Best friends
THE PET MAGAZINE OF THE ONTARIO VETERINARY COLLEGE

IS VEGANISM SAFE FOR PETS?

minutes MATTER...
Protect your pet from heat stroke this summer

Bringing back BEANER
FROM THE DESK OF OUR MANAGING DIRECTOR

This April I had the honour of meeting one of my personal and professional heroes, Dr. Jane Goodall. In 1960, Dr. Goodall travelled to Tanzania to study wild chimpanzees and what she discovered about their behaviour continues to impact the scientific community today. Her ground-breaking field research and observations in Africa not only transformed our understanding of chimpanzees, but it also redefined the relationship between humans and animals.

The experience of hearing Dr. Goodall speak reinforced my belief that we are giving back to the Ontario Veterinary College (OVC), founded in 1986 at the University of Guelph, is Canada’s first charitable fund dedicated to the health and well-being of companion animals. OVC is a leader in veterinary healthcare, learning and discovery for the health of all species, including our own. In 2018, Quacquarelli Symonds (QS) ranked OVC 1st in Canada, 3rd in North America and 7th in the world for veterinary science amongst veterinary schools worldwide.

Lastly, we are proud to announce that OVC Pet Trust has published a new pet loss resource for helping children cope with the loss of a companion animal, more can be found on page 25. This booklet is part of our series aimed to help pet owners with varying aspects of pet loss and grief. They are available free to read on our website or ask your veterinarian for a print copy.

Whether you have a long history with OVC Pet Trust or reading Best Friends for the very first time, thank you for your interest and commitment to improve and advance companion animal health.

Kim Robinson
Managing Director, OVC Pet Trust
Ontario Veterinary College
University of Guelph

OVC PET BOARD MEMBERS
Colin Campbell, Rick Hayward, Dr. Doreen Houston, Dr. Karyn Jones, Kim Lang, Dr. Jennifer Ogee, Dr. Fran Rotondo, Roland Browning Watt, Dr. Jeff Wachnik
Honorary: Roger Warren
Ex-officio: Julie Byczynski, Dr. Gordon Kirby, Dr. Stephanie Nykamp, Kim Robinson

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discovery at the forefront of veterinary medicine.

I am also honoured to help people understand how they can help too.

Best Friends magazine is full of stories that demonstrate the impact of choosing to support OVC Pet Trust. This edition explores hot topics such as: how to protect your pet from heat stroke this summer on page 14, investigating pet owner perceptions of feeding your pet a vegan diet on page 7 and what pet owners need to know about sharing their bed with their pet on page 8.

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Medical science has entered the era of the microbiome. The microbiome is a part of all living species and it is made up of microbes, bacteria, viruses, fungi and other microorganisms that live inside the body and help keep us healthy. The importance of gut health - how we ingest, digest and expel the food we put in our systems - is not just relevant in human medicine; veterinary specialists worldwide are also tackling the subject, including researchers at the University of Guelph’s Ontario Veterinary College (OVC).

Dr. Shauna Blois, a board-certified internal medicine specialist, says we still have a lot to learn about how the microbiome interacts with states of health and disease in the body. Interest in the scientific community is developing as a rapid rate to determine links between disease and the body’s microbiome.

“Research tells us that a wide number of conditions, such as various gastrointestinal (GI) diseases and obesity, are associated with changes in the microbiome,” says Blois. “Right now, there is little known to scientifically determine if these alterations in the microbiome play a role in causing disease or illness or if adjusting cells in the body could serve as a possible treatment option.”

That’s where stool transplants come into play in Blois’ work. Typically referred to as fecal microbiota transplants (FMT) in the medical community, Blois explains the procedure as transplanting feces from a healthy donor into the GI tract of the patient with the goal to replenish “good” bacteria in the body’s system. FMT is commonly known for its use in human medicine, particularly as a treatment for people affected by “Clostridium difficile” or Clostridioides infections.

Blois is currently investigating FMT in veterinary patients specifically as part of the treatment for dogs with inflammatory bowel disease (IBD). IBD happens when the immune system attacks the intestines, causing inflammation. It may occur due to multiple factors: genetics, inflammatory triggers in the diet or environment, interactions between the GI tract and normal microbes and changes in the immune system. While IBD includes a broad category of chronic GI inflammation, it is found in dogs, cats, humans and many other species. In this study, Blois along with Dr. Scott Weese and OVC Doctor of Veterinary Science (DVSc) student Allison Collier, are measuring the clinical response to FMT in patients that medically qualify as potential candidates and have a pre-existing IBD condition. Pet patient participation is based on owner consent.

“There are a lot of similarities in the way FMT is used in human and veterinary medicine. Donor selection is similar; much like human donors, animal fecal donors are screened extensively to make sure they are healthy and quality to donate,” Blois explains. “Goals are also very similar to human medicine. "The idea behind FMT is that the good microbes found in feces from a healthy donor will start to establish themselves in the sick patient’s GI tract and normalize the fecal microbiome community again," she says.

Blois believes OVC is among the first team of researchers to investigate FMT for dogs in a clinical trial for IBD. “She is hopeful her work can translate into new treatment options for dog patients. Findings could translate to benefit human health as well.”

Depending on the findings, Blois hopes FMT could be the primary treatment for some IBD pet patients, reducing the need for current standard drug therapies which can have severe side effects in patients. If dogs can respond favourably to FMT alone, it may eventually help avoid other therapies altogether.

Blois is also currently conducting two related studies that are examining fecal matter. One project investigates the impacts of surgery on the fecal microbiome of dogs and the other explores social impacts, such as housing and environmental conditions, and how they may have an effect on a dog’s fecal microbiome health. Future work is also planned to study microbiome alterations in non-GI diseases such as immune-mediated blood disorders.

“As people age, the microbiome includes trillions of bacteria that work together to keep us in optimal health. A healthy gut is the foundation of good health, so the more we can learn about changes in the gut that may cause disease, the better we can treat or prevent those conditions from occurring in the first place,” Blois says.©
**DEPARTMENT OF CLINICAL STUDIES**

**ANESTHESIOLOGIST AND ASSOCIATE PROFESSOR**

was funded by OVC Pet Trust in 1987. I understood then the importance of my research and allowed for them to follow the steps I once took early in my career.

