

VET CANDY

OCTOBER 2023

THE SILENT STRUGGLE
OF COMPASSION

FATIGUE

**STUDY UNCOVERS
UK'S MOST COMMON
DOG BREEDS AND
HEALTH RISKS**

**UNVEILING
THE SECRETS
TO A THRIVING
FARMERS
MARKET
ADVENTURE**

**SHELTER DOGS
VULNERABLE TO
TICK AND
MOSQUITO-BORNE
DISEASES:
UNVEILING
HIDDEN
HEALTH RISK**

**WHY YOU NEED
TO JOIN THE
ASSOCIATION
OF SHELTER VETS!**

**BEYOND THE CLINIC:
HOW YOU CAN BE
A HERO FOR ANIMAL
SHELTERS
EVEN WITHOUT
FULL-TIME
COMMITMENT**

**THE
ULTIMATE
GUIDE TO
RELIEVING ACHES
AND PAINS FROM
STANDING ALL DAY**

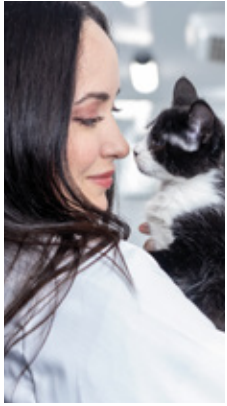
DR **RACHAEL KREISLER**

IS A VOICE FOR THE VOICELESS

+ much more

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Welcome to the world of

VET CANDY

Dr. Jill Lopez

Dear Vet Candy Readers,

October has arrived in the blink of an eye, and you know what that means – it's Adopt a Shelter Dog month! And when we talk about shelters, we've got some incredible news to spill. Vet Candy is teaming up with the Association of Shelter Veterinarians (ASV) to revolutionize shelter medicine. Our joint mission is to shine a spotlight on the invaluable work of shelter veterinarians and their enduring impact on the lives of animals, including those still waiting for their forever homes. That's why we're launching this partnership with an in-depth exploration of shelter medicine in this very issue!

But wait, there's more! Get ready for an inspirational journey alongside Dr. Rachael Kreisler. In the ever-evolving realm of veterinary medicine, her name shines brighter than ever. Dr. Rachael's unwavering commitment to shelter medicine, education, research, and practical application has truly marked her as a trailblazer and a champion for the well-being of animals. Oh, and here's a little secret – she's a featured guest on our brand-new CE podcast series: "Must-know secrets about opioids and scheduled drugs." Tune in at myvetcandy.com to discover how you can safeguard yourself and your license!

In this edition, we've reserved a special spot to take a deep dive into the world of shelter medicine. From the latest research to heartwarming success stories, we're shedding light on the remarkable work of shelter veterinarians and their contributions to the well-being of our beloved furry companions. As we uncover the challenges they face and the joys they experience, we hope to spark a fire in others to join their ranks or find ways to support these selfless heroes.

And because we're devoted to keeping you at the forefront of veterinary knowledge, we're unveiling an eye-opening study on the prevalence of



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Deadly heartworm infections neglected in cats.



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heartworm disease in cats. It serves as a reminder that there's still much to explore in the vast world of veterinary medicine. It's a call to action, urging us to provide vigilant care for our feline companions.

But we're not just about professional growth – we care about your well-being too. That's why we've included lifestyle tips to help you strike that perfect work-life balance.

A massive shout-out to all our incredible contributors and the dedicated Vet Candy team for pouring their hearts into crafting this exceptional issue. Every article has been carefully selected to ensure you receive the latest and most valuable insights in the field.

So, dive headfirst into the content, share your thoughts, and become an integral part of our Vet Candy community. Your feedback and contributions fuel our journey forward, ensuring we meet your needs as esteemed veterinary professionals. We extend our heartfelt thanks for your unwavering support, and we're confident you'll find this issue just as thrilling to explore as it was for us to create.

Sincerely,

Dr. Jill Lopez
Editor-in-chief,
Vet Candy



Dr. Rachael Kreisler

is a voice for the voiceless

Echoing the words of renowned primatologist Jane Goodall, who noted the personalities and feelings of animals, few understand this better than shelter medicine luminary, Dr. Rachael Kreisler.

In the ever-changing world of veterinary medicine, one name shines with compassion – Dr. Rachael Kreisler. Her contributions have not only advanced shelter medicine but have also touched the lives of countless animals and communities. Dr. Rachael's commitment to education, research, and practical application in shelter medicine has rightfully earned her a place as a pioneer and advocate for animal well-being.

A Guiding Light and Mentor

Dr. Rachael's journey mirrors her dedication and expertise. As an Associate Professor of Shelter Medicine and Epidemiology at Midwestern University, she plays a pivotal role in shaping aspiring veterinary professionals. Her influence extends beyond classrooms, encompassing a rich tapestry of accomplishments in research, publications, clinical practice, and organizational leadership.

Her achievements include recognition as a Diplomate in the American College of Veterinary Preventive Medicine and its specialized field of Epidemiology. These accolades underscore her profound grasp of disease dynamics in animal populations. Serving as the Immediate Past President of the Association for Veterinary Informatics, she embodies the power of technology and data in enhancing animal health outcomes and veterinary practice.





A Storyteller of Change and Healing

Dr. Rachael's narrative weaves through the fabric of shelter medicine with pioneering initiatives and publications. As the Founding Editor in Chief of the Association of Shelter Veterinarians' Journal of Shelter Medicine and Community Animal Health, she drives the dissemination of knowledge that informs clinical choices and reshapes the lives of shelter and at-risk animal communities. This journal serves as a platform for sharing research, case studies, guidelines, and reviews that address crucial issues in shelter and community animal health, behavior, and welfare.

Her extensive body of work, comprising over 20 publications, delves into topics that resonate within the veterinary community. Her research guides clinical decisions, contributes to the management of shelter populations, and enriches the education of veterinary students. By bridging the gap between theory and real-world application, she empowers veterinarians to confront the multifaceted challenges in animal welfare.

From Theory to Tender Care: Connecting with Communities

Dr. Rachael's commitment to translating knowledge into action is evident through her deep involvement in the field. Her role extends beyond academia, as she spearheads a 33-foot mobile veterinary clinic, bringing surgical and medical services to shelter and community animals. This mobile haven, launched in 2015, acts as a lifeline for shelters and reservations in Arizona – providing essential sterilizations, wellness services, and minor medical interventions. Dr. Rachael's program often becomes the only access to veterinary care for many of these animals.

The resonance of Dr. Rachael's efforts reverberates through her role in shelter data analytics and disease outbreak investigations. Her expertise has been vital in predicting, managing, and mitigating disease outbreaks, spanning from distemper to *Streptococcus zooepidemicus* and pneumovirus. Her actions underscore the pivotal role veterinarians play in safeguarding animal welfare and public health, particularly in times of crisis.





Advocacy, Enlightenment, and Hopes for Tomorrow

“ Dr. Rachael’s influence reaches far beyond her immediate engagements with animals and organizations. She mentors the Shelter Medicine and Veterinary Business Management Association student clubs, nurturing the future leaders of the field. Her role as a mentor reflects her commitment to holistic education, equipping students with practical skills and a profound understanding of the importance of shelter-focused veterinary professionals.

Dr. Rachael Kreisler’s contributions to the realm of shelter medicine are a testament to her compassion. Her expertise, dedication, and unwavering spirit have set a standard for animal welfare, education, and community service. Through her expansive work, leadership, and compassionate outreach, she embodies the true spirit of a trailblazer in the world of veterinary medicine. Her legacy will continue to shape the path for the upcoming generation of veterinary professionals, illuminating a hopeful future for both animals and communities.

Study uncovers UK's most common



dog breeds & health risks

An in-depth analysis of over 2 million pet dogs residing in the UK during 2019 has unveiled fascinating insights into the country's canine population. Leading the charts are mixed-breeds, Labrador Retrievers, and Jack Russell Terriers, dominating the list of most common breeds. However, the study, conducted by Dan O'Neill from the Royal Veterinary College, UK, and fellow researchers, also sheds light on the popularity of breeds with physical features associated with increased health risks.

With dogs reigning as the most popular pets in the UK, it becomes crucial to comprehend the demographics of the canine population, encompassing breed, sex, and physical characteristics. This knowledge is vital in guiding prospective dog owners towards breeds that are less likely to experience issues related to extreme body shape and health risks. Until recently, comprehensive and high-quality data concerning UK dogs has been scarce. However, thanks to VetCompass—a program at the Royal Veterinary College—since 2010, more than 30% of UK veterinary clinics have been contributing anonymized pet demographic and health data on over 25 million animals. This valuable resource has granted researchers unparalleled access to comprehensive dog data.

Analysis

The analysis of data from 2,237,105 dogs under the care of UK veterinary clinics in 2019 provided a clearer picture of UK dog demographics. The study unveiled that 69.4 percent of the dogs were purebred, 6.7 percent were designer-crossbred (e.g., cockapoos or labradoodles), and 24 percent were mixed-breed. The most common breeds across the board were mixed-breed, Labrador Retrievers, and Jack Russell Terriers. Among puppies less than 1 year old, mixed-breed, French Bulldogs, and cockapoos emerged as the top three. Male dogs slightly outnumbered female dogs in the overall population.

Findings

Intriguingly, a closer examination of physical characteristics revealed that 17.6 percent of the dogs in the study represented breeds like pugs, French Bulldogs, and English Bulldogs, known for brachycephaly—a flattened skull shape associated with increased health risks. The researchers expressed concerns about a potential "canine healthcare crisis" in the UK as the number of dogs with brachycephaly and other extreme physical characteristics continues to rise and age, exacerbating the adverse effects of such extreme body shapes.

These valuable findings can aid scientists, breeders, veterinarians, dog owners, and prospective owners in making informed decisions that prioritize dog health. Dr. Dan O'Neill emphasizes that with over 800 dog breeds available in the UK, there are numerous healthy options that don't suffer from extreme body shapes. He encourages potential owners to think critically before acquiring a dog with such physical features.

