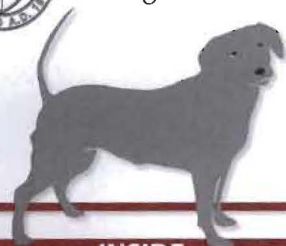




Cornell University
College of Veterinary Medicine



DOG Watch

Expert information on medicine, behavior and health from a world leader in veterinary medicine

Vol. 19, No. 6 ♦ June 2015

INSIDE

Pet Industry Sales Break Record 2

However, one niche surprisingly posts a nearly 4 percent decline.

Sniffing Out Thyroid Cancer 2

A preliminary study found scent-trained dogs can detect the disease.

No First Aid for Snakebites 3

Techniques are useless at best and at worst can cause injury.

Ask the Experts 8

What causes a Labrador to whine nearly nonstop on car rides?

IN THE NEWS ...

Raising Awareness About Begging and Obesity's Risks

Despite the consequences of obesity, up to 59 percent of dogs are overweight, according to the American Animal Hospital Association. It lists the effects in "Weight Management Guidelines for Dogs and Cats" in the *Journal of the AAHA*: chronic inflammation caused by fat tissue releasing hormones and proteins called cytokines, skin and respiratory disorders, renal dysfunction, diabetes and orthopedic disease.

The AAHA acknowledges weight management is a challenge. Many owners — 39 percent in one study — believed their dog, deemed overweight by his veterinarian, was an acceptable weight.

The guidelines go into technical detail on topics such as daily protein requirements but also offer practical advice for owners, especially in dealing with begging. They say that, when nutrient and calorie needs are met, "Begging is behavior, not nutritional or hunger-related." The substitutes: play, grooming, walks, affection; food balls and puzzles; providing a portion of the diet as treats and serving more frequent but smaller meals. ♦

Pursuing a Cure for Mammary Cancer

A Cornell study identifies a drug that seems to kill cancer cells while leaving healthy cells unaffected

Cornell researchers studying canine mammary cancer have set an ambitious agenda. They hope that their ongoing work will lead to better diagnosis, treatment and prevention of breast tumors both in dogs and humans. Much of their interest lies in how a novel class of drugs affects breast cell tumors.



Toy Poodles are among breeds vulnerable to mammary gland cancer.

ing drug that seems to kill off canine mammary cancer cells while leaving healthy cells unaffected.

Malignant Tumors. The drug inhibits certain enzymes, called peptidylarginine deiminase (PAD), which tend to be over expressed (increased) in canine mammary tumors. About half of these mammary tumors are malignant, and they

In a collaborative study funded by the Morris Animal Foundation, Assistant Professor Gerlinde Van de Walle, DVM, Ph.D., and Associate Professor Scott Coonrod, Ph.D., both working at the Baker Institute for Animal Health, have identified a promis-

are the most frequently diagnosed cancer in unspayed female dogs.

"If you can identify certain enzymes that are over- or under-expressed in tumors, those can be targets for the development of both diagnostics and treatments," Dr. Van de Walle

(continued on page 4)

Promoting Mobility, Managing Pain

Rehabilitation goes mainstream as Cornell offers therapies from lasers and platelet-rich plasma to electrical stimulation

Veterinarians at universities and specialty practices across the country today offer a range of therapies from stem cell therapy to traditional massage in the growing field of animal rehabilitation. Advocates say the therapies can help dogs recover from surgery, arthritis pain, obesity and neurological diseases that affect mobility.

"Medical doctors send patients to physical therapy after orthopedic injuries, surgery and heart attacks," says Joseph Wakshlag, DVM, Ph.D., ACVN, one of 142 specialists in the U.S. certified by the American College of Veterinary

Sports Medicine and Rehabilitation. He heads the Sports Medicine and Rehabilitation Service at Cornell University Hospital for Animals. "If people come back quicker and better after rehabilitation, why wouldn't a cat or dog?"