**What research projects are you currently working on?**

Dexmedetomidine is a popular sedative and analgesic used in small animals. One effect from this drug that is often considered adverse is the bradycardia (decrease in heart rate) that occurs after its administration. The use of another drug, lidocaine, to treat dexmedetomidine’s bradycardia was first recommended by several veterinary researchers on the use of lidocaine to provide intraoperative analgesia. This allowed us to notice that in dogs that had received dexmedetomidine, the slow heart rate could be increased to an acceptable rate without affecting the blood pressure and therefore, without compromising the work of the heart and blood supply to the tissues. We have recently completed an investigation confirming our observations and results. This is an exciting and novel way of dealing with the slow heart rate caused by dexmedetomidine, which makes the use of this sedative safer and allows veterinarians to deal with its main adverse effect in their pet patients.

**What will the new surgery and anesthesia facilities at OVC mean to you?**

Procedures that were rarely done in the past are now routine, but the older infrastructure of our hospital facilities does not have all the conditions to always carry them out in an efficient manner. New facilities will give us the opportunity to complete our daily activities in a setting that is modern and adapted to the current needs to treat our patients.

**Do you own any animals yourself?**

I don’t currently have a pet at home, but I have had animals all my life: dogs, fish, birds, horses, chickens, turkeys, and in past years a cat. I have two reasons why I don’t have a buddy presently. As I grew older, my attachment to my pets became stronger and I feel they are irreplaceable. The other reason is that I have a busy schedule that prevents me from looking after a new buddy the way I feel I should, so resist.!

**What impact does OVC Pet Trust funding have on your research?**

OVC Pet Trust has been very important during my academic career. My graduate project when I was a Doctor of Veterinary Science (DVSc) student was funded by OVC Pet Trust in 1987. I understood then the importance of being a scholar in the profession as well as accomplish an individual milestone. As faculty, I’ve had multiple projects funded by OVC Pet Trust. With this funding I’ve also been able to incorporate graduate students into my research and allow for them to follow the steps I once took early in my career.

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**VEGANISM SAFE FOR PETS?**

Research shows there may be serious health risks of feeding your cat or dog unconventional diets, but with veganism on the rise in people around the world, plant-based alternatives for pets has become a hot topic.

In North America veterinarians follow nutritional feeding guidelines for pets established by the Association of American Feed Control Officials (AAFCO). Based on current knowledge in veterinary medicine, nutritionists recognize nutrients, not ingredients in an animal’s diet. As long as a diet provides all of the essential nutrients in the appropriate amounts and ratios, it would be considered nutritionally adequate. However, according to most veterinarians who specialize in nutrition, while a diet without animal ingredients may be formulated to meet AAFCO nutrient profiles, there is little research regarding the way these diets perform when fed to the animals they are intended for.

Generally, strictly plant-based diets are considered unconventional for dogs - canine omnivores or, animals who can eat and survive on both plants and animals. Cats are carnivores and as recently as fall 2018 it was reported in The Telegraph that The Royal SPCA stated that cats could become seriously ill if given exclusively plant-based diets and owners could run the risk of getting a criminal record. “Under the [British] Animal Welfare Act, the law requires an owner to take reasonable steps to ensure that all the pet’s needs are met. This includes a healthy diet, as well as providing suitable living conditions, ability to behave normally, appropriate company and protection from pain, suffering, injury and disease.” In the worst cases where cats are so malnourished, guidelines say owners could face a hefty fine or even a jail sentence if convicted under the Animal Welfare Act.

In a new study led by board-certified veterinary nutritionist Dr. Adrianne Verbrugghe at the Ontario Veterinary College (OVC) at the University of Guelph, researchers asked pet owners to share their pet feeding practices, motivations for pet owners who have chosen a vegan lifestyle for themselves, in particular, are very highly motivated to investigate feeding plant-based diets to their pets.

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**IS VEGANISM SAFE FOR PETS?**

Investigating pet owner perceptions of plant-based diets for dogs and cats.
UNCOVERED

What pet owners need to know about sharing a bed with a pet

ZOONOTIC (zoo-on-nah-tick) diseases, also known as zoonoses, are caused by infectious diseases that are shared between animals and people. Major modern diseases such as Ebola virus disease and salmonellosis are zoonoses.

According to the Centers for Disease Control and Prevention (CDC) it is estimated that approximately 50 per cent of pet owners share their bed with their pet. If you are in this group of pet owners, you’ve likely experienced the mental and emotional benefits of sharing this space in the home with your dog or cat firsthand. Pets provide comfort and a sense of security to many. But have you ever thought about the implications of welcoming a pet under the covers from a health and infectious disease perspective? Is it safe? Are there negative consequences? Are precautions necessary? Do the benefits outweigh the risks?

While sharing your bed with a pet is generally quite acceptable, there are some risks and potential dangers pet owners should understand. We sat down with Ontario Veterinary College (OVC) infectious disease expert and professor Dr. Scott Weese to learn what all pet owners should know about sharing such close quarters with a dog or a cat in the home.

“There is never a ‘no-risk’ situation. I can’t ever say that your dog or cat won’t make you sick,” says Weese, who specializes in understanding zoonotic diseases, infectious diseases that can be transferred between animals and people. “But, the overall risks are very low, especially with dogs and cats, and healthy owners. The challenge with educating people about zoonotic disease involves walking the line between raising awareness and talking people off the ledge at the same time.”

Pathogens and parasites can be bad, but they are also critical for our immune system, the body’s protection which is made up of cells, tissues and organs that work together to fight infectious organisms.

“It’s all about lessening risk,” Weese states. “There are a number of risks pet owners can easily manage on their own: ideally, pets in the household receive regular preventive veterinary care; everyone in the home uses good handwashing practices; pets are fed properly; and when disease arises, it is medically treated. Whether we share our bed, home or life in general with a pet, we are talking about the same sanitary concepts and habits,” Weese says.