Shocking revelation: Shelter dogs' secret nocturnal behavior exposed!



Shelter dogs face the challenge of adapting to a kennel environment, making it crucial to monitor their welfare through behavioral and physiological parameters. In this study, we examined the use of a 3-axial accelerometer (Actigraph®) to assess nocturnal activity as a potential indicator of adaptability in shelter dogs during the first two weeks of their stay. We also collected urinary cortisol/creatinine ratio (UCCR), body weight, and behavior data to evaluate stress responses. A control group of pet dogs in homes, matched to the shelter dog group, was also monitored for comparison.

Findings:

Shelter dogs exhibited higher nocturnal activity and UCCRs compared to pet dogs, particularly during the initial shelter days.

Nocturnal activity and UCCRs decreased over time during the shelter stay.

Smaller dogs displayed higher nocturnal activity and UCCRs, with less autogrooming during the first nights.

Dogs without previous kennel experience had higher nocturnal activity and UCCRs, along with less body shaking.

Shelter dogs showed less body shaking during the first night, and the number of dogs displaying paw lifting decreased over time.

Age and sex had minimal effects on activity behaviors.

Shelter dogs experienced a significant loss of body weight after 12 days in the shelter.

Learning

Shelter dogs exhibited disrupted nocturnal resting patterns and stress responses compared to pet dogs. However, they seemed to partially adapt to the shelter environment after two weeks. The sensor-supported identification of nocturnal activity can serve as a valuable tool for welfare assessments in animal shelters.

Read full article:



[CLICK HERE](#)



From healing hearts to changing lives: The thrilling world of shelter veterinarians unveiled

As a shelter veterinarian, you embark on a noble journey of compassion and care, making a profound impact on the lives of animals in need. Despite the challenges that come with the territory, the rewards of this profession are boundless and heartwarming. From saving lives to finding forever homes, being a shelter veterinarian is a fulfilling and enriching experience that leaves a lasting imprint on both the animals and the veterinary professionals themselves.

Saving Lives Every Day :

One of the most rewarding aspects of being a shelter veterinarian is the opportunity to save lives on a daily basis. Many animals that find their way to shelters are in dire straits, facing illness, injury, or abandonment. As a shelter veterinarian, you play a pivotal role in nursing these animals back to health, providing medical treatment, and ensuring they receive the love and care they deserve. The joy of witnessing a once sick and suffering animal transform into a happy, healthy, and thriving pet is immeasurable.

Finding Forever Homes :

Playing matchmaker between animals and loving forever homes is an incredibly rewarding experience. Shelter veterinarians get to witness the joy and excitement in the eyes of new pet parents as they find their perfect furry companions. Facilitating the adoption process and seeing animals find their loving families is a heartwarming reminder of the positive impact shelters have on the community.

Building Unbreakable Bonds :

Shelter veterinarians forge unbreakable bonds with the animals they care for. As they provide medical attention and comfort, they become the guardians and advocates for these animals, often being their voice when they cannot speak for themselves. The relationships formed between shelter veterinarians and their furry patients are filled with trust, loyalty, and mutual understanding.

Making a Difference Beyond the Clinic :

Beyond providing medical care, shelter veterinarians actively contribute to animal welfare and community well-being. They often engage in educational outreach programs, sharing valuable knowledge about responsible pet ownership, spaying and neutering, and preventive healthcare. By advocating for animal rights and promoting responsible pet ownership, shelter veterinarians become catalysts for positive change in the community.

Inspiring and Supportive Work Environment :

Working in a shelter environment fosters a sense of camaraderie and shared purpose among veterinary professionals. The support and understanding from colleagues create a positive and uplifting work environment, allowing shelter veterinarians to overcome challenges and celebrate victories together.

The Unconditional Love of Animals :

Perhaps the most rewarding aspect of being a shelter veterinarian is the unconditional love received from the animals themselves. Each day, these gentle souls shower veterinarians with love, gratitude, and trust, reminding them why they chose this profession in the first place.

Being a shelter veterinarian is a rewarding and life-changing journey that allows veterinary professionals to touch countless lives, both human and animal. The satisfaction of knowing that your dedication and expertise make a lifesaving difference is a source of immense pride and fulfillment. For those who embrace the calling of shelter medicine, the rewards extend beyond professional achievements, encompassing the indescribable joy of witnessing the transformative power of compassion and care.



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Contact your Boehringer Ingelheim Sales Representative to learn more

IMPORTANT SAFETY INFORMATION: NexGard® PLUS (afoxolaner, moxidectin, and pyrantel chewable tablets) is for use in dogs only. The most frequently reported adverse reactions reported in clinical trials were diarrhea, vomiting, lethargy, and itching. NexGard PLUS contains afoxolaner, a member of the isoxazoline class, which has been associated with neurologic adverse reactions including tremors, ataxia, and seizures in dogs with or without a history of seizures. Use with caution in dogs with a history of seizures or neurologic disorders. The safe use of NexGard PLUS has not been evaluated in breeding, pregnant, or lactating dogs. Dogs should be tested for existing heartworm infection prior to starting a heartworm disease preventive. For more information, see full prescribing information or visit NexGardPLUSClinic.com



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NexGard® PLUS

(afoxolaner, moxidectin, and pyrantel chewable tablets)

For oral use in dogs only

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

Description:

NexGard® PLUS (afoxolaner, moxidectin, and pyrantel chewable tablets) is available in five sizes of beef-flavored, soft chewables for oral administration to dogs and puppies according to their weight. Each chewable is formulated to provide minimum doses of 1.14 mg/lb (2.5 mg/kg) afoxolaner, 5.45 mcg/lb (12 mcg/kg) moxidectin, and 2.27 mg/lb (5.0 mg/kg) pyrantel (as pamoate salt).

Afoxolaner is a member of the isoxazoline family of compounds. Its chemical name is 1-Naphthalene-carboxamide, 4-[5-[3-chloro-5-(trifluoromethyl)-phenyl]-4,5-dihydro-5-(trifluoromethyl)-3-isoxazolyl]-N-[2-oxo-2-[(2,2,2-trifluoroethyl)amino]ethyl].

Moxidectin is a semisynthetic macrocyclic lactone derived from the actinomycete *Streptomyces cyaneogriseus noncyanogenus*. The chemical name for moxidectin is [6R,23E,25S(E)]-5-O-Demethyl-28-deoxy-25-(1,3-dimethyl-1-butenyl)-6,28-epoxy-23-(methoxyimino) milbemycin B.

Pyrantel is a member of the tetrahydropyrimidine family of compounds. Its chemical name is (E)-1,4,5,6-Tetrahydro-1-methyl-2-[2-(2-thienyl) vinyl] pyrimidine 4, 4' methylenebis [3-hydroxy-2-naphthoate][1,1].

Indications:

NexGard® PLUS is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*. NexGard® PLUS is indicated for the treatment and control of adult hookworm (*Ancylostoma caninum*, *Ancylostoma braziliense*, and *Ancylostoma stenocephala*) and roundworm (*Toxocara canis* and *Toxascaris leonina*) infections. NexGard® PLUS kills adult fleas and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*) and the treatment and control of *Ixodes scapularis* (black-legged tick), *Rhipicephalus sanguineus* (brown dog tick), *Dermacentor variabilis* (American dog tick), and *Amblyomma americanum* (lone star tick) infestations for one month in dogs and puppies eight weeks of age and older, weighing four pounds of body weight or greater.

Dosage and Administration:

NexGard® PLUS is given orally once a month at the minimum dosage of 1.14 mg/lb (2.5 mg/kg) afoxolaner, 5.45 mcg/lb (12 mcg/kg) moxidectin, and 2.27 mg/lb (5.0 mg/kg) pyrantel (as pamoate salt).

For heartworm disease prevention, give once monthly for at least six months after last exposure to mosquitoes (see Effectiveness).

Dosing Schedule:

Body Weight (lbs.)	Afoxolaner Per Chewable (mg)	Moxidectin Per Chewable (mcg)	Pyrantel* Per Chewable (mg)	Chewables Administered
4 to 8 lbs.	9.375	45	18.75	One
8.1 to 17 lbs.	18.75	90	37.5	One
17.1 to 33 lbs.	37.5	180	75	One
33.1 to 66 lbs.	75	360	150	One
66.1 to 132 lbs.	150	720	300	One
Over 132 lbs.	Administer the appropriate combination of chewables			

*As pamoate salt.

NexGard® PLUS can be administered with or without food. Care should be taken to ensure that the dog consumes the complete dose and that part of the dose is not lost or refused. If a dose is missed, administer NexGard® PLUS and resume a monthly dosing schedule.

Heartworm Prevention:

NexGard® PLUS should be administered at monthly intervals year-round or, at a minimum, administration should start within one month of the dog's first seasonal exposure to mosquitoes and should continue at monthly intervals until at least six months after the dog's last exposure (see Effectiveness). When replacing another monthly heartworm preventive product, the first dose of NexGard® PLUS should be given within a month of the last dose of the former medication.

Flea Treatment and Prevention:

NexGard® PLUS should be administered year-round at monthly intervals or started at least one month before fleas become active. 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:

NexGard® PLUS should be administered year-round at monthly intervals or started at least one month before ticks become active.

Intestinal Nematode Treatment and Control:

NexGard® PLUS treats and controls adult hookworms (*Ancylostoma caninum*, *Ancylostoma braziliense*, and *Ancylostoma stenocephala*) and roundworms (*Toxocara canis* and *Toxascaris leonina*). For the treatment of adult hookworm and roundworm infections, NexGard® PLUS should be administered as a single dose. Monthly use of NexGard® PLUS will control any subsequent infections. Dogs may be exposed to and can become infected with hookworms and roundworms throughout the year, regardless of season or climate.

Contraindications:

There are no known contraindications for the use of NexGard® PLUS.

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 for treatment advice.

Keep NexGard® PLUS in a secure location out of the reach of dogs, cats, and other animals to prevent accidental ingestion or overdose.