Healing Benefits. In fact, pet owners who have experienced the healing benefits of physical therapy are more likely to seek it for their pets. The American Veterinary Medical Association approved rehabilitation and sports medicine as a specialty in 2010. (The term physical therapy is limited to humans.) Cornell has

(continued on page 6)

EDITOR IN CHIEF

William H. Miller, Jr., VMD,
Dipl ACVD, Professor,
Clinical Sciences

EDITOR

Betty Liddick

ART DIRECTOR

Mary Francis McGavic

ADVISORY BOARD

James A. Flanders, DVM,
Dipl ACVS, Associate Professor,
Clinical Sciences

Katherine A. Houpt, VMD, Ph.D.,
Dipl ACVB, Emeritus
Professor of Behavior Medicine

Joseph Wakshlag, MS, DVM, Ph.D.,
Dipl ACVN, Associate Professor,
Clinical Nutrition

Margaret C. McEntee, DVM,
Dipl ACVIM, DACVR,
Professor of Oncology

Meredith L. Miller, DVM, Dip ACVIM
Lecturer, Small Animal Medicine

Leni S. Kaplan, MS, DVM
Lecturer, Community Practice Service



**Cornell University
College of
Veterinary Medicine**

For information on pet health,
visit the Cornell University
College of Veterinary Medicine
website at www.vet.cornell.edu.



DogWatch (ISSN: 1098-2639) is published monthly for \$39 per year by Belvoir Media Group, LLC, 535 Connecticut Ave., Norwalk, CT 06854-1713. Robert Englander, Chairman and CEO; Timothy H. Cole, Executive Vice President, Editorial Director; Philip L. Penny, Chief Operating Officer; Greg King, Executive Vice President, Marketing Director; Ron Goldberg, Chief Financial Officer; Tom Canfield, Vice President, Circulation.

©2015 Belvoir Media Group, LLC.

Postmaster: Send address corrections to DogWatch, P.O. Box 8535, Big Sandy, TX 75755-8535.

For Customer Service or Subscription information, visit www.dogwatchnewsletter.com/cs or call toll free: 800-829-5574.

Express written permission is required to reproduce, in any manner, the contents of this issue, either in full or in part. For more information, write to Permissions, DogWatch, 535 Connecticut Ave., Norwalk, Connecticut 06854-1713.

SHORT TAKES

One Category Declines as Pet Industry Sales Hit a Record High

Spending on pets continues to exceed almost all other retail sales in the U.S., with an increase of 4.2 percent last year. Total up owners' expenses for pet food, veterinary care, services and supplies like over-the-counter medications, beds, bowls, collars and toys, and they top \$58 billion — an all-time high, according to the latest industry report.

Owners spent the most money on food — \$22 billion, thanks to extending their interest in the quality and source of food to their pets, says the American Pet Products Association, which issues the annual economic review. Veterinary visits were second in expenditures at \$15.7 billion, while services such as grooming, day care and boarding saw the biggest percentage increase — nearly 10 percent for a total of \$5 billion.

The only category to see a decline was the sale of live animals. It fell 3.6 percent from \$2.23 to \$2.15 billion. Bob Vetere, association president and CEO, says theories about the decline include a change in the type of pets available from shelters, a growing number of pet sale bans and longer pet lifespans due to improved healthcare.

Shelters often report an over-population in the most difficult pets to place such as big black dogs, pit-bull types, seniors and special needs dogs.

Increases in spending are being led by both ends of the pet-owning spectrum — aging baby boomers paying more to

provide care for their pets and younger Generation Y owners, those variously described as between 21 and 35 years of age, who prefer the conveniences of high-tech and pampering products and services, Vetere says.

Sniffing Out Cancer

Add thyroid cancer to the growing list of diseases that dogs can detect by smell. Researchers at the University of Arkansas for Medical Sciences have successfully used scent-trained dogs to detect whether patients had the cancer. Some patients had been diagnosed with it; others had benign nodules.

When presented with urine samples from both patients, the dogs correctly identified 30 of 34 cases for 88 percent accuracy. Their results were compared to diagnoses using surgical pathology — the study of tissues.

"Detecting and diagnosing thyroid cancer can be difficult, because it's often looking for a very small number of occurrences in a very large background of benign nodules. It is also difficult to say with certainty that a patient is cancer-free after surgery," says Donald Bodenner, MD, Ph.D., director of the Thyroid Center at the university. "Having a technique with which to do these things with a higher degree of certainty would be a tremendous advance in thyroid cancer."

The researchers' next step is to validate their study with Auburn University's Canine

Performance Sciences program in the College of Veterinary Medicine using dogs specifically bred for detection rather than the strays and other dogs they used. ♦

When presented with three urine samples, Sophia alerts to the one with thyroid cancer cells by lying down next to it.



UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

Don't Try First Aid for Snakebites

Techniques are worthless at best and at worst cause injury — go to an ER clinic for antivenom

If a venomous snake bites your dog while you're out on a walk, his life can quickly be in danger. The safest course of action: Don't attempt outdated first-aid measures such as application of a tourniquet or an incision to remove the venom with suction. The venom will have already been absorbed, and tourniquets can compromise blood circulation, causing severe injury.

"Go straight to your nearest emergency animal clinic — the faster, the better. Pit viper venom can impede blood coagulation and cause red blood cell and tissue destruction, while coral snake venom can render the victim unable to move or breathe," says Michael Schaer DVM, ACVIM, ACVECC, emeritus professor and adjunct professor in emergency medicine and critical care at the University of Florida College of Veterinary Medicine. He has studied poisonous snakebites and treated them in dogs from Poodles to Great Danes.

Now's the Season. Snakebites tend to be seasonal and regional, frequently occurring from spring through autumn. "The incidence is highest in the

Southeast and in the Western U.S.," Dr. Schaer says. "And although you probably wouldn't find venomous snakes in downtown Orlando, snakes can live almost anywhere, particularly in rural areas. One issue is that human development has encroached so much on the snake's habitat that snakes in some regions have been pushed to the limits of their ecosystems." Today rattlesnakes can be found throughout the continental U.S.

Retractable Fangs. Pit vipers inflict the most venomous snake bites in North America. Those in the Southeast include rattlesnakes, water moccasins and copperheads, all with triangular heads, retractable fangs and heat-sensing depressions, or pits, between the eyes and nostrils. "Pit vipers can actually control the amount of venom they give off," Dr. Schaer says. "If they feel very threatened, they can unload a huge dose."

Elapids, another type of snakes, include coral snakes — members of the cobra family with potent neurotoxic venom. They have short, fixed fangs in the upper jaw. "Encounters with these snakes are less common because they are shy creatures that prefer to be left alone," Dr. Schaer says.

He's found the most common scenario for a bite is when a dog notices a snake in his yard and tries to remove it from his territory. "The dog sees the snake as an invader. The snake, of course, tries to defend itself. But it is always the pet that is pursuing the snake, not vice versa."

Owners will often witness a snakebite to their dog, but even when they don't, the signs of envenomation — poisoning — should be well recognized by an experienced veterinarian. These include low blood pressure, weakness, blood coagulation problems causing bleeding from the puncture wounds and sometimes elsewhere in the body. Snakes can bite several times if they feel especially threatened.



BIGSTOCK

Keep your dog leashed on hikes in fields and woods, avoiding rocks, bushes, grassy trails and other shelters for snakes.

"Dogs most often get bitten in the face, so the face is frequently the first body area to swell up," Dr. Schaer says. "The severity of envenomation varies according to the type of snake, the venom dose and the victim's general health."

In some cases, signs of coral snake envenomation might not appear for hours, but in the case of pit vipers, most victims show signs within the first 30 minutes. They include shock, listlessness, muscle tremors, nausea, vomiting and difficulty breathing.

Most emergency veterinary clinics stock antivenom. However, particularly in the Northeast, where snakebites are rare, most private practice veterinarians don't carry antivenom because of its expense. "It can run anywhere from \$400 to \$1,000 per vial. And a snake-bitten pet may require anywhere from one to 20 or more vials, depending on the severity of the bite," Dr. Schaer says.

Expensive Antidote. Producing antivenom is costly and labor-intensive, involving "milking" venom from live snakes, then injecting it in small, increasing dosages to horses, sheep and other animals owned by drug companies, Dr. Schaer says. "In response, those animals produce antibodies. Once a high enough antibody level is reached, the animals' blood is drawn, purified and used to make antivenom."

(continued on bottom of page 7)

KEEP HIM ON A SHORT LEASH

Let common sense be your guide in protecting your dog from snakebites:

- ◆ Don't hike with him near snakes' favored haunts, such as logs, rocks, bushes and grassy trails.
- ◆ Don't walk at night in areas known to have venomous snakes. They're nocturnal.
- ◆ Keep your dog on leash — ideally six-foot rather than a flexible one. Snakes can strike half the length of their body.

MAMMARY... (continued from cover)

says. "These studies are all still in vitro (occurring in a laboratory setting), but the effects of the PAD inhibitors seem consistent and definitely have potential."