WHAT TO CONSIDER WHEN INVITING A PET INTO YOUR BED

LIFE STAGE OF YOUR PET

Generally, dogs and cats are lower risk pets. However, puppies can be higher risk than an adult dog because they are more likely to shed parasites and certain bacteria. Puppies are also known to bite and scratch more often.

THE SPECIES

When bringing an exotic pet into the home, pet owners should be made aware that some species are prone to carrying certain diseases. Reptiles such as turtles, snakes and lizards frequently carry Salmonella and are known to be much higher risk pets.

YOUR AGE AND YOUR HEALTH MATTER

“Just like animals, there are groups of people who are higher risk too. Children younger than five, adults over the age of 65, pregnant women and people with weakened immune systems (immunocompromised) are in the high-risk category. People who are undergoing chemotherapy or bone marrow transplant recipients are exceptionally high-risk,” says Weese. However, high risk doesn’t mean people shouldn’t own or have contact with pets. It means the risks need to be evaluated and measures taken to reduce those risks.

WHAT ABOUT UNDER THE COVERS?

It is important to note that on the bed and in the bed (underneath the covers) are two different things, especially when you consider the following scenarios provided by Weese. What is the risk of a healthy 20-year-old sharing their bed with their dog? Probably close to zero. In comparison, what is the risk of an 85-year-old diabetic patient with foot ulcers doing the same? There is likely higher risk in this situation, especially if the pet sleeps under the covers at the person’s feet. Close contact for six to ten hours a night under the covers together could result in a problem for the pet owner or for the dog.

COULD YOU BE THE ONE MAKING YOUR PET SICK?

It goes both ways. “We focus on bugs that go from animals to people, and that’s important. However, things go both ways. In particular, we see antibiotic resistant bacteria moving from people to their pets. People with infections or that are higher risk of carrying certain pathogens (such as resistant bacteria) should take measures to reduce the risk to their pets, such as hardwaxing.”

WHAT ARE THE MAIN HEALTH CONCERNS WHEN SHARING A BED WITH A PET?

“Odds of an infection are low overall, but transmission of bacteria during close, prolonged contact is always of some concern,” Weese explains. “Infection is more likely in people who have wounds, any type of skin lesion, surgical incision or foot ulcer, in addition to people who are generally in a high-risk category due to their age or medical status,” he adds. If the dog is in a similar category or has an active infection such as a skin infection, the risks probably increase further. Each situation should be assessed on a case-by-case basis, Weese recommends.

Pet owners should engage both their physicians and veterinarians in the conversation if they have concerns. Weese’s research has shown that physicians may not always ask patients about pets in the home and veterinarians may not necessarily be comfortable discussing human health topics, which further drives home the need for owner education.

“With education and awareness, we can greatly reduce risks so that the benefits of pet ownership outweigh the costs,” Weese says.
YOUTH IN ACTION
Punk for Paws

According to Imagine Canada, 15 million Canadians volunteer talent and time to support non-profits and charities and help those in need. Collectively, Canadians give more than $15 billion annually to registered charities. Top youth experiences that motivate future giving include seeing parents volunteer, seeing someone they admire helping others and volunteering.

In 2018 second year University of Guelph (U of G) student Nicole Iarusci had a big idea: to combine her passion for music and animals together to celebrate the positive effects both have in people’s lives.

And so, what was once a brainstormed idea in one of Iarusci’s notebooks became Punk for Paws, a live concert fundraiser, featuring local bands from Southern Ontario, with all proceeds supporting OVC Pet Trust. In May 2018 Iarusci held her first event at rock concert hall Lee’s Palace in The Annex neighbourhood in Toronto. Iarusci says it means a lot to her that she can use her passion for music to give back and to help animals.

While Punk for Paws stemmed from her own idea, Iarusci recognizes it takes a team to execute her vision into reality. She credits her support system of family and friends who have encouraged her, as well as the musical artists who play for her fundraiser event.

“Punk for Paws is our combined achievement,” Iarusci feels strongly that music has the power to bring people together.

Music fans commonly connect through a shared love for a particular act, but the power of music is greater than that. It allows people to experience a form of escapism, a cathartic and comforting environment that allows us to take a moment and get away from our daily stresses. Music has a calming affect and has been shown to improve our mood, which in turn affects our health and overall well-being. People can come together and enjoy live music while supporting a great cause.”

Iarusci says being surrounded by pets throughout her childhood contributed to a lifelong love for them. This year’s Punk for Paws will be particularly meaningful for Iarusci, who recently lost one of her own pets – Tiny Rick, a domestic short-hair cat. “Tiny Rick was able to live a great life due to the veterinary care he received.” She adds that by supporting OVC Pet Trust, her efforts are supporting the lives of other pets and the people they make people just as happy as Tiny Rick does for his owner and her family.

“Being able to support the unique bond shared between an owner and their pet is a very powerful, moving thing.”

Dr. Chris Pinard (OVC 2016) is a licensed veterinarian who is studying to become a veterinary specialist. He is currently pursuing a three-year Doctor of Veterinary Science (DVSc) degree and simultaneously pursuing a clinical residency training program in medical oncology – a branch of veterinary medicine that deals with the diagnosis and treatment of cancer in pets. His advanced specialty training includes both clinical duties and research work. Today he is on clinics at the Monia Campbell Centre for Animal Cancer in the OVC Health Sciences Centre, a specialty referral hospital and the first comprehensive centre of its kind in Canada, helping pets and their owners.

Today, before patients arrive at the University of Guelph Ontario Veterinary College (OVC), the medical oncology team meets for journal club. The goal of this weekly session is to bring newly-published research – the latest knowledge and innovation in cancer research from around the world – directly to the clinic floor at OVC. Each doctor reviews the findings of their respective assigned research paper – this morning, Drs. Sarah Laliberte, oncology intern, and Sam Hocker, board-certified medical oncologist, are presenting studies from academic institutions in Italy and the United States. The team has discussions about the implications and applications of the findings, and each paper and review how their current or future patients may benefit or be impacted by the literature. Journal club helps trainees and specialists stay up-to-date and at the forefront of cancer treatments; it is also an important requirement within the board certification process and a key component in Pinard’s training to become a medical oncology specialist.