Precautions:

Afoxolaner, one of the ingredients in NexGard® PLUS, 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.

Treatment with fewer than six monthly doses after the last exposure to mosquitoes has not been evaluated and may not provide complete heartworm prevention.

Prior to administration of NexGard® PLUS, dogs should be tested for existing heartworm infection. At the discretion of the veterinarian, infected dogs should be treated with an antidiuretic to remove adult heartworms. NexGard® PLUS is not effective against adult *D. immitis*.

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

Adverse Reactions:

In a field safety and effectiveness study, NexGard® PLUS was administered to dogs for the prevention of heartworm disease. The study included a total of 272 dogs (134 administered NexGard® PLUS and 138 administered active control) treated once monthly for 11 treatments. Over the 330-day study period, all observations of potential adverse reactions were recorded. The most frequent reactions reported in the NexGard® PLUS group are presented in the following table.

Table 1. Dogs With Adverse Reactions

Clinical Sign	NexGard® PLUS n = 134 Number (Percentage)	Active Control n = 138 Number (Percentage)
Diarrhea	9 (6.7%)	7 (5.1%)
Vomiting	6 (4.5%)	7 (5.1%)
Lethargy	3 (2.2%)	5 (3.6%)
Itching	3 (2.2%)	3 (2.2%)
Dermatitis	2 (1.5%)	1 (0.7%)
Anorexia	1 (0.7%)	4 (2.9%)
Muscle tremor	1 (0.7%)	1 (0.7%)

One dog in the NexGard® PLUS group was reported to exhibit muscle tremors along with nausea and depression for one day after the Day 0 treatment. The dog remained in the study and muscle tremors were not reported after any subsequent treatments.

Contact Information:

For a copy of the Safety Data Sheet (SDS) or to report suspected adverse drug events, contact Boehringer Ingelheim Animal Health USA Inc. at 1-888-637-4251 or www.nexgardforpets.com.

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

Clinical Pharmacology:

Mode of Action:

NexGard® PLUS (afoxolaner, moxidectin, and pyrantel chewable tablets) contains the three active pharmaceutical ingredients afoxolaner, moxidectin, and pyrantel (as pamoate salt). 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 postsynaptic 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.

Moxidectin is an endectocite in the macrocyclic lactone class. Moxidectin acts by interfering with chloride channel-mediated neurotransmission in susceptible parasites, which results in paralysis and death of the parasite.

Pyrantel is a nematocide belonging to the tetrahydropyrimidine class. Pyrantel acts as a depolarizing, neuromuscular-blocking agent in susceptible parasites, causing paralysis and death or expulsion of the parasite.

Pharmacokinetics:

Following a single oral administration of a near-final formulation of NexGard® PLUS (at mean doses of 3.9 mg/kg afoxolaner, 18.8 mcg/kg moxidectin, and 7.8 mg/kg pyrantel pamoate) in fed and fasted Beagle dogs (10 to 21 months of age), afoxolaner and moxidectin were more rapidly absorbed in the fasted state with a time to maximum concentration (T_{max}) of 2 to 3 hours.

The afoxolaner mean maximum plasma concentrations (C_{max}) in the fed and fasted states were 1610 and 2200 ng/mL (CV=33 and 16%) and the moxidectin mean C_{max} values were 11.1 and 15.5 ng/mL (CV=39 and 24%), respectively. The area under the curve (AUC) for afoxolaner and moxidectin were similar between fed and fasted states. Post-dose pyrantel plasma concentrations were quantifiable out to 24 hours.

Following six oral administrations of NexGard® PLUS at 1, 3, and 5X the maximum exposure dose of 5 mg/kg, 24 mcg/kg, and 10 mg/kg afoxolaner, moxidectin, and pyrantel pamoate, respectively, every 28 days in 8-week-old Beagle dogs, afoxolaner and moxidectin T_{max} ranged from 2 to 6 hours. The observed mean C_{max} and AUC at steady state in the 1X dose group were 2230 ng/mL and 19000 days*ng/mL for afoxolaner and 14.8 ng/mL and 55.2 days*ng/mL for moxidectin, respectively. Based on mean C_{min}, afoxolaner and moxidectin accumulated by less than 4-fold at steady state. Afoxolaner and moxidectin exposure increased in a dose proportional manner between the 1X and 3X dose groups but was less than dose proportional in the 5X dose group.

Pyrantel pamoate is poorly absorbed into systemic circulation. Pyrantel pamoate is intended to remain in the gastrointestinal tract to allow effective concentrations to be delivered to gastrointestinal nematodes.

Effectiveness:

Heartworm Prevention:

In two well-controlled laboratory studies, NexGard® PLUS was 100% effective against induced *D. immitis* infections when administered for six consecutive months.

In a well-controlled US field study consisting of 120 dogs administered NexGard® PLUS and 124 administered an active control, no dogs treated with NexGard® PLUS tested positive for heartworm disease. All dogs treated with NexGard® PLUS were negative for *D. immitis* antigen and blood microfilariae at study completion on Day 330.

Flea Treatment and Prevention:

In a well-controlled laboratory study, NexGard® PLUS demonstrated ≥99.8% effectiveness against adult fleas 24 hours after weekly infestations for one month.

In a separate well-controlled laboratory study, afoxolaner alone began to kill fleas four hours after initial administration and demonstrated >99% effectiveness at eight hours.

In an additional well-controlled laboratory study, afoxolaner alone 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, afoxolaner alone was 81.1% effective 12 hours post-infestation. Dogs in both the afoxolaner-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 afoxolaner-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 afoxolaner-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 afoxolaner alone 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 four studies (three laboratory and one field) demonstrate that NexGard® PLUS kills fleas before they can lay eggs, thus preventing subsequent flea infestations after the start of treatment of existing flea infestations.

Tick Treatment and Control:

In well-controlled laboratory studies, afoxolaner alone demonstrated >97% effectiveness against *Dermacentor variabilis*, >94% effectiveness against *Ixodes scapularis*, and >93% effectiveness against *Rhipicephalus sanguineus*, 48 hours post-infestation, for one month. At 72 hours post-infestation, NexGard® PLUS demonstrated ≥97% effectiveness against *Amblyomma americanum* for one month.

Intestinal Nematode Treatment and Control:

Elimination of adult roundworms (*Toxocara canis* and *Toxascaris leonina*) and hookworms (*Ancylostoma caninum*, *Ancylostoma braziliense*, and *Ancylostoma stenocephala*) was demonstrated in well-controlled laboratory studies.

Target Animal Safety:

Margin of Safety:

NexGard® PLUS was administered orally at 1, 3, and 5X the maximum exposure doses at approximately 28-day intervals for six treatments to 8-week-old Beagle puppies. Dogs in the control group were sham-dosed. There were no clinically relevant, treatment-related effects on body weights, food consumption, clinical pathology (hematology, coagulation, serum chemistry, and urinalysis), gross pathology, histopathology, organ weights, or ophthalmic examinations. Mild, self-limiting diarrhea (with and without blood) was possibly related to treatment, as there were more incidences in the NexGard® PLUS groups than the control group throughout the study, including within 48 hours after treatment.

Avermectin-Sensitive Collie Safety:

NexGard® PLUS was administered orally at 1, 3, and 5X the maximum label dose to MDRI-deficient Collies once on Day 0, with a second administration to the 1X group on Day 28. Dogs in the control group were sham-dosed on Days 0 and 28. No clinical signs of avermectin toxicity were noted in any dog at any time during the study. Vomiting was observed in some dogs in the 3X and 5X groups and resolved without treatment. Diarrhea, with or without blood, was observed in some dogs in all of the NexGard® PLUS groups and resolved without treatment.

Heartworm-Positive Safety:

NexGard® PLUS was administered orally at 1X and 3X the maximum exposure doses at approximately 28-day intervals for three treatments to Beagle dogs with adult heartworm infections and circulating microfilariae. Dogs in the control group were sham-dosed. Diarrhea was observed in one dog in the 1X group and in three dogs in the 3X group, and vomiting was observed in two dogs in the 3X group. No signs of avermectin toxicity were observed at any time during the study. There were no clinical signs associated with death of the microfilariae observed in any of the dogs.

Field Safety:

In a well-controlled field study, NexGard® PLUS was used concurrently with other medications such as vaccines, antibiotics, non-steroidal anti-inflammatory drugs (NSAIDs), anesthetics, sedatives, analgesics, steroids, anthelmintics, antiemetics, and antipruritics. No adverse reactions were associated with the concurrent use of NexGard® PLUS and other medications.

How Supplied:

NexGard® PLUS is available in five strengths of beef-flavored soft chewables formulated according to the weight of the dog (see Dosage and Administration). Each chewable size is available in color-coded packages of 1, 3, or 6 chewables.

Storage Information:

Store in original package at or below 25°C (77°F) with excursions permitted up to 40°C (104°F).

Approved by FDA under NADA # 141-554

Marketed by: Boehringer Ingelheim Animal Health USA Inc., Duluth, GA 30096

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Managing community cats:

A comprehensive approach for biodiversity, public health, and animal welfare

Homeless cats present a significant challenge in Europe, where hundreds of thousands are abandoned annually. While some succumb to unfortunate fates, others adapt to a free-roaming lifestyle, giving rise to community cat populations that tend to congregate in urban areas with food and shelter availability. These cats are often cared for by animal welfare organizations, receiving food, shelter, and medical attention. However, conflicts arise due to the presence of free-roaming cats, with some advocating for extreme measures like trapping and killing to control their populations. Nevertheless, such methods are frequently illegal, inhumane, and largely ineffective.

Study design

To assess the impact of cats on a specific natural area, a comprehensive cat census, study of prey species, and investigation into zoonotic or epizootic diseases are crucial. Moreover, veterinary experts assert that the public health risks associated with cats are often exaggerated. This article offers a nuanced perspective on the impact of cats on biodiversity in natural areas, focusing on their role in transmitting zoonotic diseases in European countries, particularly Spain.

