

TVC

Digital magazine

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Every Minute Counts

Time means money for an independent veterinary practice



Step into the **NEXT** **GENERATION** of Internal Parasite Protection

NEW!

- ✓ Prevents heartworm disease **and** treats & controls roundworms, hookworms & tapeworms
- ✓ First feline product to combine eprinomectin & praziquantel
- ✓ Approved for cats and kittens as young as 7 weeks of age, weighing as little as 1.8 lbs
- ✓ Easy-to-use, stress-free applicator
- ✓ Rx product available through veterinarians



IMPORTANT SAFETY INFORMATION: For topical use only. Side effects may include emesis, anorexia, lethargy, and hair changes and skin reactions at the site of application. If ingested, hypersalivation, vomiting and lethargy may be observed. The safety of CENTRAGARD has not been tested in kittens less than 7 weeks of age or less than 1.8 lbs.



CENTRAGARD is a Merial product. Merial is now part of **Boehringer Ingelheim**.

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Centragard™ 
(eprinomectin and praziquantel
transdermal solution)

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TVC University: A Way to Learn from Best Practices

By Sarah Sgromo, Education Experience Specialist

TVC has always had the goal to

provide Best Practice information to the Co-op Owners like you. As Rich Morris often says, “You can’t discount yourself into profitability”, so TVC needs to be more than just rebates and discounts.

This magazine is one example of how we take the collective intelligence of the Co-op and provide it to you on a monthly basis. TVC University has been expanding over the past five years to provide other ways to get you the needed knowledge that will help you provide the best health care to patients while making the most profit. Patient care comes first, but without making a profit, you cannot stay in business to provide that great health care.

Below you will find a short description and links to our free offerings that come as part of the TVC membership (paid for by your support of purchases made with TVC vendor partners). In 2019, TVC will be greatly expanding our offerings to provide you with great Best Practice education and CE opportunities.

TVC University E-Courses

Our newest offering, TVC University E-Courses, are TVC and vendor-developed, self-paced e-courses that attendees can take to receive RACE-approved continuing education credit. Coming soon, offerings will be approved to get credit from Veterinary Hospital Managers Association as well. These programs are hosted on TVC University’s learning platform that utilizes the Brainshark service. TVC University E-Courses are purely educational resources for TVC Co-op owners to increase their veterinary and business knowledge at their own pace, and are available 24/7. [Click here](#) to see what we offer now and will be offering in 2019. *

TVC University Live Webinars

These webinars are quarterly TVC-produced webinars, offering a synthesis of best practice business strategies and great animal healthcare. These webinars are not RACE-approved. Rather, they are quarterly webinars involving presentations on Business Sen\$e, a TVC Best Practice Q&A, and a message from a TVC vendor. These webinars are held live during various months of the year, usually falling on the third Tuesday at 9:00 am and 1:00 pm CST. [Click here](#) to see our current schedule of webinars.

CE LIVE Online Webinars

CE LIVE Online Webinars are vendor-produced, where participants can receive 1 hour of RACE-approved CE credit for attending. These webinars are held on the second Tuesday of the month at 9:00 a.m. and 1:00 p.m. CST. [Click here](#) to see our current schedule of webinars. *

TVC West and Central

TVC has partnered with Modern Veterinary to offer TVC-sponsored lecture tracks at Chicagoland Veterinary Conference in Chicago, IL (TVC Central) and Wild West Veterinary Conference in Reno, NV (TVC West). The TVC track consists of four lectures that are co-sponsored with TVC vendor partners who are interested in providing an educational program. TVC vendor partners can also participate at these conferences by attending the trade show and/or sponsoring a TVC social event.

