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Correcting a congenital cleft palate

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Understand your limits and your rights, whether you're a team member or manager, with these four facts from top employment attorneys.

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The feline facts

While there are 4.1 million more pet cats than pet dogs in the United States, roughly 45 percent of those cats didn't see a veterinarian at all in the last year. Learn the top five states for cat ownership, tips to increase feline visits and more at dvm360.com/felinefacts.



Me and my canine soulmate

Veterinary journalist Steve Dale, CABC, shares the story of his beloved pooch Chaser—including how his experiences with his dog's separation anxiety and cancer steered him into the pet world and triggered his mission to make sure all pets see the veterinarian regularly. Read his story at dvm360.com/soulmate.



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Fashion faux paws

When team members ignore the dress code, it's not just an issue of a shirt too low or a skirt too high, says *Firstline* Editorial Advisory Board Member Shawn McVey. The real concern is that team members are breaking the rules. Find out how to respond when team members diss the dress code at dvm360.com/dresscode.



Grow a happiness halo

Ready to harness your happiness? Learn to shut out the negative, accentuate the positive and be a change agent in your veterinary practice with advice from Dr. Ernie Ward at dvm360.com/behappy.



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Mission

To inspire receptionists, credentialed technicians, practice managers, and veterinary assistants to build strong relationships with co-workers, improve their communication skills, and educate clients with confidence in order to enhance their contributions to a veterinary practice and maximize every patient's well-being.

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Find links to all of the free tools, forms and online extras in this issue at dvm360.com/mayfirstline.

Help this reader: A question from dvm360.com/community

Weigh in: { How can I be a strong leader?

This month, a reader writes, "I'm a technician-turned-practice-manager. I'm married to the veterinarian, and he asked me to take over managing the practice after he fired a manager who wasn't working out. I've worked hard to make sure every member of our team knows they're appreciated. But I never wanted to manage, and I don't think I'm getting respect from team members who've been at the practice longer than I have. What should I do?"—ttruk

Response: Being a practice manager is a hard job. You can't really be anyone's friend, and you need to have the team's respect, but at the same time you must support your team and fairly discipline them. It's a balancing act. Consider these tips:

1. Be brave

You must be brave enough to have difficult conversations with people. A book that has helped me learn how to manage and how to talk to employees, bosses and clients is *Lifescrpts: What to Say to Get What You*

Want in Life's Toughest Situations by Stephen Pollan and Mark Levine (Wiley, 2004). It gave me the confidence to say what I needed to say to people and gave me the right way to say it. Sometimes it's hard to find the words. This book helps.

2. Fire bad apples

If you're the practice manager, people need to respect you and take you seriously. If people won't respect you, you need to talk to them about their issues and let them go if they can't change. Tell team members that you're going to move forward

together. Explain that when you offer direction in the practice, you're serious and you expect them to listen and treat you professionally. In turn, you will treat them the same way.

3. Choose your own career path

If you don't want to be the practice manager, then don't be. It's a hard job and you need to be tough, not take things personally and be able to discipline fairly and consistently. You might want to consider some management classes that will help teach you many valuable skills. —*jenngalvin*



Share your answer: Visit dvm360.com/strongleader to answer this question and read other responses. While you're there, check out dvm360.com/leadership for more advice on developing leadership skills.

Veterinary response launched after deadly explosion at fertilizer facility

Local clinic staff and Texas A&M emergency team work to care for the animals of West, Texas.

By Julie Scheidegger

The massive explosion at the West Fertilizer Co. in West, Texas, on April 17 created a wave of destruction that ripped through the small town, leaving 14 dead and nearly 200 injured in its wake. The impact was felt everywhere. Just a few miles down Interstate 35, the staff at Mid Texas Veterinary Clinic— inundated with animals injured or in need of shelter—was mourning for a coworker who lost her father, a first responder.

While residents grappled with the tragedy around them and rescue teams continued the desperate search for survivors, a full veterinary response was also engaged. The Texas A&M

Veterinary Emergency Team (VET) was deployed at 3:30 a.m. Thursday, April 18.

Call to action

“You got on the phone: ‘Can you deploy, yes or no?’” says Dr. Wesley Bissett—assistant professor



at the College of Veterinary Medicine and Biological Sciences and VET director—of his early morning assembly. The crew on site consisted of five veterinarians, four veterinary technicians, four senior veterinary medical students and three support staff. The team’s mission was twofold: to provide veterinary medical support for the search-and-rescue mission and to care for animals injured as a result of the disaster.

Helping the homeless

The structural damage to homes around the blast site left many residents and pets

homeless. Bissett says the Waco Humane Society is coordinating an emergency sheltering plan. “They [the animals] will be sheltered with all intents of reuniting—to bring owners and animals back together.”

Bissett says this disaster is different from those the team is usually deployed on, which happens two to three times a year. “They’re not all large responses, some are very small,” he says. This is both. “Geographically, it’s not that big of an area affected—but it was a tremendous blow. It’s a lot different than a big wildlife response. It’s contained but very severe.” **FL**

Find it all here.
dvm360

Want to help?

Learn how you can be a part of veterinary response teams at dvm360.com/vetemergency.



**Some things
are meant to
go together.**

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References:

1. Crawford C, Spindel M. Canine influenza. In: Miller L, Hurley K, eds. *Infectious Disease Management in Animal Shelters*. Ames, IA: Wiley-Blackwell; 2009:173-180.
2. Canine influenza background. AVMA Website. Available at: http://www.avma.org/public_health/influenza/canine_bgnd.asp. Updated September 7, 2009. Accessed January 10, 2011.
3. Data on file, Merck Animal Health.





2 WAYS TO FAIR PAY

Q *Illinois law states that I receive time-and-a-half for overtime, which is more than 40 hours in a work week. But when I work 35 hours one week, then 45 hours the next week, my boss doesn't pay me overtime because it balances out to 80 hours in a pay period. What's right, and what should I do?*

This is not just Illinois law but federal law, says Sheila Grosdidier, RVT, MCP, PHR, and partner at VMC Inc. in Evergreen, Colo.

"You are on very solid ground. Try the same way you would approach a client who has been misinformed or is incorrect," Grosdidier says. "Determine first if your boss will respond better to the facts or to the relationship approach."

Just the facts, Jack

If you're taking the facts approach, Grosdidier recommends you start the conversation like this:

You: "Dr. Jones, I respect what you have said regarding how overtime is calculated week to week here at the practice. While I was having some tax information reviewed by an accountant, there was a discussion about wage calculation, and how we calculate overtime at the practice came up. The accountant suggested that I share this with you. It concerned me that there are fines involved if the state or federal authorities find that regulations weren't followed. According to the accountant, laws change on occasion, and I wanted to bring it to your attention. We're a team here, working for the best of the practice."

This isn't a personal attack, it's informational. Make sure you pick a good time and speak about it privately, says Grosdidier.

Appeal to your relationship

If you need to take a more emotional approach, Grosdidier says start with your feelings. Focus on the problem, not on what your boss has done in the past. Try out this script:

You: "I feel I need to mention this. While a friend who's an accountant was helping me with my taxes, she mentioned that my overtime isn't being calculated in alignment with the state and federal laws. It concerned me, and I wanted to share it with you. There are fines involved if the state or federal authorities find that the regulations weren't followed. According to the accountant, laws change on occasion, and I wanted to bring it to your attention. We're a team here, working for the best of the practice."

Remember to use a non-threatening manner, Grosdidier says. Your goal is to help the practice owner or manager to see you as providing an answer in a nonaccusatory manner. If they check this out on their own, they will learn they are potentially responsible for back wages and at the very least should immediately fix their problem.

You have the right to be assertive, yet respectful. Find more information about wage regulations on the U.S. Department of Labor's Wage and Hour Division at www.dol.gov/whd. The agency oversees hourly employment and offers handy tools for employers and employees. You'll also find links to state requirements.

If these conversations don't fix the problem, don't give up. You deserve to be paid correctly.

Need help now?

Get an answer—fast—with Firstline Hotline. Text your problem to **913-732-1465**. We'll send you an answer in 48 hours (business days only). Standard text messaging rates apply. You can also email us at firstline@advanstar.com or direct message us on Facebook at [facebook.com/FirstlineMag](https://www.facebook.com/FirstlineMag) or Twitter at [@firstlinemag](https://twitter.com/firstlinemag).

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Ask Shawn

Shine light on a moonlighter

For the past few years, our practice's kennel business has been declining. I recently learned that an employee pet-sits for clients on the side. The other day a client approached me in an exam room asking if I was the employee who offered pet sitting. When I told him we board pets at the clinic, he said, "Oh dear, I hope I don't get someone in trouble." In fact, the moonlighting employee gave him a tour of our kennel just last week. I realize some people want a more personal approach, but the fact that the pet sitting is a secret going on behind the owner's back bothers me. Help! —Blindsided by boarding

The solution is simple: Bye, bye, employee. In my opinion, this is worse than stealing. This employee is using your practice's business model to line her own pockets.

It is acceptable for an employee to approach the practice owners with a business plan for a petsitting business for the practice's clients and offer to share the rewards with the practice. It's the fact that she's doing business behind your back that causes a myriad of other problems. For example, if other employees know about the business, this puts them in a double-bind—they may not want to snitch, but they may feel their ethics are compromised.

In this case, I urge your manager to pull aside the employee in question at the end of the day and hand her her walking papers. The manager should also inform this team member that if she continues to pilfer clients through the practice's business, the owners will seek legal channels for compensation for the damage done to the business.

Next, follow up with a letter to clients apolo-

gizing that they've been put in the position of being offered personalized home care without your knowledge and explaining you're willing to explore offering this service through legitimate channels at your practice.

Finally, it's important for practice leaders to call a practice meeting to explain why it's unacceptable for employees to offer a service that feeds off the practice without the owner's permission. Develop a script together for how you'll answer questions from clients about the ex-employee and the boarding services she offered. As a team, you'll need to focus on rebuilding the practice's legitimate boarding services.

—Shawn



Got a question? Ask Shawn.

Maybe you're tired of babysitting your team members. Perhaps you're looking for strategies to beat a bully. Shawn can help. **Shawn McVey, MA, MSW**, is a member of the *Firstline* and *Veterinary Economics* Editorial Advisory boards and CEO of McVey Management Solutions in Chicago. Email your question to firstline@advanstar.com. Then visit dvm360.com/mcvey to read McVey's advice on other hot topics, including how to talk to angry clients, the top 10 ways to kill team communication, what to do when your doctor disses you and more.

Dental corner

Correcting a congenital cleft palate

This hospital teamedworks together to rid a Rhodesian ridgeback of a congenital cleft palate.

By Patricia March, CVT, VTS (Dentistry)

Mika, a 6-month-old, female Rhodesian ridgeback, was presented to the Dentistry and Oral Surgery Service at the University of Pennsylvania for evaluation of a cleft palate. Mika's defect was noted at birth. The breeder tube fed the puppy for the first eight weeks, and then Mika was placed in a new home. She suffered from several episodes of aspiration pneumonia, which responded to antibiotics. The results of a preoperative laboratory work-up were normal, and she was deemed a good surgical candidate.

Surgery

In order to ensure the flap would be big enough to cover the defect, Mika had surgery the day of her initial exam to

extract three premolars on her right maxilla. Four weeks later, she returned for palatal surgery.

A dental technician must know the anatomy of the palate, what causes the defects and how they can be repaired. If technicians and doctors aren't aware of surgical options, pets with palatal defects might be euthanized.

Mika was anesthetized, and her bilateral secondary hard and soft cleft palate defect was surgically corrected. The mucoperiosteum of the hard palate was incised to create a releasing or elevating flap on the right side of the palate. This flap was folded over so that the connective tissue surfaces were in contact and sutured closed. This technique allowed for coverage of the midline defect. Note the difference in the rugae folds of the palate in Figure 3.

Recovery

An Elizabethan collar was placed, and Mika was sent home with antibiotics and analgesics and instructions to feed soft food only for two to four weeks. No toys or chewing were allowed.

Technicians may need to teach clients how to tube feed puppies and kittens until they are able to have surgery.

Mika recovered well. At her recheck exam four weeks later, a small area of tissue on the rostral maxilla, just caudal to the incisive papilla, had retracted and opened. The owner was given the option for another surgical procedure to close the

>>> **Photo 1:** Mika at her initial exam.

>>> **Photo 2:** The missing teeth and the healed extraction site are visible. The palatal defect extends the length of the hard and soft palate.

>>> **Photo 3:** The palate surgery site. The left side is normal tissue with rugae folds. The right side is smooth, because it is the underside of the palatal tissue that was folded over to create a flap and repair the defect. The rugae folds are now on the inside.



small defect. The owner elected to postpone another surgery.

At last report, Mika is a happy, healthy adult, and the small open area on the rostral palate does not seem to be causing any issues at this time.

Dental technicians assist during surgery, handing instruments, retracting tissue and cutting suture. After surgery, they monitor the pet's recovery.

Discussion

Palatal defects may be acquired—due to trauma or severe periodontal disease—or congenital, as in this case. Congenital palatal defects may have a hereditary

component or may result from metabolic disorders or vitamin imbalances in the dam or exposure of the dam to teratogenic chemicals or drugs. These defects are classified as either primary (involving the rostral region on the lateral aspects of the palate) or secondary (affecting the areas of the caudal palate along the midline). Affected neonates typically have difficulty nursing and swallowing, often regurgitating and aspirating. This can progress to pneumonia and eventually death.

Surgical intervention is almost

always necessary. Most oral surgeons will wait until a patient

At checkout, a dental technician will discuss possible complications with the owners as well as an appropriate feeding schedule and medication use.

is 4 to 6 months old, as in this case, to ensure that the palate is growing properly and that the tissue has sufficient strength to withstand the surgical repair.

Patricia March, CVT, VTS (Dentistry), is a dental technician at Animal Dental Center in Baltimore, Md., and the past president of the Academy of Veterinary Dental Technicians.



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SAMPLE SCRIPT: 3 responses to clients who resist vaccines

Consider these three ways to overcome client objections with advice from Liza W. Rudolph, BAS, CVT, VTS (Canine/Feline), a technician with the internal medicine service at Saint Francis Veterinary Center in Woolwich Township, N.J.:

MRS. SMITH: I'm worried about the risks of vaccination.

you: Mrs. Smith, thank you for sharing your concerns with me. I know you're worried about Fluffy's health, and it's our first priority, too. Vaccination has been used in companion animals for more than 40 years, and it has been effective in controlling many major infectious diseases. Through the proper use of vaccines, there are many diseases we don't see often. This can lull us into a false sense of security. Without continued vigilance, these diseases can

quickly rebound and become large problems again. Adverse reactions to vaccines are possible, but most are rare and of little significance in otherwise healthy pets. In most patients, the benefits of vaccination far outweigh the potential risks.

MRS. SMITH: It doesn't hurt anyone if I choose not to vaccinate my pets.

you: Mrs. Smith, I understand you're struggling with the decision to vaccinate Rover. However, there are many transmissible diseases that pets can be susceptible to, including rabies. It's important to remember that rabies is a fatal viral disease that affects many species, including humans, and it's still seen in practice. Not only it is deadly, but the legal ramifications of non-compliance can be severe, particularly if you don't vaccinate Rover and he bites a

human or is exposed to wildlife. Our practice is required to follow state and local regulations when we schedule rabies vaccination. After all, without any proof of vaccination you may be placed in the difficult situation of placing your pet in quarantine—or even euthanizing your beloved pet. Vaccinating Rover now will protect you and your pet from heartache later.

MRS. SMITH: My pet doesn't need all of the recommended vaccinations.

you: Mrs. Smith, there are general guidelines that our practice recommends for healthy pets, but you are correct that there's no one-size-fits-all vaccine protocol. The veterinarian will consider your pet's age, lifestyle and any medical problems to formulate a protocol. Do you have any questions about vaccinations I can answer?

Use laminated pictures to save steps

Our kennel technicians would spend time running back and forth between our food display and food room, and they would often forget what they went back to the food room to get. So I took pictures of the food displays and laminated them. Now they can write how many bags of each type of food they need on the photos. Then they check our stock in the food room and bring up what they need. It's more efficient than running back and forth trying to remember which food we're low on.