Effective cat management programs should prioritize non-lethal methods such as trap-neuter-return (TNR) and adoption. TNR has proven to be the most effective and humane approach for controlling the free-roaming cat population, though its success depends on adoption programs and public education on responsible pet ownership. Spanish veterinarians emphasize the significance of sustainable, science-based solutions like TNR to achieve population control of free-roaming cats. They advocate for raising awareness about sterilization, vaccination, and identification of cats to combat abandonment and reduce the number of free-roaming cats.

The veterinary profession must collaborate with public administrations to implement long-term, sustainable solutions to address cat overpopulation while promoting animal welfare. Enhancing social awareness regarding the importance of sterilization and identification to prevent abandonment and reduce free-roaming cat numbers is also critical.

Despite the challenges posed by homeless cat populations in Spain and Europe, there are reasons for optimism. Animal welfare organizations and veterinary professionals actively work together to develop humane and effective solutions for managing community cats, including TNR and adoption programs. Moreover, these initiatives gain momentum and support from emerging animal welfare laws, like the recent legislation in Spain. Through collective efforts, we can reduce the number of free-roaming cats and enhance their quality of life.



Read more by clicking here 

Deadly heartworm infections neglected in cats: Alarming study reveals hidden threat!

In the heart of Texas lies a hidden danger that threatens the lives of cats—heartworm infections caused by the mosquito-borne nematode *Dirofilaria immitis*. Despite its potential fatality, heartworm infections in cats often go unnoticed by both cat owners and veterinarians. Diagnosing this perilous disease in cats presents unique challenges, requiring a combination of laboratorial tests and clinical examination.

Study design

A groundbreaking study was conducted to shed light on the prevalence of *D. immitis* infection in shelter cats from the Lower Rio Grande Valley (RGV) region of Texas. This area is home to a large population of stray animals with limited access to veterinary care, making them particularly vulnerable to heartworm infections.

The study analyzed 122 paired samples of serum and DNA from cats in 14 towns within the RGV region. Multiple diagnostic methods were employed to detect the presence of heartworm infection. Heartworm antibody detection, heartworm antigen detection (before and after immune-complex dissociation), and a species-specific qPCR assay were used to provide a comprehensive analysis.

Results

The results were alarming, with 18% (22 out of 122) of the shelter cats testing positive in at least one diagnostic test. Antibody testing identified the most cases (15.6%), followed by pre- and post-ICD antigen testing (4.9%), and qPCR (3.3%). Strikingly, two cats tested positive on all three diagnostic tests, underscoring the severity of the issue.

Veterinarians play a crucial role in combating this overlooked threat by encouraging cat owners to prioritize year-round heartworm prevention. Early detection and preventive measures can save the lives of these feline companions, ensuring their well-being and longevity.

[Read more by clicking here](#) 

The ultimate guide to relieving aches and pains from standing all day

By Arlene Torres

For those of us who spend long hours on their feet, whether at work, during events, or while pursuing their passion, the toll on the body can be considerable. The aches and pains from standing all day can be quite uncomfortable, affecting productivity and overall well-being. However, incorporating the right stretches into your routine can make a world of difference. In this article, we'll explore some of the best stretches to alleviate the discomfort and help you stay energized throughout the day.



Calf Stretch

Start with a classic calf stretch to target the muscles in your lower legs. Stand facing a wall with one foot forward and the other foot back. Lean against the wall, keeping the back leg straight and the front knee slightly bent. Hold the stretch for about 30 seconds and then switch legs. This stretch helps to improve blood circulation and relieves tension in the calves.

Hamstring Stretch:

To ease tension in the back of your legs, try a hamstring stretch. Sit on the edge of a chair or bench and extend one leg in front of you with your heel on the ground and toes pointing upwards. Gently lean forward from your hips, keeping your back straight. Hold the stretch for about 20-30 seconds, feeling the stretch in your hamstring. Repeat on the other leg.

Quadriceps Stretch:

The quadriceps stretch targets the front thigh muscles, which can tighten from prolonged standing. Stand on one leg and bend your other knee, bringing your heel towards your buttocks. Hold your ankle with your hand and gently pull it towards your body until you feel a stretch in the front of your thigh. Hold for 20-30 seconds, then switch legs.

Hip Flexor Stretch:

The hip flexor muscles can become tight after standing for extended periods. To stretch them, kneel on one knee with the other leg bent in front of you at a 90-degree angle. Keep your back straight and gently lean forward, feeling the stretch in the front of your hip. Hold for 20-30 seconds and then switch legs.



Lower Back Stretch:

Finally, don't forget to address your lower back, which can become strained from prolonged standing. Sit on a chair or bench and cross one leg over the other knee. Gently twist your upper body towards the crossed leg, placing your opposite hand on the knee for support. Hold the stretch for 20-30 seconds and repeat on the other side.

Incorporating these stretches into your daily routine can provide much-needed relief from the aches and pains of standing all day. Remember to perform them gently and consistently, taking care not to overstretch. Along with stretching, ensure you have comfortable footwear and take short breaks throughout the day to rest your feet and legs. Prioritizing your well-being and incorporating these simple stretches can make a significant difference in how you feel and perform during those long hours on your feet.



BEYOND THE CLINIC

How you can be a hero for animal shelters - Even without full-time commitment

Veterinarians and veterinary technicians are the unsung heroes of the animal kingdom, but not all can commit to full-time roles in animal shelters. However, this doesn't mean they can't play a vital role in rescuing and caring for our furry friends. For those with a passion for helping shelter animals, there are numerous ways to make a meaningful impact, leveraging their expertise and compassion to change lives.

Part-Time Volunteering:

With hectic schedules, veterinarians can still lend a helping hand by volunteering part-time at local animal shelters. Even a few hours a week can make a significant difference in providing medical care, administering vaccinations, and conducting health checks on shelter animals. These dedicated hours contribute to the overall well-being of the animals and alleviate the burden on shelter staff.

Pro Bono Services:

Veterinarians can showcase their altruistic spirit by offering pro bono veterinary services to animal shelters. From spaying and neutering procedures to surgical interventions, these acts of kindness ensure that shelter animals receive the best possible care without stretching the limited budgets of animal welfare organizations.

Telemedicine and Consultations:

In the digital age, veterinarians can extend their reach by providing telemedicine services and remote consultations to shelters. This innovative approach allows them to diagnose and treat animals from a distance, offering expert advice and guidance to shelter staff. Through virtual support, veterinarians become indispensable allies in caring for animals in need.

Continuing Education and Training:

By conducting workshops and educational sessions, veterinarians can empower shelter staff with essential knowledge and skills. Proper training on animal health, nutrition, and behavioral care equips shelter personnel to better care for animals and improve their chances of finding forever homes.

Fundraising and Advocacy:

Veterinarians possess unique abilities to advocate for animal welfare causes. They can organize fundraising events, mobilize resources, and spread awareness about shelter needs within their communities. Their influence and expertise can inspire others to join the cause and support animal shelters.

Statistics

According to the American Society for the Prevention of Cruelty to Animals (ASPCA), approximately 6.5 million companion animals enter animal shelters nationwide every year. Sadly, not all find homes, and 1.5 million shelter animals are euthanized annually due to overcrowding and lack of resources. The valuable contributions of veterinarians can significantly impact these numbers, saving lives and improving the quality of care for shelter animals.

While not every veterinarian or veterinary technician can be a full-time shelter staff member, their expertise and compassion can still make an immeasurable difference in the lives of shelter animals. Whether through part-time volunteering, pro bono services, telemedicine, or advocacy, these dedicated professionals can be the heroes that shelter animals desperately need. Together, they can create a world where every animal finds love, care, and a forever homes.



The Silent Struggle of Compassion *Fatigue*

By Dr. Jill Lopez

Working in veterinary medicine can be a deeply rewarding profession, as it allows healthcare professionals to make a positive impact on the lives of animals in need. However, it also comes with its unique challenges, including the risk of compassion fatigue. This phenomenon refers to the emotional exhaustion and gradual decline in empathy experienced by individuals exposed to the suffering and distress of others, commonly seen in caregivers and helping professionals, including veterinarians and shelter workers. Compassion fatigue can have a significant impact on the mental, emotional, and physical well-being of veterinary professionals, potentially leading to burnout and decreased job satisfaction. Let's explore this issue further, backed by statistics, and learn effective ways to prevent and manage compassion fatigue.

Statistics on Compassion Fatigue

- **Prevalence:** According to a study published in the Journal of the American Veterinary Medical Association, nearly 37% of veterinarians reported experiencing high levels of compassion fatigue, with shelter veterinarians being particularly susceptible due to the nature of their work.
- **Emotional Impact:** Another study published in the Journal of Veterinary Medical Education found that 68% of shelter veterinarians reported feelings of sadness and frustration at work, while 63% experienced feelings of helplessness and 50% felt overwhelmed.
- **High Turnover:** Compassion fatigue can lead to increased staff turnover in shelters, affecting organizational stability and continuity of care for the animals. A survey conducted by the Association for Shelter Veterinarians revealed that compassion fatigue was a significant factor contributing to staff turnover in animal shelters.

Ways to Prevent Compassion *Fatigue*



“

- **Self-Care and Mindfulness:** Practicing self-care is essential for veterinary professionals to recharge and rejuvenate. Engage in activities that bring joy and relaxation, such as hobbies, exercise, spending time with loved ones, or mindfulness practices like meditation and yoga.
- **Set Boundaries:** Learn to set clear boundaries between work and personal life. Avoid overcommitting and prioritize time for self-reflection and self-renewal.
- **Seek Support:** Cultivate a supportive work environment where colleagues can openly discuss their experiences and emotions. Encourage peer support groups or debriefing sessions to process difficult cases.
- **Education and Training:** Offer ongoing training to veterinary staff on recognizing the signs of compassion fatigue and developing coping mechanisms. Raising awareness about this issue can help create a more empathetic and supportive workplace.
- **Regular Breaks:** Ensure staff members take regular breaks during their workday to decompress and recharge. Implement flexible scheduling options to accommodate rest periods.
- **Mentoring Programs:** Establish mentoring programs for new staff members to help them navigate the emotional challenges of shelter medicine and provide guidance and support.
- **Professional Counseling:** Make mental health support readily available to staff members. Encourage employees to seek professional counseling when needed and provide resources for accessing such services.