An estimated 25 percent of unsprayed female dogs will develop a mammary tumor during their lifetime. The tumors can be aggressive, easily spreading to surrounding tissue, lymph nodes and the lungs. The median age of dogs with canine mammary gland cancer is 10 to 11 years. The cancer can also develop in younger dogs and, in rare but serious cases, male dogs.

Drs. Van de Walle and Coonrod have undertaken related studies, also funded by the Morris Animal Foundation, in which they are investigating a different enzyme, spleen tyrosine kinase (SYK), and its role in canine and human breast cancer. They found that the SYK gene is "turned off" in mammary cancer cells from dogs as well as humans. If researchers can uncover why and how the gene is suppressed, they could devise a way to turn it back on.

In this regard, Dr. Van de Walle evaluated the drug 5-Azacytidine, marketed as Vidaza. It's used in the treatment of certain human cancers and can successfully increase the expression of



An evaluation of Vidaza at Cornell showed the drug can increase the expression of the SYK gene, which is turned off in human and feline mammary cancer cells, at least in the laboratory. Researchers want to know why the gene is suppressed and devise a way to turn it on.

CHARACTERISTICS OF THE TUMORS

A veterinarian should evaluate all canine mammary tumors to determine if they are malignant or benign. Tumors can vary in size and appearance:

- ◆ The mammary gland might have a single or multiple masses. About half of dogs have multiple tumors.
- ◆ Superficial loss of tissue on the surface of the skin over the mammary gland may be apparent, often with inflammation.
- ◆ Tumors fixed to the underlying tissues or body wall are more likely to be malignant but a malignant tumor can also be freely movable.



A veterinary appointment is warranted if you notice lumps around your dog's mammary glands. An examination is also important every six to 12 months as a dog ages.

SYK in both canine and human mammary cancer cells, at least under laboratory conditions.

Cross-Species Effect. These studies seek to better understand the underlying causes and indicators of breast cancer, and apply the knowledge from one species to another. Such cross-species comparisons are also being pursued in cats.

Mammary gland tumors are a diverse group of tumors with a wide range of biologic behaviors, especially in dogs, says Cheryl Balkman, DVM, ACVIM, a specialist in small animal internal medicine and oncology and Senior Lecturer and Section Chief of Oncology at Cornell.

The range makes diagnosis and treatment all the more challenging. "Researchers continue to work on classifying these tumors to better predict their behavior in the patient by investigating molecular profiles and receptor expression of these tumors, as is done in people," Dr. Balkman says. "But as of yet, there isn't a commercial test available, and work continues."

Like breast tumors in humans, canine mammary tumors start as small lumps beneath or next to a dog's nipple. "The most important thing for owners to know is that pets have a better prognosis when the tumors are small — less than three centimeters [slightly over an

inch] — in dogs," Dr. Balkman says. "It is important to for owners to take their pets to a veterinarian if they notice any lumps in the region of the mammary glands. It's also important to have a veterinarian examine their pet every six to 12 months as they get older."

Owners can play a valuable role in early detection by routinely screening for lumps on their pets' undersides, particularly around the nipples.

Excessive Licking. In some cases, dogs might excessively lick or groom small mammary tumors, which can become infected and begin to emit a strong odor. Often, dogs with small tumors show no other symptoms of disease, but as the tumor grows and the malignancy spreads, general signs of poor health, like weight loss or lethargy, will become evident.