—Beth Tatum
Office manager
Fairview Hospital for Animals
Decatur, Ill.



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THE VHMA FILES: 13 critical competencies for managers

Study identifies skills every manager needs to be successful in veterinary practice.

By Christine Shupe, Executive Director, VHMA



Editor's note: Firstline is pleased to bring you a new column featuring advice and tools to help managers grow in their careers from the leaders of the Veterinary Hospital Managers Association (VHMA).

Whether you're a team member eager to make the switch to manager or a manager who wants to lock in job security, it helps to know which specific skills are deemed essential to be a successful practice manager. Recognizing the need to identify these critical non-clinical skills, VHMA has recently published a guide that outlines the skills necessary to be an effective practice management professional: *Critical Competencies: A Guide for Veterinary Practice Management Professionals*.

The practice requirements and competencies in the guide were derived from a scientific practice analysis of the position of veterinary practice manager. The study identified five core practice management domains:

- > Human resources
- > Law and ethics
- > Marketing and client relations

- > Practice organization
- > Financial management.

Within these domains, 13 essential competencies emerged:

1. Decision making. The ability to make good decisions, solve problems, gather and analyze data, choose among alternatives and implement decisions is critical.

2. Integrity. Upholding high standards of ethical conduct by ensuring compliance with laws, regulations and standards is at the heart of being a professional. So are trustworthiness with financial and banking responsibilities and showing discretion with confidential matters.

3. Critical and strategic thinking. Managers must be able to identify questions, problems and arguments relevant to planning and to use critical reasoning to identify the strengths and weaknesses of alternative solutions or approaches.

4. Planning and prioritizing. A manager must be organized and capable of setting priorities to achieve goals.

5. Oral communication and comprehension. Practice managers must be effective communicators. They must also be good listeners and willing to

hear what others have to say, whether dealing with groups, employees, peers or clients.

6. Writing and verbal skills. Whether writing or updating protocols, interpreting technical information or getting a point across, the ability to write in a way that is clear, concise and tailored to the audience will help managers communicate.

7. Analytical skills. This includes accurately grasping complex information and concepts and making correct inferences from their analysis of the data.

8. Compliance. Managers are responsible for office management and compliance with federal, state and professional regulations. They must be thorough and conscientious.

9. Resourcefulness. The multifaceted nature of the practice requires managers to be able to apply knowledge, skills and expertise to perform tasks efficiently.

10. Continuous learning. Managers must keep up with evolving best practices.

11. Resilience. The ability to effectively cope with pressure and setbacks, crises, obstacles and failures while remaining

calm and in control is essential to managers.

12. Adaptability. Uncertainty and unpredictability at work require managers to be receptive and comfortable with change and ambiguity.

13. Leadership. Managers should demonstrate talent for influencing and motivating others, taking the initiative and organizing and coordinating.

Visit dvm360.com/VHMA for a free copy of *Critical Competencies: A Guide for Veterinary Practice Management Professionals*. You'll also find a dvm360 Resource Guide to build these 13 competencies and grow in your career.



Christine Shupe is the executive director of the Veterinary Hospital Managers Association. The association is dedicated to serving professionals in veterinary management through superior education, certification and networking.

Study methodology

The survey was comprised of 60 task statements, which were categorized into one of five job domains: human resources, law and ethics, marketing and public relations, finance and accounting and organization of the practice. Respondents rated how frequently they performed each task and how important the task was for their job. A measure of criticality was obtained by computing the cross-product of the frequency and importance ratings.

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DOG BITE PREVENTION: What's your role?

You can handle their bark, but you don't want a bite. *Firstline* Board member Mandy Stevenson, RVT, offers tips for how each team member can stay safe in practice:

>>Receptionist:

You're usually the first one to see pets that come in. You also talk with clients on the phone and see them regularly for retail purchases, making you more familiar with clients and their pets. So when you schedule appointments, use this knowledge to note patients that might need more space before they visit and be ready when they arrive. For example, you might take the pet straight into an exam room if needed.

Creating a system is helpful to identify these pets throughout the practice. For example, you could put a star on the chart or capitalize the pet's name in the computer system. It's also a good idea to require leashes for all dogs when they're at your practice. Having a leash hook with some of the clinic's complimentary



leashes helps enforce this without offending clients. It's also a good idea to be aware of small children in the waiting room, as they tend to walk up to pet dogs that might startle.

>>Technicians and veterinary assistants:



As a technician, you're in close contact with animals for most of their visit. Always use your restraint techniques and pay close attention to the pet's behavior. Sometimes team members will feel the urge to kiss or hug a dog. Remind them that pets that feel scared or threatened can strike very quickly. Use muzzles when needed and always stay focused on the pet.

This is also when you should monitor the pet owners. Many feel that they should hold their own pets or rub the pet's face during treatment. The pet may mistake their owner for someone else and bite or lunge. So take time to discuss your protocols with pet owners to keep them safe.

>>Practice manager:

When dogs and their owners enter your clinic, you're responsible for them. Some pet owners may be preoccupied with their pet's illness or injury. When the client's distracted, their nervous pets might strike out at other waiting animals or people. So it's important to talk to team members about how to teach your protocols to clients. Start by helping create and practice protocols for everyone to learn. Ideally this is part of your initial training process, and it's a good idea to review your protocols regularly at team meetings.



>>Veterinarian:

You're usually the last one to see a patient that may bite, so in most cases your team members can alert you to these pets. Communication is key, so you can sedate or tranquilize pets when needed to minimize the patient's stress and keep your team members safe.



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NADA 141-084, Approved by FDA

Brief Summary—For full product information see product insert.

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

Description: SENTINEL[®] (milbemycin oxime/lufenuron) Flavor Tabs[®] are available in four tablet sizes in color-coded packages for oral administration to dogs and puppies according to their weight.

Milbemycin oxime consists of the oxime derivatives of 5-deidehydromilbemycins in the ratio of approximately 80% A₁ (C₂₈H₄₂NO₇, MW 555.71) and 20% A₂ (C₂₈H₄₀NO₇, MW 541.68). Milbemycin oxime is classified as a macrocyclic anthelmintic.

Lufenuron is a benzoylphenylurea derivative with the following chemical composition: N-[2,5-dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)-phenylaminocarbonyl]-2,6-difluorobenzamide (C₂₁H₁₂F₈N₂O₃, MW 511.15). Benzoylphenylurea compounds, including lufenuron, are classified as insect development inhibitors (IDIs).

Indications and Usage: SENTINEL Flavor Tabs are indicated for use in dogs and puppies, four weeks of age and older, and two pounds body weight or greater. SENTINEL Flavor Tabs are also indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*, for the prevention and control of flea populations, the control of adult *Ancylostoma caninum* (hookworm), and the removal and control of adult *Toxocara canis* and *Toxascaris leonina* (roundworm) and *Trichuris vulpis* (whipworm) infection. Lufenuron controls flea populations by preventing the development of flea eggs and does not kill adult

fleas. Concurrent use of an adulticide product may be necessary for adequate control of adult fleas.

Dosage and Administration: SENTINEL Flavor Tabs are given orally, once a month, at the recommended minimum dosage of 0.23 mg/lb (0.5 mg/kg) milbemycin oxime and 4.55 mg/lb (10mg/kg) lufenuron. Dogs over 100 lbs. are provided the appropriate combination of tablets.

SENTINEL Flavor Tabs are palatable and most dogs will consume the tablet when offered by the owner. As an alternative to direct dosing, the tablets can be hidden in food. Administer SENTINEL Flavor Tabs to dogs, immediately after or in conjunction with a normal meal. Food is essential for adequate absorption of lufenuron.

SENTINEL Flavor Tabs must be administered monthly, preferably on the same date each month. In geographic areas where mosquitoes and fleas are seasonal, the treatment schedule should begin one month prior to the expected onset and should continue until the end of "mosquito and flea season." In areas with year-round infestations, treatment should continue through the entire year without interruption.

If a dose is missed and a 30-day interval between dosing is exceeded, administer SENTINEL Flavor Tabs immediately and resume the monthly dosing schedule.

Warnings: Not for use in humans. Keep this and all drugs out of the reach of children.

Precautions: Do not use SENTINEL Flavor Tabs in puppies less than four weeks of age and less than two pounds of body weight. Prior to administration of SENTINEL Flavor Tabs, dogs should be tested for existing heartworm infections. Mild, transient hypersensitivity reactions manifested as labored respiration, vomiting, salivation, and lethargy have been noted in some treated dogs carrying a high number of circulating microfilariae.

Adverse Reactions: The following adverse reactions have been reported in dogs after giving milbemycin oxime or lufenuron: vomiting, depression/lethargy, pruritus, urticaria, diarrhea, anorexia, skin congestion, ataxia, convulsions, hypersalivation, and weakness.

Efficacy: Milbemycin Oxime

Milbemycin oxime provided complete protection against heartworm infection in both controlled laboratory and clinical trials.

In laboratory studies, a single dose of milbemycin oxime at 0.5 mg/kg was effective in removing roundworm, hookworm, and whipworm. In well-controlled clinical trials, milbemycin oxime was also effective in removing roundworms and whipworms and in controlling hookworms.

Efficacy: Lufenuron

Lufenuron provided a 99% control of flea egg development for 32 days following a single dose of lufenuron at 10 mg/kg in studies using experimental flea infestations. In well-controlled clinical trials, when treatment with lufenuron tablets was initiated prior to the flea season, mean flea counts were lower in lufenuron-treated dogs versus placebo-treated dogs. After 6 monthly treatments, the mean number of fleas on lufenuron-treated dogs was approximately 4 compared to 230 on placebo-treated dogs.

When treatment was initiated during the flea season, lufenuron tablets were effective in controlling flea infestations on dogs that completed the study. The mean flea count per lufenuron-treated dog was approximately 74 prior to treatment but had decreased to 4 after six monthly doses of lufenuron. A topical adulticide was used in the first eight weeks of the study to kill the pre-existing adult fleas.

For technical assistance or to report suspected adverse events, call 1-800-332-2761.

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Feeling fenced in?

Understand your workplace rights—whether you're a team member or manager—in four lessons from top employment attorneys.

By Portia Stewart

Whether you're a team member or manager, you're on the same side of the fence—most of the time. But sometimes, team members cross a line. Or managers set boundaries that seem silly or arbitrary.

Beyond your practice policies, there are many state and local laws that rule your practice, and they're designed to set limits for team members and employers. Philippe Weiss is an attorney and managing director of Seyfarth Shaw at Work, the dedicated compliance services and training subsidiary for the law firm of Seyfarth Shaw LLP. He says when you talk to team members in a different town, region or state, recognize that the laws protecting you and your employer will vary, depending on where you work. So if you face a legal issue, it's important to consult an attorney in your area

who can speak specifically to your circumstances and to the laws that govern your workplace.

Let's explore some of the surprising truths you may not know—and how you can maintain a positive, professional relationship and reduce the risk you'll cross wires with managers or coworkers. Consider these four truths:

1. Bosses don't want to fire you

Firing an employee is expensive and uncomfortable for employers, and many will avoid firing until you leave them no choice.

"Employers are constantly trying to figure out ways to avoid terminating employees," says Eric Wersching, a partner and attorney with the law firm of Ross Wersching and Wolcott LLP in Costa Mesa, Calif.

Firing someone disrupts the business, and it costs a lot of money to train new employees. In Wersching's home state of California, if a fired employee has accrued vacation the employer must pay for these unused days. Employees may also be eligible for unemployment insurance.

These simple steps will keep you on the right side of your boss most of the time:

> **Arrive on time.** Your alarm clock broke, your tire was flat and Fluffy had a hair ball on the carpet and you couldn't just leave it there all day, right? Running late occasionally happens to everyone, but when you're late every Tuesday, managers notice—and it may disrupt your practice's ability to serve clients. Who's going to greet Mrs. Smith at the front desk or take Rover's history before his exam?

> **Take your lunch, take your breaks and leave on time.** You have a right to break time and lunch time—just don't abuse it. Taking five extra minutes here, five extra minutes there and punching out early not only looks bad—it's stealing, and you can quickly lose your manager's trust.

> **Do your job.** So you don't like sweeping the reception area. You ran out of time and didn't call the clients you were supposed to follow up with and someone else can clean those

cages tomorrow. When you skip tasks and leave the work for others, your coworkers and managers will notice.

> **Make sure you use the employer's equipment, computers, vehicles or files only in an authorized manner.** For example, Wersching says, in certain situations you can be fired for surfing the web when you're on the clock.

"Following these steps will prevent a lot of the reasons employees are fired," Wersching says. "Then that leaves only those subjective reasons."

The key, he says, is that employers don't fire for one minor issue—you're late once a week every week. Employers usually only fire when there are myriad problems. So start by following the rules, then try to define and meet the rest of your boss's expectations.

2. Your boss can monitor you

In many cases, your employers can monitor your behavior in the workplace. State laws may dictate the specific details of monitoring that's allowed, but your employer may be able to search your locker in your workplace, review the email you send from your practice email account and use video surveillance to monitor the practice. They most likely can't, however, record in places like changing rooms or restrooms.

If you feel you're being treated unlawfully at work, experts often recommend keeping event logs. But attorney Eric Wersching warns that logs aren't effective if they're not 100 percent accurate. For example, if you don't remember the exact time you had a key conversation with your boss, it's better to record "the afternoon" than write, "1:32 p.m." and it turns out you had a staff meeting that started at 1:30 p.m., because it can hurt your credibility.

3. Your practice's policies count

"When you cross the front door of a private employer, the Constitution, in many respects, stops right there, and the company's policies start," Weiss says. "And those policies are often stricter than the law."

This might seem strange, until you recognize your boss has to safeguard his or her business against unlawful behavior. So they may censor your speech and they may invade your privacy to protect the business.

Practice policies may also dictate some of your expectations for privacy in the workplace. For example, Weiss says your practice policy may dictate how many personal phone calls team members can make or whether—and for how long—

you can use practice computers for personal use.

“That’s why having good, clear policies is so important,” Weiss says. “The first thing you want to do if you’re an employee is read the policies. Because if something goes wrong, you want to be able to say that you followed the policies.”

Weiss says your policy manual may also offer other valuable information, such as your reporting process when you’re upset about an issue. It’s very important, he says, to be able to demonstrate you’ve followed the practice’s policies. It’s the first and highest standard you want to meet.

Your job description also yields important information about the employer’s expectations, and Weiss recommends reviewing it often to make sure you’re meeting all of the requirements of the job. One approach, he says, is to use a job description as an audit list to make sure you’re meeting your boss’s expectations. Then, as you complete assigned tasks, use a simple query, such as, “Is there anything else you want me to do? Have I accomplished this task?”

The goal, he says, is to change your attitude about your boss from an “us vs. them” perspective to instead viewing your manager as a customer you’re trying to satisfy—and maybe even delight—by making

yourself indispensable. And managers, he says, should also be reviewing job descriptions to manage their employees and hold them accountable.

4. Teamwork may trump technical skills

Keep in mind, there are a number of skills managers expect that may not be listed in your job description. These include good communication with coworkers and customers and the ability to work together.

“Someone who’s not working effectively with colleagues and customers is generally not a good performer,” Weiss says. “A collaborative workforce is often as important as a profitable one.”

In other words, high technical skills and following the exact letter of your job description may meet some requirements, but they also may fall short of your employer’s expectations.

This also means you should embrace the review process. A good review can offer documentation of your good performance, and a review with improvement needed should offer you a road map to reach a place where you can satisfy your manager’s expectations.

“You want to embrace all of the standards set for you and exceed those standards, and you want to have good communication with your manager

so he or she acknowledges that you’ve met and exceeded those standards,” Weiss says.

Tear down barriers

If you’re a manager, your secret employer defense is effective compliance training. Just remember, Weiss says, that all discrimination, harassment and other workplace training programs aren’t built the same. He recommends choosing programs that have already been reviewed by government agencies, including the Equal Employment Opportunity Commission and the Department of Justice, in the context of settlement and litigation consent decrees.

For employees, you’re expected to work toward a safe, respectful and productive workplace, Weiss says. This may mean not focusing too hard on one specific conflict. Instead, remember you have many common interests with your coworkers and managers in the workplace. When everyone understands the boundaries, you’ll enjoy a more productive workplace. **FL**

Portia Stewart is a freelance writer in Lenexa, Kan. Send questions to firstline@advanstar.com.