Compassion fatigue is a real and serious issue faced by veterinary professionals in all disciplines. By acknowledging its prevalence and impact, veterinary organizations can take proactive measures to prevent and manage compassion fatigue effectively. Through promoting self-care, fostering a supportive work environment, and providing resources for mental health support, we can create a healthier and more resilient workforce, ensuring the well-being of both caregivers and the animals they serve.



UNLEASH YOUR FULL POTENTIAL WITH THIS EQUIPMENT-FREE BODYWEIGHT

HIIT WORKOUT!

by Arlene Torres

Are you looking to kickstart your fitness journey without the need for expensive gym equipment? Look no further! High-Intensity Interval Training (HIIT) is a fantastic way to burn calories, build strength, and boost cardiovascular fitness, and the best part is, it can be done entirely with your bodyweight. Whether you're a beginner or a seasoned fitness enthusiast, this bodyweight HIIT workout is designed to suit all fitness levels and will leave you feeling invigorated and accomplished.

WHAT IS HIIT?

HIIT is a training technique that alternates between short bursts of intense exercise and brief periods of rest or lower-intensity exercise. The goal is to elevate your heart rate during the intense intervals and then allow it to recover during the rest periods. This method has been proven to burn more calories and fat in a shorter amount of time compared to traditional steady-state cardio.

BENEFITS OF BODYWEIGHT HIIT:

Convenience: One of the most significant advantages of bodyweight HIIT is that it requires zero equipment. You can do it anywhere, whether at home, in the park, or during a work break, making it a time-efficient workout for those with busy schedules.

Full-Body Workout: Bodyweight exercises engage multiple muscle groups simultaneously, providing a full-body workout that targets strength, endurance, and flexibility.

No Cost: Unlike gyms or fitness classes, bodyweight HIIT doesn't require any financial investment, making it a budget-friendly option for everyone.

Versatility: The variety of bodyweight exercises available ensures you never get bored. You can mix and match movements to create endless combinations for a dynamic and exciting workout routine.

THE ULTIMATE EQUIPMENT-FREE BODYWEIGHT HIIT WORKOUT:

Perform each exercise for 40 seconds, followed by a 20-second rest. Complete the circuit three times for a challenging and effective workout.



- 1. Jump Squats:** Start with your feet shoulder-width apart, squat down, and explosively jump into the air. Land softly and immediately descend into the next squat.
- 2. Push-Ups:** Get into a plank position with your hands slightly wider than shoulder-width apart. Lower your chest to the ground and push back up, engaging your core throughout the movement.
- 3. Mountain Climbers:** Begin in a plank position and bring one knee towards your chest, then quickly switch legs in a running motion. Keep your core tight and your back straight.
- 4. Burpees:** From a standing position, drop into a squat, kick your feet back into a plank, perform a push-up, return to the squat position, and jump up explosively.
- 5. Reverse Lunges:** Step back with one foot, lowering your body until both knees are bent at a 90-degree angle. Push off the back foot to return to the starting position and repeat on the other side.

Safety Tips:

- Always warm up before starting the workout to prevent injuries.
- Listen to your body and modify exercises as needed to suit your fitness level.
- Stay hydrated throughout the workout, especially during intense intervals.

Bodyweight HIIT workouts are an excellent way to stay active, improve your fitness, and achieve your goals without the need for any equipment. They offer a versatile and accessible exercise option for anyone, regardless of their fitness level. So, lace up your sneakers, find a suitable space, and get ready to experience the incredible benefits of this equipment-free, heart-pumping workout!



BEWARE! HIDDEN DANGERS

Lurking in **shelter dogs** across Eastern US - **surprising risk factors revealed!**

Vector-borne infections pose significant health risks not only to humans and wildlife but also to our beloved domestic animals. In this comprehensive study, we focus on domestic dogs (*Canis lupus familiaris*) in the United States, who may unwittingly serve as carriers for various zoonotic vector-borne pathogens. The aim of this research is to shed light on the geographical distribution, risk factors, and co-infections associated with Ehrlichia spp., Anaplasma spp., Borrelia burgdorferi, and Dirofilaria immitis infections specifically in shelter dogs located in the Eastern United States.

STUDY

To gather essential data, blood samples were meticulously collected from 3750 shelter dogs across 19 states during the period from 2016 to 2020. To determine the seroprevalence of tick-borne pathogen infections and Dirofilaria immitis infections, IDEXX SNAP® 4Dx® Plus tests were employed. The impact of various factors, such as age, sex, intact status, breed group, and location, on the occurrence of infections was carefully assessed using advanced logistic regression techniques.

RESULTS

The findings revealed an overall seroprevalence of 11.2% (n = 419/3750) for Dirofilaria immitis, 2.4% (n = 90/3750) for Anaplasma spp., 8.0% (n = 299/3750) for Ehrlichia spp., and 8.9% (n = 332/3750) for Borrelia burgdorferi. Remarkably, regional variations were evident, with the Southeast showing the highest seroprevalence for D. immitis (17.4%, n = 355/2036) and Ehrlichia spp. (10.7%, n = 217/2036), while the Northeast displayed the highest seroprevalence for B. burgdorferi (19.3%, n = 143/740) and Anaplasma spp. (5.7%, n = 42/740).

What's more, an alarming 4.8% (n = 179/3750) of shelter dogs were found to have co-infections, with D. immitis/Ehrlichia spp. (1.6%, n = 59/3750), B. burgdorferi/Anaplasma spp. (1.5%, n = 55/3750), and B. burgdorferi/Ehrlichia spp. (1.2%, n = 46/3750) being the most common combinations.

Analyzing the risk factors, it was evident that location and breed group played pivotal roles in influencing infection rates across the evaluated pathogens. In particular, all evaluated risk factors significantly influenced the seroprevalence of D. immitis antigens.

The implications of these findings are profound, as they highlight the regionally variable risk of vector-borne pathogen infections in shelter dogs across the Eastern United States. The varying distributions of vectors are believed to be the contributing factor to this phenomenon. Given the ongoing climate and landscape changes that impact vector distributions, it is evident that continued surveillance of vector-borne pathogens is imperative for maintaining a reliable risk assessment.

This study serves as a clarion call for heightened awareness and action to protect our furry friends from these potential health threats, thereby ensuring their well-being and safety in shelter environments. By understanding and addressing these risks, we can pave the way towards better protection and care for shelter dogs across the Eastern United States



Read full article by clicking here

ANXIETY UNVEILED: THE HIDDEN STRUGGLES AND COPING *Secrets Revealed*

Anxiety is a complex and often misunderstood emotional state that affects millions of individuals worldwide. While it's essential for educated professionals to grasp the intricacies of this condition, it can be challenging to comprehend fully what anxiety feels like for those who experience it. In this article, we aim to provide an insightful glimpse into the world of anxiety, shedding light on its manifestations, impact, and ways to support individuals coping with this distressing mental health challenge.

THE EMOTIONAL STORM

At its core, anxiety is an overwhelming sense of fear, apprehension, or worry that can be triggered by specific situations or even arise seemingly out of nowhere. For individuals experiencing anxiety, it can feel like being caught in an emotional storm, with thoughts and emotions colliding in chaotic waves.

PHYSICAL SENSATIONS

One of the distinguishing features of anxiety is the array of physical sensations it brings. From a pounding heart and rapid breathing to sweating and trembling, anxiety can manifest itself in various physical ways. These sensations often exacerbate the emotional distress, leading to a vicious cycle of heightened anxiety.

THE MENTAL TUG-OF-WAR

Imagine a constant mental tug-of-war where worries and "what-ifs" relentlessly battle against rational thinking. Anxiety can distort perceptions and magnify potential threats, causing individuals to become hyper-vigilant and struggle to find a sense of calm.



THE BURDEN OF OVERTHINKING

Individuals with anxiety often find themselves stuck in a loop of overthinking, replaying past events or obsessing over future outcomes. This excessive rumination can lead to self-doubt, second-guessing, and feelings of inadequacy.

THE ISOLATION OF ANXIETY

Anxiety can be an isolating experience. Despite the prevalence of anxiety disorders, individuals may feel alone in their struggles, fearing judgment or misunderstanding from others. This isolation can further intensify the emotional burden they carry.

COPING MECHANISMS

People with anxiety may employ various coping mechanisms to manage their distress. While some may seek solace in isolation, others might engage in distraction techniques or rituals to gain a sense of control. Understanding these coping strategies can help professionals provide appropriate support and guidance.

THE IMPORTANCE OF COMPASSION

Educated professionals can play a vital role in supporting individuals dealing with anxiety. By offering empathy and a non-judgmental ear, you create a safe space for them to share their struggles openly. Validating their feelings and experiences can be immensely comforting and foster a sense of understanding.

SEEKING PROFESSIONAL HELP

For some individuals, anxiety may become overwhelming and interfere with daily life. Encouraging those in need to seek professional help, such as therapy or counseling, can be instrumental in managing anxiety effectively.

Understanding what anxiety feels like can be an eye-opening experience for educated professionals. By recognizing the emotional turmoil and complexities individuals with anxiety endure, we can create a more compassionate and supportive environment. Together, let's foster a community that acknowledges the challenges of anxiety and works collaboratively to promote mental well-being.



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The One You Want for One-And-Done Monthly Parasite Protection

- ✔ First-of-its-kind formulation includes esafoxolaner—specifically developed for use in cats
- ✔ Easy-to-apply topical solution provides a month of protection
- ✔ Safe for use in kittens as young as 8 weeks, weighing 1.8 lbs or more

Contact your Boehringer Ingelheim Representative to learn more

IMPORTANT SAFETY INFORMATION: NexGard® COMBO (esafoxolaner, eprinomectin, and praziquantel topical solution) is for topical use only in cats. Use with caution in cats with a history of seizures or neurologic disorders. The most frequently reported adverse reactions include vomiting, application site reactions, and anorexia. If ingested, hypersalivation may occur. Avoid direct contact with application site until visibly dry. For more information, see full prescribing information or visit NexGardCOMBOClinic.com.