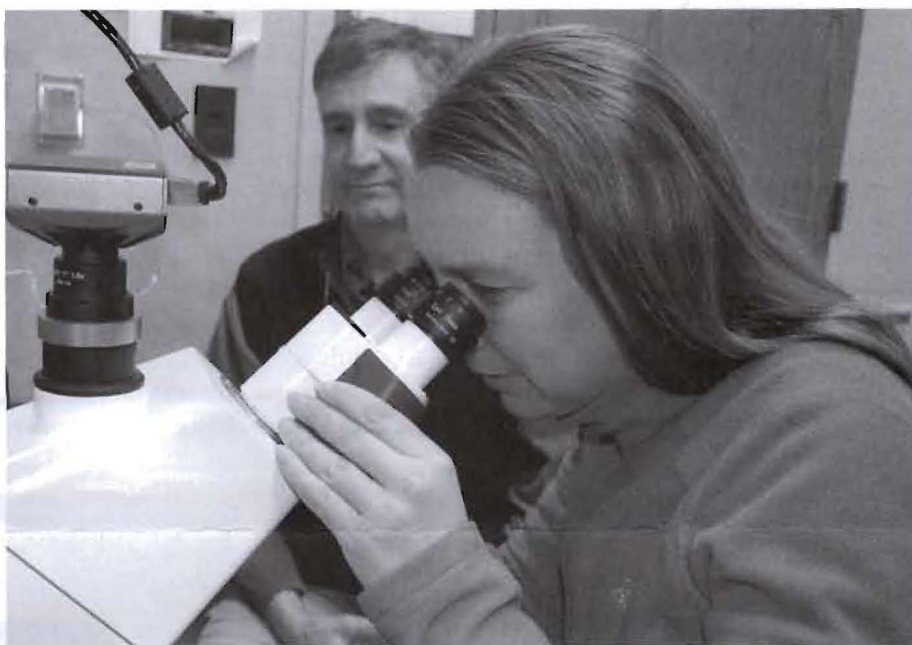
The underlying causes of canine mammary gland cancer are unknown, but the disease likely involves both genetic and environmental factors. All breeds of dogs are vulnerable, but certain breeds have a higher prevalence. These include Boston and Fox Terriers, Brittany and Cocker Spaniels, English Setters, Pointers and Miniature and Toy Poodles.

Hormones also seem to play a significant role. Dr. Balkman notes that it

is very rare for mammary gland tumors to develop in dogs who have been spayed early in life, such as before the first heat cycle, which usually occurs around 6 months of age. "This is one of the best ways to prevent these tumors from developing," she says. In fact, spaying before the first heat cycle has been shown to reduce the risk of mammary cancer in dogs to .5 percent. Spaying after the first cycle reduces the risk to 8 percent.

Essential Tests. When a small lump is identified, veterinarians typically use a fine-needle aspirate to determine if the mass is cancerous. If cancer is suspected or confirmed, they might also perform a fine-needle aspirate of nearby lymph nodes to determine if the mass has spread. "Because such tumors can spread to the lungs or other organs, chest X-rays should be taken to check for that possibility," Dr. Balkman says. "Blood work is also recommended as a health screen prior to anesthesia for surgery."

Treatment will depend on the size of the tumor, the extent to which it has spread and the dog's overall health. If the tumor is confined to the mammary glands, a veterinarian will likely recommend a mastectomy, the removal of the entire breast.



Gerlinde Van de Walle, DVM, Ph.D., here with Scott Coonrod, Ph.D., examines stainings on mammary tissues to evaluate the effect of enzymes.

Because some mammary tumors in dogs are aggressive and have a high risk of spreading, treatment with chemotherapy may be considered to try to slow their reach. "Further studies are needed to determine the appropriate chemotherapy that can provide a strong survival advantage, as currently this data is limited," Dr. Balkman says.

However, a new chemotherapy agent, Paccal Vet, is now being marketed for canine mammary tumors (see sidebar). "Hopefully over the next few years, we will be able to determine how effective this drug is against canine mammary tumors," Dr. Balkman says.

The expense of diagnosis and treatment of mammary tumors varies with each patient. Evaluation typically costs \$200 to \$600, and the cost of surgery, depending on its extent to completely remove the tumor, ranges from \$1,500 and \$3,000 at Cornell.

As in humans, the prognosis for dogs depends heavily on how soon the disease is caught. The outlook is guarded for dogs with large tumors with a high degree of malignancy, especially if the cancer has spread. In those cases, survival may be only a few months. If, however, treatment begins early — when the tumors are small and before the cancer has spread to the lymph nodes or lungs — the survival chances are favorable, with some dogs living several years after the complete removal of a malignant mammary tumor.

As research continues at Cornell and other institutions, advanced diagnostics and treatments could be on the horizon to improve the outlook even further. ♦

A NEW CHEMOTHERAPY DRUG INTRODUCED

The Food and Drug Administration's Center for Veterinary Medicine last year conditionally approved Paccal Vet-CA1, a chemotherapy drug intended to treat dogs with mammary cancer and squamous cell carcinoma of the skin.

The "CA1" designation means the approval is the drug's first conditionally approved application and allows the manufacturer to market it before meeting the standard of effectiveness for full approval. The company has shown that, when used according to the label, the drug is safe and has a "reasonable expectation of effectiveness," the FDA says.

