed him. Two boarded specialists were blind to the signs that my mother-in-law noticed instantly. The

experience was a humbling reminder of how difficult it can be for pet owners to detect weight loss in their own pets, regardless of their day jobs.

After five years of successfully managing his IBD, Jeter's disease progressed to lymphoma and I took over his oncologic care. I could handle prescribing his chemotherapy, but I struggled to manage his inappetence.

Because prolonged inappetence can become even more detrimental to the



CLINICAL TIPS **M4**

Collaborate with screensharing and help clients microchip pets

PAIN MANAGEMENT **M6**

Make client collaboration and pricing in rehab easier

PARASITOLOGY **M7**

Heartworm hotspots: When pet travel is the trouble

dvm360.com/medicine

Find interactive cases, expert answers to your questions, clinical research summaries and more.

patient than the underlying disease, and because appetite can be a crucial element in the pet owner's perception of the patient's quality of life (i.e. an eating pet is a happy pet), our oncology patients need us to become proactive instead of reactive. We must work to discover and treat the underlying cause(s), and we must educate pet owners on the signs so the issue doesn't go undetected.

Cause and effect

Inappetence can be the first (and sometimes only) sign that a pet is ill. The causes fit into three categories:

> **True inappetence** can have physical (e.g. an inability to smell), neurologic (e.g. damage to the appetite center), environmental (e.g. moving to a new home, hospital stay) or psychological (e.g. fear) causes.

> **Secondary inappetence** can be caused by medications such as chemotherapy and opioids, pain, nausea, respiratory distress, neurologic disease and systemic disease.

> **Pseudoinappetence** can stem from oral disease, dysphagia, food aversion and an unpalatable diet.

Clinical signs of inappetence include decreased food consumption, weight loss, muscle wasting, lip smacking, vomiting, poor hair coat and behavior changes. The most common behavior change my clients report is the pet approaching the bowl as if hungry, then turning away without eating. As I've discovered firsthand, these signs can be difficult for both pet owners and veterinary professionals to recognize.

Consequences of inappetence include weight loss, cachexia, metabolic derangements and delayed wound healing, as well as decreased immune response, strength, gastrointestinal mucosal function and survival time.¹⁻³

Mitigating medications

Here are the three most common medications I prescribe for my inappetent oncology patients:

Capromorelin oral solution (Entyce—Aratana Therapeutics) is indicated for the stimulation of appetite in dogs (though it can be used off label in cats at lower doses). As a ghrelin receptor agonist, capromorelin mimics the action of the hunger hormone ghrelin, which triggers appetite stimulation and growth hormone secretion. It's been shown to increase food intake

and weight gain in both dogs and cats and has demonstrated a wide margin of safety.^{4,5}

I find it helpful to use capromorelin with maropitant (Cerenia—Zoetis) in inappetent patients when it's unclear whether nausea is contributing to the inappetence. I recommend using both for a minimum of two days and then continuing with capromorelin.

Mirtazapine transdermal ointment (Mirataz—KindredBio) is the first and only FDA-approved transdermal product for weight loss management in cats.

Mirtazapine is a 5-HT₃ receptor antagonist with appetite stimulant properties. Oral mirtazapine is used as an antidepressant in people, and increased appetite and weight gain are among its common side effects. It's also regularly used as an appetite stimulant in dogs and cats, but oral administration can be a challenge for many cat owners.

Data has shown that mirtazapine transdermal ointment is safe and results in weight gain in both normal cats and cats with underlying disease.⁶ It represents another option for cats with cancer and other diseases causing inappetence and weight loss.

I find it helpful to use mirtazapine transdermal ointment with maropitant in cats that aren't eating when it's unclear whether nausea is contributing to the inappetence. This approach has been especially helpful for cats with gastrointestinal lymphoma.

Maropitant is a neurokinin-1 receptor antagonist that acts in the central nervous system by inhibiting substance P, the key neurotransmitter involved in vomiting. Maropitant suppresses both peripheral and centrally mediated emesis and has been shown to be effective for controlling vomiting secondary to a variety of stimuli (including reducing chemotherapy-induced nausea and vomiting [CINV]).^{7,8} Some dogs and cats with cancer may benefit from chronic maropitant therapy, as controlling CINV can be a relentless challenge.

Partner with pet owners

On the first day of chemotherapy, all my patients go home with maropitant, metronidazole, a probiotic and a client information sheet that walks pet owners through what to look for and how to manage side effects at home. I

give pet owners an overview of what the sheet contains so they know when and how to use it when they're on their own. If the patient is inappetent before starting chemotherapy or if I'm prescribing antibiotics or pain medications, I will also add capromorelin oral solution for dogs and mirtazapine transdermal ointment for cats.

Despite the recent emergence of more effective antiemetics and inappetence medications, inappetence remains a challenge. But as I mentioned earlier, the efforts I've described aren't meant to merely prevent the patient from enduring the detrimental effects of inappetence. Their other, equally important goal is to preserve the pet owner's perception that their pet has a good quality of life.

References

1. Forman MA. Anorexia. In: Ettinger SJ, Feldman EC, eds. *Textbook of Veterinary Internal Medicine*. Vol 1. 7th ed. St. Louis: Elsevier, 2010;172-174.
2. Zoran DL. Nutritional management of gastrointestinal conditions. In: Ettinger SJ, Feldman EC, eds. *Textbook of Veterinary Internal Medicine*. Vol 1. 7th ed. St. Louis: Elsevier, 2010;676-681.
3. Satyaraj E. Emerging paradigms in immunonutrition. *Top Companion Anim Med* 2011; 26(1):25-32.
4. Zollers B, Wofford JA, Heinen E, et al. A prospective, randomized, masked, placebo-controlled clinical study of capromorelin in dogs with reduced appetite. *J Vet Intern Med* 2016;30(6):1851-1857.
5. Wofford JA, Zollers B, Rhodes L, et al. Evaluation of the safety of daily administration of capromorelin in cats. *J Vet Pharmacol Ther* 2018;41(2):324-333.
6. Poole M, Quimby JM, Hu T, et al. A double-blind, placebo-controlled, randomized study to evaluate the weight gain drug, mirtazapine transdermal ointment, in cats with unintended weight loss. *J Vet Pharmacol Ther* 2019;42(2):179-188.
7. Rau SE, Barber LC, Burgess KE. Efficacy of maropitant in the prevention of delayed vomiting associated with administration of doxorubicin to dogs. *J Vet Intern Med* 2010;24(6):1452-1457.
8. Vail DM, Rodabaugh HS, Conder GA, et al. Efficacy of injectable maropitant (Cerenia) in a randomized clinical trial for prevention and treatment of cisplatin-induced emesis in dogs presented as veterinary patients. *Vet Comp Oncol* 2007;5(1):38-46.

Suggested reading

1. Gustafson DL, Page RL. Cancer chemotherapy. In: Withrow SJ, Vail DM, Page RL, eds. *Small Animal Clinical Oncology*. 5th ed. St. Louis: Elsevier, 2013;157-179.
2. Rodriguez CO. Chemotherapy. In: Henry CJ, Higginbotham ML, eds. *Cancer Management in Small Animal Practice*. Saunders 2010;101-121.

Dr. Sue Ettinger is a practicing veterinary cancer specialist, speaker, book author and vlogger. She is the co-author of the second edition of The Dog Cancer Survival Guide.



Dr. Sue Cancer Vet
You want more on oncology?
Dr. Ettinger has all the
updates (and info for your
clients). See more from her at
dvm360.com/cancervet.

Mobility is our Mantra.

ANTINOL[®], *the supplement for joint comfort and mobility*

- ANTINOL's active ingredient, PCSO-524[®], is a naturally occurring fatty acid group from the indigenous New Zealand Green-lipped Mussel.
- A patented extraction and manufacturing process prevents auto-oxidation of fats and keeps their beneficial properties intact.
- Safe for long-term daily use.



Enhanced mobility seen in dogs in as little as 2 weeks!¹



For more information, ask your Boehringer Ingelheim sales representative or visit www.Antinolforpets.com

When it comes to learning, share and share alike

Screen-sharing during imaging consults:
A powerful, collaborative teaching tool.

Telemedicine has always hinged on technology, and high-speed internet has led to easy screen-sharing, especially for imaging consultations. Fetch dvm360 conference speaker Maria Evola, DVM, MPH, DACVR, says this is leading to a revolution in the way doctors interact. She says being able to look at another veterinarian’s computer in real-time has applications for teaching as well as clear sharing of information and opinions.

“It can be very helpful to just share their screen and to say, ‘Look, here it is,’ and point with the mouse,” she says. Dr. Evola also notes that this form of information exchange makes it much more efficient to point out what is normal, a variation of normal or just flat-out abnormal on an image. Watch Dr. Evola talk about advances in veterinary telemedicine and how she has used it to improve her and her colleagues’ outcomes at dvm360.com/evola-tips.



Help clients register their pet's microchip information

Accurate microchip info can save a lost pet’s life, but pet owners often forget to update. Just in time for Check the Chip Day on Aug. 15, here's a tip on helping clients register their pet.

By Meghan Bingham, CVPM

We have a number of clients who bring their pets to us already microchipped but not registered in the manufacturer’s database. When asked about the microchip, they admit they haven’t registered their pet or updated their information—but they don’t know how to go about getting it done. I created a document that helps our veterinary clients register a chip that wasn’t administered at our clinic.

Go check out this document to help the clients in your practice at dvm360.com/registerchip.



BRIEF SUMMARY:
Before using Coraxis™, please consult the product insert, a summary of which follows:

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 application sites for two (2) hours after application.

(See Contraindications, Warnings, Human Warnings, and Adverse Reactions, for more information)

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

INDICATIONS:
CORAXIS is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*. CORAXIS is also indicated for the treatment and control of the following intestinal parasites:

Intestinal Parasite	Intestinal Stage		
	Adult	Immature Adult	Fourth Stage Larvae
Hookworm Species	<i>Ancylostoma caninum</i> <i>Uncinaria stenocephala</i>	X	X
Roundworm Species	<i>Toxocara canis</i> <i>Toxascaris leonina</i> <i>Trichostrongylus axei</i>	X	X

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

WARNINGS:
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.¹

* Some dogs are more sensitive to avermectins due to a mutation in the ABCB1 gene (formerly MDR1 gene). Dogs with this mutation may develop signs of severe avermectin toxicity if they ingest this product. The most common breeds associated with this mutation include Collies and Collie crosses.

¹ Although there is no specific antagonist for avermectin toxicity, even severely affected dogs have completely recovered from avermectin toxicity with intensive veterinary supportive care.

HUMAN WARNINGS:
Not for human use. Keep out of the reach of children.
Children should not come in contact with application sites for two (2) hours after application. Causes eye irritation. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Exposure to the product has been reported to cause headache, dizziness, and redness, burning, tingling, or numbness of the skin. Wash hands thoroughly with soap and warm water after handling.