TVC East

TVC East CE Conference and Trade Show is a TVC Fall conference in Atlanta, GA. It is a one-day CE and trade show event, where attendees can earn RACE CE credit, meet and mingle with TVC’s vendor partners, enter to win raffle prizes, and learn more about the partnerships that TVC is cultivating on your behalf. And, the best part is this opportunity is **FREE** to TVC Co-op Owners and clinic staff members! *

TVC University Newsletter

Please keep your eyes open for the TVC University Newsletter that goes out twice a month to all TVC Co-op Owners, with updates on TVC University offerings, including upcoming educational events.

We are continuously creating programs. Topics for future courses come from suggestions made by TVC Co-op Owners. If you have any suggestion for future education topics, submit them [HERE!](#)

*All programs are RACE-approved and NYS-accredited



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NEWS

This Month at the Veterinary Cooperative

Switch Promotions

This month we are continuing our monthly Switch Promotion campaign to encourage all TVC Owners to switch and support TVC vendors and share in \$17 million in rebates. Remember, supporting our vendors helps to ensure they will continue supporting us with programs, and helps to put money in your pocket through both individual and group goals. It also helps get you closer to the “Strive for \$450” goal.

In September as the kids head back to school with new backpacks and school supplies, why not consider some new supplies of your own, in the form of equipment? Check out these September Switch promos on equipment:

- Get a FREE VetScan UA Starter Kit with the purchase of a VetScan In-House Lab System through MWI.
- K-Laser is offering twice the traditional trade-in value on your old laser or, if you don't have a trade-in, get \$2000 off the purchase of a Platinum 4 laser, plus TVC owners also earn their TVC rebate!
- Need help financing a major purchase? OnePlace Capital has extended their Summertime Finance Specials to coincide with these offers. Choose from their Payment Pass Option or Delayed Billing Option.
- Merck has extended their “Grow 20%, Get 20%” PurrchasePoints™ promo on purchases of Bravecto and/or Nobivac!

Be sure to check out all of these promos on our members-only website!

Webinars



[Register](#)

Systemic Hypertension in Cats
October 9 | 9 a.m. & 1 p.m. (CST)

Please join Dr. Clarke E. Atkins and **Boehringer Ingelheim** for a 1-hour presentation on “Systemic Hypertension in Cats” and earn **1 CE credit**.

TVC West



[Register](#)

TVC West: 2018 Wild West Veterinary Conference
October 3 – 7, 2018 | Reno, Nevada

Wild West Veterinary Conference is a great place to expand your knowledge and grow your network. TVC will be sponsoring a fantastic lineup of speakers and lecture topics you won't want to miss. **TVC Co-op Owners can receive 10 percent off their registration with promo code: TVC2018.**



The lectures sponsored by TVC and presented by TVC Vendor Partners include:

- **Dr. Edward Koronowski:** “How to Address Fear and Anxiety in Your Patients” brought to you by Ceva Animal Health
- **Dr. Avi Deshmukh & Jeff Wineke:** “Why Breed Nutrition & How to Improve Nutrition Discussions” brought to you by Royal Canin
- **Dr. Melissa Hall:** “Ectoparasite Control & Dermatological Conditions” brought to you by Boehringer Ingelheim
- **Dr. Joseph Hahn:** “Canine Infectious Respiratory Disease Complex” brought to you by Merck

Promotions

Abaxis: Switch to Abaxis and receive a free VetScan UA Urine Analyzer Starter Kit with the purchase of a VetScan In-House Laboratory System now through September 29, 2018.

Bayer: Exclusive TVC-Claro promo! Buy 2 boxes of Claro and get \$150 in a rebate check. The \$150 allows you to offer the client an instant rebate of \$10 at checkout. Get 15- \$10 consumer rebates!

BI: There's still time to grab some Fall Savings! Buy 20 Cartons & Get 7500 PurrrchasePoints™! Mix & Match: Frontline Gold; Nexgard; Heartgard; Centragard through September 21, 2018.

BI: Centragard: Buy a 3-dose carton, get a 1-dose carton FREE through December 31, 2018.