"Paccal Vet-CA1 is the first veterinary drug to utilize paclitaxel, one of the most frequently used chemotherapeutics for the treatment of a wide range of cancers in humans for the past 20 years," says the manufacturer, Oasmia Pharmaceutical AB in Uppsala, Sweden.

The drug, given intravenously, is based on the plant substance paclitaxel. After a year, the manufacturer can ask for annual conditional renewal for up to four more years. The company must collect data during that time to prove the drug meets the effectiveness standard for full approval.

THERAPIES... *(continued from the cover)*

offered rehabilitation for some time but recently renamed the program, formerly known as pain management.

Among the advanced techniques Cornell offers is platelet-rich plasma (PRP) therapy, which has been gaining popularity in human medicine, especially for its use among professional athletes. Specialists take a concentration of the dogs' platelets — small blood cells that contain lots of growth factors in their blood — and inject or deliver them into the tendon or joint space to promote healing of tendons or cartilages.

"This short procedure — usually less than an hour — may be suggested for cruciate ligament tears, osteoarthritis and other joint or tendon injuries, and we think we are seeing favorable results," Dr. Wakshlag says. "The department is doing an ongoing study of PRP on arthritics and stifles (knees), typically cruciate injuries, and results appear promising."

When patients arrive at the Rehabilitation Service, therapy typically starts with evaluating their range of motion in the affected areas. "We also measure muscle mass, girth and fitness, and then we try to improve on all those," Dr. Wakshlag says. "We try to rebuild muscle and improve range of motion and, in effect, the joint, so we tend to use many different therapies, including home exercise programs.

Varied Patients. "We see the gamut of patients. For some owners, it's just a matter of getting a dog back and walking. For others, it's a matter of getting them back into agility. The expectations are highly variable, depending on the patient and the injury."

Veterinarians may experiment with different therapies to find the one or a combination of several that works for individual dogs. Many rehabilitation therapies appear to have benefits, though few studies have been done to confirm their effects, Dr. Wakshlag says. "But exercise of just about any kind just plain makes sense, and we try to use ones that work specific muscle groups in safe and effective ways."

The ancient Chinese therapy of acupuncture, which Cornell also offers, is the

well-researched of the complementary therapies, says Narda Robinson, DVM, director of the Colorado State University Center for Comparative and Integrative Pain Management. Studies on acupuncture's effectiveness in treating chronic pain span a range of species, from rats to cats, dogs, horses and humans, she says.

Rehabilitation specialists treat dogs with complicated fractures, limb amputations, neurological disorders and deformities that cause problems with limb usage. For instance, dogs who have undergone an



MIKE CORNELL, CORNELL

Results appear promising on a Cornell study on the effects of platelet-rich plasma therapy on arthritis and knee injuries, says Joseph Wakshlag, DVM, Ph.D., director of the Sports Medicine and Rehabilitation Service.

amputation must learn how to walk on three legs.

Among other techniques that Cornell offers dogs are:

- ◆ **Laser therapy** for pain and healing. In Class IV laser therapy, which has long been used on human patients, the specialist directs an intense beam of light into tissues to reduce swelling, increase circulation or block a nerve's ability to send a pain signal to the brain. Veterinarians apply it for wound healing and inflammatory conditions in the elbow, stifle or lower back. It also can be helpful for spinal cord injuries in small dogs.
- ◆ **Stem cell therapy:** Isolating stem cells from a dog's fat tissue or bone marrow

and injecting them into damaged tissue may promote healing, reduce pain and inflammation, and repair damaged tissue, cartilage or bone.

- ◆ **Therapeutic ultrasound:** High-frequency sound waves stimulate tissues to help increase blood flow, reduce swelling and gently massage muscles, tendons and ligaments. It can also help speed healing, reduce pain and relieve tight muscles and tissues.
- ◆ **Electrical stimulation** for pain and neurologic problems. Therapists apply an electrical current on the skin to help nerve regeneration after back surgery, relieve chronic pain, especially in geriatric pets with spinal arthritis, promote mobility and prevent muscle atrophy from disuse. Certain electrical stimulation therapy causes the muscle to contract rhythmically to increase contractions so it doesn't atrophy. "We use electrical stimulation therapy for chronic pain relief in just about any geriatric animal who's got chronic back pain, for muscle and neurogenic pain relief," Dr. Wakshlag says.
- ◆ **Exercise regimens,** such as stepping over cavaletti (jump) poles, walking up or down steps or standing on wobble boards helps improve the perception of movement and spatial orientation, coordination and strength.
- ◆ **Massage:** Rubbing and kneading muscles and joints can relieve pain and relax contracted muscles.
- ◆ **Underwater treadmills** help spinal cord patients because they create buoyancy, and dogs move better in water than on land. Resistance generated by walking in water also increases muscle strength and helps patients with neurological deficiencies move with ease. Nine out of 10 dogs do well on the underwater treadmill, Dr. Wakshlag says. Standard treadmill therapy continues to be popular for conditioning and building strength.