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10-minute drill: *parasite prevention*

These three game-winning plays will take your team members through their paces with activities to refresh your parasite prevention skills and educate clients.

Take a time-out at your next team meeting to practice a few quick drills that offer a refresher course for your practice's parasite prevention program. These three new tools and exercises are designed to help you keep your message fresh and recharge your team.

1. Make a game plan

Even if you've written practice protocols before, it's a good idea to spend a few minutes reviewing your practice's plan of attack and making sure everyone has each part memorized. Use the team tools—"Parasite prevention: What's your role?" and "Build your team's protocol"—at dvm360.com/parasiterole to review your plays and make any last-minute substitutions you need to ensure every client hears your parasite message.

2. Practice winning passes

Next, schedule a little practice

time with your team members to make sure no one fumbles these critical conversations with clients. Practice role-playing and use the instructions in "Sample scripts and role-play" available at dvm360.com/parasitescript, to write sample scripts to answer the top questions clients ask at your practice.

3. Handouts score points with clients

Finally, make sure you don't drop the ball by sending clients home empty-handed. Client handouts, such as "7 myths about Lyme disease," available at dvm360.com/Lymemyths, help pet owners get the whole family in the game of prevention, even if some of them miss the education you offered at the pet's visit.

Remember, when you work in a veterinary practice, every day is game day. Even if you don't win over every client, you can be proud of your work as a team to protect pets' health. **FL**



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Videos

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Handouts

Ready-to-use client handouts

>> Wellness and behavior screens for older pets

p13



Take Action

>>The next step
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p15

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p2

*Pets,
clients
and
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p6



Updates on 3 common conditions of aging dogs and cats

Should thyroid function be monitored in hypothyroid dogs given corticosteroids?

By David S. Bruyette, DVM, DACVIM

Q. Some of my hypothyroid canine patients also intermittently receive corticosteroids at anti-inflammatory doses to treat flare-ups of allergic dermatitis. Does the corticosteroid therapy affect thyroid hormone concentrations and interfere with testing—either for the initial diagnosis or for therapeutic monitoring purposes? Are thyroxine supplementation dosage adjustments needed during corticosteroid therapy?

A. Animals receiving anti-inflammatory or immunosuppressive doses of prednisone or prednisolone can have altered thyroid function test results, especially if they have been receiving the corticosteroids for more than two weeks. In general, I would prefer to see animals off of all forms of corticosteroids for at least four to six weeks before trying to evaluate thyroid function.

In animals receiving thyroid hormone supplementation that subsequently begin to receive corticosteroid therapy, we generally do not perform laboratory tests to evaluate thyroid function until the corticosteroids have been removed. However, a recent paper looked at the effect of short-term anti-inflammatory doses of prednisone in dogs with naturally occurring hypothyroidism.¹

Eight adult spontaneously hypothyroid dogs receiving supplementation with thyroxine were given prednisone (1 mg/kg orally) daily for seven days and then on alternate days for 14 days.¹ Serum total thyroxine (T_4), free T_4 , and thyroid-stimulating hormone (TSH) concentrations were measured on days 7, 21, and 28 and compared with baseline data. In this group of dogs, total T_4 concentrations were significantly decreased after seven days of anti-inflammatory prednisone but were not significantly altered from baseline on days 21 or 28. Free T_4 and TSH concentrations were not significantly altered from baseline at any point during the study. Two dogs had decreased total T_4 concentrations on day 7, which may have

Darbepoetin for treatment of anemia in cats with CKD

By Avi Blake, DVM

Erythropoiesis is largely controlled by the kidney's production of erythropoietin in response to anemia. In cats with chronic kidney disease, 30% to 65% have an associated anemia. The use of erythropoiesis-stimulating agents has been associated with a number of complications in cats, including a pure red cell aplasia, rendering patients transfusion-dependent. Darbepoetin is an effective erythropoiesis-stimulating agent in people, but there is little data on its use in companion animals.

What researchers did

A recent study evaluated 25 cats seen at the Animal Medical Center in New York between 2005 and 2009 that received two or more doses of darbepoetin, had chronic kidney disease, and had follow-up information available for at least 56 days.

What they found

Of the 25 cats, 14 responded to darbepoetin—all but one receiving a dose of 1 µg/kg/week or higher. The adverse events possibly attributable to darbepoetin included vomiting, hypertension, seizures, and fever.

Take-home message

Darbepoetin was effective for treating anemia associated with chronic kidney disease in cats. Additionally, the results suggest that pure red cell aplasia is less common with the use of darbepoetin than with the use of other erythropoiesis-stimulating agents.

Chalhoub S, Langston CE, Farrelly J. The use of darbepoetin to stimulate erythropoiesis in anemia of chronic kidney disease in cats: 25 cases. *J Vet Intern Med* 2012;26(2):363-369.

Link to abstract: <http://onlinelibrary.wiley.com/doi/10.1111/j.1939-1676.2011.00864.x/abstract>

resulted in an alteration in thyroid supplementation.

Results showed that administration of prednisone at a dosage of 1 mg/kg given orally once daily for seven days decreased total T₄ concentrations, while free T₄ concentrations were unchanged,¹ suggesting that free T₄ concentrations may be less affected by daily prednisone administration. Anti-inflammatory doses of prednisone administered every other day did not interfere with thyroid hormone monitoring. So, at least with short-term

administration of a single daily anti-inflammatory dose of prednisone, thyroid function may be evaluated by looking at free T₄ or TSH concentrations. However, these results cannot be generalized to patients taking prednisone for longer periods or at higher doses.

REFERENCE

1. O'Neill SH, Frank LA, Reynolds LM. Effect of an anti-inflammatory dose of prednisone on thyroid hormone monitoring in hypothyroid dogs. *Vet Dermatol* 2011;22(2):202-205.

Bigger dogs may need less trilostane to control hyperadrenocorticism

By Jennifer L. Garcia, DVM, DACVIM

What researchers did

In a retrospective study, researchers evaluated 70 dogs with naturally occurring pituitary-dependent hyperadrenocorticism (PDH) being treated with trilostane.

What they found

Dogs weighing > 66 lb (30 kg) required less trilostane to control their clinical signs. The results did not achieve statistical significance, but a trend suggested that as body weight increased, the relative amount of trilostane needed to control signs decreased. The researchers also found that only 11% of dogs required more than 3 mg/kg/dose to control their disease—the manufacturer's recommended initial dose is 3 to 6 mg/kg once daily.

Take-home message

Sensitivity to trilostane may increase as body weight increases, so larger dogs with PDH may require lower relative doses of trilostane. Additionally, study data suggest that the initial dosage recommendation of 3 to 6 mg/kg/day be reconsidered.

Nelson EC, Kass PH. Trilostane dose versus body weight in the treatment of naturally occurring pituitary-dependent hyperadrenocorticism in dogs. *J Vet Intern Med* 2012;26(4):1078-1080.

Link to abstract: <http://onlinelibrary.wiley.com/doi/10.1111/j.1939-1676.2012.00956.x/abstract>



Golden years mean golden veterinary care

Whether you're launching a new senior preventive care program or just giving your existing one a boost, use these five steps from Jeff Rothstein, DVM, MBA, to help patients age gracefully.

Age isn't a disease, but it is true that seniors are more likely to develop disease than juvenile or adult pets. And fortunately, most clients today are much more compliant with recommended care for their seniors than even five or 10 years ago. With that in mind, the success with providing senior care is really based on how seriously team members believe in and advocate for it.

Ask yourself this: Does your clinic truly focus on senior pet care? Sure, most small animal clinics run age-appropriate diagnostics for sick pets. But do you encourage special testing and diagnostics for seniors that look and act healthy?

We often talk about clients being compliant, but the first step is asking if your clinic is compliant with the standard protocols practiced at high-quality clinics.

The good news is that it's not too late to start. Use these steps to get started.

STEP 1: Educate yourself

Before you launch or revamp your program, use your practice software to determine the percentage of senior pets you serve. Most of us have an aging pet population. Nearly 50 percent of my patients are 7 years or older. The second question is, does senior screening often lead to early disease detection? Consult your reference lab for current data—they have plenty of it. In general, we found that about 20 percent of seniors have at least one abnormality that's worth tracking. If you now believe it's worth having a senior program in place, move on to step 2.

STEP 2: State your goal

Why launch a senior wellness program? For example, the goal of our senior program is to

educate clients about age-appropriate preventive care for their senior pets and the significance or diagnostic tests to identify disease early.

STEP 3: Educate the team

If you want to focus on senior care, the whole team must speak “senior.” If you’re a manager, it’s a good idea to host several one-hour meetings to briefly educate your team on common senior diseases, such as renal failure, diabetes mellitus, Cushing’s disease, and hyperthyroidism, to name a few, and elaborate on how catching these early can lead to effective treatments. Create reading assignments to enhance what you’re teaching and test everyone on it. The whole team should know the basics. This is the best way to make sure every employee is an effective advocate.

STEP 4: Educate the pet parent

Create marketing and educational materials to help promote senior wellness care. For a customizable marketing guide, see [pages 10-11](#). Here are some other ideas:

>>“**Senior at 7.**” Who are your seniors? Some programs start at 5 or 6 years of age, but we found 7 to be a good fit for us.

>>**Senior-specific report cards.** This is more detailed than a general exam report card. It often emphasizes lab tests, eye pressure, blood pressure, and the arthritis exam, and it’s generally more comprehensive than the adult or young pet report card.

>>**Senior questionnaires and handouts.**

This offers the client the chance to tell us about the changes they’ve noticed in their aging pets. Clients can pinpoint their specific concerns, and in our practice it uncovers issues consistently and thoroughly. See examples on [page 13](#).

>>**Age chart.** This tool adds perspective for pet parents, who may not equate the 10-year-old dog to a 70-year-old person. It’s a great idea for clinics to show or give the client the human age equivalent at each pet visit.

STEP 5: Create a program

Senior prevention programs can come in all shapes and sizes. For the simplest program, you may just promote a senior blood screen.

My favorite approach, however, is to offer an all-inclusive package for senior pets. It mimics our standard-of-care packages. You can market these as you want: Pay one price up front, or split it into semi-annual payments or even monthly payments. These work well if you educate the client properly and price the package right. I recommend a 20-percent discount.

While it’s a popular program, it isn’t for everyone. If a client refuses these services, we offer our senior heartworm health screen. We package a heartworm test and a senior blood screen with a thyroid test and a urinalysis. We discount this package 20 percent, because we get special pricing on this test from the lab—and most hospitals can. Just ask for a promotion. I’ve learned that most clients are aware of screening and are at least a little interested, and when the price is right they’ll bite. It’s good for the pet, because we have at minimum a baseline, good for the owner, because we can catch health issues early, and good for the clinic, because good medicine is good business. Just remember, if pets get sick in a month or three months, they’ll need another test.

You or your managers may have been reluctant to launch—or revamp—a senior prevention program. Clients still want good care for their pets, but they also want a discount or package that provides value. That’s why it’s important to find the right package and price point for your area.

If your clinic hasn’t been putting its all into promoting senior care, there’s no better time than now. You’ve got lots of seniors at your clinic, and this is about offering more high-quality medical care, which is the future of veterinary practice. Now’s a perfect chance to improve your client compliance, which then improves the health of your practice as well as the health of the pets you serve.



Pets, clients and *senior moments*

Seeing more senior pets? That's great. But it's important to teach clients to be on the lookout for signs of aging and corresponding behavioral changes.

We all know that pets are living longer thanks to better veterinary care, but do your clients realize that, just like people, aging cats and dogs need special care? Improvements in veterinary care, diagnostics, and earlier intervention can make it possible for clients to enjoy their pets longer, but the key to that enjoyment is helping pets enjoy their later years to the fullest extent.

Dogs and cats are prone to debilitating ailments as they age, such as kidney failure, heart disease, arthritis, dental disease, cancer, and cognitive dysfunction. It's important that you encourage clients to visit for regular exams—this may mean more frequent exams than when the pet was younger. Depending on the pet's health risks or clinical signs, these exams may include blood work,

blood pressure checks, radiographs, or electrocardiograms.

Educate clients about these early warning signs that a senior pet may be having problems. Clients should call you right away if they notice any of the following actions or behaviors:

- > Increased thirst and urination
- > Loss of bladder control or noncompliance with house training.
- > Repeated vomiting
- > Bad breath, drooling, or changes in appetite
- > Excessive panting or exercise intolerance
- > Lumps or changes in areas of skin color
- > Change in appetite such as eating more or less than usual
- > Changes in behavior such as disorientation or excessive whining
- > Unusual bowel habits such

as diarrhea or constipation

- > Gaining or losing weight.

Stress the importance of early disease recognition and intervention as opposed to waiting until a disease is grossly evident and reversal or improvement will be much more challenging. It is much easier (and cheaper) to maintain an automobile in good working order instead of waiting until the engine fails and replacing it. Besides, we can't easily replace many "engines" in veterinary practice. It's up to you to utilize your medical expertise—and client education skills—to do just that.

For easy-to-use client handouts on wellness and behavior screening, see page 13.



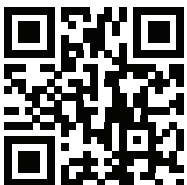
Generate geriatric pet care awareness

Use your social media network to educate clients and raise awareness about senior pets with these tweets and posts.

Feeling frustrated with Facebook? Not sure how Twitter can be of service to you? Not to worry—we're here to help your practice get the right message out to clients on key topics like caring for senior pets.

By serving up a mix of statistics and reminders, you're encouraging your clients to join in the conversation—and learn something, too!

Visit dvm360.com/seniorposts to get your hands on the Facebook posts and tweets (at right) for your practice's Facebook and Twitter pages. And, for more categories, visit dvm360.com/socialmediatoolkit.



Use your mobile device to scan the QR code at left and send your first tweet right now.



Fact: Dogs and cats are prone to debilitating ailments as they age, such as kidney failure, heart disease, arthritis, dental disease, cancer, and cognitive dysfunction. This is why regular visits are so darn important!

Warning signs to look for in senior pets: Increased thirst and urination, repeated vomiting, bad breath, drooling, or changes in appetite. Sound familiar? Call us ASAP!

You'll start getting retirement pamphlets in the mail, but how do you know when your pet is considered a senior? There are many deciding factors—come on in and we'll tell you all about them.

Do you equate your 10-year-old dog to a 70-year-old person? Visit our clinic and ask for an age equivalent chart. Then we can start focusing on the proper senior care for Scruffy.

Fact: Puppies have different nutritional requirements compared to older dogs. Let's make a preventative health and nutritional plan that's just right for your pet.



DYK? Just like people, aging cats and dogs need special care! Ask us how we can keep your senior #pet healthy #pethealth #petcare

Good news: Improvements in veterinary care, diagnostics, and earlier intervention make it possible to enjoy #pets longer. Ask us how!

Is Daphne getting older? She may need more frequent exams than when she was younger. Set up an appointment today! #petcare #pethealth

Senior #pets are more likely to develop disease than juvenile or adult pets. Keep your old friends healthy & come visit us! #pethealth

Warning signs to look for in senior #pets: Gaining/losing weight, disorientation, excessive whining, lumps. Come in and we'll talk about it!

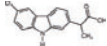
Vetprofen®

(carprofen)
Caplets

Non-steroidal anti-inflammatory drug
For oral use in dogs only

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

DESCRIPTION: Vetprofen (carprofen) is a non-steroidal anti-inflammatory drug (NSAID) of the propionic acid class that includes ibuprofen, naproxen, and ketoprofen. Carprofen is the nonproprietary designation for a substituted carbazole, 6-chloro- α -methyl-9H-carbazole-2-acetic acid. The empirical formula is C₁₅H₁₁ClN₂O₂ and the molecular weight 273.72. The chemical structure of carprofen is:



Carprofen is a white, crystalline compound. It is freely soluble in ethanol, but practically insoluble in water at 25°C.