Ceva: Great Q3 savings from Ceva on Behavior, Duoxo, and Clenz-A-Dent, as well as Catego and Vectra, including all types of Buy 1, Get 1's and Mix and Match. Be sure to check out the Ceva Q3 Promo detailer to see all the great offers! But hurry, the offers end September 30, 2018!

Hill's: Metabolic Awareness Promo: Save 15 percent, get \$5 coupons, and earn 2000-4000 PurrrchasePoints™ Runs from July 15 through September 30, 2018.

KVP Custom Orthotics: KVP Custom Orthotics has just launched an exclusive rebate program with TVC. They are offering an \$85 rebate on each KVP Custom Orthotics brace!

Label Value: Labels for vet offices. Save 10 percent off your order with promo code TVC10.

Merck: Switch to Merck and Grow 20 percent and Get 20 percent with Merck's PurchasePoints™ promo on purchases of Bravecto and/or Nobivac, *plus an additional 2020 points just for qualifying!*

Merck Bravecto Client Offer: Pet parents can receive a \$15 rebate for 2 doses; Mix, Match, and save when you purchase any Bravecto product!

MWI September Bonus Program: Earn up to a 3 percent bonus rebate on eligible products if you purchase a minimum of \$1,000 from MWI during September and achieve one of two growth levels. Plus, earn up to a 3 percent bonus rebate

on VetOne, in addition to the standard 2 percent VetOne Q3 rebate, for a total Q3 VetOne rebate potential of up to 5 percent! Rebates on VetOne products are paid back to dollar one.

One Place Capital: Check out the great summer financing options from One Place Capital! Get 3 payment vouchers to skip a payment at any time during your loan, or get a loan now and make no payments until 2019! Extended through September 30, 2018!

PetLink: New User Offer: Buy 2 boxes of PetLink slim microchips and get either a free box of 10 PetLink slim microchips or a free PetLink Compact Max scanner.

PurVetLogic: Animal Facility Disinfectant Hospital and/or Kennel starter kits at special TVC pricing!

Purina: Buy 2 bags of 25-lb. Purina ProPlan Veterinary Diets HA Hydrolyzed Chicken Flavor Canine Formula and Get 1 Case of Purina ProPlan Veterinary Diets HA Hydrolyzed Chicken Flavor Canned Canine Formula FREE; September 4 – October 12, 2018.

Securos Surgical: Buy a Vet Tech Pack (includes 3 premium instruments and carry pouch) at 30 percent off through October 31, 2018!

Spectrum Vet: Spectrum Vet guarantees all rebates in September! Look to Spectrum Vet for the diagnosis and treatment of allergies.

VetOne: Switch to VetOne and enjoy 11 percent to 111 percent savings on scores of everyday items for your clinic!

Vetoquinol: Buy \$1,000 of Vetprofen (Mix & Match; on one invoice), Get a FREE customized Ultrasound stethoscope September 1 through September 30, 2018.

Vetsource: Switch to Vetsource for your online pharmacy and your pet parents will save 20 percent on senior supplements through September 30, plus you'll get a host of Perks for being a TVC member/owner!

Wedgewood: Get Big Savings on Tiny Tabs: Metronidazole (as Benzoate) 50 mg, 100 ct.: \$19.00.

Every Minute Counts

Time means money for an independent veterinary practice



At an independent veterinary clinic, the little things can add up – especially minutes. Veterinarians and staff have to make the most of their time with clients, as well as setting up and using equipment, and performing tests to get a complete picture of what their patients need.

Oklahoma-based Choctaw Family Pet Care has made several investments to increase efficiency in the day-to-day tasks at the practice. For instance, the veterinary practice upgraded to the [Abaxis](#) VetScan Urine Analyzer. The VetScan UA analyzer is designed for easy touchscreen operation, unique diagnostics, easy-to-read – and quick – results. There have been clinical benefits to using the new analyzer, but Carlye Yancey, Vet Tech and Biologist at Choctaw Family Pet Care, says she appreciates the time she is able to use in other areas rather than waiting on results.