If contact with eyes occurs, hold eyelids open and flush with copious amounts of water for 15 minutes. If eye irritation develops or persists, contact a physician. If swallowed, call poison control center or physician immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or physician. People with known hypersensitivity to benzyl alcohol or moxidectin should administer the product with caution. In case of allergic reaction, contact a physician. If contact with skin or clothing occurs, take off contaminated clothing. Wash skin immediately with plenty of soap and water. Call a poison control center or physician for treatment advice.

The Safety Data Sheet (SDS) provides additional occupational safety information. For a copy of the Safety Data Sheet (SDS) or to report adverse reactions call Bayer Veterinary Services at 1-800-422-9874. For consumer questions call 1-800-255-8826.

PRECAUTIONS:
Do not dispense dose applicator tubes without complete safety and administration information.

Use with caution in sick, debilitated, or underweight animals. The safety of CORAXIS has not been established in breeding, pregnant, or lactating dogs. The safe use of CORAXIS has not been established in puppies and dogs less than 7 weeks of age or less than 3 lbs body weight.

Prior to administration of CORAXIS, dogs should be tested for existing heartworm infection. At the discretion of the veterinarian, infected dogs should be treated with an adulticide to remove adult heartworms.
CORAXIS is not effective against adult *D. immitis*. (See ANIMAL SAFETY - Safety Study in Heartworm-Positive Dogs.)

ADVERSE REACTIONS:
Since CORAXIS contains 2.5% moxidectin, studies that demonstrated the safe use of a topical solution containing 2.5% moxidectin + 10% imidacloprid were acceptable to demonstrate the safety of CORAXIS.

Field Studies: Following treatment with a topical solution containing 2.5% moxidectin + 10% imidacloprid or an active control, dog owners reported the following post-treatment reactions:

OBSERVATION	Moxidectin + Imidacloprid n = 128	Active Control n = 68
Pruritus	19 dogs (14.8%)	7 dogs (10.3%)
Residue	9 dogs (7.0%)	5 dogs (7.4%)
Medicinal Odor	5 dogs (3.9%)	None observed
Lethargy	1 dog (0.8%)	1 dog (1.5%)
Inappetence	1 dog (0.8%)	1 dog (1.5%)
Hyperactivity	1 dog (0.8%)	None observed

During a field study of a topical solution containing 2.5% moxidectin + 10% imidacloprid using 61 dogs with pre-existing flea allergy dermatitis, one (1.6%) dog experienced localized pruritus immediately after product application, and one investigator noted hyperkeratosis at the application site of one dog (1.6%).

Laboratory Effectiveness Studies: One dog in a laboratory effectiveness study experienced weakness, depression and unsteadiness between 6 and 9 days after application of a topical solution containing 2.5% moxidectin + 10% imidacloprid. The signs resolved without intervention by day 10 post-application. The signs in this dog may have been related to peak serum levels of moxidectin, which vary between dogs, and occur between 1 and 21 days after product application.

The following clinical observations also occurred in laboratory effectiveness studies following application of a topical solution containing 2.5% moxidectin + 10% imidacloprid and may be directly attributed to the drug or may be secondary to the intestinal parasite burden or other underlying conditions in the dogs: diarrhea, bloody stools, vomiting, anorexia, lethargy, coughing, ocular discharge and nasal discharge. Observations at the application sites included damp, stiff or greasy hair, the appearance of a white deposit on the hair, and mild erythema, which resolved without treatment within 2 to 48 hours.

ANIMAL SAFETY:
In a controlled, double-masked, field safety study, a topical solution containing 2.5% moxidectin + 10% imidacloprid was administered to 128 dogs of various breeds, 3 months to 15 years of age, weighing 4 to 157 pounds. The moxidectin + imidacloprid topical solution was used safely in dogs concomitantly receiving ACE inhibitors, anticonvulsants, antihistamines, antibiotics, chondroprotectants, corticosteroids, immunotherapeutics, MAO inhibitors, NSAIDs, ophthalmic medications, sympathomimetics, synthetic estrogens, thyroid hormones, and urinary acidifiers. Owners reported the following signs in their dogs after application of moxidectin + imidacloprid topical solution: pruritus, flaky/greasy residue at the treatment site, medicinal odor, lethargy, inappetence and hyperactivity. (See ADVERSE REACTIONS.)

NADA # 141-417, Approved by FDA

Bayer HealthCare LLC
Animal Health Division
P.O. Box 390, Shawnee Mission, Kansas 66201 U.S.A.

LV1808
©2018 Bayer HealthCare LLC
Bayer (reg'd), the Bayer Cross (reg'd) and
Coraxis™ are trademarks of Bayer.

Bayer

2500

Slow and steady packs a punch.

Coraxis® (moxidectin) Topical Solution for Dogs leverages its transdermal solution to deliver and steadily release **2,500 µg/kg of moxidectin** throughout the month.

- Kills established heartworm larvae from the previous 30 days
- Kills incoming heartworm larvae for the next 30 days
- Treats and controls hookworms, roundworms and whipworms with monthly application

////// Add the power of transdermal moxidectin to your clinic's portfolio. Contact your Bayer sales representative today.

CORAXIS
(moxidectin)

1 dose.

6 parasites.

30 days.

That's Coraxis®.

Coraxis® is not approved for the treatment of adult *D. immitis*.

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

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.) CONTRAINDICATIONS: Do not use this product on cats.

©2019 Bayer, Shawnee Mission, Kansas 66201

Bayer, the Bayer Cross and Coraxis are registered trademarks of Bayer. CX191933



Rehab recommendations

Veterinary specialists David Dycus and Matthew Brunke weigh in on how to motivate clients and what to charge for your services. *By Maureen McKinney*

Rehabilitation is an important part of the treatment plan for animals recovering from orthopedic or neurologic surgery and soft tissue injury, as well as those with osteoarthritis, neurologic conditions and obesity. But how do you engage pet owners to ensure they comply with your recommendations for professional rehab and follow through with your instructions for at-home exercise?

The keys, say David Dycus, DVM, MS, CCRP, DACVS-SA, and Matthew Brunke, DVM, DACVSMR, CCRP, CVPP, CVA, who both work in veterinary pain, sports medicine and rehabilitation in the Annapolis Junction, Maryland, area, are to outline the benefits of rehabilitation and set goals that make the task fun.

Getting started

"It is often best to explain the advantages of rehab for pets in terms of human medicine," Dr. Dycus told *dvm360*. If people have an orthopedic problem, their doctor will diagnose the condition, begin pharmaceutical intervention if needed and perform surgery if indicated.

Many nonsurgical orthopedic problems—and just about every orthopedic surgical case—will be sent to a physical therapist to work on improving pain, regaining and maintaining strength and range of motion, and improving coordination. Likewise, pet owners need to understand that rehabilitation helps to manage pain, promote mobility and return patients to the most functional state possible.

Formal rehab therapy occurs once or twice a week and includes such professional modalities as laser therapy (photobiomodulation), therapeutic ultrasound, electrical stimulation, underwater treadmill workouts and therapeutic exercises. But the home exercise plan is just as important to enable progression and "graduation" from formal therapy, Dr. Brunke says.

"Owners don't want to hurt their pets and often are unsure how far to push the pet to assist with healing

while avoiding injury," he points out. "So, we need to explain the importance of formal rehabilitation therapy and then show owners how to exercise the pet at home."

Some owners can be taught to perform manual therapies at home, including light massage and passive range of motion and light stretching, but much of the home care program involves controlled leash walks.

"The idea is to restrict activity but allow for regular controlled movement with active muscle engagement," Dr. Dycus says. "We aim to have dogs walk 30 minutes two or three times a day, seven days a week," Dr. Brunke adds.

Stress the importance of warming up the pet before exercising. "Taking a dog right out of the crate or car for a 5-mile run isn't recommended," Dr. Brunke says. Prepare by mimicking the activity to be performed for five to 10 minutes at one-quarter or one-half the speed that it will be done during exercise.

Setting goals

Communication is key. "Be honest with clients, provide important information in multiple ways and set reasonable goals," Dr. Brunke says.

"Tailor the program to each client and patient by asking clients what they like to do with their pet." From there, "you can plan how to achieve those goals."

Explain that rehab and tissue healing take time. "Depending on the nature of the injury and how the body is healing and responding to therapy, it may be two or three months before the pet is able to return to normal daily activities," Dr. Dycus says.

Here are some ideas to ensure that owners follow through with the home care regimen:

- > Take before and after photos so owners can see the results. Suggest they reward themselves and their pet when they achieve certain goals.
- > Track your walks with a phone app (e.g. MapMyWalk).
- > Teach your dog new tricks (e.g. sit to stand, walking backward, give a paw), and build on them.

> If the pet is able, discuss how the owner can make the dog part of a running program.

> Get involved in a dog-friendly sport such as lure coursing or agility.

> Ask owners to post fun activities on social media and tag your hospital.

> Have them "check in" for rehab on social media at your practice.

Pricing your services

Money is often a client concern, so be practical about what professional rehab services your practice can provide versus what the owner can do at home.

The best outcomes typically occur when both sides work together. "If the pet can't come as often as we like, we'll move on to a 'plan B' that still meets most of the goals, but it may take longer," Dr. Brunke says.

Rehabilitation consults typically take longer than an annual physical exam, so charge more for them, Drs. Brunke and Dycus advise. Also, they emphasize, charge for rechecks! "We set up reasonable rechecks and reassess to determine whether we have met our goals or need to continue with the same plan or move to a conditioning program," Dr. Dycus says.

Rehab visits can range from 30 to 90 minutes in length. The per-visit cost

will vary depending on geographic location and whether the practice is a specialty or general hospital.

Rehab visits are typically a technician-driven service, but when deciding what to charge, you have to factor in the hourly wage of the technician, the technician's skill level and training, practice overhead and your profit.

In most cases one rehab session is not going to solve the problem. Although you can price individual rehab sessions higher, Drs. Brunke and Dycus think it's a good idea to offer a package deal.

Some services (such as postoperative laser therapy or a massage session) can be priced a la carte, Dr. Brunke says, but he finds it best to charge by units of time and then let the rehab professional use that time as they see fit for that patient that day. "Allowing owners to pick and choose which services they want or can afford (like at a salad bar) may handcuff our progress for the patient," he says.

Although clients may balk at paying a package rate up front for rehabilitation services, Dr. Brunke says, this can streamline the process for everyone. The client doesn't have to check out at the front desk and staff time is freed up to help other clients.



Many home care rehab programs for veterinary patients involve controlled leash walks.