CLINICAL PHARMACOLOGY: Carprofen is a non-narcotic, non-steroidal anti-inflammatory agent with characteristic analgesic and antipyretic activity approximately equipotent to indomethacin in animal models.¹

The mechanism of action of carprofen, like that of other NSAIDs, is believed to be associated with the inhibition of cyclooxygenase activity. Two unique cyclooxygenases have been described in mammals:² The constitutive cyclooxygenase, COX-1, synthesizes prostaglandins necessary for normal gastrointestinal and renal function. The inducible cyclooxygenase, COX-2, generates prostaglandins involved in inflammation. Inhibition of COX-1 is thought to be associated with gastrointestinal and renal toxicity while inhibition of COX-2 provides anti-inflammatory activity. The specificity of a particular NSAID for COX-2 versus COX-1 may vary from species to species.³ In an *in vitro* study using canine cell cultures, carprofen demonstrated selective inhibition of COX-2 versus COX-1. Clinical relevance of these data has not been shown. Carprofen has also been shown to inhibit the release of several prostaglandins in two inflammatory cell systems: rat polymorphonuclear leukocytes (PMN) and human rheumatoid synovial cells, indicating inhibition of acute (PMN system) and chronic (synovial cell system) inflammatory reactions.¹

Several studies have demonstrated that carprofen has modulatory effects on both humoral and cellular immune responses.⁵⁻⁹ Data also indicate that carprofen inhibits the production of osteoclast-activating factor (OAF), PGE₁, and PGE₂ by its inhibitory effects on prostaglandin biosynthesis.¹

Based upon comparison with data obtained from intravenous administration, carprofen is rapidly and nearly completely absorbed (more than 90% bioavailable) when administered orally.¹⁰ Peak blood plasma concentrations are achieved in 1-3 hours after oral administration of 1, 5, and 25 mg/kg to dogs. The mean terminal half-life of carprofen is approximately 8 hours (range 4.5-9.8 hours) after single oral doses varying from 1-35 mg/kg of body weight. After a 100 mg single intravenous bolus dose, the mean elimination half-life was approximately 11.7 hours in the dog. Carprofen is more than 99% bound to plasma protein and exhibits a very small volume of distribution.

Carprofen is eliminated in the dog primarily by biotransformation in the liver followed by rapid excretion of the resulting metabolites (the ester glucuronide of carprofen and the ether glucuronides of 2 phenolic metabolites, 7-hydroxy carprofen and 8-hydroxy carprofen) in the feces (70-80%) and urine (10-20%). Some enterohepatic circulation of the drug is observed.

INDICATIONS: Vetprofen is indicated for the relief of pain and inflammation associated with osteoarthritis and the control of postoperative pain associated with soft tissue and orthopedic surgeries in dogs.

CONTRAINDICATIONS: Vetprofen should not be used in dogs exhibiting previous hypersensitivity to carprofen.

WARNINGS: Keep out of reach of children. Not for human use. Consult a physician in cases of accidental ingestion by humans. **For use in dogs only.** Do not use in cats.

All dogs should undergo a thorough history and physical examination before initiation of NSAID therapy. Appropriate laboratory tests to establish hematological and serum biochemical baseline data prior to, and periodically during, administration of any NSAID should be considered. **Owners should be advised to observe for signs of potential drug toxicity (see Information for Dog Owners, Adverse Reactions, Animal Safety and Post-Approval Experience).**

PRECAUTIONS: As a class, cyclooxygenase inhibitory NSAIDs may be associated with gastrointestinal, renal and hepatic toxicity. Effects may result from decreased prostaglandin production and inhibition of the enzyme cyclooxygenase which is responsible for the formation of prostaglandins from arachidonic acid. 11-14 When NSAIDs inhibit prostaglandins that cause inflammation they may also inhibit those prostaglandins which maintain normal homeostatic function. These anti-prostaglandin effects may result in clinically significant disease in patients with underlying or pre-existing disease more often than in healthy patients. 12,14 NSAID therapy could unmask occult disease which has previously been undiagnosed due to the absence of apparent clinical signs. Patients with underlying renal disease for example, may experience exacerbation or decompensation of their renal disease while on NSAID therapy. 11-14 The use of parenteral fluids during surgery should be considered to reduce the potential risk of renal complications when using NSAIDs perioperatively.

Carprofen is an NSAID, and as with others in that class, adverse reactions may occur with its use. The most frequently reported effects have been gastrointestinal signs. Events including suspected renal, hematologic, neurologic, dermatologic, and hepatic effects have also been reported. Patients at greatest risk for renal toxicity are those that are dehydrated, on concomitant diuretic therapy, or those with renal, cardiovascular, and/or hepatic dysfunction. Concurrent administration of potentially nephrotoxic drugs should be approached cautiously, with appropriate monitoring. Concomitant use of Vetprofen® with other anti-inflammatory drugs, such as other NSAIDs or corticosteroids, should be avoided because of the potential increase of adverse reactions, including gastrointestinal ulcerations and/or perforations. Sensitivity to drug-associated adverse reactions varies with the individual patient. Dogs that have experienced adverse reactions from one NSAID may experience adverse reactions from another NSAID. Vetprofen® treatment was not associated with renal toxicity or gastrointestinal ulceration in well-controlled safety studies of up to ten times the dose in healthy dogs.

Carprofen is not recommended for use in dogs with bleeding disorders (e.g., Von Willebrand's disease), as safety has not been established in dogs with these disorders. The safe use of carprofen in animals less than 6 weeks of age, pregnant dogs, dogs used for breeding purposes, or in lactating bitches has not been established. Studies to determine the activity of carprofen when administered concomitantly with other protein-bound or similarly metabolized drugs have not been conducted. Drug compatibility should be monitored closely in patients receiving additional therapy. Such drugs commonly used include cardiac, anticonvulsant and behavioral medications. It has been suggested that treatment with carprofen may reduce the level of inhalant anesthetics needed.¹⁵

If additional pain medication is warranted after administration of the total daily dose of carprofen, alternative analgesia should be considered. The use of another NSAID is not recommended. Consider appropriate washout times when switching from one NSAID to another or when switching from corticosteroid use to NSAID use.

INFORMATION FOR DOG OWNERS: Vetprofen, like other drugs of its class, is not free from adverse reactions. Owners should be advised of the potential for adverse reactions and be informed of the clinical signs associated with drug intolerance. Adverse reactions may include decreased appetite, vomiting, diarrhea, dark or tarry stools, increased water consumption, increased urination, pale gums due to anemia, yellowing of gums, skin or white of the eye due to jaundice, lethargy, incoordination, seizure, or behavioral changes. **Serious adverse reactions associated with this drug class can occur without warning and in rare situations result in death (see Adverse Reactions). Owners should be advised to discontinue Vetprofen therapy and contact their veterinarian immediately if signs**

of intolerance are observed. The vast majority of patients with drug related adverse reactions have recovered when the signs are recognized, the drug is withdrawn, and veterinary care, if appropriate, is initiated. Owners should be advised of the importance of periodic follow up for all dogs during administration of any NSAID.

ADVERSE REACTIONS: During investigational studies of osteoarthritis with twice daily administration of 1 mg/lb, no clinically significant adverse reactions were reported. Some clinical signs were observed during field studies (n=297) which were similar for carprofen- and placebo-treated dogs. Incidences of the following were observed in both groups: vomiting (4%), diarrhea (4%), changes in appetite (3%), lethargy (1.4%), behavioral changes (1%), and constipation (0.3%). The product vehicle served as control.

There were no serious adverse events reported during clinical field studies of osteoarthritis with once daily administration of 2 mg/lb. The following categories of abnormal health observations were reported. The product vehicle served as control.

Percentage of Dogs with Abnormal Health Observations Reported in Osteoarthritis Field Study (2 mg/lb once daily)		
Observation	Carprofen (n=129)	Placebo (n=132)
Inappetence	1.6	1.5
Vomiting	3.1	3.8
Diarrhea/Soft stool	4.5	
Behavior change	0.8	0.8
Dermatitis	0.8	0.8
PUPD	0.8	---
SAP increase	7.8	8.3
ALT increase	5.4	4.5
AST increase	2.3	0.8
BUN increase	3.1	1.5
Bilirubinuria	16.3	12.1
Ketonuria	14.7	9.1

Clinical pathology parameters listed represent reports of increases from pre-treatment values; medical judgment is necessary to determine clinical relevance.

During investigational studies of surgical pain for the caplet formulation, no clinically significant adverse reactions were reported. The product vehicle served as control.

Percentage of Dogs with Abnormal Health Observations Reported in Surgical Pain Field Studies with Caplets (2 mg/lb once daily)		
Observation*	Carprofen (n=148)	Placebo (n=149)
Vomiting	10.1	13.4
Diarrhea/Soft stool	6.1	6.0
Ocular disease	2.7	0
Inappetence	1.4	0
Dermatitis/skin lesion	2.0	1.3
Dysrhythmia	0.7	0
Apnea	1.4	0
Oral/periodontal disease	1.4	0
Pyrexia	0.7	1.3
Urinary tract disease	1.4	1.3
Wound drainage	1.4	0

*A single dog may have experienced more than one occurrence of an event.

Post-Approval Experience: Although not all adverse reactions are reported, the following adverse reactions are based on voluntary post-approval adverse drug experience reporting. The categories of adverse reactions are listed in decreasing order of frequency by body system.

Gastrointestinal: Vomiting, diarrhea, constipation, inappetence, melena, hematemesis, gastrointestinal ulceration, gastrointestinal bleeding, pancreatitis.

Hepatic: Inappetence, vomiting, jaundice, acute hepatic toxicity, hepatic enzyme elevation, abnormal liver function test(s), hyperbilirubinemia, bilirubinuria, hypoalbuminemia.

Approximately one-fourth of hepatic reports were in Labrador Retrievers.

Neurologic: Ataxia, paresis, paralysis, seizures, vestibular signs, disorientation.

Urinary: Hematuria, polyuria, polydipsia, urinary incontinence, urinary tract infection, azotemia, acute renal failure, tubular abnormalities including acute tubular necrosis, renal tubular acidosis, glucosuria.

Behavioral: Sedation, lethargy, hyperactivity, restlessness, aggressiveness.

Hematologic: Immune-mediated hemolytic anemia, immune-mediated thrombocytopenia, blood loss anemia, epistaxis.

Dermatologic: Pruritus, increased shedding, alopecia, pyotraumatic moist dermatitis (hot spots), necrolyzing panniculitis/vasculitis, ventral ecchymosis.

Immunologic or hypersensitivity: Facial swelling, hives, erythema.

In rare situations, death has been associated with some of the adverse reactions listed above.

To report a suspected adverse reaction call 1-800-835-9496

DOSEAGE AND ADMINISTRATION: Always provide Client Information Sheet with prescription. Carefully consider the potential benefits and risk of Vetprofen and other treatment options before deciding to use Vetprofen. Use the lowest effective dose for the shortest duration consistent with individual response. The recommended dosage for oral administration to dogs is 2 mg/lb (4.4 mg/kg) of body weight daily. The total daily dose may be administered as 2 mg/lb of body weight once daily or divided and administered as 1 mg/lb (2.2 mg/kg) twice daily. For the control of postoperative pain, administer approximately 2 hours before the procedure. Caplets are scored and dosage should be calculated in half-caplet increments.

EFFECTIVENESS: Confirmation of the effectiveness of carprofen for the relief of pain and inflammation associated with osteoarthritis, and for the control of postoperative pain associated with soft tissue and orthopedic surgeries was demonstrated in 5 placebo-controlled, masked studies examining the anti-inflammatory and analgesic effectiveness of carprofen caplets in various breeds of dogs.

Separate placebo-controlled, masked, multicenter field studies confirmed the anti-inflammatory and analgesic effectiveness of carprofen caplets when dosed at 2 mg/lb once daily or when divided and administered at 1 mg/lb twice daily. In these two field studies, dogs diagnosed with osteoarthritis showed statistically significant overall improvement based on lameness evaluations by the veterinarian and owner observations when administered carprofen at labeled doses.

Separate placebo-controlled, masked, multicenter field studies confirmed the effectiveness of carprofen caplets for the control of postoperative pain when dosed at 2 mg/lb once daily in various breeds of dogs. In these studies, dogs presented for ovariohysterectomy, craniate repair and aural surgeries were administered carprofen preoperatively and for a maximum of 3 days (soft tissue) or 4 days (orthopedic) postoperatively. In general, dogs administered carprofen showed statistically significant improvement in pain scores compared to controls.

ANIMAL SAFETY: Laboratory studies in unanesthetized dogs and clinical field studies have demonstrated that carprofen is well tolerated in dogs after oral administration.

In target animal safety studies, carprofen was administered orally to healthy Beagle dogs at 1, 3, and 5 mg/lb twice daily (1, 3 and 5 times the recommended total daily dose) for 42 consecutive days with no significant adverse reactions. Serum albumin for a single female dog receiving 5 mg/lb twice daily decreased to 2.1 g/dL after 2 weeks of treatment, returned to the pre-treatment value (2.6 g/dL) after 4 weeks of treatment, and was 2.3 g/dL at the final 6-week evaluation. Over the 6-week treatment period, black or bloody stools were observed in 1 dog (1 incident) treated with 1 mg/lb twice daily and in 1 dog (2 incidents) treated with 3 mg/lb twice daily. Redness of the colonic mucosa was observed in 1 male that received 3 mg/lb twice daily.

Two of 8 dogs receiving 10 mg/lb orally twice daily (10 times the recommended total daily dose) for 14 days exhibited hypoalbuminemia. The mean albumin level in the dogs receiving this dose was lower (2.38 g/dL) than each of 2 placebo control groups (2.88 and 2.93 g/dL, respectively). Three incidents of black or bloody stool were observed in 1 dog. Five of 8 dogs exhibited reddened areas of duodenal mucosa on gross pathologic examination. Histologic examination of these areas revealed no evidence of ulceration, but did show minimal congestion of the lamina propria in 2 of the 5 dogs.

In separate safety studies lasting 13 and 52 weeks, respectively, dogs were administered orally up to 11.4 mg/lb/day (5.7 times the recommended total daily dose of 2 mg/lb) of carprofen. In both studies, the drug was well tolerated clinically by all of the animals. No gross or histologic changes were seen in any of the treated animals. In both studies, dogs receiving the highest doses had average increases in serum L-alanine aminotransferase (ALT) of approximately 20 IU.

In the 52 week study, minor dermatologic changes occurred in dogs in each of the treatment groups but not in the control dogs. The changes were described as slight redness or rash and were diagnosed as non-specific dermatitis. The possibility exists that these mild lesions were treatment related, but no dose relationship was observed.

Clinical field studies were conducted with 549 dogs of different breeds at the recommended oral doses for 14 days (297 dogs were included in a study evaluating 1 mg/lb twice daily and 252 dogs were included in a separate study evaluating 2 mg/lb once daily). In both studies the drug was clinically well tolerated and the incidence of clinical adverse reactions for carprofen-treated animals was no higher than placebo-treated animals (placebo contained inactive ingredients found in carprofen). For animals receiving 1 mg/lb twice daily, the mean post-treatment serum ALT values were 11 IU greater and 9 IU less than pre-treatment values for dogs receiving carprofen and placebo, respectively. Differences were not statistically significant. For animals receiving 2 mg/lb once daily, the mean post-treatment serum ALT values were 4.5 IU greater and 0.9 IU less than pre-treatment values for dogs receiving carprofen and placebo, respectively. In the latter study, 3 carprofen-treated dogs developed a 3-fold or greater increase in (ALT) and/or (AST) during the course of therapy. One placebo-treated dog had a greater than 2-fold increase in ALT. None of these animals showed clinical signs associated with laboratory value changes. Changes in the clinical laboratory values (hematology and clinical chemistry) were not considered clinically significant. The 1 mg/lb twice daily course of therapy was repeated as needed at 2-week intervals in 244 dogs, some for as long as 5 years.

Clinical field studies were conducted in 297 dogs of different breeds undergoing orthopedic or soft tissue surgery. Dogs were administered 2 mg/lb of carprofen two hours prior to surgery then once daily, as needed for 2 days (soft tissue surgery) or 3 days (orthopedic surgery). Carprofen was well tolerated when used in conjunction with a variety of anesthetic-related drugs. The type and severity of abnormal health observations in carprofen- and placebo-treated animals were approximately equal and few in number (see **Adverse Reactions**). The most frequent abnormal health observation was vomiting and was observed at approximately the same frequency in carprofen- and placebo-treated animals. Changes in clinicopathologic indices of hematopoietic, renal, hepatic, and clotting function were not clinically significant. The mean post-treatment serum ALT values were 7.3 IU and 2.5 IU less than pre-treatment values for dogs receiving carprofen and placebo, respectively. The mean post-treatment AST values were 3.1 IU less for dogs receiving carprofen and 0.2 IU greater for dogs receiving placebo.