“I know it doesn’t sound like a lot, but saving two minutes is important,” she says. “If you’ve got a lot going on, it really helps.”

Whenever you have multiple animals and multiple things going on in the practice, you don’t have to worry about sitting for two minutes just to read colors, Yancey says. “It’s much quicker, and honestly I can get quite a bit done in two minutes.” Whether it’s gathering items for the exam room, answering a client’s questions, or even reading sediment on the microscope – those are all things veterinary staff couldn’t do before with a traditional urinary stick test.

Before, with the sticks, veterinarians or staff had to sit and count the time elapsed. The urine dipstick would read certain colors and values at certain timeframes. “With the scanner, all we have to do is put the urine on the stick, put it into the scanner and it does everything for us,” says Yancey.

Although the old way was reliable, Yancey says it’s nice to have a product geared toward animals. “Everyone just used human dip sticks. Now this is actually designed for animals. It’s more accurate, so you’re getting better diagnoses with it.”

Choctaw Family Pet Care uses the VetScan UA with every animal that comes in for either urinary issues or a

recheck for urinary issues. The most common issue they check for is UTI, but there are several other disease states where the analyzer comes in handy. “Sometimes, if we are trying to diagnose something like diabetes, it’s good for that because it can show us glucose or ketones in the urine,” Yancey says. “Ketones are a byproduct of the body starting to eat up the muscles. It tells us the severity of diabetes; what stage it is in. The urine test results can also indicate kidney failure.”

Efficient improvements

Along with the VetScan UA, Choctaw Family Pet Care has been incorporating more technology into their day-to-day activities, Yancey says. “We can do a lot of things in the room with our iPads.” For instance, instead of writing things

Although the old way was reliable, Yancey says it’s nice to have a product geared toward animals. “Everyone just used human dip sticks. Now this is actually designed for animals. It’s more accurate, so you’re getting better diagnoses with it.”

down on a notepad and then walking out of the exam room to enter it into the computer, the veterinarian and staff can enter it into their iPads while continuing the exam. Veterinary staff can also note charges for services.

“We’re pretty up to date compared to other veterinary clinics,” says Yancey. “We like to stay up to date and do things that are the best for the patient, and are the best use of our money and resources.” ■

VETSCAN Urine Analyzer vs. basic urine test strips

According to [Abaxis](#), some of the benefits of upgrading to the VetScan UA over traditional urine test strips include:

VetScan UA	Basic urine test strips
Intuitive, easy to follow prompts on screen reduce margin for human error	No screen prompts provided; must read enclosed instructions
Automatically displays analyte values on LCD screen or prints to hand-held printer	Compares color shades and requires perfect strip alignment for accurate interpretation
Objective results eliminate the possibility of human error with subjective strip readings	Subjective results interpretation dependent on the user
On-screen timer delivers results on time, every time, preventing missed read times	Manual timing leads to variable read times and inconsistent interpretation
14 reported analytes including Microalbumin and Urine Protein:Creatinine Ratio	Most strips only include 10 analytes, requiring other modalities for MA & UPC
60 seconds to results	Analytes take different amounts of time: read between 30 and 120 seconds
Most cost-effective option for 14 urine chemistries with MA and UPC included	Additional costs for MA and UPC send out to reference lab.

Take a bite out of Lyme.

NexGard® (afloxolaner) is the **ONLY** chew that combines all of the following benefits into the one that dogs prefer¹:

- ✓ Kills fleas
- ✓ Kills ticks — lone star ticks, brown dog ticks, American dog ticks, and black-legged (deer) ticks
- ✓ **And FDA-approved for the prevention** of *Borrelia burgdorferi* infections as a direct result of killing *Ixodes scapularis* vector ticks



¹Data on file.

NexGard is a Merial product.
Merial is now part of Boehringer Ingelheim.