The University of Tennessee, the first institution in the U.S. to offer certification courses in animal rehabilitation, has



Treadmills tend to be helpful for conditioning and building strength.



Swimming helps cardiovascular fitness and encourages the bending of joints.



Wobbler boards help improve strength, balance and perception of movement.

SMALL ANIMAL PHYSICAL REHABILITATION,
UNIVERSITY OF TENNESSEE

graduated more than 850 individuals from its program since it began in 2001. Marti Drum, DVM, Ph.D., a clinical assistant professor at the University's College of Veterinary Medicine in Knoxville, most commonly treats traumatic orthopedic injuries such as pelvic fractures, deranged stifles — in which all the ligaments of the knee are traumatically torn — and spinal cord injuries. But many senior dogs could benefit from rehab, she says.

One reason: It is estimated up to 20 percent of adult dogs have arthritis in one or more joints, which can be exacerbated by obesity. Massage, exercise and stretches keep joints flexible, while a diet plan from a rehab specialist can help reduce excess weight.

Diet is important since carrying extra weight makes rehabilitation more difficult. "A strict diet plan is often part of the rehabilitation plan and all rehab specialists are well versed in obesity management as part of their training," Dr. Wakshlag says.

Dietary Changes. Many dogs are so overweight that it's difficult for them to

get around. This is part of the reason that Nestle Purina PetCare is funding a residency position at Cornell in Canine Sports Medicine and Rehabilitation, Dr. Wakshlag says. "Exercise and dietary changes often go hand in hand."

Obese dogs with painful arthritis can also benefit from supplements with anti-inflammatory effects such as fish oil or glucosamine-chondroitin.

Owner participation is often a significant part of rehabilitation. At-home exercises can include stretching to keep joints flexible, applying heat or ice to injured areas to improve blood flow (heat) and reduce inflammation (ice), and walking on air mattresses. Some owners build ramps and encourage their dogs to walk up and down them for treats.

Age is not a disease, Dr. Wakshlag says. "Many ailments that come with aging are definitely treatable, and this extra attention to details regarding movement, behavior and pain management is all part of this growing area of rehabilitation in our family pets. As your dog ages and doesn't do the things that he or she used to do, look up one of

the ACVSMR (American College of Veterinary Sports Medicine and Rehabilitation) specialists. They may be able to add few years to your dog's life and help him rediscover life again."

Some of the rehabilitation service's most successful cases were geriatric patients whose owners were considering euthanasia because of their dogs' poor health and mobility, Dr. Wakshlag says. "We made very positive advancements as far as the pets' ability to get up, get down, being active and mobile when they were potentially at the end of their life. We gave them more time." ♦

HOW TO FIND A SPECIALIST

Ask your dog's veterinarian to recommend a specialist in rehabilitation. The American College of Veterinary Sports Medicine and Rehabilitation (<http://vsmr.org/>) and the University of Tennessee (www.utc.edu/Faculty/David-Levine/) websites list facilities and individuals offering services.

SNAKEBITES... (continued from page 3)

In difficult cases, a dog may need intravenous fluids, antibiotics, oxygen and pain medication in addition to antivenom. "A severely envenomated pet may need six to eight vials over the first three to four hours," Dr. Schaer says. "The pet is re-assessed after each dose for coagula-

tion and cardiac issues. If these worsen, more antivenom may be needed."