OVC’s oncology team is made up of faculty and veterinary specialists, residents and interns; a surgical oncologist, a medical oncologist, a radiation oncologist, a neuro-oncologist, a pain management specialist, and many more.

The latest advancements in veterinary medical oncology are helping more and more patients live long and healthy lives. At OVC, research is focused on improving outcomes for pets with cancer. By understanding the molecular underpinnings of how cancer grows, we can develop new and more effective treatments. This is a rapidly evolving field, with new drugs and treatments being developed all the time. Our goal is to bring these advances to the clinic floor to benefit our patients and their owners.

The team at OVC is dedicated to providing the best care possible for pets with cancer, and we are constantly working to improve our treatments and outcomes. Our goal is to help pets live long and healthy lives, and we are committed to providing the best care possible.

A DAY IN THE LIFE OF A MEDICAL ONCOLOGY RESIDENT

MORNING

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their treatments. RVs bring dogs Radar, Cassie and Bailey into the treatment room, and like all patients who are visiting the cancer centre, they will undergo pre-treatment physical exams as well as spend a short time after their therapies under the supervision of the veterinary team.

As Pinard performs a physical exam on Radar, an eight-year-old Australian Shepherd with lymphoma who is here for his chemotherapy treatment, he explains the importance of thoroughly examining each patient prior to their treatment. “Depending on the cancer type, a physical examination can tell us how a patient is responding to chemotherapy; this is especially true in dogs with lymphoma. In others, it is vital that they maintain their health and quality of life through this process.” Pinard and his team are gifted communicators. “My goal is to make sure our patient’s families have all the information they need to make an educated and informed decision for their pet. For many patients, there is a lot we can offer that will help maintain a very good quality of life,” Pinard explains. “I want our clients to understand the gold standard of care that is available to their pet here at OVC.”

In consultation with the team of board-certified specialists, Pinard acts as a guide for his patients. “That may mean navigating the road to a definitive diagnosis of what the pet is facing, developing a personalized treatment plan, and explaining all of the risks, benefits and considerations that come along with battling a life-altering disease. In the end, some owners decide to pursue all of Pinard’s recommendations. Others, for many reasons, may choose not to. Some of the questions pet owners have when they learn their pet has cancer are: “How long does my pet have to live?” and “What would you do if it was your pet? Pinard draws from his own experiences and what originally inspired him to study the field of veterinary oncology: in his second year of veterinary school, he lost his beloved dog, Jude, to a nasal tumour. Pinard very openly explains to his clients there is no right or wrong when it comes to making their decision, keeping quality of life for their pet, financial, emotional and personal factors in mind. Through this morning’s appointments, he constantly reminds owners that their quality of life matters as well as that of their pet. “We know that these amazing families want the best for the pet they love. It’s our job to offer everything that is medically and reasonably available for that patient to help an animal fight cancer and help owners make the decision that is best for them—sometimes this may involve treatment or other times it may not,” Pinard says.

**Afternoon**

Frank, an eight-year-old Bernese Mountain Dog, greets Pinard in the waiting room. Frank is a new patient and has a suspected soft tissue sarcoma, a broad term for cancers that start in the muscle, nerves and other connective tissues. As like with all new patients who come to the animal cancer centre, he has been referred by his family veterinarian. Three returning dog patients—Zinfandal, Molly and Zimba—have also arrived for their chemotherapy appointments. Much like the morning, there is a whirlwind of activity. Team members meet with pet owners to find out how patients are doing back at home between therapy sessions. Pinard conducts their physical exams and blood samples are collected. Once test results arrive back from the Animal Health Lab, if the bloodwork shows that their white, red and clotting cell (platelets) counts are within normal range, he authorizes scheduled therapies.

In veterinary oncology, our ultimate goal is to increase the quality of life for each individual patient,” Pinard explains. Depending on the type and severity of cancer, treatment options may include surgery, chemotherapy, radiation therapy or a combination thereof. Frank’s owners decide to do anything and everything they can to help their dog battle his cancer diagnosis. Next steps for Frank will involve scheduling diagnostic imaging tests later in the week to get a clear picture of how far or even if the cancer has spread in his body before targeted treatment can begin. Once all new patients have been treated for the day, rounds begin again for the entire team. Afternoon rounds involve each intern, resident and specialist summarizing their day for all of the patients they have met or treated.

**Evening**

White each day is different, after all of his patients have gone home or if any have been transferred to OVC’s intensive care unit (ICU) for the evening for around-the-clock monitoring, it is time for paperwork, phone calls and scheduling. A typical evening for Pinard involves completing patient medical records; phone calls to owners and referring veterinarians to provide updates; and finding the next available day and time to schedule tests, procedures and therapies for his patients. The days can be long, but Pinard is grateful for the opportunity to train at a world-class veterinary school and expand his knowledge in the field he’s so passionate about. “The more I learn, the more I can help my patients. At the end of the day, that’s what I am here for. It’s a great feeling to learn from and be part of such an amazing team.”
What is heat stroke and how is it caused?

Heat stroke is a term commonly used for hyperthermia or elevated body temperature and occurs when a pet can no longer cool down its own body. All warm-blooded animals that regulate their body temperature can be affected. A temperature above 103°F/39.4°C is considered abnormal; organ failure and death occur around 107°F-109°F (41.2°C-42.7°C). Heat stroke is much more common in dogs than cats, but can affect both species. The most common cause of heat stroke is leaving a dog in a car with insufficient ventilation.

Why is heat stroke a medical emergency?

Dogs cannot control their body temperature by sweating like people do since they only have a small number of sweat glands located in their footpads and their primary way of regulating body temperature is by panting. It often only takes minutes for a dog’s body temperature to rapidly increase. Flat-faced breeds of dogs such as pugs, boxers, and bulldogs genetically have a restricted airway and are at greater risk for developing heat stroke. In these breeds, heat stroke can occur even when the outside temperature is only moderately elevated. Signs of heat stroke include panting and lethargy, difficulty breathing, vomiting, diarrhea, weakness or inability to stand and reduced responsiveness progressing to loss of consciousness and even seizures. Permanent organ damage and death is possible.