STORAGE: Store at controlled room temperature 15° C - 30° C (59° F - 86° F).

HOW SUPPLIED: Carprofen caplets are scored, and contain 25 mg, 75 mg, or 100 mg of carprofen per caplet. Each caplet size is packaged in bottles containing 30, 60, or 240 caplets.

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For a copy of the Material Safety Data Sheet (MSDS) or to report adverse reactions call: 1-800-835-9496.
ANADA # 200-397, Approved by FDA



TAKE TIME

OBSERVE
LABEL DIRECTIONS

Made by :
Belcher Pharmaceuticals, LLC
12393 Belcher Road Suite 420
Largo, Florida 33773

Distributed by:
Vétoquinol U.S.A., Inc.
4250 N. Sylvia Ave.
Fl. Worth, TX (USA) 76137

October 2010
Printed in USA

L071-VET

R-0707B



Vétoquinol



Use your iPad to *promote senior care*

This interactive client module helps your clients understand their role when caring for older pets.

As pets grow older, their needs change—making client compliance that much more critical. To bridge the gap, try using the senior care client module in the dvm360 iPad app. This free tool allows clients to rate changes in behavior, watch a video on feline weight loss, learn about wellness care and senior testing, and take an interactive quiz to assess their pet's quality of life.

To get clients started, just flip to the Client Education tab inside the dvm360 iPad app, and hand over the iPad while clients wait in the exam room. By starting this conversation in a relaxed new way, you're making it easy for you (and your team) to educate pet owners about the importance of regular senior wellness care.



INTERESTED? Update your app via iTunes to check out our client education tools right now. We'll release more modules on a regular basis, so be sure to check back for our latest offerings. Don't have the app yet? Visit dvm360.com/ipadapp on your iPad to download, or search "dvm360" in the Apple App Store.

Did you know?

Older pets have a higher incidence of being overweight or obese. These extra pounds amplify pre-existing conditions and can complicate treatments.

Source: petobesityprevention.com



MARKET your MESSAGE for SENIOR WELLNESS

Appeal to clients and get senior dogs and cats in the door with a five-step marketing plan.

Senior wellness evaluations are an invaluable way to ensure your clients' pets are on the right track as they enter their golden years. But unfortunately, unless their pet is sick, clients don't always realize the value in these senior wellness exams and health screenings.

That's why Karyn Gavzer, MBA, CVPM, a veterinary business consultant and nationally known writer and speaker, recommends developing a marketing plan. "Senior wellness exams and screens are a good buy for clients," Gavzer says. "But it's a low priority to a pet owner. It doesn't have the urgency that something specific does."

Her advice? Narrow your search and appeal to clients by giving them a single, concrete reason to bring their pet in. Get started with these steps, then download your own customizable marketing plan:

1 Search your database.

Enlist the help of your veterinary manager to conduct a thorough search of all patients



Karyn Gavzer, MBA, CVPM

older than 7 years of age in your practice. You can narrow it down even further and search by condition, too—after you have a pool of patients based on age, go back and fine-tune that list by tracking patients that came in for symptoms of arthritis, renal disease, or any other common age-related ailments.

2 Plan a doctors' meeting.

With the results from the database search in hand, round up the doctors in the practice, review the findings, and select one condition to use for a marketing campaign. For example, did the results show that

quite a few older patients had presented with signs of arthritis or had been prescribed a pain management regime consistent with arthritis treatment? Make that your focus and discuss what kind of diagnostic plan and treatment protocol your practice will promote to help senior pets with arthritis.

3 Get the team on board.

Now that your practice has determined a specific focus, you've got market the idea to your staff—and get their ideas, too. "If an idea isn't built right inside the practice, even the best marketing in the world goes flat," says Gavzer.

So round everyone up and have a brainstorming lunch meeting. Does someone have a great idea for a catch phrase or slogan for your senior pet wellness plan? Gavzer points out that this is the time to get creative with your marketing effort. Send the message to clients that your practice wants to "Make old pets feel young again" or "Tackle those over-the-hill troubles." If you



invite your team's input in the planning stages of your marketing plan, they'll be much more excited about it and convey that enthusiasm to clients.

4 Send it to the masses. Have your practice manager draft a letter promoting your new service for older pets. Send it out via email if you can, but don't hesitate to send it via snail-mail, too—it's just as effective. (Visit dvm360.com/seniorcaretoolkit to download a sample letter.)

But don't stop there. Get a media campaign started on the social media channels and your practice's website, too. Post something about your senior wellness plan at least once a week on social media. Keep the message simple and make sure it ties in with your letter. Ask clients if they've noticed their pet slowing down on walks or hesitating to climb stairs and encourage them to make an appointment. Just make sure you notify your staff before the letters are mailed and the social media posts begin. You want to be sure everyone on your team is fully prepared and ready to talk about your senior wellness plan once clients start calling your hospital for appointments.

5 Track and measure. Set goals and stick to them. "Without goals, there's never reinforcement," says Gavzer.

Set a marketing goal and track how your practice is doing on a weekly basis. When clients come in for an arthritis evaluation exam, ask how they heard about it. Was it on social media or through the mailing you sent? Code each possible channel and evaluate which one is performing the best. And even if you don't see results right away, give it time. Online campaigns can take up to nine months before they gain traction with their audience.

Gavzer recommends planning what promotional material you'll send out for the next 12 months. Post something arthritis-related every week on social media channels. Send a mailing once a month, reminding pet owners of your service and using any new success stories as a hook. Clients want to hear about pets you've helped and how you could help theirs, too. Social media is also great for promoting a success story. As you start evaluating and treating patients for arthritis, take before-and-

after pictures or videos (with permission, of course) of a senior dog with arthritis who's now doing much better thanks to a pet owner who heeded your advice and brought her in, and post the progress on Facebook. Other pet owners will see it and want their pets to feel young again, too.

XYZ Animal Clinic Senior care		
	Tactics	Results
Goal	<ul style="list-style-type: none">- To drive 20% more senior care visits in the next 12 months compared to the same month last year- ___ total additional visits, an average of ___ per day during the program	
Top level message	If your pet appears to be slowing down, we can help. Here's what to look for.	
Slogan	"Make old pets feel young again"	
Duration	12 months	
Month 1 tactics	<ul style="list-style-type: none">- Include 250 word article about human age equivalents in monthly e-newsletter w/clip out pet age chart- Post one senior care related Facebook status update each week- Share one senior care related tweet each week- Send senior care visit letter to first 20% of target client list	___ visits 2013 ___ visits 2012
Month 2 tactics	<ul style="list-style-type: none">- Include 250 word article about arthritis & signs to look for in monthly e-newsletter- Post one senior care related Facebook status update each week- Share one senior care related tweet each week- Send senior care visit letter to second 20% of target client list	___ visits 2013 ___ visits 2012
Month 3 tactics	<ul style="list-style-type: none">- Include 250 word article about general signs of aging in monthly e-newsletter- Post one senior care related Facebook status update each week- Share one senior care related tweet each week	___ visits 2013 ___ visits 2012

Visit dvm360.com/seniorcaretoolkit to download a customizable marketing plan. This plan breaks down tactics by month and allows you to track results accordingly. The best part? It's free.



Health, diet & weight loss {in older cats}

Watch and share these videos by Dr. Susan Little for practical advice on nutrition topics for geriatric cats.



1. Protein-restricted diets in healthy geriatric cats



In this video, Susan Little, DVM, DABVP, discusses the appropriate use of protein-restricted diets in older cats and the importance of individualizing these cats' nutritional management.

2. Weight loss: An early sign of disease in older cats



Particularly in aging cats, weight loss can be the earliest sign of disease, according to Little.

3. How to encourage senior cats to eat



Poor appetite in senior cats can be treated when the underlying problem is properly diagnosed. Here Little offers practical tips that owners can use at home to promote their cats' food intake.

To play these videos on your mobile device, scan the corresponding QR code right now. Or, visit dvm360.com/seniorcaretoolkit to watch the videos and access other tools online.



Wellness screens *for senior pets*

Raise your clients' awareness of important changes their older pet may be experiencing.

Your clients want their pets to live long and healthy lives—and you want to help them get there.

Use these client handouts to help pet owners identify behavioral changes their dog or cat could experience as part of the aging process, as well understand as the importance of wellness screenings to detect early signs of disease.

Wellness for the older pet

Important facts about senior testing

An aging pet's organs gradually deteriorate and may lose their ability to function properly. We use senior testing to promote early detection and treatment of disease, so we can maintain health and prevent illness during your pet's senior years. Early detection of disease often gives us more effective and less costly treatment options. And senior testing helps establish normal baseline values for your pet, creating a point of comparison for the future.

What pets should take part in senior testing?

We recommend senior testing for all senior pets as well as any pet who is exhibiting one or more of the following symptoms: weight loss or gain, increased thirst or urination, lethargy, vomiting/diarrhea, poor hair coat, coughing, seizures, unusual behavior, or overall decline in condition.

Is my pet a senior?

If your pet is 7 years old or older, we consider him or her senior. Your pet may seem healthy well into its senior years. However, many problems common to senior pets (like kidney or heart failure) may not present symptoms until your pet becomes seriously ill. A comprehensive senior care program helps your veterinarian identify problems early enough to institute preventive healthcare measures.

What is senior testing?

Your pet's complete senior testing program includes these elements:

- > **A physical exam** is the most important part of the senior care program. Your veterinarian will assess all body systems to check for any abnormalities.
- > **Blood chemistry tests** measure levels of various substances in the blood and diagnose diseases such as diabetes, and liver and kidney failure.
- > **A complete blood count (CBC)** provides a detailed look at the blood itself and helps the doctor diagnose anemia or infection.
- > **A urinalysis** gives information on kidney function and checks for urinary tract infections.
- > **The thyroid screen (T4)** helps diagnose thyroid disease, which is an especially common ailment in older cats and dogs.
- > **Glaucoma testing** measures the pressure in each eye quickly and painlessly using a tonometer. Undetected glaucoma leads to irreversible blindness.
- > During a **retinal exam**, performed after the pupils are dilated, the veterinarian will look for evidence of bleeding, degeneration, inflammation, or detachment.
- > **Blood pressure measurement** lets our team check for hypertension. Just as in humans, high blood pressure in pets can lead to kidney problems, heart disease, blindness, and other complications.
- > **Radiographs (X-rays)** come as part of the senior care program. Generally, we perform chest radiographs to assess the heart and lungs. However, your veterinarian may decide a different set of radiographs would be more important for your pet. For example, he or she could recommend abdominal radiographs to assess the liver or kidneys.
- > **FelV/FIV testing**, recommended for senior cats, tests for the feline leukemia and feline immunodeficiency viruses, which can suppress the cat's immune system and lead to secondary infections, anemia, and even cancer.

I'd like my pet to participate in the Senior Care Program. What do I do?
Call us to schedule an appointment to bring your pet in for testing. We'll go over further details and answer any questions you may have, too.

Behavior screen for older dogs and cats

Please complete this form to give our team important information about your pet.

1. Locomotory/ambulatory assessment (check one)

- ☐ a. No alterations or debilities noted
- ☐ b. Modest slowness associated with change from youth to adult
- ☐ c. Moderate slowness associated with geriatric aging
- ☐ d. Moderate slowness associated with geriatric aging plus alteration or debility in gait
- ☐ e. Moderate slowness associated with geriatric aging plus some loss of function (e.g., cannot climb stairs)
- ☐ f. Severe slowness associated with extreme loss of function, particularly on slick surfaces (may need to be carried)
- ☐ g. Severe slowness, extreme loss of function, and decreased willingness or interest in moving (spends most of time in bed)
- ☐ h. Paralyzed or refuses to move
- ☐ i. Leaks urine when awake
- ☐ j. Leaks urine when asleep or asleep
- ☐ k. Full-stream, uncontrolled urination when asleep
- ☐ l. Full-stream, uncontrolled urination when awake
- ☐ m. Full-stream, uncontrolled urination when awake or asleep
- ☐ n. No leakage or uncontrolled urination, all urination controlled, but in inappropriate or undesirable location
- ☐ o. No change in urination control or behavior
- ☐ p. Defecates when asleep
- ☐ q. Defecates without apparent awareness
- ☐ r. Defecates when awake and aware of action, but in inappropriate or undesirable locations
- ☐ s. No changes in bowel control
- ☐ t. Slightly decreased ability to play with toys
- ☐ u. Slightly decreased interest and ability to play with toys
- ☐ v. Extreme decreased interest in toys
- ☐ w. Extreme decreased ability to play with toys
- ☐ x. Extreme decreased interest and ability to play with toys

2. Appetite assessment (check all that apply)

- ☐ a. No alterations in appetite
- ☐ b. Change in ability to physically take food
- ☐ c. Change in ability to retain food (vomits or regurgitates)
- ☐ d. Change in ability to find food
- ☐ e. Change in interest in food (may act out)
- ☐ f. Change in rate of eating
- ☐ g. Change in completion of eating
- ☐ h. Change in timing of eating
- ☐ i. Change in preferred textures

3. Pattern of elimination (check one in each category)

- ☐ a. Frequency and timing
- ☐ b. Frequency, no timing
- ☐ c. Frequency, no timing
- ☐ d. Frequency with timing
- ☐ e. Frequency with timing
- ☐ f. Frequency, but no timing
- ☐ g. Asleep

4. Visual acuity: How well do you think the dog or cat sees? (check one)

- ☐ a. No change in visual acuity detected by behavior, appears to see as well as ever
- ☐ b. Some change in acuity not dependent on ambient light conditions
- ☐ c. Some change in acuity dependent on ambient light conditions
- ☐ d. Extreme change in acuity dependent on ambient light conditions
- ☐ e. Extreme change in acuity dependent on ambient light conditions
- ☐ f. Blind

5. Auditory acuity: How well do you think the dog or cat hears? (check one)

- ☐ a. No apparent change in auditory acuity
- ☐ b. Some hearing loss
- ☐ c. Extreme hearing loss
- ☐ d. Deaf

6. Play interactions: If the dog or cat plays with toys, which situation best describes that play? (check one)

- ☐ a. No change in play with toys
- ☐ b. Slightly decreased interest in toys

7. Interactions with people: Which situation best describes that interaction? (check one)

- ☐ a. No change in interaction with people
- ☐ b. Recognizes people but slightly decreased frequency of interaction
- ☐ c. Recognizes people but greatly decreased frequency of interaction
- ☐ d. Withdrawal but recognizes people
- ☐ e. Does not recognize people

8. Interactions with other pets: Which situation best describes that interaction? (check one)

- ☐ a. No change in interaction with other pets
- ☐ b. Recognizes other pets but slightly decreased frequency of interaction
- ☐ c. Recognizes other pets but greatly decreased frequency of interaction
- ☐ d. Withdrawal but recognizes other pets
- ☐ e. Does not recognize other pets
- ☐ f. No other pets or animal companions in house or social environment

9. Changes in sleep-wake cycle (check one)

- ☐ a. No changes in sleep patterns
- ☐ b. Sleeps more during the day
- ☐ c. Some change, awakens at night and sleeps more during the day
- ☐ d. Much change, profoundly erratic nocturnal pattern and irregular daytime pattern
- ☐ e. Sleeps virtually all day, awake occasionally at night
- ☐ f. Sleeps almost around the clock

Handout of Clinical Behavioral Medicine for Small Animals by Karen Overall, to be published by Elsevier in 2008.



Meeting guide:

Everyone has a hand IN COMPLETE SENIOR CARE

Without every team member reinforcing the message, clients may not see the need for senior wellness care. Improve the lives of elderly pets by applying these tips at your next team meeting.