Heartworm hotspots: When pet travel is the trouble



Heartworm disease is affecting more dogs and cats in more parts of the country than ever. Here's what you need to know to educate your clients. *By Natalie Stilwell, DVM, MS, PhD*

In its annual parasite forecast, released in April, the Companion Animal Parasite Council predicted that the incidence of heartworm disease would be higher than average across the country this year. At Fetch dvm360 conference in Baltimore, parasitologist Brian Herrin, DVM, PhD, discussed the impact of animal transport on shifting heartworm prevalence in the United States, noting that while “heartworm infection isn’t moving much on its own, it does seem to be moving because of a lot of travel.”

Long-distance movement

A significant amount of animal travel involves long-distance transport of shelter animals. “These dogs surely deserve a happy life,” explained Dr. Herrin, an assistant professor at Kansas State University College of Veterinary Medicine, “but we have to consider the diseases that travel with them.”

The counties that have accepted the highest number of shelter dogs have also reported the largest increase in heartworm-positive dogs, which animal movement undoubtedly contributed to. Between 2014 and 2017, for example, more than 130 animal welfare organizations imported about 114,000 dogs to Colorado shelters, turning the area into a heartworm disease hotspot.

Most states don’t legally require heartworm testing before interstate travel. Disease can become established quickly after arrival, Dr. Herrin warned, because “every state has mosquito vectors that are capable of transmitting heartworm.” The American Heartworm Society (AHS) and Association of Shelter Veterinarians (ASV) recently published procedures for minimizing the risk of heartworm transmission during animal travel. The two societies stated that along with considering the document’s recommendations, veterinarians should also ensure they are following state and federal transportation regulations.

AHS and ASV recommendations

The AHS/ASV document states that all dogs should be tested for heartworm disease before travel. If testing isn’t possible or test results aren’t immediately available, then relocation should be postponed until testing is completed.

If a dog tests heartworm-positive, treatment should begin right away, before the animal travels, particularly because infection can leave a dog too unstable for travel. However, if treatment is impossible at the time, then at minimum a macrocyclic lactone preventive and doxycycline therapy

should be administered. “Infected dogs are a risk to the surrounding area,” Dr. Herrin stated. By preventing circulating microfilariae from growing into adult worms, a preventive reduces the patient’s worm burden and stops disease transmission to other animals. Doxycycline reduces inflammation from dying worms.

A topical permethrin-based insecticide product is also recommended before travel to prevent disease transmission by disrupting the mosquito life cycle. Upon arrival, the AHS-recommended treatment protocol should be instituted. Retesting after arrival is not recommended, because preventive and doxycycline treatments can both cause false-negative antigen test results.

Dogs that test heartworm-negative before travel may still suffer from prepatent infection. For these dogs, a preventive should be administered before travel and retesting should be performed 6 months later. In the meantime, according to Dr. Herrin, preventive should continue for “every pet, every month, all year round.”

Dr. Natalie Stilwell received her DVM and MS in fisheries and aquatic sciences from Auburn University and a PhD in veterinary medical sciences from the University of Florida.



MinXray: Max Value.

QUALITY DIGITAL IMAGING SOLUTIONS FOR ALL THINGS THAT WALK, FLY AND SLITHER.

MinXray offers portable x-ray equipment for all equine/large animal, companion, exotic and mixed animal practices. Our systems include everything from individual imaging equipment components to complete veterinary digital radiography systems. Each product is packaged to be compact, portable and easy to use.

MinXray’s long-lasting and ultra-durable systems guarantee superior diagnostic imaging capabilities; even under challenging conditions.

For more information, visit minxray.com or call 1-800-221-2245.

MINXRAY®

Where you care, we’re there.

Visit us at FETCH in KC
Booth #836



30 YEARS

OF VETERINARY EXCELLENCE

Atlantic Coast Veterinary Conference® is celebrating 30 years this year in Atlantic City!

With over **250 sessions** and **21 hours of RACE-approved CE**, there will be something for everyone in the practice.



REGISTER TODAY AT ACVC.ORG

Pin the competition: How to make market share to work for you

How much of the local veterinary business is your practice capturing compared with your competitors? Use this tool from AVMA to pin down a plan toward greater success.

Veterinarians live in a competitive world. No matter how smart you are, or how good at your job, you might have a dozen or more competitors in your market area. These may be other veterinarians, but just as often they're big-box stores, pharmacies and other

businesses that don't occupy a purely veterinary space.

In this landscape, it's critical to know where you stand relative to the competition. This means understanding and tracking your market share.

This may sound daunting, but we promise it's not that hard.

First, the basics

Market share measures the amount of business you're capturing in your local market compared with the amount going to your various competitors. Just as your financial records tell you about your practice's fiscal health, market share gives you an idea of how



More marketing tips
Find more ways to suss out your competition and bring in the veterinary clients at dvm360.com/marketing.

Over 35 Years of Quality and Innovation, Now Available to Your Veterinary Practice

Havel's Inc. has a variety of veterinary products for your practice. Our affordable echogenic needles, developed by Hakko Medical for use during Ultrasound Guided Procedures, use Corner Cube Reflectors (CCR) or Micro Laser Etching (MLE) to reflect sound waves back to the transducer to illuminate the needle and improve success rates. Havel's also has a large selection of quality surgical blades and sutures at competitive prices. Please call today for your free samples.

Get a free sample today:

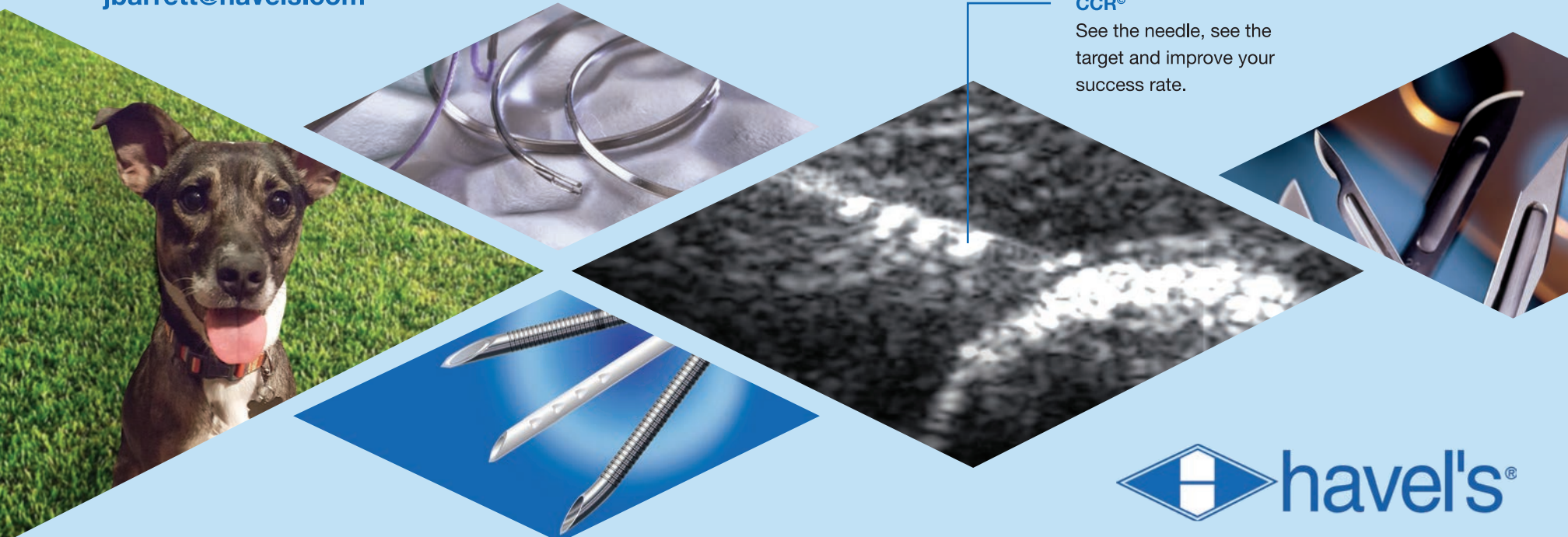
John Barrett

1-800-638-4770, ext. 13

jbarrett@havel's.com

CCR®

See the needle, see the target and improve your success rate.



you compare with other businesses in your area. This can help you identify where you stand in your market, your potential to attract new business and possible growth strategies.

Tracked over time, market share is also an important monitoring tool. Checking your market share regularly is like taking the pulse of your business. It lets you know if your health is stable, improving or declining. If you see market share go up, it could mean a new business tactic is starting to work. Seeing it go down can alert you to a possible problem, like losing ground to a new or existing competitor.

How to measure market share

Here's what you need to do to measure your market share:

- > Know your geographic market area.
- > Identify the animal population in the area, specific to what you treat.
- > Estimate the total number of patients and visits, as well as the total veterinary revenue, in your area.
- > Calculate your practice's share of the market.

That seems like a lot of information, and it is. Fortunately, the AVMA has an easy-to-use worksheet that will help you identify all these numbers. Our Market Share Estimator tool, free for all AVMA members, provides step-by-step instructions and calculations for companion-animal veterinarians to identify your market share based on the specific species you treat. You can find the tool at avma.org/MarketShare.

Turn market share into meaningful action

The Market Share Estimator will tell you approximately how much of the veterinary business you're capturing in your specific market. If your practice treats cats, dogs, horses and birds, you can identify the total market share for your whole practice, or calculate specific percentages for each species by looking at one species at a time.

Once you know your market share, what you decide to do will depend on your individual situation. Market share is an important piece of information about your business's health, but it's just one component.

If you're happy with your market share and the current state of your business, then you might simply pack



your market share data away to check in on once a year to make sure you're not losing ground.

For those whose market share is lower than you'd like, you might look inward first. Do you utilize all team members to their full abilities and capacity? Do you have facility space that could be put to better use, perhaps to see more clients each week? These are foundational questions for any business to make sure you're running a lean operation. While you're at it, look at your business practices. For example, do your pricing strategies capture all of your team's valuable work?

Ideas to grow your business

When you're ready to turn your attention to business growth—that is, to increasing your market share—here are some ideas to get you started:

> **Deepen your relationships with existing clients.** This might mean focusing more on callbacks and forward booking, or it might involve asking clients if they have additional pets at home that you don't see. Make sure your clients know about all the services you offer. Don't assume that every client who brings their dog in for annual exams is aware that you provide boarding or grooming services. They might be thrilled to learn they can consolidate multiple errands into one. Current clients can also help you attract new patients to your hospital. Consider offering clients incentives to recommend you to their friends.

> **Consider offering wellness plans.** They can be a good way to stay in closer touch with clients, and encourage more frequent consultations and adherence to your treatment and preventive care guidelines.

> **Reach out to AWOL clients.** Do you have inactive clients who haven't had their animals examined in some time? Consider a campaign to get them back into the practice. Partners for Healthy Pets has a free toolkit that has proven effective for practices.

> **Look at your strengths.** Think about the things you do best and how you can improve on them. These are the areas where you already may have an edge over competitors and may be able to gain more ground.