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NexGard COMBO

(esafloxolaner, eprinomectin, and praziquantel topical solution)

For topical use in cats only

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

Description:

NexGard COMBO is a topical solution containing esafloxolaner, eprinomectin and praziquantel available in 0.3 mL and 0.9 mL unit applicators to treat cats from 1.8 lbs to 33 lbs. Each mL of NexGard COMBO contains 12 mg of esafloxolaner, 4 mg of eprinomectin, and 83 mg of praziquantel. Inactive ingredients: dimethyl isosorbide, unstabilized glycerol formal, and butylated hydroxytoluene.

Esafloxolaner is a member of the aryl isoxazoline class of compounds. Its chemical name is 4-[(1S)-5-[3-chloro-5-(trifluoromethyl)phenyl]-5-(trifluoromethyl)-4, 5-dihydro-1,2-oxazol-3-yl]-N-[2-oxo-2-(2,2,2-trifluoroethyl)amino]ethyl]-1-naphthamide.

Eprinomectin belongs to the avermectin class of anthelmintics and is a mixture of homologous components referred to as eprinomectin B1a and B1b. The chemical name for eprinomectin B1a is (4'R)-acetylaminoo-5-O-demethyl-4'-deoxyavermectin A₁₀. The chemical name for eprinomectin B1b is (4'R)-acetylaminoo-5-O-demethyl-25-de(1-methylpropyl)-4'-deoxy-25-(1-methylethyl)avermectin A₁₀.

Praziquantel is a pyrazinoisoquinoline anthelmintic. Its chemical name is 2-(Cyclohexylcarbonyl)-1,2,3,6,7,11b-hexahydro-4H-pyrazino[2,1-a]isoquinolin-4-one.

Indications:

NexGard COMBO is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis* and for the treatment and control of roundworm (fourth stage larval and adult *Toxocara cati*), hookworm (fourth stage larval and adult *Ancylostoma tubaeforme*, adult *Ancylostoma braziliense*), and tapeworm (*Dipylidium caninum*) infections. NexGard COMBO kills adult fleas (*Ctenocephalides felis*) and is indicated for the treatment and prevention of flea infestations and the treatment and control of *Ixodes scapularis* (black-legged tick) and *Amblyomma americanum* (lone star tick) infestations for one month in cats and kittens 8 weeks of age and older, and weighing 1.8 lbs or greater.

Dosage and Administration:

NexGard COMBO is dosed at a minimum of 0.055 mL/lb (0.12 mL/kg), which delivers a minimum dose of 0.65 mg/lb (1.44 mg/kg) esafloxolaner, 0.22 mg/lb (0.48 mg/kg) eprinomectin, and 4.53 mg/lb (9.98 mg/kg) praziquantel.

For heartworm disease prevention, apply once monthly for at least three months after last exposure to mosquitoes (see Effectiveness).

Administer the entire contents of a NexGard COMBO unit applicator topically once a month as specified in the following table:

Dosing Schedule:

Cat Weight (lb)	Volume (mL)	Esafloxolaner (mg)	Eprinomectin (mg)	Praziquantel (mg)
1.8-5.5	0.3	3.6	1.2	24.9
5.6-16.5	0.9	10.8	3.6	74.7
16.6-22	0.3 + 0.9	14.4	4.8	99.6
22.1-33	0.9 + 0.9	21.6	7.2	149.4

A veterinarian or veterinary technician should demonstrate or instruct the pet owner regarding the appropriate technique for applying NexGard COMBO topically to cats and kittens prior to first use.

Keep product in original packaging until ready to use.



- Use scissors to cut the blister along the dotted line.
- Then pull the lid away.
- Remove the applicator from the package and hold it upright. Pull back the plunger slightly.
- Twist and pull off the cap.
- Part the hair on the midline of the neck, between the base of the skull and the shoulder blades until the skin is visible. Place the tip of the applicator on the skin and apply the entire contents directly onto the skin in one spot. The product should be applied to dry skin on an area where the cat cannot lick it off. If the weight of the cat requires a second application, apply the contents in the same manner as described above in the same location.
- Wash hands after use with soap and water.

Heartworm Prevention:

For the prevention of heartworm disease, NexGard COMBO should be administered once a month year-round. At a minimum, administration of NexGard COMBO should start at least 1 month before the cat's first expected exposure to mosquitoes and monthly thereafter until at least 3 months after the cat's last seasonal exposure to mosquitoes (see Effectiveness). If a dose is missed and a 30-day interval between doses is exceeded, administer NexGard COMBO immediately and resume the monthly dosing schedule. Treatment with fewer than 3 monthly doses may not provide complete heartworm prevention. When replacing another monthly heartworm preventive product in a heartworm prevention program, the first treatment with NexGard COMBO should be given within one month of the last dose of the former medication. At the discretion of the veterinarian, cats older than 6 months of age may be tested to determine the presence of existing heartworm infection before treatment with NexGard COMBO. Cats already infected with adult heartworms can be given NexGard COMBO monthly to prevent further infections.

Flea Treatment and Prevention:

For the treatment and prevention of flea infestations, the use of NexGard COMBO may begin at any time of year. NexGard COMBO should be administered year-round at monthly intervals or begin at least one month before fleas become active. However, an environmental infestation may persist for a short time after beginning treatment with NexGard COMBO because of the development of adult fleas from eggs that were laid prior to the initiation of treatment.

Tick Treatment and Control:

For the treatment and control of infestations with *Ixodes scapularis* and *Amblyomma americanum*, the use of NexGard COMBO may begin at any time of year. NexGard COMBO should be administered year-round at monthly intervals or begin at least one month before the ticks become active.

Treatment and Control of Roundworms, Hookworms, and Tapeworms: NexGard COMBO provides treatment and control of roundworms (adult and fourth stage larval *Toxocara cati*), hookworms (adult and fourth stage larval *Ancylostoma tubaeforme*, adult *Ancylostoma braziliense*), and tapeworms (*Dipylidium caninum*). For the treatment of hookworm, roundworms and tapeworm infections, NexGard COMBO should be administered once as a single dose. Monthly use of NexGard COMBO will control any subsequent infections. Cats may be exposed to and can become infected with roundworms, hookworms, and tapeworms throughout the year, regardless of season or climate.

Contraindications:

There are no known contraindications for the use of NexGard COMBO.

Human Warnings:

Not for human use. Keep this and all drugs out of sight and reach of children.

Avoid direct contact with application site for 4 hours or until visibly dry.

This product may act as a mild to moderate eye irritant.

Keep product in the original packaging until use. Wash hands after product administration. If the product accidentally gets into the eyes, rinse thoroughly with water. If wearing contact lenses, flush the eyes first with water and then remove the lenses and continue to flush thoroughly with water. In case of accidental ingestion, or if skin or eye irritation occurs, contact a poison control center or physician for treatment advice.

Precautions:

Esafloxolaner, one of the ingredients in NexGard COMBO, 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 cats receiving isoxazoline class drugs, even in cats without a history of seizures. Use with caution in cats with a history of seizures or neurologic disorders.

Do not administer orally. Cats may salivate excessively if NexGard COMBO is accidentally administered orally or is ingested through licking/grooming the application site (see Target Animal Safety).

The safety of NexGard COMBO has not been tested in breeding, pregnant, or lactating cats.

The safety of NexGard COMBO has not been tested in kittens less than 8 weeks of age or weighing less than 1.8 lbs (0.8 kg).

Adverse Reactions:

In a field safety and effectiveness study, which included a total of 201 households and 380 treated cats (244 cats treated with NexGard COMBO, 136 cats treated with an active control), the safety of NexGard COMBO was evaluated over a 90-day period through in-clinic physical examinations or through reporting of abnormalities by the owner. The most frequently reported reactions in the NexGard COMBO and active control groups are presented in the following table.

Adverse Reactions by Treatment Group

EVENT	Treatment Group			
	NexGard COMBO		Active Control	
	n ¹	% (n=244)	n ²	% (n=136)
Vomiting	16	6.56	8	5.88
Application Site Hair Change	9	3.69	0	0.00
Anorexia	7	2.87	4	2.94
Lethargy	6	2.46	5	3.68
Bacterial Skin Infection	4	1.64	1	0.74
Itching	4	1.64	0	0.00
Sneezing	4	1.64	5	3.68
Skin Peeling	3	1.23	2	1.47
Diarrhea	3	1.23	3	2.21
Ephiphora	3	1.23	1	0.74
Hypersalivation	3	1.23	0	0.00
Hyperthermia	3	1.23	0	0.00
Alopecia	2	0.82	0	0.00
Dermal Thickening	2	0.82	0	0.00
Ear Pruritus	2	0.82	1	0.74
Application Site Redness	2	0.82	0	0.00
Conjunctivitis	1	0.41	1	0.74

¹Number of cats treated with NexGard COMBO with the identified abnormality.

²Number of cats treated with Active Control with the identified abnormality.

Contact Information:

To report suspected adverse events, for technical assistance or to obtain a copy of the SDS, contact Boehringer Ingelheim Animal Health USA Inc. at 1-888-637-4251 or www.nexgardforpets.com.

For additional information about reporting adverse drug experiences for animal drugs, contact FDA at 1-888-FDA-VETS or online at www.fda.gov/reportanimalae.

The Safety Data Sheet (SDS) provides additional occupational safety information. For customer service or to obtain product information, including the SDS, call 1-888-637-4251.