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

Addressing Your Team's Needs

How to galvanize your team when times are tough

By Lisa Earle McLeod

Welcome to the new normal. We're

adding jobs daily, but most people are still miserable at work. Workplace study data confirms what leaders are experiencing: work is harder, over half of all employees are disengaged and many people actively hate their jobs.

In the old days leaders could rally the troops by painting a picture of a glorious, prosperous future, garlanded with bonuses, perks and advancement. Today, people want both money and meaning. They're also less trusting of senior

One of the essential roles of a leader is to remind your team why their work matters. When employees seem like they don't care, it's often because leadership hasn't given them anything important to care about. Revenue objectives, market share targets and productivity numbers are worthy goals.

leadership promises, having seen evidence that a merger, acquisition, economic downturn, or CEO change makes all past promises null and void.

Given the climate, how can well-intended leaders galvanize their teams? It's simple, but not easy. You must go beyond the traditional transactional approach to work and address three core human needs:

No 1. Connection: Get emotional

Discussing emotions at work can make people queasy. But have you ever noticed that you never hear managers saying, "Please don't get so excited?" Emotions are at the center of every human endeavor.

What would happen if you walked in one day, looked one of your employees in the eye and told him or her, "I'm so grateful you're on our team, and it's not just about the work; it's also about how much you as a person add to this place. I love having you here"?

It sounds hokey, but every time I suggest this in a presentation, people's eyes fill with tears. Human connection isn't a nice thing to have; it's a must-have. Meaningful connections

provide people with the internal fortitude they need to stay productive during tough times.

No 2. Meaning: Provide context

We all want to know our lives – and work – actually count for something. A person who makes widgets may do a good job of quality control. But if his boss holds a team meeting every Monday morning and shares stories about people who bought the widgets and how their lives were made better, more fun, more interesting, safer or easier as a result, that imagery is going to stick. The person responsible for stamping out part 357A will know his work counts for something more than a production number. He has a purpose.

No. 3. Leadership: Apply daily

It would be nice if we all went through our days feeling beloved by our families and co-workers, secure in the knowledge our work makes a real difference. Sadly, angst and worry are the typical default setting for the human brain. Left to the mercy of our own perceptions, our jobs can descend into an endless series of meaningless tasks. That's why we need leaders who can reset us in times of uncertainty and challenge.

In fact, one of the essential roles of a leader is to remind your team why their work matters. When employees seem like they don't care, it's often because leadership hasn't given them anything important to care about. Revenue objectives, market share targets and productivity numbers are worthy goals. But the secret of true emotional engagement is to get beyond the numbers and make it personal.

People who are connected to each other and have a sense of purpose about their work will push through tough conditions to get things done. If your team is facing a challenge, or they seem to be disengaged, ask yourself: Do they know why their work matters? And most importantly, do I as a leader reinforce meaning and connection every single day? ■

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Industry NEWS



Rocky Mountain spotted fever could soon spread to U.S.

A new species of tick is causing Rocky Mountain spotted fever to ravage Mexico and may soon invade the United States, according to a study published in the journal of [Emerging Infectious Diseases](#) and highlighted by *USA Today*. The brown dog tick – not to be confused with American dog tick – is a cosmopolitan parasite that thrives in warm climates and is more likely to bite humans than other types of ticks, although it favors dogs for hosts. It's also the cause of an epidemic of Rocky Mountain spotted fever that killed 80 people in one Mexican state alone. Rocky Mountain spotted fever is spread by ticks carrying Rickettsia bacteria. It can be fatal and is characterized by fever, headache and muscle aches with a rash that has crusted skin at the bite site.

Nine confirmed cases of canine flu in Connecticut

According to Connecticut-based *WFSB*, the Connecticut state veterinarian reported that there have been nine confirmed cases of dog flu in the state. The H3N2 Canine Influenza A cases were reported between July 18 and Aug. 10. The nine dogs were seen by different private vets between July 18 and July 30. They received examinations, diagnostic testing and treatment. Vets across the state warned pet owners that Connecticut is in the midst of a dangerous canine flu season.