> **Work on expanding your market reach.** This could mean adding a new species or specialty focus, or offering remote, video-based follow-up exams that could expand your market geographically. You would still need an in-person exam to establish the veterinarian-client-patient relationship with each patient, but the ability to use telemedicine technology for follow-ups can make your practice a more convenient alternative to a competitor who's actually located closer to the client.

If you currently treat multiple species and find your market share is much higher with one species than another, focus on that as you grow your business. For example, if you have a 40% market share among dogs but only 15% among cats, then it might be time to consider making your practice more feline-friendly or reaching out to more cat owners. This could be another situation where a telemedicine-based approach could make a difference.

Charlotte Hansen, MS, is assistant director of statistical analysis for the AVMA Veterinary Economics Division.



They already have a lot to remember.
Give them **one less thing to forget.**



No matter how busy life gets, at least you'll know your patients are protected from fleas & ticks with BRAVECTO®

Prescription-only BRAVECTO provides **up to 12 weeks*** of extended protection against fleas & ticks with just one dose. Good for **patients**, good for **compliance**, good for your **practice**.

Ask your Merck Animal Health Rep about BRAVECTO or Visit Bravetovets.com

*BRAVECTO kills fleas and prevents flea infestations for 12 weeks. **BRAVECTO Chew** kills ticks (black-legged tick, American dog tick, and brown dog tick) for 12 weeks and also kills lone star ticks for 8 weeks.

Important Safety Information

BRAVECTO Chews for Dogs: The most common adverse reactions recorded in clinical trials were vomiting, decreased appetite, diarrhea, lethargy, polydipsia, and flatulence. Bravecto has not been shown to be effective for 12-weeks' duration in puppies less than 6 months of age. Bravecto is not effective against lone star ticks beyond 8 weeks after dosing. **Please see Prescribing Information on following page 38.**

BRAVECTO®
(FLURALANER)

Also available as a topical application.



Flavored chews for dogs.

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

Description:
Each chew is formulated to provide a minimum dose of 11.4 mg/lb (25 mg/kg) body weight.

The chemical name of fluralaner is (±)-4-[5-(3,5-dichlorophenyl)-5-(trifluoromethyl)-4,5-dihydroisoxazol-3-yl]-2-methyl-N-[2-oxo-2-(2,2,2-trifluoroethylamino) ethyl]benzamide.

Indications:
Bravecto kills adult fleas and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*) and the treatment and control of tick infestations [*Ixodes scapularis* (black-legged tick), *Dermacentor variabilis* (American dog tick), and *Rhipicephalus sanguineus* (brown dog tick)] for 12 weeks in dogs and puppies 6 months of age and older, and weighing 4.4 pounds or greater.

Bravecto is also indicated for the treatment and control of *Amblyomma americanum* (lone star tick) infestations for 8 weeks in dogs and puppies 6 months of age and older, and weighing 4.4 pounds or greater.

Dosage and Administration:
Bravecto should be administered orally as a single dose every 12 weeks according to the **Dosage Schedule** below to provide a minimum dose of 11.4 mg/lb (25 mg/kg) body weight.

Bravecto may be administered every 8 weeks in case of potential exposure to *Amblyomma americanum* ticks (see **Effectiveness**).

Bravecto should be administered with food.

Dosage Schedule

Body Weight Ranges (lb)	Fluralaner Content (mg)	Chews Administered
4.4 – 9.9	112.5	One
>9.9 – 22.0	250	One
>22.0 – 44.0	500	One
>44.0 – 88.0	1000	One
>88.0 – 123.0*	1400	One

*Dogs over 123.0 lb should be administered the appropriate combination of chews
Treatment with Bravecto may begin at any time of the year and can continue year round without interruption.

Contraindications:
There are no known contraindications for the use of the product.

Warnings:
Not for human use. Keep this and all drugs out of the reach of children. Keep the product in the original packaging until use, in order to prevent children from getting direct access to the product.

Do not eat, drink or smoke while handling the product. Wash hands thoroughly with soap and water immediately after use of the product.

Precautions:
Bravecto has not been shown to be effective for 12-weeks duration in puppies less than 6 months of age. Bravecto is not effective against *Amblyomma americanum* ticks beyond 8 weeks after dosing (see **Effectiveness**).

Adverse Reactions:
In a well-controlled U.S. field study, which included 294 dogs (224 dogs were administered Bravecto every 12 weeks and 70 dogs were administered an oral active control every 4 weeks and were provided with a tick collar); there were no serious adverse reactions. All potential adverse reactions were recorded in dogs treated with Bravecto over a 182-day period and in dogs treated with the active control over an 84-day period. The most frequently reported adverse reaction in dogs in the Bravecto and active control groups was vomiting.

Percentage of Dogs with Adverse Reactions in the Field Study

Adverse Reaction (AR)	Bravecto Group: Percentage of Dogs with the AR During the 182-Day Study (n=224 dogs)	Active Control Group: Percentage of Dogs with the AR During the 84-Day Study (n=70 dogs)
Vomiting	7.1	14.3
Decreased Appetite	6.7	0.0
Diarrhea	4.9	2.9
Lethargy	5.4	7.1
Polydipsia	1.8	4.3
Flatulence	1.3	0.0

In a well-controlled laboratory dose confirmation study, one dog developed edema and hyperemia of the upper lips within one hour of receiving Bravecto. The edema improved progressively through the day and had resolved without medical intervention by the next morning.

For technical assistance or to report a suspected adverse drug reaction, contact Merck Animal Health at 1-800-224-5318. Additional information can be found at www.bravecto.com. 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>.

Clinical Pharmacology:
Peak fluralaner concentrations are achieved between 2 hours and 3 days following oral administration, and the elimination half-life ranges between 9.3 to 16.2 days. Quantifiable drug concentrations can be measured (lower than necessary for effectiveness) through 112 days. Due to reduced drug bioavailability in the fasted state, fluralaner should be administered with food.

Mode of Action:
Fluralaner is for systemic use and belongs to the class of isoxazoline-substituted benzamide derivatives. Fluralaner is an inhibitor of the arthropod nervous system. The mode of action of fluralaner is the antagonism of the ligand-gated chloride channels (gamma-aminobutyric acid (GABA)-receptor and glutamate-receptor).

Effectiveness:
Bravecto began to kill fleas within two hours after administration in a well-controlled laboratory study. In a European laboratory study, Bravecto killed fleas and *Ixodes ricinus* ticks and reduced the numbers of live fleas and *Ixodes ricinus* ticks on dogs by >98% within 12 hours for 12 weeks. In a well-controlled laboratory study, Bravecto demonstrated 100% effectiveness against adult fleas 48 hours post-infestation for 12 weeks. In well-controlled laboratory studies, Bravecto demonstrated ≥93% effectiveness against *Dermacentor variabilis*, *Ixodes scapularis* and *Rhipicephalus sanguineus* ticks 48 hours post-infestation for 12 weeks. Bravecto demonstrated ≥90% effectiveness against *Amblyomma americanum* 72 hours post-infestation for 8 weeks, but failed to demonstrate ≥90% effectiveness beyond 8 weeks.

In a well-controlled U.S. field study, a single dose of Bravecto reduced fleas by ≥99.7% for 12 weeks. Dogs with signs of flea allergy dermatitis showed improvement in erythema, alopecia, papules, scales, crusts, and excoriation as a direct result of eliminating flea infestations.

Palatability: In a well-controlled U.S. field study, which included 559 doses administered to 224 dogs, 80.7% of dogs voluntarily consumed Bravecto within 5 minutes, an additional 12.5% voluntarily consumed Bravecto within 5 minutes when offered with food, and 6.8% refused the dose or required forced administration.

Animal Safety:
Margin of Safety Study: In a margin of safety study, Bravecto was administered orally to 8- to 9-week-old puppies at 1, 3, and 5X the maximum label dose of 56 mg/kg at three, 8-week intervals. The dogs in the control group (0X) were untreated.

There were no clinically-relevant, treatment-related effects on physical examinations, body weights, food consumption, clinical pathology (hematology, clinical chemistries, coagulation tests, and urinalysis), gross pathology, histopathology, or organ weights. Diarrhea, mucoid and bloody feces were the most common observations in this study, occurring at a similar incidence in the treated and control groups. Five of the twelve treated dogs that experienced one or more of these signs did so within 6 hours of the first dosing. One dog in the 3X treatment group was observed to be dull, inappetent, with evidence of bloody diarrhea, vomiting, and weight loss beginning five days after the first treatment. One dog in the 1X treatment group vomited food 4 hours following the first treatment.

Reproductive Safety Study: Bravecto was administered orally to intact, reproductively-sound male and female Beagles at a dose of up to 168 mg/kg (equivalent to 3X the maximum label dose) on three to four occasions at 8-week intervals. The dogs in the control group (0X) were untreated.

There were no clinically-relevant, treatment-related effects on the body weights, food consumption, reproductive performance, semen analysis, litter data, gross necropsy (adult dogs) or histopathology findings (adult dogs and puppies). One adult treated dog suffered a seizure during the course of the study (46 days after the second treatment). Abnormal salivation was observed on 17 occasions: in six treated dogs (11 occasions) after dosing and four control dogs (6 occasions).

The following abnormalities were noted in 7 pups from 2 of the 10 dams in only the treated group during gross necropsy examination: limb deformity (4 pups), enlarged heart (2 pups), enlarged spleen (3 pups), and cleft palate (2 pups). During veterinary examination at Week 7, two pups from the control group had inguinal testicles, and two and four pups from the treated group had inguinal and cryptorchid testicles, respectively. No undescended testicles were observed at the time of necropsy (days 50 to 71).

In a well-controlled field study Bravecto was used concurrently with other medications, such as vaccines, anthelmintics, antibiotics, and steroids. No adverse reactions were observed from the concurrent use of Bravecto with other medications.

Storage Information:
Do not store above 86°F (30°C).

How Supplied:
Bravecto is available in five strengths (112.5, 250, 500, 1000, and 1400 mg fluralaner per chew). Each chew is packaged individually into aluminum foil blister packs sealed with a peelable paper backed foil lid stock. Product may be packaged in 1, 2, or 4 chews per package.

NADA 141-426, Approved by FDA

Distributed by:
Intervet Inc (d/b/a Merck Animal Health)
Madison, NJ 07940

Made in Austria

Copyright © 2014 Intervet Inc, a subsidiary of Merck & Company Inc.
All rights reserved

154545 R1





Generation Z in the spotlight

In the latest Spotlight Series from dvm360, we take a deeper look into your new veterinary clients: Gen Z. In addition to finding out why millennials are no longer your main concern, explained on this page, discover what veterinary professionals should expect to face with Gen Z customers and how to market your practice to this up-and-coming generation. Read more at dvm360.com/GenZ.

Think you understand millennials? Brace yourself for Gen Z

They're the same (but they're different), and they're getting ready to invade your veterinary hospital. *By Brendan Howard*

Wait, where'd everybody go? I thought we were all obsessed with millennials, born 1981 to 1995-ish. But now the kids born in 1996 are turning 22, graduating college, flying into the workforce and, yes, buying pets that need your veterinary care.