Clinical Pharmacology:

Mode of Action: Esafloxolaner is a member of the isoxazoline family, shown to bind at a 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 esafloxolaner-induced hyperexcitation results in uncontrolled activity of the central nervous system and death of insects and acarines. The selective toxicity of esafloxolaner between insects/acarines and mammals may be inferred by the differential sensitivity of the insects/acarines' GABA receptors versus mammalian GABA receptors.

Eprinomectin is an endectocide in the macrocyclic lactone class that binds to glutamate gated chloride channels that are present in invertebrate nerve and muscle cells and increases the permeability of the cell membrane to chloride ions that triggers hyperpolarization of the nerve or muscle cell in susceptible parasites, resulting in paralysis and death of the parasite.

Praziquantel's mode of action is not precisely known, but treated tapeworms undergo muscular paralysis accompanied by a rapid influx of calcium ions and the disruption of the tegument.

Pharmacokinetics:

After a single topical administration to healthy male and female cats of a combined topical formulation containing esafloxolaner (12 mg/mL), eprinomectin (4 mg/mL), and praziquantel (83 mg/mL), at dose volumes of 0.06, 0.12, or 0.24 mL/kg, there was a dose proportional increase in the exposure of each ingredient based on maximum plasma concentration (C_{max}) and area under the plasma concentration time curve (AUC). After repeated monthly doses of the combined topical formulation at the target dose of 1.44 mg/kg esafloxolaner, 0.48 mg/kg eprinomectin, and 9.98 mg/kg praziquantel, steady state was reached by the fourth dose for esafloxolaner and after the second dose for eprinomectin and praziquantel. Additionally, modest accumulation was observed for esafloxolaner (approximately 3-fold) and praziquantel (approximately 1.5- to 2-fold) between the first and fifth dose, whereas no accumulation was observed for eprinomectin.

Effectiveness:

Heartworm Prevention:

In well-controlled laboratory studies, NexGard COMBO (esafloxolaner, eprinomectin, and praziquantel topical solution) was 100% effective in preventing the development of heartworms in cats inoculated with infective larvae of *Dirofilaria immitis* 30 days prior to the first of three consecutive monthly treatments.

Flea Treatment and Prevention:

In a well-controlled laboratory study, NexGard COMBO killed >92% of fleas within 24 hours. During subsequent weekly infestations, NexGard COMBO killed >95.5% of fleas within 24 hours through Day 31 and killed fleas before they could lay eggs. The effectiveness against adult fleas at 24 hours post-infestation in the treated cats virtually eliminated flea egg production (99.8 – 100% control of flea egg production by 24 hours) throughout the remainder of the month.

In a field safety and effectiveness study in the United States, conducted in households with existing flea infestations, the effectiveness of NexGard COMBO against fleas was 97.8%, 99.6%, and 99.9% when assessed on Days 30, 60, and 90, respectively. Cats with signs of flea allergy dermatitis showed improvement in alopecia, dermatitis/pyodermitis, pruritus, erythema, papules, and scaling, as a direct result of eliminating fleas.

Tick Treatment and Control:

In well-controlled laboratory studies, NexGard COMBO demonstrated >95.1% effectiveness against *Ixodes scapularis* 48 hours post-infestation for a month and >95.6% effectiveness against *Amblyomma americanum* 72 hours post-infestation for a month.

Treatment and Control of Roundworms, Hookworms, and Tapeworms:

In 2 well-controlled laboratory studies, NexGard COMBO provided 98.9% and 100% effectiveness against natural and/or induced roundworm infections with the dose-limiting gastrointestinal nematode species (adult *Toxocara cati*), respectively. Effectiveness studies against fourth stage larval *Toxocara cati* and hookworms (adult and fourth stage larval *Ancylostoma tubaeforme*; adult *Ancylostoma braziliense*) were conducted with an early formulation. The doses of eprinomectin in this early formulation are equivalent to that of the final formulation of NexGard COMBO. In well-controlled laboratory studies, NexGard COMBO provided on average 92.8% effectiveness against natural and/or induced infections with *Dipylidium caninum*.

Target Animal Safety:

Margin of Safety Study:

NexGard COMBO was applied topically to healthy kittens (8 to 9 weeks of age) at 1X, 3X, or 5X the maximum exposure dose six times at 28-day intervals; kittens in the control group were dosed with mineral oil. One kitten in the 5X group exhibited recumbency, tremors, hypothermia, ataxia, disorientation, and pupil dilation (responsive to light) 9 hours after the third dose. This kitten received supportive care, including washing the application site, and recovered within 48 hours post-dose. During necropsy, a dark red subcutaneous area (<5 mm diameter) was observed in the treatment site area of three cats in the 5X group, but microscopic examination revealed no histologic abnormalities. No significant changes related to NexGard COMBO were observed for physical examination, body weight, clinical pathology (hematology, coagulation, and serum chemistry), histopathology, or organ weights.

Study in Heartworm Positive Cats:

Adult cats, 4.7 to 6.6 months of age, were experimentally infected with adult heartworms (*D. immitis*) by venous transplantation. All cats were negative for heartworm antibody, antigen and microfilariae prior to transplantation. Two weeks after transplantation, immunoserology verified positive antigen and the presence of microfilariae in all enrolled cats. A combination of fipronil, eprinomectin, praziquantel, and (S)-methoprene was applied topically to cats at 1X or 3X the maximum exposure dose once every 28 days for three consecutive treatments; cats in the control group were dosed with mineral oil. One cat in the 1X group exhibited cyanotic mucous membranes and tachypnea for 24 hours following the first treatment. The cat recovered and exhibited no abnormal signs following two subsequent treatments. There was no difference between the treatment groups in the number of adult *D. immitis* recovered at the end of the study.

Oral Administration Study:

Oral tolerance was evaluated to assess the effects of accidental oral ingestion. Kittens (male and female) ranging in age from 7.4 to 8.9 weeks were orally administered NexGard COMBO at 1X the maximum exposure dose; kittens in the control group were dosed with saline. Cats were observed for adverse reactions at 1, 2, 3, 4, and 8 hours following administration, then twice a day until Day 14. All 8 cats administered NexGard COMBO immediately exhibited excessive hypersalivation after oral administration. However, all cats stopped salivating within 1 hour after exposure. No additional health-related observations were seen for the remainder of the study.

How Supplied:

NexGard COMBO is packaged as a single dose in 0.3 mL (for cats 1.8-5.5 lb) and 0.9 mL (for cats 5.6-16.5 lb) applicators. Each size applicator is available in cartons containing 1, 3, or 6 applications.

Storage Information:

Store at 59° – 86°F (15° – 30° C). Brief periods up to 104° F (40° C) are permitted. Protect from light.

Approved by FDA under NADA # 141-570

Marketed by: Boehringer Ingelheim Animal Health USA Inc., Duluth, GA 30096

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Unveiling the secrets to a thriving farmers market adventure

Farmers markets are a vibrant hub of fresh produce, artisanal goods, and a delightful way to support local farmers and businesses. Whether you're a seasoned market-goer or a first-timer, here are five valuable tips to make your farmers market visit successful and enjoyable:

1. Come Prepared:

Wear comfortable shoes, as you'll likely do a fair amount of walking. Bring reusable bags or baskets to carry your purchases, reducing the need for single-use plastic bags and making it easier to manage your items. Additionally, consider bringing cash, as some vendors may not accept credit cards.



2. Arrive Early

The early bird catches the worm, and in this case, the freshest produce! Arriving early at the farmers market allows you to browse through the widest selection of fruits, vegetables, and other products. You'll have more time to interact with the farmers and vendors, and you might even discover limited-quantity or specialty items that tend to sell out quickly.



3. Explore Mindfully:

Farmers markets offer an array of tempting choices, from colorful fruits and vegetables to artisanal cheeses and freshly baked goods. Take your time to explore the stalls and interact with the vendors. Ask questions about their products, farming practices, and cooking tips. Being curious can lead to exciting new culinary experiences and deepen your connection with the local food community.

4. Embrace Seasonal Produce:

One of the joys of shopping at a farmers market is indulging in seasonal delights. Keep an open mind and be willing to try new fruits and vegetables that might not be available at grocery stores year-round. Seasonal prod

5. Plan Your Meals:

To make the most of your market haul, plan your meals around the fresh ingredients you purchase. Create a shopping list based on what's available and in-season. This will not only inspire your cooking but also reduce food waste. Consider trying new recipes that highlight the flavors of the seasonal produce you've chosen.

By following these five tips, you'll enhance your farmers market experience and support local farmers and artisans. From savoring the taste of freshly harvested fruits to engaging with your community, a successful farmers market visit is a truly rewarding experience. Happy shopping!



Shelter Dogs

Vulnerable to Tick and Mosquito-Borne Diseases: Unveiling Hidden Health Risk

As temperatures rise, the relentless spread of ticks and mosquitoes to new regions is accompanied by the dangerous diseases they carry. A recent study from the University of Georgia suggests that shelter dogs in the eastern U.S. may be disproportionately affected by this growing threat.

Researchers delved into the health of shelter dogs, analyzing blood samples from 3,750 canines across 19 states in the eastern U.S. The focus was on heartworm and three tick-borne bacteria prevalent in these animals.

The results were concerning. Over 10% of the dogs carried heartworm infections, with more than 8% exposed to the bacteria causing Lyme disease. A further 10% were infected with bacteria leading to anaplasmosis or ehrlichiosis, lesser-known but equally serious diseases transmitted by ticks. Worryingly, nearly 5% of the dogs exhibited multiple infections, indicating exposure to multiple disease-causing agents.

Preventive medications can curb these diseases, but access to veterinary care often determines their use. Many neglected or stray shelter animals lack these preventatives, leaving them vulnerable to these potentially fatal illnesses. Although treatment options are available for heartworm infections, they can be expensive and may require medication or surgery. Unfortunately, long-term infections can prove difficult to treat.



Corinna Hazelrig, lead author of the study, emphasizes the importance of preventive medications: "Preventatives can be expensive, and some pet owners may not want to or be able to invest in them. However, these pathogens are common throughout the eastern United States, and the best management strategy for your pet's health is to use preventive medications on a regular basis."