AVMA supports passage of animal drug user fee legislation

The American Veterinary Medical Association (AVMA) applauds House and Senate lawmakers for their passage of the Animal Drug and Animal Generic Drug User Fee Amendments of 2018 (H.R. 5554/S.2434), “which are vital to increasing veterinary access to drugs approved by the U.S.

Food and Drug Administration (FDA),” the organization said in a release. In a significant victory for the veterinary community, the legislation includes language that would expand conditional approvals beyond minor uses and minor species. “When signed into law, the animal drug user fee amendments will reauthorize the FDA’s Center for Veterinary Medicine to continue collecting animal drug and animal generic drug user fees from the drugs’ sponsors,” AVMA says. “These fees – coupled with annual appropriations – support FDA’s animal drug review processes and ultimately improve veterinary access to FDA-approved drugs. Conditional approval of new animal drugs will incentivize the development of new and innovative products for conditions that prove particularly difficult to study.”

Survey: Some pet owners may harm pets to get opioids, veterinarians say

Newsweek reported that veterinarians in Colorado are concerned that some pet owners may be intentionally harming their animals in an attempt to get hold of prescription opioids, according to a survey conducted by researchers at the Colorado School of Public Health (CSPH). The role that vets plays in the opioid crisis has largely been overlooked, even though vets can and do prescribe powerful drugs, with potential implications for pet owners, animals and even veterinary staff themselves. The survey involved 189 vets, 13 percent of whom reported that they had seen a client who they believed had intentionally injured a pet, made them ill, or made them appear unwell, to obtain drugs. In many of these instances, Tramadol, the most common opioid stocked by veterinary practices, is the target. Nearly 45 percent of the participating vets knew of a pet owner or member of their team who was abusing opioids, while 12 percent said they were aware of a staff member that was giving out opioids for illicit use or abusing them.

Centragard™

(epinomectin and praziquantel
transdermal solution)

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

Description:

CENTRAGARD is a transdermal solution containing epinomectin 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 CENTRAGARD contains 4 mg of epinomectin and 83 mg of praziquantel, as well as the inactive ingredients (dimethyl isosorbide, glycerol formal, and butylated hydroxytoluene). Epinomectin belongs to the avermectin class of anthelmintics and is a mixture of homologous components referred to as epinomectin B1a and B1b. Praziquantel is a pyrazinoisoquinoline anthelmintic.

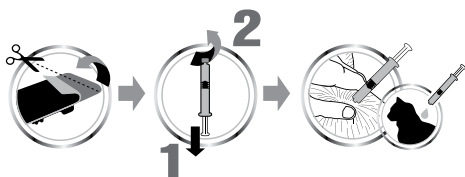
Indications:

CENTRAGARD is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*, and for the 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 (adult *Dipylidium caninum* and *Echinococcus multilocularis*) in cats and kittens 7 weeks of age and older and 1.8 lbs or greater.

Dosage and Administration:

CENTRAGARD is dosed at a minimum of 0.055 mL/lb (0.12 mL/kg), which delivers a minimum dose of 0.23 mg/lb epinomectin and 4.55 mg/lb praziquantel. Administer the entire contents of a CENTRAGARD unit applicator topically once a month as specified in the following table:

Cat Weight (lb)	Volume (mL)	Epinomectin (mg)	Praziquantel (mg)
1.8-5.5	0.3	1.2	24.9
5.6-16.5	0.9	3.6	74.7
16.6-22.0	0.3+0.9	4.8	99.6
22.1-33.0	0.9+0.9	7.2	149.4



To apply CENTRAGARD pull back the plunger of the unit applicator slightly and remove the cap. Part the hair in one spot on the midline of the neck between the base of the skull and the shoulder blades, place the tip of the unit applicator on the skin and apply the contents directly on the skin. If the weight of the cat requires a second application, apply the contents in the same manner as described above in the same location. Discard applicator after use.