So while the millennials (born mostly to boomer parents) will continue to spend, it's time to think a little bit about Gen Z (born mostly to Gen-Xers). Here's what defines them.

Gen Z never lived without the internet

They might have gotten their own computer, laptop, tablet or smartphone earlier or later in their life, relatively speaking, but this generation's world has always revolved around the internet: for entertainment, for shopping, for answering questions.

But here's a weird dichotomy: According to VisionCritical, 53% of Gen Z bought something via their mobile device in the past six months (vs. 37% of millennials), yet 53% also say they prefer in-person communication over IMs or emails. So when they say "in-

person communication," do they mean just sight and sound and not presence? Maybe, as 85% of them prefer YouTube as their favorite website over millennials' favorite, Facebook.

Time will tell how Gen Z pet owners prefer to get veterinary care, whether informative face-to-face appointments at home or in the clinic, or via televisit calls (with video) over their smartphones. Probably ... both.

Gen Z wants to see the cash

By next year, it's estimated that Gen Z will make up 20% of the total workforce. They prioritize salary in jobs (65% vs. 54% of millennials say it's important), they're entrepreneurial (72% of high school students say they want to start a business), 77% expect to work harder than previous generations, and only 38% say work-life balance is important (vs. 47% of millennials). Their money-focused attitude may come from being raised by Gen X parents during the Great Recession.

One firm asked Gen Z to state their top priorities in a job: Their top three answers were growth opportunities (they'll leave a position without

them), generous pay, and making a positive impact (that's in veterinarians' favor). Runners-up included job security, healthcare benefits (easier for corporate practices?), flexible hours and a manager to learn from (you do mentor, right?).

Gen Z distrusts big brands

A survey from Packaged Facts focused on pet food found that Gen Z is less likely to trust "the quality of pet foods produced by larger companies ... [a] finding [that] may simply reflect Gen Z's overall lack of trust in large corporations and government institutions." Could that skepticism work in independently owned veterinary practices' favor? Time will tell.

While predicting the future is fraught with problems, big veterinary companies, large corporate hospital chains and small mom-and-pop veterinary practices are all trying their best to appeal to the pet owners of today and preparing for those of tomorrow.

The surprise is always how fast tomorrow gets here. Start thinking about it now to save yourself some grief.

Does Gen Z want delivery of veterinary care to change?

The answer is, probably. Asked their preferences for information about pet care and veterinary visits, Gen Z and millennials answered very differently from older pet owners.

- > 72% are interested in veterinary visits to their home for routine dog health services (vs. 42% of those ages 55 to 74).
- > 77% are interested in veterinary visits to their home for routine cat health services (vs. 42% of those 55 to 74).
- > 57% are interested in veterinary visits to their workplace for routine dog health services (vs. 22% of those 40 to 74).
- > 54% are interested in veterinary visits to their workplace for routine cat health services (vs. 21% of those 40 to 74).
- > 18% used a mobile clinic in last 12 months for veterinary services (vs. 6% of those 40 to 74).

Source: Packaged Facts, "Gen Z and Millennials as Pet Mark Consumers: Dogs, Cats and Other Pets"

Human stress can transfer to dogs

Sit. Stay. Stress. Good boy! If you're suffering from chronic stress, your dog's feeling it too, a new study says. Here are the details. *By Hannah Wagle*



The human-animal bond might go deeper than we think, a new study claims.¹ As a veterinary professional, you probably have loads of anecdotal evidence to support this claim—now you have proof.

“This study reveals, for the first time, an interspecific synchronization in long-term stress levels,” the study authors state. In other words, dogs mirror their owners when they’re experiencing long bouts of stress.

What researchers did

As you probably already know, when a human or animal is stressed, cortisol is released into the bloodstream and absorbed by hair follicles. The researchers of this study surveyed 58 people who own border collies (n=25) or Shetland sheepdogs (n=33), examining hair cortisol concentration

(HCC) in both owners and dogs.

In the study, headed by a team from Linköping University in Sweden, dogs’ and owners’ hair cortisol concentrations were analyzed twice: once in summer and once in winter. At the same time, personality traits of the dogs and owners were analyzed using the Dog Personality Questionnaire and Big Five Inventory surveys. Additionally, the dogs’ activity levels were monitored continuously with a cloud-based activity collar for one week.

What they found

Significant correlations were found between dogs and humans regarding long-term stress. “Interestingly,” the study states, “the dogs’ activity levels did not affect HCC, nor did the amount of training sessions per week, showing that the HCC levels were not related

to general physical activity.” In other words, stress produced the results.

In addition, the dogs’ personalities had little effect on cortisol, but owners’ personalities were an important factor. “Since the personality of the owners was significantly related to the HCC of their dogs,” the study says, “we suggest that it is the dogs that mirror the stress levels of their owners rather than the owners responding to the stress in their dogs.”

Why it matters

So what does this mean for the human-animal bond? First of all, it depends on whether a dog is a pet or a competing animal. Researchers found that prize-winning dogs had stronger cortisol synchronization with their owners than pet dogs did. This may, the authors write, be due to the fact that competing owners and dogs spend more time

together engaging in the same tasks.

Another thing to note is the personality of the pet owner. According to the study, neuroticism, openness and conscientiousness influence long-term cortisol concentrations in dogs. Owners who scored high on neuroticism formed a strong attachment to their dogs and used their dogs for social support, while simultaneously functioning as a social supporter for their dog. (Similar results have been found with cats and their owners.)

At the end of the day, if you’re feeling stressed, your dog’s probably feeling it also. After a particularly rough day, be sure to give your pet a good head scratch—and maybe yourself too.

Reference

1. Sundman AS, Van Poucke E, Svensson Holm AC, et al. Long-term stress levels are synchronized in dogs and their owners. *Sci Rep* 2019;9(1):7391.

Lawmakers aim to fight zoonotic disease with new One Health law

U.S. Senators Tina Smith (D-Minnesota) and Todd Young (R-Indiana) have reintroduced a bipartisan bill aimed at improving public health preparedness by ensuring that federal agencies employ a One Health approach to prevent and respond to disease outbreak.

Initially introduced by Smith in March 2018 but not enacted, the Advancing Emergency Preparedness Through One Health Act is based on the concept that human, animal and

environmental health are linked.

The veterinary profession is well aware that zoonotic diseases can impose enormous health and economic costs. Consider these statistics:

- Between 1997 and 2009, the global costs from zoonotic disease outbreaks exceeded \$80 billion.
- About 2.5 billion cases of zoonotic infection are reported each year, resulting in 2.7 million human deaths.
- The 2014-2015 highly pathogenic avian influenza outbreak in the United

States led to the culling of nearly 50 million birds and more than \$3 billion in losses for poultry and egg farmers, animal feed producers, baked good producers and other related industries.

According to a release posted on Smith’s website, the bill would require the U.S. Department of Health and Human Services and the USDA to develop a One Health framework with other agencies to:

- Advance workforce development related to prevention of and response

to outbreaks in animals and humans.

- Improve coordination among federal agencies that study human and animal health and the environment.
- Foster a better understanding of the connections between human, animal and environmental health.

The bill has been endorsed by the AVMA, the National Association of County and City Health Officials, the Association of American Veterinary Medical Colleges and the Infectious Diseases Society of America.

House increases funding for debt relief

Bill boosts funding of Veterinary Medicine Loan Repayment Program to \$9 million.

The U.S. House of Representatives passed H.R. 3164 on June 25, a bill that includes more funding for the Veterinary Medicine Loan Repayment Program (VMLRP) as part of a larger agricultural appropriations minibill.

The VMLRP was created as a means of helping veterinarians offset student loan debt by working in rural areas with veterinary shortages. By committing to work at least three years in designated shortage areas, veterinarians can have up to \$25,000 of their student loans paid off each year by the USDA's National Institute of Food and Agriculture (NIFA).

The bill increases funding for the VMLRP by \$1 million to reach a total of \$9 million. A press release from the AVMA applauds its passage: "The Veterinary Medicine Loan Repayment Program has been a tremendous success in connecting food animal veterinarians in rural communities that so badly need their services and public health veterinarians that are essential to maintaining the health of animals and humans alike. This funding is an important step toward helping the program expand its reach," said AVMA President Dr. John de Jong.

The bill also maintains \$3 million for

the Veterinary Services Grant Program, which helps rural areas spend money on education, placement and retention of veterinarians and veteri-

nary technicians and technology.

Another piece of legislation, the Veterinary Medicine Loan Repayment Program Enhancement Act, has been

referred to the House Ways and Means Committee. This bill would eliminate the need for VMLRP recipients to pay taxes on the forgiven amounts.

Vmed Wireless Monitors with Remote Connect



Now Monitor your patients remotely on any WiFi enabled device

- Monitor on your mobile device and clinic computer at the same time
- Record and store vital signs automatically
- Store files on your computer or server
- Attach patient files to your practice management program

* Requires Windows software installation

VetGard+™ and VetChek™ wireless monitors



Monitor surgeries on your computer and mobile device with the **VetGard+** multiparameter monitor.

Use the **VetChek** for routine ECGs, resurgical screens or postsurgical monitoring on your computer and mobile device.

Both products include free ECG electronic interpretation software.

Vmed blood pressure solutions

The **BP-AccuGard** automatic BP monitor with SunTech animal validated software minimizes motion artifact. Optional wireless link to your computer for display and automatic file storage.

For those really difficult patients the **VetDop2** with low noise and high sensitivity is the Doppler of choice for veterinarians.



vmed technology

www.vmedtechnology.com, johnb@vmedtech.com
800 926-9622



products



VIN Foundation Student loan resource

The 2019 Veterinary Graduate Student Loan Playbook from the VIN Foundation provides detailed information to help new veterinary graduates worry less about loan repayment. The online resource includes three parts: (1) a webinar on student loans, consolidation, repayment options and tools, (2) a guide for starting a loan repayment strategy as soon as possible, and (3) answers to questions on consolidation and income-driven repayment plans.

For fastest response visit
vinfoundation.org



Rayne Clinical Nutrition Nutrition counseling

Rayne Nutrition, which provides whole-food veterinary diets for pets, has launched a service to provide nutrition advice to veterinary hospitals throughout Canada, with U.S. expansion slated for later in 2019. The Clinical Advisory Team consists of independent veterinarians and board-certified specialists in multiple disciplines, who are available to provide unbiased guidance and support for individual case management.