Climate change plays a role in the spread of these disease vectors. Mosquitoes and ticks, carriers of these ailments, are expanding their range due to changing climates. This geographical shift affects dogs and humans alike, posing a significant health risk.

Lyme disease, for instance, causes fatigue, lameness, and kidney damage in dogs. For humans, it results in symptoms such as fever, rash, and joint pain.

The study also highlights the role of dogs as sentinels for human infections, with regions having high canine exposure to Lyme disease bacteria correlating to higher rates of human infection.

The study underscores the vital role of preventive measures, not only for pets' welfare but also for human health. The ongoing collaboration with the Companion Animal Parasite Council (CAPC) provides invaluable data, helping veterinarians, physicians, and pet owners assess the risk of exposure to these diseases across North America.

This eye-opening research, co-authored by dedicated experts, serves as a reminder of the importance of vigilance and proactive measures in safeguarding our beloved furry companions and ourselves from the expanding threat of tick- and mosquito-borne diseases.

SHOCKING REVELATIONS: VETERINARY BEHAVIORISTS TRACK DOGS BEHAVIOR 6 MONTHS POST ADOPTION



A new study offers rare comprehensive data on what owners can expect in the six months after adopting a dog from a shelter: These dogs may display a variety of problem behaviors that ebb and flow, but owners tend to be highly satisfied with the four-legged family addition despite the lengthy adjustment period.

Researchers surveyed new owners of dogs adopted from five Ohio shelters at four time points after the pet went home – seven, 30, 90 and 180 days later – using a research tool called the Canine Behavioral Assessment & Research Questionnaire (C-BARQ).

INTERESTING RESULTS

Results showed the dogs had a high prevalence for aggression toward strangers, their owners and other dogs that changed in a variety of ways over time, and separation-related behavior problems decreased at the six-month time point. By the study's end, 93.7% of owners rated their dog's overall behavior as excellent or good and 100% reported their pet had adjusted to the new home extremely or moderately well.

"We really got to see where in the timeline the pet's behavior may change or may not change, and that's really the key," said lead study author Kyle Bohland, assistant professor-clinical of behavioral medicine in the Department of Veterinary Clinical Sciences at The Ohio State University.

"The shelter system touches many lives, both humans and pets," said Bohland, whose practice centers on companion animal behavior. "And so it's important for us to be able to counsel owners on what may or may not change in the future so they can be better prepared to handle those consequences and then, hopefully, keep dogs in homes."

The study was published recently in the journal PLOS ONE.

WHAT YOU NEED TO KNOW ABOUT SHELTER DOGS

Statistics show that about 2 million dogs are adopted from U.S. shelters every year.

An internet search about adopting shelter dogs will return results suggesting these pets' behavior will change three days, three weeks and three months after joining a household. Three days makes sense, Bohland said, because the stress hormone cortisol is known to spike in dogs when they enter a new environment, and then returns to normal in a few days.

“But the three-week and three-month rule really had no scientific basis,” he said. Previous studies on adopted shelter dogs took a piecemeal approach, testing one point in time in the new home or using unvalidated surveys.

So Bohland and his colleagues set out to take a longer look at dog behavior changes in their forever homes using C-BARQ, which provides a standardized way to assess an individual dog’s behavior. They recruited participants who adopted dogs from four shelters in the Columbus area and one in Cleveland.

Ninety-nine new adopters completed the first survey a week after taking their dogs home, and repeat surveys were emailed to those participants one, three and six months after the adoption. Sixty-two owners answered all four surveys.



SURVEY REVEALS ANSWERS

The survey contained 42 questions asking participants to use a 0-4 scale to rate excitability; aggression directed toward strangers, owners and either familiar or unfamiliar dogs; fear; touch sensitivity; separation-related behavior; attachment and attention seeking; chasing; and energy level. Owners were also asked at each time point to rate their overall satisfaction with the dog’s behavior and document any changes in their household.

Among behaviors that changed, results showed that a few increased at all time points: stranger-directed aggression, chasing behavior and training difficulty. Increases in excitability and touch sensitivity were reported at 90 and 180 days.

Two characteristics, separation-related behaviors and attachment and attention-seeking, decreased by the six-month mark.

Of behaviors that didn’t change, a few still stood out for their high prevalence at various time points: dog-direction aggression (75%), familiar dog aggression (37.8%), and owner-directed aggression (32.3%).

“The biggest thing that stuck out to me was that we’ve got a lot of aggression among dogs in our community. That definitely concerns me from a public health standpoint and from a human mental health standpoint, because we’ve got a lot of dogs that are struggling – and that has human implications,” Bohland said.

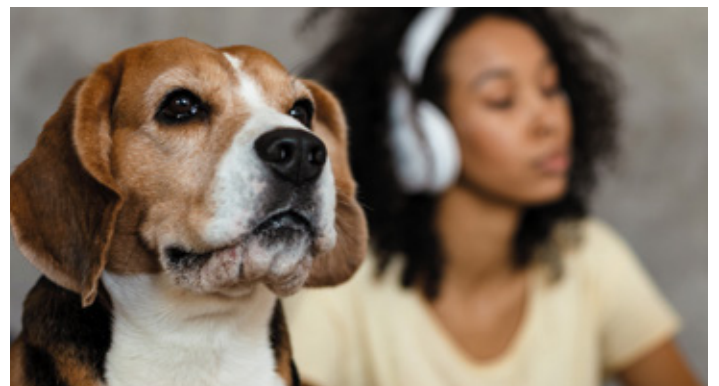
“And the other big piece was that despite that, people were pretty darn happy with their dogs,” he said. “This combination of findings is a reminder that just about everybody has, on some level, dealt with unpredictable behavior problems, illnesses and the quirks of animal aging – and we still love our dogs. Overall, this really speaks to the bond people have with their pets.”

Statistical analysis suggested that in some cases, a dog’s size, age or sex was associated with specific behaviors. Dogs treated in the shelter with anti-anxiety medications were more apt to show aggression toward strangers and touch sensitivity after adoption – likely because those pets were more difficult to handle from the beginning, not because the medications made it worse. Researchers deliberately left breed out of the analysis – most dogs were described as mixed breeds, and all were neutered.

Based on what the researchers see in their practice, some behavior changes make sense: Stranger aggression may increase as dogs feel more protective of their new environment, and separation anxiety logically lowers as dogs settle into a household routine. Touch sensitivity might go unnoticed for months – until that first nail trim.

Seven adopted dogs were returned to the shelter during the study, resulting in a return rate of 7.1%. The national average return rate is about 15%.

“The bottom line is we don’t want to see dogs coming back to shelters,” Bohland said. “A lot of what we study comes from clients having questions. So my hope is that in the long term, this can help shelter employees and veterinarians target interventions that will help keep more dogs in their homes.”



Unleash your impact:

Joining the Association of Shelter Veterinarian for exclusive benefits and game changing opportunities.



The world of veterinary medicine is a vast and diverse one, with various specialties and niches that cater to different aspects of animal health and welfare. Among these, the Association of Shelter Veterinarians (ASV) stands out as a crucial organization dedicated to the betterment of animal welfare in shelters and rescue organizations. For professionals and enthusiasts passionate about this field, joining ASV offers a multitude of benefits that can enhance both their careers and their impact on animal lives.

1. Access to Members-Only Directory

The ASV offers its members an exclusive members-only directory, providing a comprehensive list of professionals, organizations, and supporters connected to the shelter veterinary community. This directory serves as a valuable networking tool, enabling members to connect with like-minded individuals, potential mentors, and collaborators. The power of networking within a specialized field cannot be underestimated, and the ASV directory paves the way for meaningful connections.

2. Annual Member Events

ASV organizes annual member events that bring together professionals, experts, and enthusiasts from the shelter veterinary realm. These events provide a platform for sharing insights, discussing advancements, and collaborating on solutions to challenges faced by the community. Whether it's through seminars, workshops, or panel discussions, these events foster a sense of camaraderie and shared purpose among members.



3. Networking Opportunities

Beyond the annual events, ASV offers year-round networking opportunities. From online forums and discussion groups to local meetups and workshops, members have ample chances to connect with others who are equally passionate about shelter veterinary medicine. This networking ecosystem not only facilitates knowledge sharing but also opens doors to potential career prospects, partnerships, and collaborations.

4. ASV Program Updates, News, and Alerts

Staying updated with the latest trends, research, and developments in shelter veterinary medicine is crucial for anyone invested in this field. ASV provides its members with regular program updates, news, and alerts related to animal welfare, veterinary practices, and industry advancements. This ensures that members remain informed and equipped to provide the best possible care to sheltered animals.



5. Monthly Newsletters

ASV's monthly newsletters serve as a valuable resource, delivering a curated collection of information, articles, and insights relevant to shelter veterinarians.

These newsletters cover a wide range of topics, from medical advancements to behavioral strategies, and from case studies to success stories. For professionals seeking to enhance their expertise, the newsletters offer a continuous stream of knowledge.

6. Continuing Education Offerings

As the field of veterinary medicine evolves, continuous learning is essential to stay updated with the latest techniques, technologies, and best practices. ASV provides its members with access to various continuing education offerings, including webinars, workshops, and seminars conducted by experts in the field. This ensures that members can refine their skills and provide the highest quality care to animals in their care.

7. Discounts on Products and Services

In addition to the aforementioned benefits, ASV membership often comes with exclusive discounts on a range of products and services relevant to shelter veterinary practice. These discounts can include everything from medical supplies and equipment to educational resources and software, further incentivizing membership.

In conclusion, the Association of Shelter Veterinarians (ASV) offers a comprehensive array of benefits for those involved or interested in the field of shelter veterinary medicine. From networking opportunities and access to a members-only directory to job search tools, continuing education, and exclusive discounts, ASV membership provides a robust support system for professionals committed to improving the lives of animals in shelters and rescue organizations. By joining ASV, individuals can connect, learn, and contribute to a community that shares their passion for animal welfare.

Join today: <https://www.sheltervet.org>

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