Heartworm Prevention:

For prevention of heartworm disease, CENTRAGARD should be administered once a month. CENTRAGARD may be administered year round or at a minimum, should start 1 month before the cat's first expected exposure to mosquitoes and continuing at monthly intervals until at least one month after the cat's last exposure to mosquitoes. If a dose is missed and a 30-day interval between doses is exceeded, administer CENTRAGARD immediately and resume the monthly dosing schedule.

When replacing another monthly heartworm preventive product in a heartworm prevention program, the first treatment with CENTRAGARD 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 CENTRAGARD.

Treatment and Control of Roundworms, Hookworms and Tapeworms:

CENTRAGARD treats and controls roundworms (adult and fourth stage larval *Toxocara cati*), hookworms (adult and fourth stage larval *Ancylostoma tubaeforme*, adult *Ancylostoma braziliense*), and tapeworms (adult *Dipylidium caninum* and *Echinococcus multilocularis*) after a single administration or when given monthly as part of a heartworm prevention program. Cats may be exposed to and can become infected with roundworms, hookworms, and tapeworms throughout the year, regardless of season or climate. Clients should be advised of appropriate measures to prevent reinfection of their cat with intestinal parasites. Because the prepatent period for *E. multilocularis* may be as short as 26 days, cats treated at the labeled monthly intervals may become reinfected and shed eggs between treatments.

Human Warning:

Not for human use. Keep out of reach of children. Avoid contact with the application site for 5 hours following treatment. Wash hands after administering the product. If the product accidentally gets into the eyes, 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:

Do not administer orally. Cats may salivate excessively and vomit if CENTRAGARD is accidentally administered orally or is ingested through licking/grooming the application site (see ANIMAL SAFETY).

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

The safety of CENTRAGARD has not been tested in kittens less than 7-9 weeks of age or weighing less than 1.8 lbs (0.8 kg).

Adverse Reactions:

In a well-controlled field study emesis, anorexia, lethargy, temporary clumping or spiking of the hair, or mild, transient skin reactions (itching, hair loss) were reported. When cats licked the application site after treatment, temporary excessive salivation was observed. Oral ingestion of CENTRAGARD may also result in hypersalivation, vomiting and/or lethargy. In margin of safety studies, transient neurological signs such as ataxia, disorientation, lethargy, and pupil dilation were observed in some cats. Correct application will minimize the occurrence of such events.

To report suspected adverse events, for technical assistance or to obtain a copy of the SDS, contact Merial at 1-888-637-4251.

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

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.

Information for Owner or Person Treating Animal:

Echinococcus multilocularis is a tapeworm found in wild canids and domestic cats. *E. multilocularis* can infect humans and cause serious disease (alveolar hydatid disease). Owners of cats living in areas where *E. multilocularis* are endemic should be instructed on how to minimize their risk of exposure to this parasite, as well as their cat's risk of exposure. Although ML-635 was 100% effective in laboratory studies in cats against *E. multilocularis*, no studies have been conducted to show that the use of this product will decrease the incidence of alveolar hydatid disease in humans. Because the prepatent period for *E. multilocularis* may be as short as 26 days, cats treated at the labeled monthly intervals may become reinfected and shed eggs between treatments.

Mode of Action:

Epinomectin 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 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.

Effectiveness:

Effectiveness studies were conducted with an early formulation (ML-635), containing 8.3% fipronil, 0.4% epinomectin, 8.3% praziquantel, and 10% (*S*)-methoprene. The doses of epinomectin and praziquantel in ML-635 are equivalent to the final formulation of CENTRAGARD (epinomectin and praziquantel transdermal solution).

Heartworm Disease Prevention:

In well-controlled laboratory studies, ML-635 provided 100% effectiveness against induced heartworm infections after a single application.