For fastest response visit
raynenutrition.com

Veterinarian designs pet poison phone app

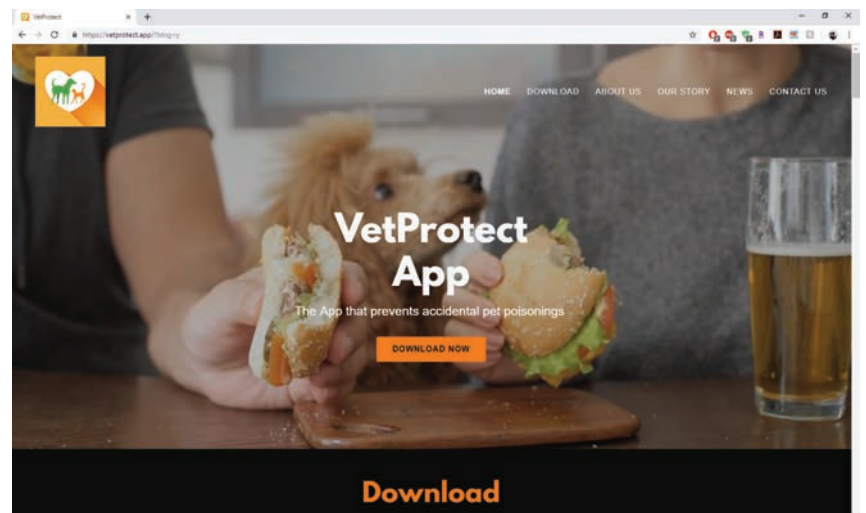
A DVM practice owner has launched a new tool to help pet parents prevent accidental drug and food toxicoses.

Mari Delaney, DVM, knows that your veterinary clients can get information online about drug toxicities and adverse reactions to food. But do they always know where to go and whom to trust? There's a real chance that the information your clients glean from Dr. Google could be misinformation, resulting in harm to their pet.

So Dr. Delaney built a \$2.99 smartphone app to do the work for them: Bad Human, No! (soon-to-be-renamed VetProtect). Like you, she's intimately familiar with the damage accidental and inadvertent poisoning can do to patients.

"Last December, a client called to say he'd given his Rottweiler mix 1,000 mg of Aleve two days in a row. I asked him to bring her right in, and we initiated aggressive IV therapy," she says. "We were able to counteract the kidney failure, but the massive GI ulceration took over a month to resolve. Angie made it through, but the anguish the owner felt at having accidentally poisoned his girl was awful and, of course, preventable."

Dr. Delaney, who owns Compas-



sionate Companion Care in Pine City, New York, says the app's biggest advantages over client research are her 25 years of clinical expertise and that she's "exhaustively researched each drug and food in the database."

"Dr. Google's sources are dubious at best," she says. "The app also estimates an average vet bill for the toxicity in question. I think that data really help people stop and think before they do something that could hurt their pet and also be quite expensive."

The app launched in iOS and Android stores in March, with "most

OTC medications as well as the top 150 most prescribed medications in the United States" for cats and dogs, according to Dr. Delaney. She says the app is updated daily with new drugs and food items.

A Spanish version also exists.

"People love having the data when they're eating dinner and wondering if they can give their cat or dog some of that onion pizza," she says. "The fact that the information is right there is prompting people to look things up before they give in to those big brown eyes."

FDA OKs new vial size for Nocita

20-ml vial expected to be available later this year, Aratana says.

Aratana Therapeutics recently announced FDA approval of an additional vial size (10 ml) for Nocita (bupivacaine liposome injectable suspension).

The analgesic is provided as a single-dose infiltration into the surgical site to provide local pain relief after cranial cruciate ligament surgery in dogs and as a peripheral nerve block to provide regional analgesia after onychectomy in cats. Nocita is currently available in a 20-ml vial.

"Nocita has drastically changed veterinary multimodal pain management protocols because it safely and

effectively controls pain in patients for up to 72 hours," says Ernst Heinen, DVM, PhD, Aratana's chief development officer, in a company release. "Ultimately, we believe a smaller vial size may allow for expanded use."

Aratana anticipates availability of the 10-ml vial this fall.



DRwizardPRO
14" x 17" Wireless Cesium Iodide
Flat Panel X-Ray System

NEW!

- Wireless 14" x 17"
- Csl - Pixel Pitch - 139 µm
- 5 year warranty
- Integrated Dental Software

**DIAGNOSTIC
IMAGING SYSTEMS**

VETXRAY.COM & XRAYCATALOG.COM

QUALITY | INTEGRITY | VALUE DIS privately owned since 1983

Ask About Our **PRICE MATCH GUARANTEE**

**Double Head Probe
Mini Wireless Ultrasound**

MADE IN USA

Under \$20k!

DRwizard20
Wireless 12" x 12"
GOS Pixel Pitch 140 µm
3 year warranty
Internal Image Memory Storage

DRwizardEZ
Wireless 10" x 12"
Csl - Pixel Pitch - 76 µm
5 year warranty
Lightweight and Durable

DRwizard20
Wireless 14" x 17"
Csl - Pixel Pitch - 140 µm
5 year warranty
Superior Software

Scott@VetXray.com 1.800.346.9729 www.VetXray.com



Modern Veterinary Therapeutics Generic medetomidine

Medetomidine Hydrochloride is an FDA-approved generic medetomidine hydrochloride injection (1 mg/ml) for sedation and analgesia in dogs. This product follows the launch earlier this year of Revertidine, an FDA-approved generic atipamezole hydrochloride injection (5 mg/ml), Modern Veterinary Therapeutics' reversal agent for medetomidine and dexmedetomidine. *For fastest response visit modernveterinarytherapeutics.com*



Diamond Pet Foods Urinary diet for cats

Diamond Care Urinary Support Formula for Adult Cats is a therapeutic nutrition formula for cats suffering from feline lower urinary tract disease (FLUTD). The diet supports a healthy urinary tract by reducing urine pH. It also contains guaranteed levels of omega-3 and omega-6 fatty acids in an optimal ratio to maintain healthy skin and coat. The formula offers complete and balanced nutrition for adult cats and is designed for daily long-term use. *For fastest response visit diamondpet.com*



TailTrax Littermate tracking app

TailTrax, a free mobile app available for Apple and Android devices, lets veterinarians share information with their colleagues on specific litters of dogs. Features include being able to share real-time health alerts regarding a litter, search health alerts, access a research database and securely message peers caring for other dogs from the same litter. Pet parents can help by downloading and registering their pet. TailTrax Litter Link Technology also lets pets rescuers and breeders help pet owners search for littermates. *For fastest response visit tailtrax.com*



Barco Uniforms Scrubs that resist animal hair

Barco Uniforms' Barco One and Barco One Wellness scrub sets have antistatic properties that allow animal hair to release quickly from the surface of the fabric. In addition, both lines feature moisture-wicking fabric with four-way stretch designed to release soil and a temperature-regulating component that allow the wearer to stay fresh-smelling, ultra-cool and composed throughout the busiest days with the rowdiest of animal patient visitors. *For fastest response visit barcouniforms.com*



Advocate by Pharma Supply U-40 insulin syringes

PetTest U-40 syringes feature 31-ga, extra-fine needles. The syringes, available in both 1/3-cc and 1/2-cc capacities, are a perfect match for U-40 insulin (commonly used for canine and feline diabetes) and do not require any conversions or calculations as a result. The new syringes also feature 1/2-cc unit markings, ensuring accurate doses, no matter how small. These 31-ga, 5/16-inch-length syringes for U-40 insulin offer veterinarians an option to the thicker and less-comfortable 29-ga needle commonly used for insulin injections. *For fastest response visit advocatemeters.com*



Animal Nutritional Products CBD chew for dogs

PhytoMAXX Bites are chews containing a proprietary cannabidiol (CBD) formulation and are available exclusively through veterinarians. The ingredient capsiicum, which activates the TRPV1 receptor that can influence pain perception, combined with CBD is designed to help with pain, stress and seizures. PhytoMAXX is a hemp-extract product featuring the cannabinoids found in the cannabis plant minus tetrahydrocannabinol (THC), which means pets receive all the benefits without the high. This zero-THC phytocannabinoid product is formulated to support the endocannabinoid system. *For fastest response call (800) 224-6805*



Digicare Animal Health Monitor with iPad app

LifeWindow One is a portable physiological monitor for veterinary use. Exclusive VetECG algorithms are optimized for veterinary QRS detection and classification, allowing for quick and accurate measurements on companion animals, exotic pets or horses. LifeWindow offers up to five measurement parameters—ECG, SpO2, CO2, noninvasive blood pressure and temperature—which can be remotely controlled and viewed by a Wi-Fi-connected iPad companion app that allows for recording, capturing and printing of up to two hours of ECG waveforms. All patient records—both ECG and tabular data reports—can be emailed, wirelessly printed or exported into practice management software. *For fastest response visit digi-vet.com*



ELIAS Animal Health Canine cancer treatment

ELIAS Animal Health and BodeVet are working together to significantly expand the availability of ELIAS's ECI treatment for canine cancer via the mobile apheresis capabilities of BodeVet. Apheresis is a processing procedure that separates blood into different components and, in this case, yields the T cells critical to the ELIAS treatment protocol. Currently, there are 12 locations offering apheresis for pets. BodeVet offers a mobile service that will enable veterinary oncologists in most major cities in the United States to incorporate ECI into their specialty hospital portfolio of oncology services, expanding beyond chemotherapy and radiation. *For fastest response visit eliasanimalhealth.com*



30 YEARS

OF VETERINARY EXCELLENCE

Atlantic Coast Veterinary Conference® is celebrating 30 years this year in Atlantic City!

With over **250 sessions** and **21 hours of RACE-approved CE**, there will be something for everyone in the practice.



REGISTER TODAY AT ACVC.ORG

MEDICAL EQUIPMENT



Technidyne
Serving the Veterinary Industry Since 1982
(800) 654-8073
WWW.TECHNIVET.COM

Proudly made in the U.S.A.

\$2,980
MOBILE WET DENTAL / TREATMENT LIFT TABLE

\$2,505
MOBILE TREATMENT TABLE W/ SCALE
BATTERY OPERATED ELECTRIC LIFT
LIGHTWEIGHT

\$1,655
PNEUMATIC LIFT GURNEY
LIGHTWEIGHT ONLY 44 LBS!

TOMS RIVER, NJ 08755

SURGICAL SUPPLIES



Put Your Cost Concerns at Ease with eSutures.com

eSutures.com is a discount distributor of Ethicon and Covidien sutures and endomechanicals, as well as Synthes screws, implants and instruments.

eSutures Can Offer Your Business:

- ✓ Name Brands, In Stock
- ✓ All Items Available by the Box or Individual Packet
- ✓ Low Prices
- ✓ No Contracts or Minimum Orders
- ✓ Same Day Shipping

Find out more at: eSutures.com or call 888-416-2409

Use promo code: **DVM2019** for 10% off your order of \$50 or more.*

eSutures.com
The Surgical Superstore

*Promo code valid for (1) one use only. Offer expires 12/31/19.

MOBILE VETERINARY



“Take care of the little things and the big things take care of themselves.”

RED DOOR veterinary clinic
REDDOORVET.COM
931-561-9911

La Boit
Specialty Vehicles Inc.