Receptionists

Ask clients with senior pets to withhold food from their pets for four to six hours before the visit in case the doctor wants to run lab tests. Clients should also keep their pets from “watering the bushes” before visiting so they’ll be ready for a urinalysis. Tell owners that their pets have entered a new life stage and you’ll schedule their appointments to last five to 10 minutes longer than usual to allow time for the doctor to go over the pets’ changing needs. Also keep clients committed to senior care by following up to make sure they’re complying with recommended at-home care.

Technicians and assistants

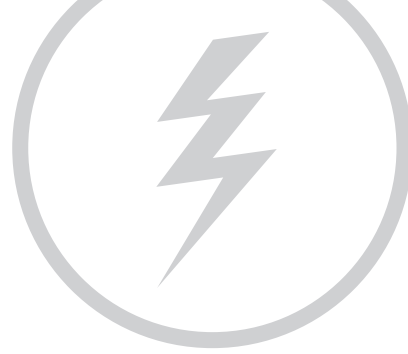
A thorough history is the starting point of any wellness program, especially one for seniors. Observant owners can detect subtle changes in their pets’ activity levels, elimination patterns, or behavior. So be sure to listen for comments like, “She’s always thirsty,” or “He’s slowing down.” Also continually quiz yourself on common senior conditions and which tests you’d run to detect them. Remember—the better you understand the diagnostics, the better you’ll be able to explain them to clients.

Managers

Design a marketing strategy for your senior program. Use newsletters, reminders, and invoices to educate your clients—and team members—on age-related problems. Then keep team members up to date on senior protocols and trends with CE seminars. One idea: Find the team member with the best compliance rates for senior screens and ask him or her to share tips with the rest of the team.

Veterinarians

Delegate the completion of lab tests to qualified technicians, giving you more time for diagnosing and treating. But don’t completely pass on the responsibility of client education. When veterinarians and team members explain the importance of senior care to clients, the chances of compliance surely increase.



The next step

Typically, once pets reach the age of seven, they're considered seniors. But since your clients probably still consider their pets youngsters, it's up to you to guide them toward appropriate diagnostics and lifestyle changes necessary to make their pet's senior years golden. Use these next steps.

1. Prep your staff. Gather your group to get everyone engaged and ready to promote senior wellness. Use the **step-**

by-step guides on pages 4 and 10 to develop a plan.

2. Gather information. Your appointment schedule is probably tight—so to make sure you get the information you need about a senior pet, have clients complete **the behavior hand-on on page 13.**

3. Spread the word. Social media helps to share your message with your clients. Use the **prewritten tweets and Facebook posts on page 7** to get

started. Bonus: Encourage your clients to share your tweets and posts and watch your social media status soar!

4. Watch and learn. We've got educational videos both your staff and your clients will appreciate. Embed the videos on your own website and send clients the link. **Head over to page 12 to watch the videos** and determine the best way to incorporate them into your senior wellness plans.

One more tip

Streamline your senior care

Encourage staff and client compliance with these strategies from Dr. Laura McClain Madsen, an associate veterinarian at Central Valley Veterinary Hospital in Salt Lake City, Utah.

1. Make sure everyone is on the same page. We use a chart that lists recommended procedures for every age, such as blood pressure and thyroid hormone measurements. The chart is a quick reference for receptionists. We also created "canned" estimates for routine wellness exams for senior pets. The estimate includes examination, lab testing, parasite preventives, and so on.

2. Talk to your lab about custom panels. We arranged for a customized senior wellness panel with our referral laboratory. Because we run so many, our lab gives us a discount on cost. We pass that savings on to clients.

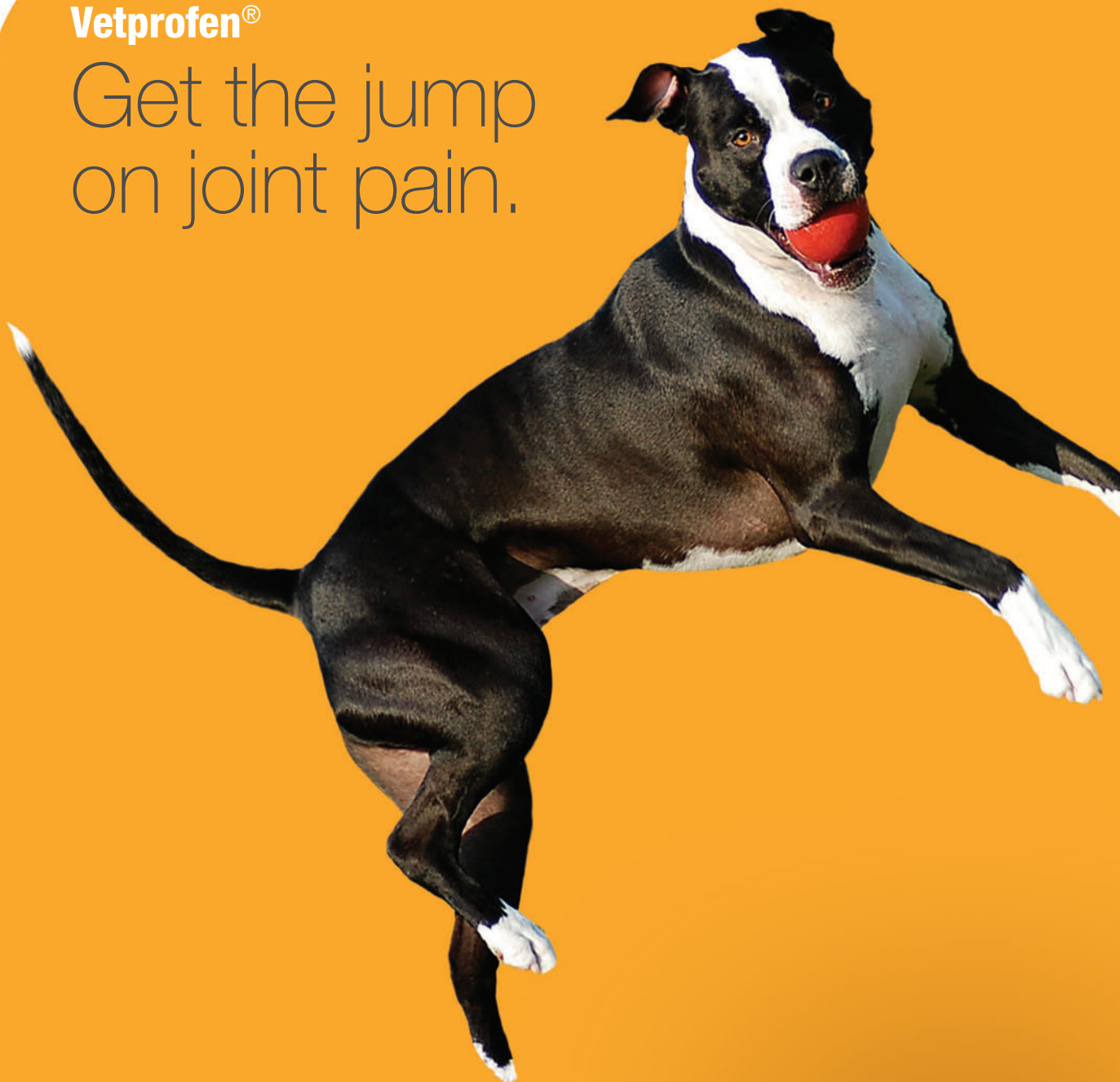
3. Teach team members. Schedule a staff meeting to teach your team the basics about common problems in senior pets. I encourage our team members to run lab work on their own pets, so they can see the benefits firsthand.

CORRECTION

In the article "Lyme disease: How to keep pets—and patients—safe" by Julie Legred, CVT, (March Tick Control toolkit) a paragraph was inadvertently omitted: "Some assays can identify the presence of antibodies that are caused by true infections vs. vaccine. These are referred to as sensitive and specific patient-side assays. Antibody titers to C6 are the most popular for differentiating vaccine or prior exposure vs. true infection with *B. burgdorferi* ..." To read the complete paragraph and corrected article, visit **dvm360.com/tickcontroltoolkit**. The dvm360 team regrets the error.

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See brief summary on page 8.

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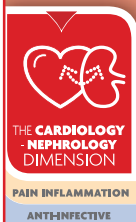
RENAL K⁺ A tasty gel supplement that provides the potassium they need.

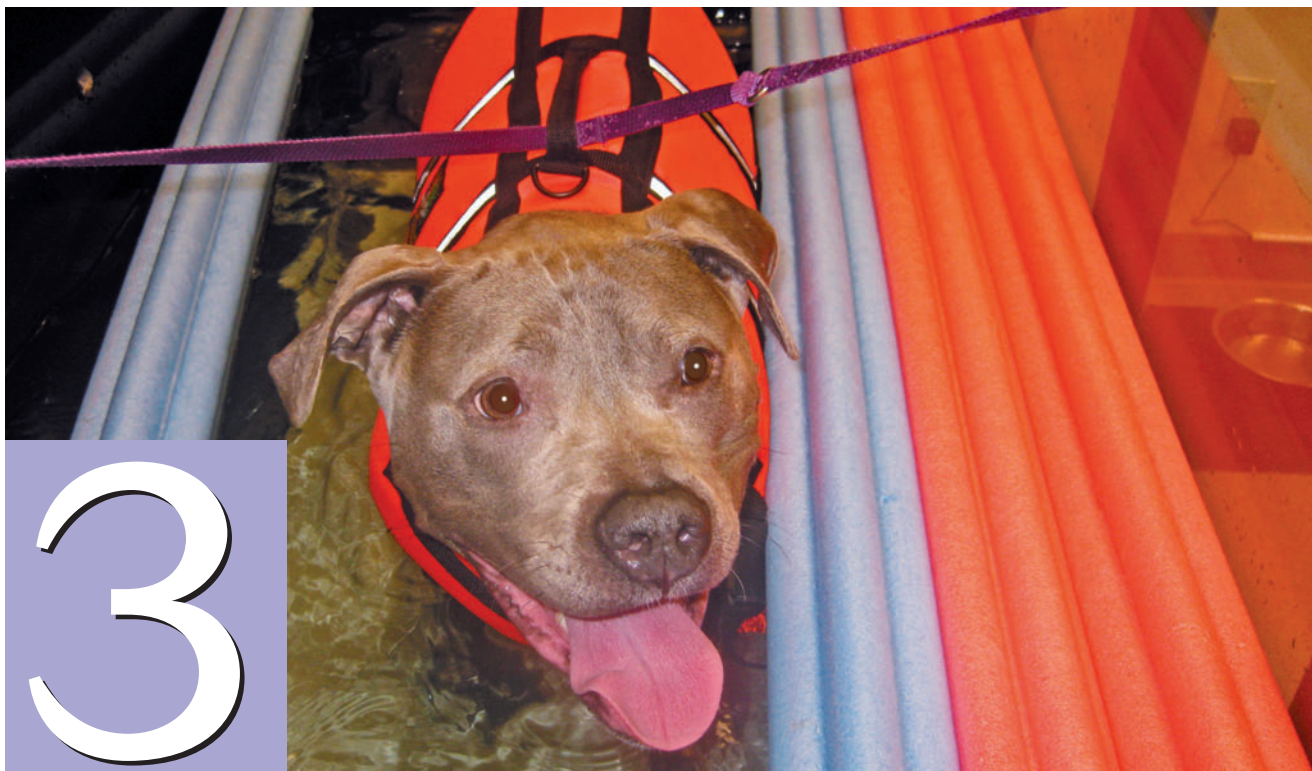
EPAKITIN® A chitosan-based powder that operates in the intestines,
binding to phosphates and decreasing serum phosphate levels.

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3

Remarkable stories of rehab recovery

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Share
pictures of
your favorite
canine survivors on
Twitter @firstlinemag
#caninesurvivor.



What do a pit bull suffering from fibrocartilaginous embolism, a Labrador retriever with chronic severe elbow dysplasia, and a beagle with ventral slot decompression have in common? These precious pooches are rehabilitation success stories that teach us to never give up hope. *By Jodi Beetem, RVT, CCRP*

In my years of working to help rehabilitate dogs, I've seen many amazing canines overcome seemingly insurmountable illnesses and injuries. The following rehabilitation success stories teach us that all pet owners need to understand their options to improve their

pets' quality of life. Whether a pet is struggling with arthritis or just underwent surgery, there's always a need for physical rehabilitation. All three of these amazing pets have amazing owners who dedicated a lot more than just the cost of the rehabilitation.

Case No. 1: Lola Warren

Have you ever heard the eye-watering, cringe-worthy cry of an unhappy beagle? Imagine that, multiplied by 10. That's what Lola did every time we even looked at her. She was just 10 days post ventral slot decompression and very unhappy. And honestly, who could blame her? She couldn't sit, stand, walk or even shift positions from side to side. On top of that, her neck hurt and she was

In every new-client appointment, we discuss home life and realistic goals to create a rehabilitation schedule. I usually give my owners the perfect world scenario—they don't work or have any other responsibility other than their pets—and then break it down from there. Each case I see has a different level of necessity when it comes to rehabilitation.

For example, would I like to see a dog that just underwent knee surgery three times a week for eight to 12 weeks? Sure. Is it realistic? Not for most owners. And this example might do fine with one to two visits a week, as long as the owner commits to daily home walks and so on. However, in Lola's case, and most other critical neurologic cases, she needed much more attention and care.

surrounded by new people who wanted to mess with her—or in my case, help her.

Her anticipation of pain seemed to stress her out the most, causing her cries. She even cried when her owner was around. Fortunately Lola's owner was receptive and understood that the cries weren't necessarily pain-related.

We formulated a plan to move slowly and begin with some shoulder and neck massages and standing exercises. Her owner had a very busy home schedule, with two young boys and a husband who was out of town. We agreed that Lola's best option was to board with us for the week so

Not every owner is easy to work with. Many times we must comfort and reassure owners that we're not trying to hurt their pets and that we must get past that scared moment when their pets squirm or cry out for help. Usually once the owner relaxes, the patient does too. If you've ever had physical therapy yourself, you know that sometimes it hurts a little before it gets better.

we could work with her every couple hours throughout the day. (See "Sample script: Creating a rehabilitation schedule with clients" on page 30.)

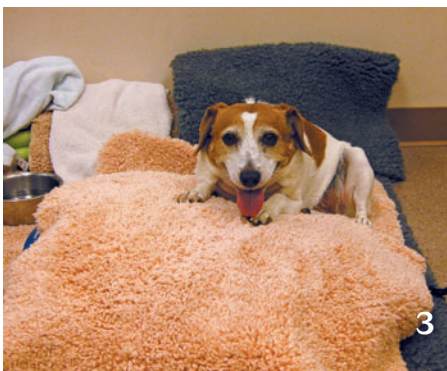
Lola's lack of interest in

>>> **Photo 1:** On her first day of rehab, Lola worked on learning to lie down and build her core.

>>> **Photo 2:** Lola warms up under blankets after spending time in the underwater treadmill.

>>> **Photo 3:** Team members propped Lola into more comfortable positions for her neck.

>>> **Photo 4:** At two weeks post-op, Lola still needed assistance in the water.



moving her legs 10 days after surgery concerned everyone. If she didn't start using her legs, she would need an MRI to rule out a nerve sheath tumor. So we started to help Lola walk again.

Every day we worked with her on the exercise equipment and in the water. She was not a huge fan of the peanut-shaped exercise balls, but they were so important in helping her regain her core strength and stability. We would use this piece of equipment by positioning Lola in lays, sits and stands on top of the ball. Doing this helped with joint awareness and worked her overall balance. For the first five days or so, she didn't show any signs of wanting to use her forelimbs and she couldn't figure out how to use her hindlimbs when we supported her with a vest for walking. She was very insecure, but

after about a week of aggressive, yet gentle, daily rehabilitation, she started showing improvement. She was able to push herself up into a sit, and she even stopped screaming. Before we knew it, she was walking in the water and on

a week for a month, and she continued to get stronger and less ataxic with each visit. She was also about five to six pounds overweight when we started, so her owners committed to helping her lose weight. They took it seriously

Weight-loss conversations can be an important part of rehabilitation. Many times you can start the recommendation with a simple opener, like, "There are a number of good weight-loss foods for dogs. We can call your veterinarian to find out what she recommends and then come up with a plan for the proper amount of calories Jake should eat."

land unassisted, and she was only a few weeks out from surgery. We were all ecstatic.