Treatment and Control of Roundworms, Hookworms, and Tapeworms:

In well-controlled laboratory studies, ML-635 provided >90% effectiveness against natural and/or induced roundworm (adult and fourth stage larval *Toxocara cati*); hookworm (adult and fourth stage larval *Ancylostoma tubaeforme*; adult *Ancylostoma braziliense*), and adult tapeworm (*Dipylidium caninum*; *Echinococcus multilocularis*) infections.

Animal Safety:

Margin of Safety Study: A combination of fipronil, epinomectin, praziquantel, and (*S*)-methoprene was applied topically to 7 to 9 week old healthy kittens at 1, 3, or 5X the maximum dose (8 cats/group) six times at 28 day intervals. One 5X kitten exhibited ataxia, disorientation, and lethargy for 12 hours and exhibited pupil dilation for 24 hours following the 3rd treatment. This 5X kitten exhibited ataxia, disorientation, and lethargy for 6 hours, and moderate pupil dilation for 24 hours following the 4th treatment, and had pupil dilation following the 5th treatment. Hypersalivation was observed for one hour for one 5X kitten following the 1st treatment and one 3X kitten following the 4th treatment. One 5X kitten had slow pupillary light responses for one day after one treatment and one 3X kitten had slow pupillary light responses for 3 hours after one treatment. One control cat had marked pupil dilation and slow pupillary light responses lasting two hours after one treatment. Immediately post-treatment cats in all groups scratched and groomed the application site.

Study in Heartworm Positive Cats: Three groups (0X, 1X and 3X) of 12 young, 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 microfilaria in all enrolled cats. A combination of fipronil, epinomectin, 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. 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. Sixteen cats (8 male and 8 female) ranging in age from 9 - 10 months were studied. Eight cats were orally administered a combination of fipronil, epinomectin, praziquantel, and (*S*)-methoprene at 1X the maximum exposure dose; the 8 control cats were sham dosed. All 8 treated cats immediately exhibited hypersalivation after oral administration, and 2 cats vomited and 3 cats were lethargic during the 1-2 hour post-treatment observations. Treated cats continued to hypersalivate and lick lips/mouth for 1-2 hours after oral administration. Cats were monitored for 14 days thereafter, during which one treated cat vomited on Day 12.

Storage Information:

Store at or below 30°C (86°F) with excursions permitted to 40°C (104°F). Protect from light.

How Supplied:

CENTRAGARD 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.

NADA 141-492, Approved by FDA

Manufactured by:
Merial, Inc.,
Duluth, GA 30096-4640
USA
Made in France

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Revision date: Feb 2018

NexGard® (afoxolaner) Chewables

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

Description:

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

Indications:

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

Dosage and Administration:

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

Dosing Schedule:

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

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

Flea Treatment and Prevention:

Treatment with NexGard may begin at any time of the year. In areas where fleas are common year-round, monthly treatment with NexGard should continue the entire year without interruption.

To minimize the likelihood of flea reinfestation, it is important to treat all animals within a household with an approved flea control product.

Tick Treatment and Control:

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

Contraindications:

There are no known contraindications for the use of NexGard.

Warnings:

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

Precautions:

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

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

Adverse Reactions:

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

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

Table 1: Dogs With Adverse Reactions.

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

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

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

In the US field study, one dog with a history of seizures experienced a seizure on the same day after receiving the first dose and on the same day after receiving the second dose of NexGard. This dog experienced a third seizure one week after receiving the third dose. The dog remained enrolled and completed the study. Another dog with a history of seizures had a seizure 19 days after the third dose of NexGard. The dog remained enrolled and completed the study. A third dog with a history of seizures received NexGard and experienced no seizures throughout the study.

Post-Approval Experience (July 2018):

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

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

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

Contact Information:

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

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

Mode of Action:

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

Effectiveness:

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

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

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

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

Animal Safety:

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

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

Storage Information:

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

How Supplied:

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

NADA 141-406, Approved by FDA

Marketed by: Frontline Vet Labs™, a Division of Merial, Inc.
Duluth, GA 30096-4640 USA

Made in Brazil.

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