What exactly happens to a dog’s body when they experience heat stroke?

Hot conditions can prevent dogs from being able to regulate their own body temperature. It only takes minutes on a warm day for the air inside a car to become very hot. When dogs pant in a hot environment, they inhale hot air directly into their lungs which causes their temperature to spike. When this occurs, protein structures in the body begin to fail. The linings of blood vessels are now damaged, which can cause blood clots in tissue. Organs such as the heart, liver, kidneys and more — these organs all start to fail from a lack of oxygen in the body, causing the dog to vomit or have diarrhea. The brain will then quickly become damaged, which may cause the dog to go into shock, produce seizures or even a coma, followed by death.

What is heat stroke preventable?

Yes, heat stroke is preventable. Each year, during the spring, summer and fall, the OVC Companion Animal Hospital treats five to 10 pets with heat stroke. Unfortunately, sometimes the outcomes are tragic. Pet owners can prevent heat stroke by never allowing their animal to remain in a car that is not air conditioned, cool and running. Better yet – leave them at home; and avoid exercising your pet during the hottest times of the day. If you exercise with your pet outside, shift the time to cooler parts of the day such as early morning or late evening. On warmer days, resist the urge to go further than typical and actively reduce the amount of exercise on such days; ensure that pets have a cool or air-conditioned space in your home that they can escape to when needed.

On the very hottest days, most people are aware enough to avoid the major risk factors. Unfortunately, pet owners sometimes follow their urges on the first warm day in the spring, or a sudden warm spell in the fall, to be outside with their pet. Often pets have not acclimated to the change in weather or the change in activity level and can develop heat stroke in such conditions. Always be cautious and limit exposure and gradually allow pets to build up more of a tolerance to heat and exercise under such conditions.

What should owners do if they suspect their pet has heat stroke?

While heat stroke is an urgent medical emergency and the pet should be taken to a veterinarian for immediate attention, there are some basic things pet owners can do to provide safe and controlled reduction of body temperature: get the pet into a cool, air-conditioned space as soon as possible; offer a cold drink of water; use wet towels or blankets to soak your pet’s fur quickly and allow them to be in front of a fan blowing cool air; transport the pet to the nearest veterinary facility. If the pet is severely affected, the veterinary team can arrange a referral to an emergency veterinary facility such as OVC when safe to do so.

What can pet owners do to feel prepared to deal with medical emergencies involving their pet (heat stroke or otherwise)?

Educate yourselves on common risks and avoid them. Always be aware where the closest veterinary care is, or utilize telemedicine services to assist in triage and initial assessment and advice. Have some basic first aid elements at home or travel with them. Peroxide (fresh, not expired, unopened), clean towels / bandages, elastic bandage and a blanket large enough to help transport a pet if needed.
Bringing back **BEANER**

“It’s a situation we wouldn’t wish on anyone, but unless a person has been in the terrible position of almost losing their pet, they can’t fully grasp what it’s like to go from hopeless to hopeful and the emotions that come with it.”

It was Christmas morning in 2018 and while most people were heading out to family functions, Tanya Prospero and Rick Anodal were making their way to the Ontario Veterinary College (OVC) at the University of Guelph to visit their seven-year-old mini Shar Pei, Beaner, who had been hospitalized the day before.

Beaner’s condition had suddenly deteriorated when he became unable to walk without collapsing, appeared to be paralyzed and refused to eat or drink. Since it was Christmas Eve and most veterinary hospitals were booked up or closed for the holidays, their family veterinarian referred Beaner to a local emergency clinic. When it became obvious that Beaner may have been suffering from a bacterial or a neurological condition, it was recommended that their best course of action was to take their dog to Guelph. Frustrated that they were left with more questions, no answers and terrified that another car ride could do more damage if their dog had a back or spinal cord injury, Beaner’s family got into their car and started driving to OVC’s Companion Animal Hospital.

“What we didn’t realize at the time was that taking Beaner to OVC was going to save his life,” Tanya says.

Between tears, Tanya and Rick did their best to explain what had happened to the veterinary team that welcomed the couple and Beaner upon arrival. Tests were run and a CT scan confirmed his diagnosis: intervertebral disc disease (IVDD), a condition where the cushioning discs between the spinal column either bulge or burst into the spinal cord space, causing painful clinical signs in dogs. Beaner needed immediate surgery and there were no guarantees that he would ever be able to walk again. Understanding the unknowns, the family moved forward with the operation — a procedure called a ventral slot surgery was performed with the goal of repairing the herniated disc between Beaner’s C2 and C3 vertebrae.
“After surgery, it felt like a giant weight had been taken off of our shoulders, but it was quickly replaced with a new one: a waiting game and a long road to recovery,” Tanya remembers.

Beaner ended up spending two weeks at OVC. At first, he was totally unable to move his legs. Gradually, he could sit up for short periods of time, but still unable to stand on his own. “Did we make the wrong decision?” they wondered.

Tanya and Rick took Beaner home in January and decided to continue with the recommended rehabilitation plan, a mix of both wet and dry therapy sessions with the Ontario Veterinary College Fitness and Rehabilitation Service located in the Hill’s Pet Nutrition Primary Healthcare Centre.

“The first few water treadmill sessions were heartbreaking, as we watched our dog struggle to move his legs, and often times he would be unable to move at all,” Rick says. “But having the opportunity to watch our dog start to climb back up gave us hope and made it easier to continue.”

Today, Beaner’s owners say he is back to his old self at home with his usual larger-than-life personality and Tanya and Rick are no longer questioning if they made the right decision. His right front leg still slips inwards when he walks and he has a bit of a limp on his back right leg too. He’s a bit clumsy when he gets excited, but Tanya and Rick are hopeful that even these abnormalities will improve over time.

Beaner was admitted to OVC over the holidays, which means that everyone who made the commitment to be there gave up spending time with their family and loved ones. This level of devotion often goes unnoticed and unappreciated. We would like to take this opportunity while we share our story to give our heartfelt thanks to everyone at OVC who has gone above and beyond to help our dog and cats who is needed to control ficlibiere diseases.