The owners were able to continue her home exercises and bring her in three times

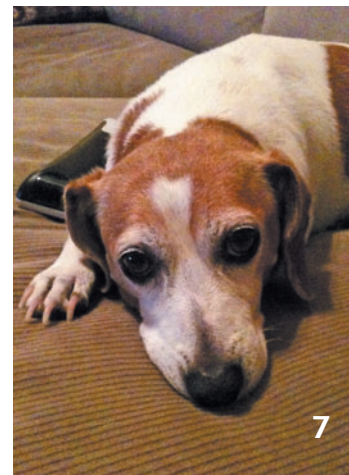
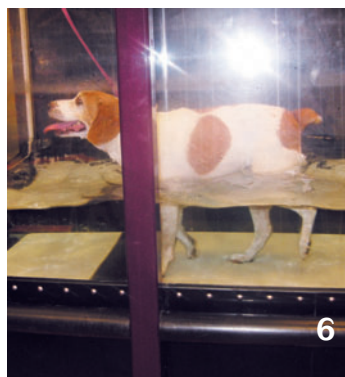
and understood that both in her current state and in the future getting Lola to a healthy weight was the best thing for her.

After two months of pretty

>>> Photo 5: By three weeks post-op, Lola was walking without a vest and without assistance.

>>> Photo 6: "Before we knew it, she didn't even need the bumpers on the side to help keep her straight," says Jodi Beetem. "And she even looked thinner."

>>> Photo 7: Lola relaxes in her favorite spot—the couch.



Find it all here.
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care

Rehab resources

Visit dvm360.com/rehab for rehabilitation tools, including a client handout about osteoarthritis and links to sites that will help you find a rehabilitation specialist near you. You'll also find resources to learn more about becoming a certified canine rehabilitation practitioner (CCRP).

Lola's case showed me the importance of patience. Sure, it was frustrating when I was trying to help her and she screamed at me. But slowly over time, her screams turned to tail wags, and I was able to watch her run around the yard pain-free—and that was one of my favorite days in my career.

intense rehabilitation three times a week, we weaned her down to two times a week, then one time a week, and, finally, graduation. So within just three months, we took a dog that had a possible guarded prognosis to ever walk again to being able to run, jump and play. She even gained muscle mass and got a waistline in the process.

Lola is now living it up at home with zero pain. Her owner continues to update us on how well she's doing, stopping by for visits and sending pictures. Today, you'd never know she had surgery. She's a spunky beagle that likes to thrash her toys all around, slinging them from side to side. Neck surgery? What neck surgery?

Case No. 2: Batista Hessman

Picture coming home from work one day to find your 95-pound pit bull lying outside, unable to get up. Imagine the feelings of worry that run through your body. That's what happened to Tracy Hessman one September day in 2010.

Batista suffered from a fibrocartilagenous embolism (FCE). FCEs typically affect one side of

infection or another condition with an MRI and neurologic examination is always recommended. Once the diagnosis is confirmed, it's on to medical management and a lot of physical rehabilitation. There is also no guarantee that a patient suffering from this injury will make any type of recovery. It depends on the severity of the injury and how much neurologic function has been lost.

home life and the owner's lifestyle all play a huge part in this decision.

Lucky for Batista, his owner was willing to do whatever it took to help him walk again—even with the understanding that there was still a chance he wouldn't make a good recovery.

I saw Batista for his initial consultation on September 17, 2010, three days after his

Discussions about whether to pursue treatment are very difficult conversations that usually take place between the owner and the referring veterinarian. However, there will be times when a client will look to a team member and ask for guidance. In those cases, it's important to

remember to leave your judgment at the door. You also need to be careful with what you say and how you say it. Explaining to clients that there's no right or wrong answer is usually a good place to start. They need to be the ones to make the decision, and they have a lot to think

about. They need to do what's not only right for their pets but also for their families. However, with suspected FCEs most clients will at least try and go forward with post-injury care in the hopes that their pets land in that higher percentage of those that recover.

the body, and, in Batista's case, his entire left side was affected. While there are no surgical treatments for an FCE, ruling out a disk problem, tumor,

As you can imagine, for many owners the decision whether to pursue treatment can be difficult for many reasons. Finances, schedule,

injury. After his examination I was concerned about his left forelimb, as it wasn't showing much response to stimulation. There was no withdrawal or

conscious proprioception. His left hindlimb, however, showed subtle signs of response during his neurologic examination. The right side of his body appeared within normal limits neurologically. However, he had a thinning hair coat and his left stifle joint was thickened on palpation. A veterinarian later diagnosed chronic bilateral cruciate

All owners need to understand that nothing is guaranteed when it comes to FCEs. Explaining the successes of rehabilitation is important, but I always follow up with something like, "However, since we don't know the extent of injury, there's still no guarantee. This can be frustrating, I know, but I'm going to do everything I can to ensure we give Jake the best chance he can have to make a recovery. Then we'll just take it day by day."

tears and hypothyroidism.

After his examination, the owner and I discussed the items that Batista would need at home to help with his recovery. This included plenty of soft bedding, a belly sling, a life vest and boots for his feet to protect them from drag-

ging. I also recommended therapy three times a week until he was walking. Keep in mind, this 95-pound dog couldn't sit, stand or walk on his own. So we started to address these challenges first.

Batista's owner purchased a life vest to help her lift him up and down. Canine life vests offer good abdominal support and feature a nice handle on the back. This was a staple in his recovery at home because she could not lift him on her own without it.

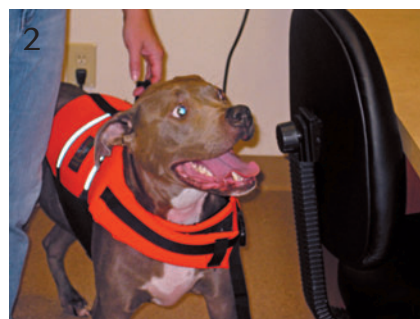
Batista came in on a Friday afternoon. After the first weekend at home with his new exercise program, he was already able to shift his body from lateral to sternal position—huge progress—and he was moving his left hindlimb. His left forelimb continued to concern the veterinary rehabilitation team, so we started neuromuscular electrical stimulation and assisted water walking and standing. For almost two months, we saw Batista and his owner, Tracy, three times a week—getting in the water

>>> **Photo 1:** Batista receives neuromuscular electrical stimulation to his triceps.

>>> **Photo 2:** To help with his recovery, Batista wears a life jacket to make it easier for his owner to lift him up or down.

>>> **Photo 3:** Initially, Batista needed assistance in the underwater treadmill.

A pet's needs during rehabilitation vary by case, but we often recommend items like raised food dishes to promote better posture when standing, head collars (e.g., Gentle Leader—Premier) to promote better posture when walking, life vests (e.g., Web Master Harness—Ruffwear; Help 'em Up Harness—Blue Dog Designs) for patients needing assistance walking and rising, gel packs for hot and cold therapy and rubber booties to protect paws and to help with traction.





**WHEN YOUR PATIENTS CAN'T RESIST CHEWING IN STYLE,
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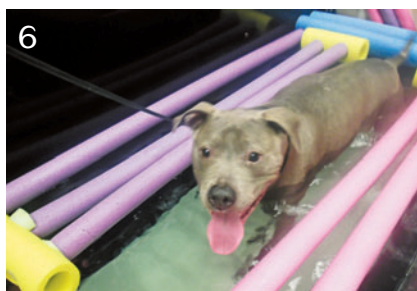
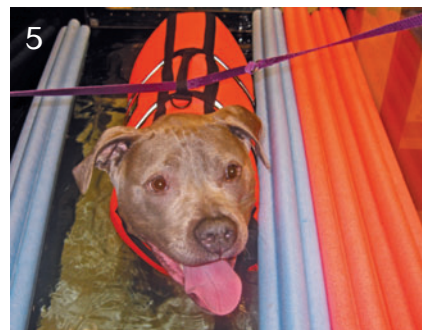
Passionate About Animal Health

>>> **Photo 4:** Soon, Batista could stand on his own with no assistance in the treadmill.

>>> **Photo 5:** One month into rehab, Batista still wore a life vest for support but didn't need assistance in the underwater treadmill.

>>> **Photo 6:** Three months into rehab, Batista no longer needed a life jacket.

>>> **Photo 7:** Batista receives laser therapy to his stifles.



with him, helping him move his legs and using passive range of motion, neuromuscular electrical stimulation, low-level laser and any therapy we could think of. Every week he improved. He even started showing signs of movement in his left forelimb. I actually teared up a little while

I was in the water with him because I was so excited.

Then after three months of slowly weaning him from sessions three times a week to two times a week to, finally, once a week, we hit a plateau. His neurologic status was static. But he could walk, and

that's all that mattered. He's not normal by any means, but he can use all four of his limbs and move himself about the house unassisted—except on stairs—which is a great improvement.

Of course, we still looked for additional ways to help Batista. However, his neurologic state meant he wasn't a candidate for surgery to help correct his bilateral chronic cranial cruciate ligament tears. So we turned to NSAIDs, exercise sessions in the

underwater treadmill and low-level laser on both of his knees.

Batista continues to visit weekly with that big pit bull smile and stutter step. Someday I hope Batista doesn't always need my assistance as much as he does now, but given the nature of his diseases, I suspect he will always have a spot on my schedule. Without rehab there's no telling where he might be in his recovery. He's definitely one of my favorite success stories.

Batista's case is a good example of teamwork within the veterinary team and with the owner. Having good communication with his regular veterinarian helped us plan his medication regimen for his FCE, get to the diagnosis of hypothyroidism and receive the surgical referral. Batista has even started seeing another veterinarian who practices holistic medicine and acupuncture. Building open lines of communication with all the team members who take care of Batista—no matter which hospital he's at—is important to his owner and for Batista's well-being.

Find it all here.
dvm360

Rehab in pictures

Scan the QR code to see a photo gallery of these amazing animals in rehab, or check it out at dvm360.com/rehabphotos.



Case No. 3: Baxter Flynn

Baxter, an 8-year-old, castrated male black Labrador retriever, had been slowly becoming less active over the last year, until he was struggling to stand up.

Just like in people, there's no cure for osteoarthritis (OA). And unfortunately, with each year that passes the OA progresses. So it's important to explain to pet owners that each patient with OA is likely to have good days and bad, but with the help of physical rehab, medications as needed, weight management, chondroprotectives and daily controlled exercises at home, we hope to make the good days last longer and the bad seem less difficult.

Watching him walk into our office, his severe head bob and stilted gait in both of his rear limbs were apparent. He also has a number of lipomas on his body, with a predominant one over his left hip, which may or may not be the cause of his abnormal rear limb gait. His most current ailment related to his elbows. Baxter had been living with chronic severe elbow dysplasia that had become debilitating.

After his examination I talked with the owner, and we decided to begin in-house rehabilitation two times a week, consisting of underwater treadmill walking and

low level laser for his elbows. His home exercises used warm packs on his elbows before walks and then started with slow controlled 10-minute walks twice daily on days that he didn't visit for therapy.

Baxter was a natural with the underwater treadmill, and he loved it—especially when he got to lay in the Jacuzzi jets, allowing the warm water to massage his joints.

Just three sessions into his rehab program we were already seeing improvements. Baxter's head bob was less pronounced and he was able to get around more easily at home. His home exercises were staying steady as he was still getting a little sore after his walks, but he soon passed that phase and started increasing his land walking time as well. But, like any arthritic dog, he still

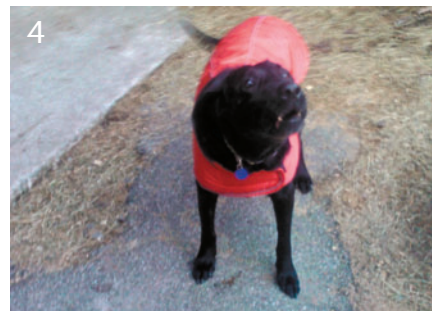
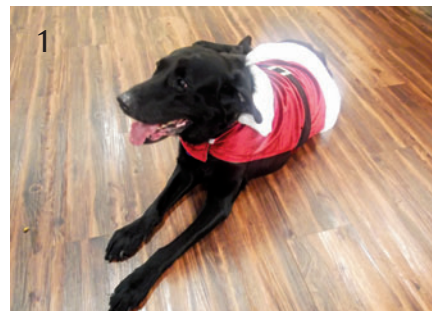
had the occasional bad day with lameness. It was always consistent with days he didn't get enough exercise or got too much. There's a fine line between too much and too little with arthritic dogs, and it's a trial-and-error process for each patient.

A few months into his rehab, he hit a plateau. He wasn't getting worse, but I talked with the pet owner and she agreed that referral to a surgeon

Baxter is a classic case of old stiff dog syndrome. In these cases it's always important to remember that too much is just as bad as too little when it comes to an exercise regimen. Cases such as Baxter's are very common to the general practice team, so it's important that team members who are responsible for client communication educate themselves on arthritis and ways to help their patients.

for additional options would be a good idea.

The first thing that was recommended by the surgeon was to add polysulfated



>>> **Photo 1:** Near Christmas, Baxter visited us wearing his Santa outfit.

>>> **Photos 2-3:** Baxter receives some low-level laser therapy to his elbows. Low-level laser therapy in arthritic joints helps decrease inflammation and pain.

>>> **Photo 4:** Baxter enjoys life at the farm with his owner.

glycosaminoglycan injections to his current rehab schedule before considering surgical options. Baxter

ing consistently good weeks at home. After months of weekly exercise sessions and low-level laser therapy, we've

team and an improved quality of life with the help of physical rehabilitation. Remember that every

If you as a team member suspect a patient needs a referral to a surgeon, it's important to watch your words. Since you're not the doctor, you can't make the referral.

If I see a plateau or if I notice a case where the opinion of a specialist would be helpful, I usually

start with, "I've noticed that Jake is doing well but isn't progressing. Since we've tried all our tricks here, have you ever thought of getting the opinion of a specialist?"

Many times people assume that if they go to see a surgeon, the surgeon will recommend surgery,

so I reassure them that going for the consultation can be beneficial to know their options. If they show interest—or even if they hesitate—I say, "Talk it over with your veterinarian the next time you see her and see what she thinks. Then, if she agrees, she can call in a referral."

responded to the treatment, and he returned to enjoy-

been able to stretch Baxter's rehab sessions to as little as twice a month.

Baxter has always loved spending his Saturdays at the horse farm with his mom, but now he's less painful and more able to get around the terrain. He'll always have those up and down moments—I call it the osteoarthritis roller coaster—but they aren't as frequent and don't last as long.

Baxter will probably always need rehab given his age and disease, but for now he's happy to get his twice-a-month "spa" time and at-home rehab walks with his owner.

Lola, Batista and Baxter have a lot in common. They have dedicated owners, a great extended veterinary

veterinary team member plays an important role in client communication and education. Ensuring that our clients and patients receive the best care there is should be our No. 1 priority. For every postoperative case like Lola, acute injury like Batista or arthritic geriatric patient like Baxter, it's important to discuss physical rehabilitation. Even if clients decide rehabilitation isn't right for them, you'll know that you've done everything you could to ensure the best quality of life for your patients. **FL**

Jodi Beetem, RVT, CCRP, helped launch the small animal rehabilitation program at University of Missouri Veterinary Teaching Hospital. In 2010, she joined Atlanta Animal Rehabilitation and Fitness and Veterinary Referral Surgical Practice.

Sample script

Creating a rehabilitation schedule with clients

There's no one-size-fits-all schedule for all clients or patients. So when clients object to a proposed schedule, use this script to find an approach that works for everyone:

Mrs. Smith: I work long hours, and I don't know if I can exercise Jake three times a day.

You: Mrs. Smith, I understand it can be challenging to offer the care we're suggesting. Let's talk about some other approaches we can use to make sure Jake gets the care he needs. Many clients use dog-walking companies and will share home exercises with their dog walkers to ensure their pets perform their daily exercises. Some clients also opt to board their dogs with us overnight or even do a day board by dropping off before work and then picking up their pets after work. Help me understand your schedule and obligations and we can brainstorm an approach together.



Oh, baby!

8 RISKS

to avoid during pregnancy

Whether you're expecting or you work with someone who is—or might one day—review this list of risks in veterinary practice and plan how to keep everyone in the workplace safe.