800-776-9984 www.laboit.com

SUPPLEMENTS



Pala-Tech LABORATORIES

FELINE
CANINE

Tricky Treats™
(All Natural Treat to Hide Medications)

- Packaged for the veterinary clinic.
- NOW labeled for use in dogs and cats!
- Safe for use in all pets – hydrolyzed proteins and no corn, wheat or soy.
- Simplify inventory - only two flavors...
Roasted Chicken and Grilled Duck.

Request a FREE sample of each flavor at
www.palatech.com/trickytreats.

Search for the company name you see in each of the ads in this section for **FREE INFORMATION!**



PRACTICE VALUATION SERVICES

What is your practice worth?

Contact us for a practice valuation today

William J. Roll, CPA
Herring, Roll & Solomon, P.C.
570-286-5895 • wjroll@ptd.net



Join the pack!

Get instant updates on critical developments in veterinary medicine, business and news by following dvm360.



facebook.com/dvm360



twitter.com/dvm360

OXYGEN EQUIPMENT



GENER-OX ONSITE OXYGEN

PSA Oxygen Generators are a proven alternative to any other source of oxygen supply and are the most cost effective and safest oxygen source available.

Call or Email for More Information:

Joe Hennessy
info@inlande.com
(509) 885-3992



IDEAL FOR THE VETERINARY MARKET!

Gener-Ox™ on-site oxygen generation products range from standard generators to custom-built, large-scale Pressure Swing Adsorption ("PSA") systems that can produce from 12 standard cubic feet per hour of oxygen up to 120 tons of oxygen per day. The PSA Standard Generator product line produces from 8 to 5,500 cubic feet of oxygen per hour at up to 95% oxygen concentration. Self-contained models only require a standard 120 or 220 VAC outlet and offer "plug-and-play" operation.

PSA Standard Generator product line produces from 8 to 5,500 cubic feet of oxygen per hour at up to 95% oxygen concentration. Self-contained models only require a standard 120 or 220 VAC outlet and offer "plug-and-play" operation.

- Eliminates Dependence on Delivered Liquid or Cylinder Oxygen for Veterinary Care
- Proven alternative to other sources of oxygen supply and is the most cost effective and safest oxygen source available for use in Veterinary market
- System is fully automatic
- Easy to operate and maintain

Gener-Ox™ provides diagnostic and repair services for all your on-site oxygen needs. We also have technicians that will travel to your facility for on-site service of larger oxygen concentration systems. We have in-house specialists to perform repairs on AirSep Topaz, Topaz Plus, and Topaz Ultra, as well as Onyx, Onyx Plus, and Onyx Ultra oxygen concentrators. Simply box and send your unit to our select locations and a highly qualified service Gener-Ox™ technician will rapidly diagnose, clean, and repair your oxygen system to ensure your unit is ready for many years of reliable operation. Gener-Ox™ also can offer technicians that will travel to your facility for on-site service of larger oxygen concentration systems.

VISIT OUR WEBSITE FOR MORE INFORMATION
www.gener-ox.com

© 2019 Gener-Ox Inc.

MEDICAL EQUIPMENT



VETERINARY DENTAL, ANESTHESIA & OXYGEN EQUIPMENT

Download all
product details,
brochures and
more from
our support
website at:

engler411.com

Wall Mount
included
Optional
Stand
Available



Mini Scale-Aire High Speed Dental Air Unit
Easily connects to a regulated
nitrogen tank or external compressor

All in one miniature air
unit Introductory Price
\$2350

Wall Mount included
Optional Stand
Available

Our Most Affordable High
Speed at only
\$1295



Drill-Aire High Speed Dental Air Unit
For Clinics in need of highspeed capability.
Includes a highspeed handpiece
and Air-Water Syringe

Wall Mount included
Optional Stand
Available

Very Affordable High
Speed at only
\$1695



Drill-Aire Plus High Speed Dental Air Unit
Includes a highspeed handpiece, low speed
Handpiece and Air-Water Syringe

SCALE-AIRE HIGH SPEED

Ultrasonic scaler / Highspeed /
Low speed / Air-Water syringe



Our Most Popular High
Speed for only
\$4275

Never pay for Oxygen again with one 5L Oxygen concentrator you can run 1 traditional anethesia machine. Visit www.engler411.com to view all our brochures.



A.D.S. 2000
Electronic positive pressure
Anesthesia Machine/Ventilator

Visit our support website for all our brochures,
manuals and how to videos www.engler411.com



Sentinel VRM
Veterinary Respiratory Monitor



Electro-Son Electrosurge Unit
Mono & Bipolar LCD Touch Screen



NEW
\$855
5 LPM
EverFlo 5 LPM
Oxygen Concentrator

All Engler Dental Table top units comes with a SIX YEAR WARRANTY & LIFE TIME LOANER SERVICE - Visit our support website for brochures, Manuals, Videos Etc... for complete details



Son-Mate II Ultrasonic Scaler/Polisher

At the touch of the switch, alternate from scaling to
polishing plus a variety of other operations. You can perform
curettage, deep scaling of heavy calculus and stain removal.
Optional drilling & cutting accessories available



Sonus II Ultrasonic Dental Scaler

The Sonus II ultrasonic scaler is a reliable, powerful and
rugged unit that has a proven track record. As with all our table
top dental units it is supplied with our super 6 year warranty,
lifetime loaner service and proudly made in the USA.



TriMate - Scaler, Polisher & Electrosurgery

A three in one unit that offers a high quality, high
powered, fully automated scaler, polisher and general
purpose electrosurgery unit. (**An Engler Exclusive!!!**)



Dynax
Stretcher & Gurney

The Dynax Gurney is a tubular frame
construction with unique connectors
creating a means of supporting the
Dynax stretcher and the larger canine
patient, up to 200 pounds.



The "Original" Cat Grabber

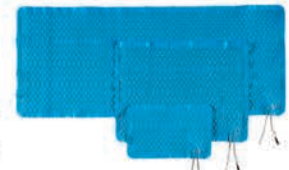
The CAT-GRABBER is the safest means of
controlling the fractious cat, humanely.

Engler Digital Water Circulator Warming Pump



NEW
\$595

The **Engler Circulator Pump** effectively
warms the patient to assist in preventing
Hypothermia during surgery, recovery and
intensive care using heavy duty Maxitherm
pads. (sold separately) MAXITHERM Pads
are adaptable to the Gaymar T-Pump.



MaxiTherm Circulator Pads

Why pay more? Adapts to all circulator
warmers. Our pads are less expensive, better
quality and will last longer than any other
circulator pad. We also offer our Fleece Bags
to protect our pads from punctures and
provides patient comfort. Engler's innovative
products provide more for less \$\$\$ See
www.dynaxusa.com for more details.

Engler Engineering Corp / Dynax

1099 East 47th Street • Hialeah, Florida 33013 USA
Toll Free 800-445-8581 • Tel: 305-688-8581 / Fax: 305-685-7671
Email: info@englerusa.com • dynax@englerusa.com
Web: www.englerusa.com • www.dynaxusa.com
Download Brochures, Manuals, Videos, How to Pages and much more at:
Support website: www.engler411.com



Proudly made
in the U.S.A.


Search for the company name you see in each of the ads in this section for FREE INFORMATION!



Anesthesia Equipment

BLUEPRINT FOR BREATHING
Anesthesia made simple... A.D.S. 2000

Proudly made in the U.S.A.



Revolutionary Veterinary Breakthrough

- Anesthesia Machine (Positive Pressure)
- Electronically microprocessor controlled
- Delivery & Ventilation for small animal use
- Automatically sets breathing parameters
- Very affordable and easy to use
- Just connect to vaporizer & Oxygen

6 Hour Battery backup providing portability and protection

engler engineering corporation
In Business Since 1964

1099 East 47th Street - Hialeah, Florida 33013 USA
800-445-8581 - FAX 305-685-7671
www.englerusa.com

Continuing Education

check it out at www.capsulereport.com

Capsule Guarantee
If not satisfied after 2-months, receive a full refund

Dental

SON-MATE II DENTAL SCALER POLISHER COMBO

THE ONLY UNIT YOU WILL NEED FOR ALL YOUR DENTAL NEEDS



6 YEAR WARRANTY LIFETIME LOANER SERVICE

Proudly made in the U.S.A.

\$1825

engler engineering corporation
In Business Since 1964

1099 East 47th Street - Hialeah, Florida 33013 USA
800-445-8581 - FAX 305-685-7671
www.englerusa.com

PLACE YOUR AD HERE
Get your message to veterinarians TODAY



Employment

Need Techs? Support Staff?



WhereTechs Connect.com

Connecting vet techs with jobs since 2003

Fast. Easy. Inexpensive.

WhereTechsConnect.com is your answer!

Tags

TAGS

- Available in Colored Aluminum, Brass or Stainless Steel
- Multiple Heart Shapes

\$10 OFF
your order of 1,000 or more Rabies Tags.
Use coupon code: **DVM2019**

Call us at: **859-261-6000**



NB National Band & Tag Company
INTERNATIONAL IDENTIFICATION INC.
Family Operated Since 1902

tags@nationalband.com
www.nationalband.com

Medical Services

ULTRASONIC REPAIRS

Send your Ultrasonic Scaler for tuning and repair to **ENGLER ENGINEERING CORPORATION**, the manufacturer of TIPS, STACKS and MARATHON 25K insert, SONUS V, ULTRASON 990, SON-MATE, POLI-X and ADS 1000, SONUS II, SON-MATE II and ADS 2000 (Anesthesia Delivery System/Ventilator). Sole manuf. of spare parts for the ENGLER line of scalers and all the former LITTON units the Sonus II, LT:200, Ultrason 880, Veterinarian II & others. Six month warranty on repairs. In business since 1964.

NEW Now Repairing: **SHORELINE, Prosonic, OraSonic & AlphaSonic Piezo Electric Ultrasonic Dental Scaler Units**
Check out our NEW SUPPORT WEBSITE www.engler411.com

1099 East 47th Street - Hialeah, Florida 33013 USA
800-445-8581 - FAX 305-685-7671
www.englerusa.com

engler engineering corporation
In Business Since 1964

Mobile Veterinary

Mobile Veterinary Clinics

Lower stress on your patients by bringing all your services to your clients.
With less overhead and more freedom!

Your Mobile Workplace



MAGNUM MOBILE Specialty Vehicles

602.478.4206
MAGNUMMOBILESV.COM

West Coast Manufacturer
Phoenix, AZ

Compare our products before rolling forward and you'll find Magnum is By Far The Leader!



Researching a purchase?
Visit dvm360.com for hundreds more product listings.



Join the pack!