An investigation of hyaluronan in cats and dogs Dr. Alex Beresnas

There is increasing evidence that liberal use of intravenous fluids is negatively associated with outcome in critically ill people and early investigations are suggesting similar results in dogs. This study is intended to provide the preliminary foundation for assessing alternative, more restrictive IV fluid practices in cats and dogs presenting with shock.

Internal sterility of 3-D printed plastics used for customized surgical tools Dr. Alex Beresnas

The goals of this research are to ensure 3-D printed plastics are internally sterile and can be safely used in the surgical suite for clinical patients to repair skull defects or other skeletal abnormalities. The use of 3-D printed plastics in medicine is a relatively new emerging field and the safety of its potential applications will improve over time.

In the end it’s made us cherish the little things that add up to what makes your dog a special part of your life. The trivial things, like how he comes to the kitchen expecting peanut butter because you opened the jar. How he buries his head between you and the sofa when he hears a new noise. How he comes to the kitchen expecting peanut butter because you opened the jar. How he buries his head between you and the sofa when he hears a new noise. How he comes to the kitchen expecting peanut butter because you opened the jar. How he buries his head between you and the sofa when he hears a new noise. How he comes to the kitchen expecting peanut butter because you opened the jar. How he buries his head between you and the sofa when he hears a new noise. How he buries his head between you and the sofa when he hears a new noise. How he buries his head between you and the sofa when he hears a new noise. How he buries his head between you and the sofa when he hears a new noise. 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Why I took part in an OVC Research Study

At the Ontario Veterinary College (OVC), scientists regularly rely on the contributions of pets and their owners to study, discover and impact their specific area of research. I should know; my name is Ashleigh and I write stories about science and discovery in my role at OVC Pet Trust. When I learned that my dog Finn and I could help improve companion animal welfare by participating in a research study that could not only benefit Finn, but also the broader dog population and society as a whole (less fearful dogs = fewer dog bites!), it was an easy decision to get involved.

THE STUDY: EXAMINING METHODS FOR REDUCING FEAR IN DOGS DURING ROUTINE VETERINARY APPOINTMENTS

I picked this study because as a dog owner I know it is probably safe to say most dogs don’t love trips to the “dogtor.” My three-year-old Border Collie / Golden Retriever mix Finn has had to make numerous trips to our veterinary hospital within the first few years of his life, and I am grateful my dog has a very close bond with our family veterinarian. Thanks to the compassionate care he receives on each visit to the hospital, he’s had positive and friendly experiences. Whether I have had to bring Finn in for a regular wellness check or for the unfortunate discovery and treatment of epilepsy, our veterinarian managing his care makes him wag his tail with excitement. But with each visit there are new smells, noises, other animals, strange people of all ages and the anticipation of the unknown that can be overwhelming. Having been to the veterinarian with both a sick and well pup I know all too well that going to the hospital comes with some anxieties. I was motivated to know that by taking part in this study I could in some way help reduce that stress for someone else’s dog in the future.

The commitment to the study was clear from the beginning: what would be expected of my dog and I, how the study would be carried out and what the potential benefits would be for giving our time to the project. Finn and I were one of forty-six dog/owner pairs who participated in the project that took place at OVC Smith Lane Animal Hospital. The research team assessed Finn’s fear levels during his entrance to the hospital, including walking into the clinic and up onto the scale to be weighed and during a standardized veterinary physical exam. The program lasted for four weeks; scientific assessments of his fear responses were made on the first visit and again after the four-week training program was complete. We were instructed to complete five-minute “cookie visits” to the hospital once a week during that month for at least five minutes. We were given homework too. I performed practice exam-style handling with Finn at least twice a week for that month, for five to 10 minutes each session. There were four main areas of handling methods and progressions that Finn and I did together at home: ears, mouth, body and paws. Emphasis was placed on making it a positive experience for the dog (welfare is always the number one priority) by pairing each handling exercise with a favourite treat. It was important to do the exercises gradually, monitor for fear behaviour to keep Finn below threshold and maintain my own personal safety.

The study was funded by OVC Pet Trust and led by PhD candidate Anastasia Stellato, a trainee within Professor Lee Niel’s Companion Animal Behaviour and Welfare Lab at OVC.

WHAT I LEARNED ABOUT MY DOG THROUGH THIS STUDY

Research shows many factors can influence dog fear responses during veterinary visits, but when owners can recognize signs of fear and address it effectively by reducing responses to trigger stimuli, this can make the animal feel more comfortable. “Investing time and consulting with your family veterinarian regarding how to successfully change your dog’s behaviour at the clinic can help make it a more pleasurable experience for the animal and the people they interact with in a hospital environment,” says Stellato.

As Finn and I slowly progressed through our handling program, I noticed he became more comfortable the more we worked together. My dog is particularly food-motivated, which definitely helped.

Giving back to science was a rewarding and insightful experience and important for bettering the health and welfare of pets everywhere. Science is all about discovery: uncovering new knowledge, forming connections, generating wisdom and creating impact. I’ll be very interested to learn the results when the study Finn and I took part in is officially published in the near future. The next time you come across an opportunity to give back to science, I hope you’ll consider the value in and the benefits of volunteering your time and getting involved.

HOW PET OWNERS HAVE HELPED CREATE NEW KNOWLEDGE

At OVC, researchers also ask veterinary staff to help out with data collection. In a recent survey it was found that many veterinary clinics are reducing fear in animals during routine veterinary visits by gaining certification through special programs such as the American Association of Feline Practitioners’ Cat Friendly Practice.

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PUPPIES

Puppy owners help identify behavioral responses that show when puppies are scared. This will help owners improve puppy interactions with the world around them. Did you know that barking can indicate that a puppy is afraid?

DOGS & NOISE

Canadian survey data shows that one of the top stressors for dogs is noise. As Finn and I slowly progressed through our handling program, I noticed he became more comfortable the more we worked together. My dog is particularly food-motivated, which definitely helped.

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VET TEAMS

OVC researchers also ask veterinary staff to help out with data collection. In a recent survey it was found that many veterinary clinics are reducing fear in animals during routine veterinary visits by gaining certification through special programs such as the American Association of Feline Practitioners’ Cat Friendly Practice.