By Oriana D. Scislowicz, BS, LVT, VDT

Someday you—or someone you work with—might decide to expand the family to include a baby that doesn't sport fur, wear a collar or use the litter box. You may be less familiar with infants of this species, and their lengthy gestation means you'll need to take extra care to keep mother and baby safe.

You probably didn't learn how to care for this species in school, so make sure to point any mothers-to-be to their hu-

man doctors for medical advice. Meanwhile, you can help make the workplace a little safer by keeping these tips—and the potential risks—in mind.

Educate your team

When I told my employers I was expecting, they were very accommodating. But not all bosses are so accepting. It helps to remember that this is a mere nine months the practice may be slightly inconvenienced.

A piece of advice for expect-

ing mothers: In the end, when you're pregnant you need to feel comfortable with the decisions you make, and you shouldn't feel pressured by anyone else. Remember, this is your body, your health, your pregnancy and your baby. If you stand by your decisions, when your baby is born you will feel confident that you took care in the best way possible in their first months of growth.

In the veterinary field in particular, it's vital for em-

employees to share news of their pregnancy as soon as possible to avoid exposure to many workplace hazards. It may be nerve-racking sharing such personal information so early on, but remember that it's in your child's best interest, as the first trimester is the time of the most crucial development.

Many factors will determine a veterinary team member's risks when she's expecting. For example, receptionists who spend most of their time in the front office may pass through treatment or be exposed to different hazards briefly, while medical support team members who spend most their time in the back office might experience longer exposure. Regardless, it's important for managers to educate every team member of possible dangers. It's a good idea to present this information to team members when they're hired so they can take immediate precautions when they discover they're expecting.

1 Radiation

Exposure to radiation can occur in a few different ways besides taking radiographs. Fluoroscopy procedures also use radiation, and I-131 treatments for hyperthyroid cats employ radiation as well. As with most risks, if you can eliminate the risk during your months of pregnancy and ask other team members pick

On the next pages, you'll find additional insights from Phil Seibert, CVT, an author, speaker and consultant with SafetyVet in Calhoun, Tenn.

up these duties, then discuss how you can still be productive in these months while avoiding these risks.

However, some team members will have a more difficult time avoiding these



Phil Seibert, CVT

posed to more than this amount, you'll need to discuss with your hospital manager what changes you can make, and make sure your equipment is up-to-date on inspections and deemed safe.

Many pregnant women wear the same protective equipment during radiographs as before: apron—wraparounds are better for full coverage of that belly—lead goggles, gloves and a thyroid shield, but add in a dosimeter at the baby's level. This allows for more specific measurements of exposure to the fetus. If possible, take images with you and the pedal outside of the room if the patient is sedated and securely positioned.

On radiation, Seibert says:

"Exposure occurs only during the millisecond when the button is pressed. Wearing full gown and full hand gloves is often adequate protection. So in most cases, the pregnant worker does not need to completely avoid the radiation area—just minimize the exposure and wear the appropriate safety devices."

hazards—for example, perhaps you're a radiology technician in a specialty practice or the only credentialed technician in a practice. In these cases, take steps to reduce the risk. Radiation exposure during the entire gestation of pregnancy should not exceed 500 mrem.¹ It may be helpful to review your exposure history for the past nine to 10 months before your pregnancy to ensure that your badge readings add up to less than this amount. If you've been ex-

2 Waste anesthetic gases

Another concern is the risk for waste anesthetic gas exposure. When a gas reaches the level where you can smell it, it's entirely too high to be safely exposed to, pregnant or not. You can avoid most risks by following appropriate operating procedures for the anesthetic machine. Always check the machine for leaks before you use it, and make sure the scavenging system is in working order

On waste anesthetic gases, Seibert says:

"If you follow the safety rules—such as avoiding hard-to-scavenge procedures like masking, using the scavenger hooked to the machine, checking the machine for leaks before use, using the proper protective equipment when handling chemicals and practicing good personal hygiene—then there's really no increased exposure or risk to the fetus.

"If you are using any scavenger properly and in the case of the air canister, changing it regularly, you should have no exposure to waste anesthetic gasses during the procedure. However, animals do give off some gas during recovery since they don't metabolize all of the gas they inhale while on the machine. The only way to deal with that issue is with good general ventilation in the recovery area and for you to avoid very close face-to-face contact with recovering animals."

Tip for managers: "I don't recommend using masks for protection against anesthetic gasses. A better solution is to do the procedure safely. By allowing the employee to use a mask as personal protective equipment (PPE), the practice is required to comply with the full provisions of the Respiratory Protection Standard for the respirator, including logs for monthly leak checks, test fittings, cleanings and so on. Furthermore, OSHA expects you to use engineering controls—fans, scavengers, etc.—and procedural controls to alleviate the hazard before you use PPE for protection. So before you go straight to PPE, consider testing the employee's exposure." Visit dvm360.com/safetyvet for links to information about masks and testing badges, including instructions on how to use them.

and connected, which should be performed before every use outside of pregnancy as well. It's also important to make sure the endotracheal tube is cuffed and inflated appropriately to avoid leakage.

Once the procedure is complete and the patient is off of anesthetic gas, maintain the oxygen with the patient still connected to give time for the system to be flushed through the scavenging system. The most dangerous

times for exposure are during induction and recovery, so swapping with another employee during these periods can help. It's a good idea to avoid mask and box inductions completely, as a much greater amount of gas seepage can occur.

3 Bone cement

This danger may not be an issue in most general practices, but in orthopedic or neurology specialties especially,

bone cement can be used for surgical procedures. Bone cement is made up of liquid methyl methacrylate, along with polymethyl methacrylate. It can create strong fumes, and manufacturers advise pregnant women not be present during the mixing of bone cement.² If you're pregnant and you see a surgery where bone cement is needed on the schedule, it may be best to either swap shifts or take the day off. With the exposure of fumes from bone cement, there may be an adverse effect on bone growth and overall fetal health, according to the FDA.³ A threshold limit of 125 ppm per 10 minutes was determined by the Substances Hazardous to Health Guidelines. However, without scavenging systems devices, measurements can range from 2 to 374 ppm, and with a scavenging system, 90 to 100 ppm.⁴ Since the detrimental effects are unknown, err on the safe side and try to avoid bone cement altogether, if possible.

4 Oral drugs

Some oral drugs prescribed to veterinary patients are dangerous for pregnant women, even to handle. Among these are diethylstilbestrol (DES), chloramphenicol, misoprostol and cyclosporine.^{5,6} If possible, ask another employee to fill these medications and medicate patients. If you opt to, or can't

avoid, handling these drugs while pregnant, use double gloves and consider wearing thicker chemotherapy gloves. Wash your hands thoroughly after preparing. It's also advisable to wear a mask to reduce dust inhalation.

5 **Chemotherapy**

Once you take the time to think about why we use chemotherapy, it's clear how this could harm a developing baby: This is a cytotoxic drug with the intention of killing fast-growing cells. Since babies have a lot of fast-growing cells developing in their bodies, ideally, pregnant women shouldn't interact with patients receiving chemothera-

On hazardous chemicals, Seibert says:

"I would avoid the chemotherapy treatment, even handling patients that have undergone the procedure elsewhere. Use good personal hygiene and pharmacy practices when handling medications, such as washing hands and using the pill counter instead of counting tabs in the palm of the hand."

py. However, if you can't avoid it during pregnancy, try to at least avoid the mixing of IV fluids containing chemotherapeutic agents and the preparation of chemotherapy agents.

When handling a patient receiving chemotherapy, the biggest danger is elimination, such as urine. Let others clean up accidents, and wear double chemotherapy gloves when performing treatments. You can also use other protection, such as a gown and mask, but you are less likely to need these after the medication is prepared. Remember, certain chemotherapeutic agents are more dangerous than others, so it's a good idea to learn more about these drugs before handling them if you're pregnant.

6 **Formaldehyde**

As with many substances, studies vary about the hazard formaldehyde can pose for pregnant women. Some studies show that there's an increased risk of spontaneous abortion,⁷ and both major and minor birth defects have been noted in exposed nurses.⁸ Given that it's a known carcinogen, it's advisable to avoid contact with formaldehyde, which in most practices is easy since it's not used frequently.

7 **Toxoplasmosis**

Most pregnant women have heard of the dangers of toxoplasmosis. Those of us in the field know that you don't have to relinquish your cats, and you don't have to avoid cats in the practice altogether during your pregnancy. However, since the parasite can

On zoonotic diseases, Seibert says:

"Personal hygiene and knowledge of disease transmission routes is the best defense. It's a good idea to review zoonotic disease textbooks to educate yourself on commonly transmitted diseases of wild animals, even if you aren't pregnant."

be found in feline feces, it's a good idea to allow other team members to clean litter boxes. Pregnant employees may opt to be serologically tested to achieve peace of mind that with a seropositive result, they are not at risk of contracting the protozoa. However, you should still take sanitary precautions when handling litter boxes, even if you aren't pregnant.⁹ Anytime you handle a cat in the practice, make sure to wash your hands thoroughly, as you should be doing already between handling patients. Good personal hygiene will go far to protect you and your baby in many cases. And remember, the most frequent exposure is eating undercooked pork, so thoroughly cook your pork chops.

8 **Lifting and long shifts**

Frequent rest breaks are recommended for those who are on their feet most of

How to support pregnant co-workers

Use this advice to help out your practice's super-mommies-to-be.

By Rachael Simmons

Well, I'm pregnant. Things are gonna change, but part of me will still think I'm superhuman. For instance, don't let me pick up an animal when I shouldn't. I might tell you I can do it, but be my mother and say, "No." I'll put up a good argument, but stay the course or get out the Kryptonite. Even better, if you could put the pet up on the table, I can still hold it for an IV catheter or exam.

Remember that holding animals can be hard work. So if you see me eating a little something to get through the day, don't comment on how I'm eating yet again. In return I promise not to drop the "eating for two" quip. In fact, if you're nice enough I might even share.

And who can forget that pregnancy is synonymous with dropping things? Be a dear and help me pick up the endless pens, syringes, cage cards, chart notes and everything else that I can't seem to hang onto. In this case, it would be fine to make a light-hearted comment. Lord knows I'll be complaining how many times I've had to bend over.

As I get more pregnant, try to let me do some of the sit-down jobs that are easy for me to handle, like patient discharges and client phone recalls. That way I feel like I'm still contributing but taking it easy. Secretly I know there are some clients you don't want to call anyway.

When I'm close to my maternity leave, please be patient with me when I'm slow and awkward. If you think it's hard for you, let me tell you it's twice as hard for me, especially when I'm used to going Mach 2 down the hallway with my hair on fire.

And last but not least, if mommy brain kicks in and I don't tell you before I have the baby, please know I thank you all for your understanding and help. I couldn't have done it without you!

Rachael Simmons is a Firstline Editorial Advisory Board member and head receptionist at Veterinary Surgical Specialists in Spokane, Wash.

On lifting limitations, Seibert says:

"When you're expecting, it's important to understand your limitations. No matter how busy the practice gets, you must allow the other team members to do physical tasks like lifting even small dogs and restraining patients, especially fractious animals. Wear good slip-resistant footwear. And of course, be careful when you get into or out of the car, go up and down the stairs and even while sitting down in a chair or standing up from a sitting position."

Tip for managers: "You can't regulate most of this advice, but you can remind team members if you see them pushing the limits."

how much is too much, along with lifting restrictions. If you're feeling exhausted and pushed to the limit, usually your body is guiding you for a reason, so discuss with your manager cutting back on hours or the time you spend standing. Generally, 25 pounds is the limit for most healthy pregnancies¹⁰ when it comes to lifting, so don't try to be a hero and do it all by yourself. It can be better for the patient as well to have more

the day—which is most of us in the field. Prolonged walking or standing increases the risk of

preterm labor and intrauterine growth restrictions. Consult with your obstetrician about

Great expectations for expecting moms

Firstline Editorial Advisory Board member Rachael Simmons offers this advice on how to be a great employee when you're pregnant:

- 1. Recognize that you can't do all the things you could do before.** For example, let your coworkers do the heavy lifting—literally.
- 2. Help out in other areas.** You want to keep on task, not take hour-long breaks all day. Offer to do jobs that allow you to sit down for periods of time. If you aren't working, then maybe you shouldn't be at work.
- 3. Don't use pregnancy as an excuse**—not for being late to work or taking a long lunch.
- 4. Try to schedule your doctor visits around your work schedule, if possible.** There's no such thing as a quick doctor visit.
- 5. Don't spend all day discussing your pregnancy with your coworkers.** Although they're happy for you, they may not want to hear about it day after day for nine months. And not everyone wants to hear all the details.

hands on deck when lifting.

Keep in mind these are only a handful of possible risks. Educate yourself and discuss your risks with your obstetrician and manager when you

find out you're expecting. There are many decisions you need to make, and it can be overwhelming, but you need to feel comfortable with your choices. Most employers will be understanding.

Remember, this is only nine to 10 months of change for the hospital, but the detrimental effect of failing to take precautions could cause a lifetime of

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Firstline (Print ISSN: 1095-0613, Digital ISSN: 2150-6574) is published monthly by Advanstar Communications Inc., 131 W. First St., Duluth, MN 55802-2065. Subscription rates: one year \$21.00, two years \$36.50 in the United States & Possessions; \$31.50 for one year, \$57.00 for two years in Canada and Mexico; all other countries \$42.00 for one year, \$78.00 for two years. Single copies (prepaid only) \$10.00 in the United States; \$14.00 in Canada, Mexico, and \$16.00 in all other countries. Periodicals Postage Paid at Duluth, MN and additional mailing offices. POSTMASTER: Please send address changes to Firstline, P.O. Box 6086, Duluth, MN 55806-6086. Canadian G.S.T. number: R-124213133RT001. PUBLICATIONS MAIL AGREEMENT NO. 40612608. Return Undeliverable Canadian Addresses to: IMEX Global Solutions, P.O. Box 25542, London, ON N6C 6B2, CANADA. Printed in the U.S.A. Copyright 2013 Advanstar Communications Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including by photocopy, recording, or information storage and retrieval without permission in writing from the publisher. Authorization to photocopy items for internal/educational or personal use, or the internal/educational or personal use of specific clients is granted by Advanstar Communications Inc. for libraries and other users registered with the Copyright Clearance Center, 222 Rosewood Dr. Danvers, MA 01923, 978-750-8400 fax 978-646-8700 or visit <http://www.copyright.com> online. For uses beyond those listed above, please direct your written request to Permission Dept. fax 440-756-5255 or email: mcannon@advanstar.com. Advanstar Communications Inc. provides certain customer contact data (such as customers' name, addresses, phone numbers, and e-mail addresses) to third parties who wish to promote relevant products, services, and other opportunities that may be of interest to you. If you do not want Advanstar's lists, to make your contact information available to third parties for marketing purposes, simply call toll-free 866-529-2922 between the hours of 7:30 a.m. and 5 p.m. CST and a customer service representative will assist you in removing your name from Advanstar's lists. Outside the U.S., please phone 218-740-6477. Firstline does not verify any claims or other information appearing in any of the advertisements contained in the publication and cannot take responsibility for any losses or other damages incurred by readers in reliance on such content. Firstline cannot be held responsible for the safekeeping or return of unsolicited articles, manuscripts, photographs, illustrations, or other materials. Address correspondence to Firstline, 8033 Flint, Lenexa, KS 66214; (913) 871-3800; e-mail firstline@advanstar.com. To subscribe, call toll-free 888-527-7008. Outside the U.S. call 218-740-6477.

A photograph of bamboo stalks and leaves. The stalks are green with light blue nodes, and the leaves are long, thin, and green. The background is white.

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¹ Greene CE, Levy JK: Chapter 100 Immunoprophylaxis, in Greene CE (Ed.): *Infectious Diseases of the Dog and Cat*, 4th ed. Philadelphia, Saunders Elsevier, 2012:1163-1205.

² Day MJ, Schoon HA, Magnol JP, *et al.* A kinetic study of histopathological changes in the subcutis of cats injected with non-adjuvanted and adjuvanted multi-component vaccines. *Vaccine* 2007;25:4073-4084.

³ Data on file with Merial.