Get instant updates on critical developments in veterinary medicine, business and news by following dvm360.



facebook.com/dvm360

twitter.com/dvm360

For a full listing of events in 2019, visit dvm360.com/calendar



August 21-23
HospitalDesign360 Conference
(800) 255-6864, ext. 6
fetchdvm360.com/hd



August 23-26
Fetch dvm360
in Kansas City
(800) 255-6864, ext. 6
fetchdvm360.com/kc



December 12-15
Fetch dvm360
in San Diego
(800) 255-6864, ext. 6
fetchdvm360.com/sd



Here are the CE opportunities coming in the next few months

August 11-14

Sun N Fun
Veterinary
Conference
Myrtle Beach, FL
(252) 422-0943
vetmeetings.com

apps.vetmed.wisc.edu/cereg/

September 6-7

Sports Horse Medicine
& Orthopedics
Snohomish, WA
(844) 870-6097

September 12-15

Colorado VMA
Convention 2019
Denver, CO
(303) 318-0447
colovma.org

September 28

Canine Geriatric
Medicine Course
Raleigh, NC
(919) 513-6259
cvm.ncsu.edu/event

October 12-13

Colorado VMA CE
Southwest
Durango, CO
(303) 318-0447
colovma.org

August 15-18

13th Keystone
Veterinary
Conference
Hershey, PA
(888) 550-7862
pavma.org

September 6-8
Oral Surgery, Oral Pa-
thology, and Radiology
Baltimore, MD
(410) 828-5005
Animaldentaltraining.com

September 21-22

San Diego County
VMA Fall Conference
San Diego, CA
(619) 640-9583
sdcvma.org

September 28-October 4

American Association
of Zoo Veterinarians
51st Annual Conference
St. Louis, MO
aazv.org

October 14-17

The Atlantic Coast
Veterinary Conference
Atlantic City, NJ
(609) 325-4915
acvc.org

August 21-23

HospitalDesign360
Conference
Kansas City, MO
(800) 255-6864,
ext. 6
fetchdvm360.com/hd

September 7-9
Surgical Oncology for
the Small Animal GP
Las Vegas, NV
(702) 443-9247
wvc.org

September 22

It's What's Up Front
That Counts!
Portland, OR
(303) 674-8169
vmc-inc.com

October 4-6
Alaska State
VMA Annual
Symposium
Anchorage, AK
akvma.org

October 17-19

2019 ACVS
Surgery Summit
Las Vegas, NV
(301) 916-0200
acvssurgerysummit.org

August 21-24

Uncharted Veterinary
Conference: Staff
Drama
Kansas City, MO
unchartedvet.com

September 7-10

American Holistic
Veterinary Medical
Association Annual
Conference
Nashville, TN
(410) 828-5005
ahvma.org

September 25-26

119th Penn Annual
Conference
Philadelphia, PA
(215) 746-2421
vet.upenn.edu/education

October 4-6
2019 New York State
Veterinary Conference
Ithaca, NY
cvent.me/xaxKg

October 17-19
Updates in Endocrinol-
ogy and Cardiology
Asheville, NC
(888) 488-3882
vetvacationce.com

August 23-26

Fetch dvm360
in Kansas City
Kansas City, MO
(800) 255-6864, ext. 6
fetchdvm360.com

September 8-10
Pet Loss & Grief
Companioning
Certification Course
Boston, MA
(317) 966-0096
twoheartspetlosscenter.com

September 26-29

Southwest Veterinary
Symposium 2019
San Antonio, TX
(972) 664-9800
swvs.org

October 5-6
Breed-Specific
Medicine: Using
Genetics to Elevate
Quality of Care
San Antonio, TX
lonestarvetacademy.com

October 31-November 3
2019 AAEP 5th World
Feline Veterinary
Conference
San Francisco, CA
(908) 359-9351
catvets.com/education

August 23

Hot Topics in
Veterinary Anesthesia
Baraboo, WI
(608) 265-5206

dvm360™ (Print ISSN: 2326-0688, Digital ISSN: 2326-070X) is published monthly by MultiMedia Healthcare LLC, 325 W 1st St STE 300 Duluth MN 55802. Subscription rates: \$40 for one year in the United States & Possessions, Canada and Mexico; all other countries \$87.50. Single copies (prepaid only): \$18 in the United States; \$20 in Canada and Mexico; \$24 all other countries. Back issues, if available: U.S. \$23; Canada/Mexico \$28; all other countries \$46. International pricing includes air-expedited service. Include \$6.50 per order plus \$2 per additional copy for U.S. postage and handling. Periodicals postage paid at Duluth MN 55806 and additional mailing offices. POSTMASTER: Please send address changes to dvm360, P.O. Box 6309, Duluth, MN 55806-6309. Canadian GST number: R-124213133RT001, Publications Mail Agreement Number 40612608. Return undeliverable Canadian addresses to: IMEX Global Solutions, P.O. Box 25542, London, ON N6C 6B2, Canada. Printed in the U.S.A.

© 2019 MultiMedia Healthcare LLC All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including by photocopy, recording, or information storage and retrieval without permission in writing from the publisher. Authorization to photocopy items for internal/educational or personal use, or the internal/educational or personal use of specific clients is granted by MultiMedia Healthcare LLC for libraries and other users registered with the

Copyright Clearance Center, 222 Rosewood Dr. Danvers, MA 01923, 978-750-8400 fax 978-646-8700 or visit <http://www.copyright.com> online. For uses beyond those listed above, please direct your written request to Permission Dept. fax 732-647-1104 or email: jfrommer@mmhgroup.com

MultiMedia Healthcare LLC provides certain customer contact data (such as customers' names, addresses, phone numbers, and e-mail addresses) to third parties who wish to promote relevant products, services, and other opportunities which may be of interest to you. If you do not want MultiMedia Healthcare LLC to make your contact information available to third parties for marketing purposes, simply call toll-free (866) 529-2922 between the hours of 7:30 a.m. and 5 p.m. CST and a customer service representative will assist you in removing your name from MultiMedia Healthcare LLC's lists. Outside the United States, please call (218) 740-6477. dvm360 does not verify any claims or other information appearing in any of the advertisements contained in the publication, and cannot take responsibility for any losses or other damages incurred by readers in reliance on such content. dvm cannot be held responsible for the safekeeping or return of unsolicited articles, manuscripts, photographs, illustrations, or other materials. Address correspondence to dvm360, 11140 Thompson Ave., Lenexa, KS 66219; (913) 871-3800. To subscribe, call 888-527-7008. Outside the U.S. call 218-740-6477.



'Say cheese, Mr. Vice President!'

It's hard to take a vacation as a practice owner, but this trip (and several noteworthy encounters) made the effort worth it.

Years ago, my good friend Dr. Mark Justice, a veterinarian in Hobbs, New Mexico, advised me that we needed to start a group for veterinarians who like to fish. I was a bit skeptical about such a venture, but Mark wasn't. He worked at it awhile and came up with Vetadventure.

I just got back to West Texas from one of these fishing trips. We caught halibut, salmon, sea bass, cod and rockfish to the tune of about 50 lbs of fillets apiece. And we weren't the only group at the lodge near Angoon, Alaska. There were people from all over the world there as well, and we all fell in with a particular couple from Florida. Dot and Rudy were in their mid-70s and some of the most wonderful people I've ever met.

On Friday we took an excursion to a hot springs and lake located a two-hour boat trip from the lodge. When we arrived, the captain told us we had a 45-minute hike up to the hot springs and lake. He said it was uphill all the way but downhill all the way back. I wasn't sure about these old folks in the group making it that far, but they insisted, so off we went.

Let me paint a mental picture of what this place looked like. The cove was next to mountains jutting up about 3,000 feet from the ocean. The mountains were covered with Sitka spruce trees and 200-foot waterfalls. There were humpback whales feeding about 15 feet from our boat as we docked and about 50 orcas in the strait leading into the bay. There were a few log cabins on the shore and a wooden path that led from the dock into the rainforest toward the hot springs. It

was absolutely breathtaking.

We absorbed the view—salmon berries, blueberries, ferns, dense foliage, bald eagles, waterfalls, hummingbirds, bear footprints and Native American carvings. This went on for 45 minutes until we came upon the hot springs and then the lake. Each step showed us new things we'd never seen before.

Along the way, some of the "younger folks" either led or pulled up the rear. I was in the very back. My job was to take the occasional arm of Dot or Rudy and help with the steep spots. It was a blast.

On the way down, I was about 100 feet behind the group and was surprised to see a man in a business suit and tie coming up the trail toward us. He was followed by a woman wearing a pantsuit and sunglasses. As they passed, I said hello, and they said nothing. They looked me over thoroughly and continued up the steep trail.

In my mind, former U.S. Vice President Walter Mondale would have to be about 100 years old—if he were even still alive.

About a minute later, I heard Dot say, "Why, looky there, Rudy! It's Walter Mondale!" In my mind, former U.S. Vice President Walter Mondale would have to be about 100 years old—if he

were even still alive. But this would explain the two Secret-Service-looking hikers I'd just seen.

I finally caught up to the group just in time to hear Dot telling someone she wanted to get a picture with Walter. I then heard Rudy telling her that it most certainly wasn't Walter Mondale. She kept insisting it was. I finally caught sight of the person in question, and indeed it was not Walter Mondale.

The celebrity in question kept saying, "No ... no ... no pictures." But when you're facing a 75-year-old lady from Florida determined to get a picture with Walter Mondale in the middle of nowhere, well, you eventually say OK.

So, we got a picture with former Vice President Al Gore.

I took the picture. And it was a little blurry because I couldn't stop laughing.

I'm 55 years old. My youngest daughter, Kimmi, who's pregnant, was on the trip with us. As we went over the events of the day on the way home, I realized it seemed like I was just holding Kimmi in my arms when she was a newborn. Twenty-five years have passed so fast, and I probably don't even have 25 years left on earth. If I'm going to get honors like meeting Dot and Rudy and finding Al Gore in the middle of nowhere, I have to do it now.

Vetadventure, once just an idea, has given my family wonderful memories and reminded me that there's more to being a vet than working all the time.

Bo Brock, DVM, owns Brock Veterinary Clinic in Lamesa, Texas. His latest book is Crowded in the Middle of Nowhere: Tales of Humor and Healing From Rural America.

Relaxation
without
Sedation

Helps support balanced behavior
& relaxation in dogs & cats
in stressful situations.

**Available from all authorized
veterinary product distributors.**



Solliquin[®]
BEHAVIORAL HEALTH SUPPLEMENT



What are their **kidneys** telling you?

Listen closer with **IDEXX SDMA[®]**

Detects
diseases of the
kidney sooner¹⁻³



Reflects
other disease
processes
affecting the
kidneys⁶

Learn more at **idexx.com/dvmsdma**

References available at idexx.com/SDMA.

© 2019 IDEXX Laboratories, Inc. All rights reserved. • 2162925-00
All ®/TM marks are owned by IDEXX Laboratories, Inc. or its affiliates in the United States and/or other countries.
The IDEXX Privacy Policy is available at idexx.com.

IDEXX