SIGN UP

If you are interested in participating in future research studies keep an eye on OVC social media channels: @ovcpettrust or @ontvetcollege on Twitter, @ontvetcollege on Instagram, www.facebook.com/ovcpet and www.facebook.com/ontvetcollege or email ovctrust@uoguelph.ca.
With the speed of climate change and the rapid growth in urbanization, globalization, overpopulation and current trends in pet ownership, the study and understanding of infectious disease is of increasing importance. “If you think about it, it is obvious: disease spreads around the world because humans and animals move,” says Dr. Scott Weese, professor at the University of Guelph’s Ontario Veterinary College (OVC). Weese is an international leader in the field of infectious disease or infectiology, a medical specialty dealing with the diagnosis, control and treatment of infections. His specific interests lie in managing the risks associated with diseases that can be transferred between animals and humans, or vice versa, commonly called zoonotic diseases.

**RESISTANCE TO DRUGS**

As people and animals travel, the chances of coming in contact with or in bringing foreign viruses home is greater than ever before. Furthermore, the rising threat of drug-resistant superbugs—disease strains that are no longer affected by certain medications due to liberal use of antibiotics that are normally reserved for serious infections—is an urgent and growing need. In this context, Weese’s research is investigating methods to control Clostridium difficile (C. difficile) within human hospitals and a potentially deadly bacteria that infects people and animals, indicates that we need to control flu in the community. “If we can control seasonal flu, we have a lot less people who are sick, resulting in fewer hospital stays, decreased use or need for antibiotics, and a reduced number of hospital-acquired infections. The same applies with animals,” he says.

Preventing disease reduces secondary bacterial diseases and the need for antibiotics to treat or prevent those diseases in the first place. Weese has coordinated and published international guidelines for antibiotic use that are influencing veterinary care around the world and wants to address a pressing issue: how can we support veterinarians in providing excellent patient care and using antibiotics most appropriately and effectively in each case? “In order to decrease the burden of disease (the impact of a health problem on a given population, measured using a variety of indicators such as mortality, morbidity or financial cost), we must improve antibiotic use across the board in both human and veterinary medicine,” Weese says.

**HELPING PETS**

Weese is one of only a handful of prominent experts worldwide who has dedicated his career to the study of infectious disease, and is regularly called upon to develop tactics to manage and mitigate emerging diseases and outbreaks in Canada. Often dealing with the unknown, he tackles issues as if he were a detective. He spends his days working with veterinarians, physicians, public health officials, researchers and provincial, federal and international government agencies who seek his expertise.

“OVC has invested time and effort in developing our expertise in this area,” Weese says. “Research support for various studies, including funding from OVC Pet Trust, has allowed us to invest in this field.”

According to Weese, the scientific exploration and increased knowledge of infectious diseases can save the lives of pets in three major ways. First, there are clinical benefits: research and progress make it possible to treat animals with rare or emerging infections. Second, preventive medicine benefits pets by helping to prevent and control infectious disease. Third, lack of owner education and awareness may lead to euthanizing or rehoming of pets; people often lose their pets because of fear, worry and anxiety about infections. He says the more we can communicate with pet owners, work with physician groups and veterinarians, the more easily we can help owners reduce risks associated with pet ownership when they are going through a health problem so they don’t have to give up or surrender their animal.

**NEXT IN DISCOVERY**

For Weese, there is always something new on the horizon, whether it is studying West Nile, Lyme disease, echinococcus, canine flu or leptospirosis. He says when we start to understand one infection, we have to figure out how to apply it to the next emerging infectious disease. His future work will examine infection control at large international dog shows, the use of antibiotics in animal cancer patients and the implications of importing pets from other countries into Canada. He emphasizes the importance of veterinarians in controlling emerging infectious diseases; pet owners who have questions about how to protect their own pet should always consult with their family veterinarian.

“The goal is to improve the use of antibiotics across the board to improve the outcomes of patients we are treating today, and to reduce the risk that future patients, human or animal, contract a drug resistant infection,” Weese says.
I still remember the phone call one day in December 1999 when I was away from home on business. A veterinary colleague called me with a plea to adopt a rescued four-month-old Border Collie cross puppy that needed to be rehomed immediately. We had lost our beloved dog Barnio, another rescue, at 16 years of age a year earlier and had Whisper, another mixed breed rescue, at home. Whisper had really aged with the loss of her friend so without question, the answer was yes and a puppy. Bennett, two-year-old Golden Retriever, that he would have loved Rayner. He likes to hang out in the same corner of the yard where Rayner did.

When Rayner was in her fifteenth year, she really slowed down. She developed a lump on her spleen and I was terrified it would rupture when I wasn’t home. We made a very difficult decision: it was time to say goodbye. We set the date in advance so it would be after her birthday and immediately after we did one last Smiling Blue Skies Walk for Canine Cancer together — her third and final one — I would do two more in her honour. I had a hard time talking to anyone at that walk knowing what we were facing, but it was important we completed it.

I knew the place where Rayner’s euthanasia would occur — with Dr. Paul Woods, her oncologist, at OVC.

Like all of our dogs before her, we made her a special last meal at home. We went for a walk in our favorite forest before we drove to OVC. She ambled along slowly but enjoyed one last woof at a squirrel. I lifted her carefully onto her blanket and into the car. We made the last trip with her to OVC, with tears streaming down my face. Dr. Woods and his team were compassionate and supportive as we laid her with on the floor. Kees and I were with her until the last breath; holding her, loving her, cherishing her, missing her immediately. The tears are flowing again now as I write this. Memories flood my mind and my heart overflows with the joy that was Rayner.

We requested an autopsy and cremation. As a veterinarian, it was important to me to find the final answers and give our oncology team closure on whether the cancer had returned. It had not. We brought Rayner’s ashes home to be with our other dogs that have gone on before.

We still have the plaster imprint of her paw, her collar, the letters, cards and memorial donations made to OVC Pet Trust in her memory. I made a photo album of her life and every once in a while, look at it and smile. Years later, tears can still come easily. I sometimes find myself telling Obi, our two-year-old Golden Retriever, that he would have loved Rayner. He likes to lounge out in the same corner of the yard where Rayner did. That makes me smile.