The prognosis for snake-bitten dogs is guarded. "All in all, roughly 5 to 20 percent of dogs may not survive," Dr. Schaer says. But sometimes there's an unexpected happy ending when the initial signs had been life threatening. One

2-year old Labrador mix named Cali needed more than 22 vials of antivenom as part of her treatment. "She survived, against all odds," he says. "As a result, she became kind of a media star, appearing on YouTube and even on the local news — a truly amazing dog belonging to a lovely and caring family." ♦



Katherine A. Houpt, VMD, Ph.D., here with her West Highland White Terrier, Yuki, provided the answer on this page. Dr. Houpt is a diplomate of the American College of Veterinary Behaviorists and emeritus professor at Cornell University College of Veterinary Medicine.

Please Share Your Questions
We welcome questions of general interest on health, medicine and behavior. We regret however, that we cannot comment on specific products and prior diagnoses. Please send correspondence to:

DogWatch Editor
535 Connecticut Ave.
Norwalk, CT 06854
or email dogwatcheditor@cornell.edu

COMING UP ...

SHEDDING



THE ABCs
OF CBCs



HYPERTENSION



PATELLAR
LUXATION

What Causes a Lab to Whine Nearly Nonstop on Car Rides?

Q I have a 7-year-old chocolate Lab. When I put him in the car for a ride, he whines and whines. Probably takes him 30 to 45 minutes before he lies down. Is there anyway to stop his whining, and is there an explanation for this?

A A whine is a high-pitched vocalization that a dog usually makes with his mouth closed. He may whine because he feels unwell or is frustrated in trying to reach something or be somewhere else. Most commonly whining is an attention-seeking behavior. If you pay attention by saying "What do you want?" or "Poor dog" or even "Shut up!," you will reward him with attention. So don't respond to whining, especially in the car.

If he whines because of car or motion sickness, he will probably have his ears down, tail down if not tucked and his body generally lowered. Note if he is salivates more than usual, which is another sign of motion sickness. Of course, if he is particularly sick, he will vomit, but many dogs in a car are a little queasy and do not vomit. There are medications that your dog's veterinarian can prescribe for carsickness. Cerenia is the trade name of one medication.

A 7-year-old Labrador is reaching the age when he is in danger of several old-dog diseases — from obesity to kidney disease and arthritis. To rule out other illnesses, be sure to have your dog examined by his veterinarian and ask that blood tests be run.

A more likely reason for whining is that he is anticipating the end of the journey. There are two kinds of anticipation: joyful and fearful. If most of his trips in the car end at the groomer, the boarding kennel or (shudder) the veterinarian, he may be whining with worry. One way

to deal with this is to take him places that he will love — the dog park, hiking trail, his favorite dog-friend's house. As long as the ratio of happy trips to fearful trips is high, he should gradually begin to relax in the car.

Many dogs whine with frustration because they want to interact with other dogs, people or even cars they see out the windows. This can be dealt with by simply obscuring his view. A covered crate is the best and safest way. You can block his ability to see out the windows, but that will obscure your view, too. Sometimes a blanket between the front and the back seat is enough. A Thundercap is another way to reduce visual stimulation. It is a veil over the dog's head that limits his ability to see. If he can't see the things he might like to chase, he will not whine.

He also should have been wearing a seatbelt for safety reasons. If he is wearing a seatbelt, he cannot hurt himself, hurtle across the car during a collision or jump on you, causing an accident. Many seatbelts are available from simple bungee cords to elaborate padded harnesses.

You have several ways to calm a dog in a car: one tactile, one auditory and two olfactory. The tactile treatment is a Thundershirt wrapped snugly around him with Velcro straps. It tends to calm and reassure some dogs. We have talked about decreasing visual stimulation already, but dogs also are calmed by music. Classical music is much better than heavy metal that tends to agitate the dog as well as the driver.

The olfactory treatments are lavender and dog-appeasing pheromones. Essence of lavender, not just a spritz of lavender cologne, has been shown to calm dogs in the car. Dog-appeasing pheromone is a synthetic version of an odor produced by a female dog when she nurses puppies. It is available as the Adaptil collar from veterinarians and pet stores. Good luck! ♦

CORRESPONDENCE

The Editor
DogWatch*
535 Connecticut Avenue
Norwalk, CT 06854-1713
dogwatcheditor@cornell.edu

SUBSCRIPTIONS

\$39 per year (U.S.)
\$49 per year (Canada)

Single copies of back issues are available for \$5 each. Call 800-571-1555

For subscription and customer service information, visit www.dogwatchnewsletter.com/cs or write to: DogWatch, P.O. Box 8535, Big Sandy, TX 75777-8535.

OR CALL TOLL FREE: 800-829-5574