As we laid with her on the floor, Kees and I immediately went to the Mona Campbell Centre for Animal Cancer at OVC where Dr. Paul Woods sat with us and discussed all the options for Rayner. After discussing our options, it was clear to me that surgery was the best option to give our girl the best chance possible. The procedure removed part of her jaw and associated lymph nodes.

By the time our grandson Bennett was born in September of that same year, Rayner was five months post-operative.  With our help, she had learned how to eat again — it was messy, but she did it. The day Bennett came home from the hospital we were all there to greet him. And that was the beginning of a wonderful friendship — a boy and his dog. For the next three years, Rayner traveled with us to Toronto where we stayed and cared for Bennett two days per week. Rayner and Bennett were best friends and it warmed my heart.

In the end, Rayner was a wonderful friend, Houston—van Berkel the First, “Rain” for short. DVM, OVC 1980
Dear OVC Pet Trust,

My son Mark and I adopted a five-week old German Shepherd puppy in July 2017. With the tremendous caring, loving, and highly dedicated professional support from Thornhill Veterinary Clinic, Mandy flourished within her short 14-months, to gain over 50 pounds, in-spite of her many medical obstacles. Regardless of her physical milestones, Mandy was energetic, affectionate and a beloved member of our family — more than my meagre words could ever express.

Mandy and I spoke to one another beyond words and she quickly perceived my moods, needs, routines and intentions much faster than me. She could also find and fetch by name, more than 15 of her toys. Now I sound like a proud “puppy mom!” Her wonderful puppy trainer adored her as did the puppy members in her puppy training groups. I could never express the relationship that Mandy and I shared. She was my alarm clock in the mornings with her licks to my face; the guide for my 94-year-old mom who lived with us; the devout motivator for our morning yoga for dogs during Woof-fit Tofino events, and anything and everything in-between, including over a foot of snow for the dogs to frolic in, and now, new life is springing forth for the west coast. Well, this year, we were gifted with more of the same, experiencing on the west coast. And just like those times all those years ago, Smiling Blue Skies offers 24/7 support to anyone whose life has been touched by cancer, both.

This year, at the Smiling Blue Skies Walk for Canine Cancer, May 5th marked Calgary’s 17th Annual Walk for Canine Cancer. When coping with losing a pet, people may find it helpful to celebrate, memorialize and honour their life. To share your “In Memory” story, please email Ashleigh Martyn at ovcpet@uoguelph.ca.

With much gratitude and appreciation,
Shelia Chichelnik

Suzi Beber

Remembering Mandy

Last year around this time, I was writing about the wild and wacky weather we had been experiencing on the west coast. Well, this year, we were gifted with more of the same, including over a foot of snow for the dogs to frolic in, and now, new life is springing forth all around us, and I find it hard to believe that 18 years of changing seasons have passed since the founding of The Smiling Blue Skies Cancer Fund, and the beginning of a friendship that has spanned the whole of Canada.

Out of life’s challenges, special relationships are forged, and in my case, one email paved the way to a friendship that lay down roots in Ontario and bloomed on Vancouver Island. All for Mandy’s life.

Lesley is a hero of Smiling Blue Skies, from its early beginnings, when we could only share letters and photographs, never knowing that one day, we would lose more than two hours from each other, instead of a five-hour plane ride away. Leading to walking side by side in events in Victoria and Nanaimo, participating in yoga for dogs during Woof-fit Tofino events, and anything and everything in-between, always cheering each other on through life’s highs and lows. Because of our individual health issues, we often joke that we are two halves of a whole.

Lesley and I share a special catch phrase, “Blue Skies and Golden Sunsets Forever,” which was born out of Blues’ and Grizz’s registered names, and each year, on their special day, a candle burns brightly for them both.

And just like those times all those years ago, Smiling Blue Skies’ office, 24/7 support to anyone whose life has been touched by cancer, and it doesn’t matter where you live! May 5th marked Calgary’s 17th Annual Smiling Blue Skies Walk for Canine Cancer.

Lots of other activities are coming your way in 2019 too.

Check out the second edition of our “Kindred Spirits” candles, our special collaboration with Tofino Soap Company. 100 per cent of the proceeds fund innovative cancer research, benefitting both the precious pets and people in our lives.

Stay tuned for the release of the OVC Pet Trust Smiling Blue Skies 2018 Update Report and please check out our new website!!!

Thanks to all of you, we are changing the face of cancer. Long live blue skies, where hope is a kite and dreams really do come true.

www.smilingblueskies.com
TEDDY BEAR SURGERY (PHOTOS 1 AND 3)
The University of Guelph celebrated its 95th College Royal in March 2019. More than 900 children had the opportunity to visit OVC’s Teddy Bear Surgery, where the OVC class of 2020 and 2021 led them through a mock physical exam, surgery prep, procedures and bandaging techniques. Participants took a pose in OVC Pet Trust’s ‘Official Teddy Bear Surgeon’ photobooth after they scrubbed in and performed their surgeries.

OTS DOG JOG (PHOTO 2)
This March, the 9th Annual OTS Dog Jog in Guelph raised more than $12,400 to support OVC Pet Trust. To date, more than $75,000 has been raised from this student-organized initiative, all to make a difference to benefit companion animal health and well-being at the Ontario Veterinary College.

TAKE A PAWS (PHOTOS 4 AND 5)
Now in its third year, this spring University of Guelph students were able to once again “Take a Paws” with therapy dogs during the exam period. Take a Paws began in 2016 and is a bi-annual event organized by the U of G McLaughlin Library in partnership with St. John Ambulance, the Ontario Veterinary College and OVC Pet Trust.

YOUTH IN ACTION (PHOTO 6)
Ten-year-old Paige fundraised for OVC Pet Trust and visited Ontario Veterinary College this winter with her family for a tour of the college and to see how the funds she raised will help pets.

COMING EVENTS
JUNE 8: Healing Hearts. A Day of Learning for Veterinary Professionals – Ontario Veterinary College.

OVC Pet Trust is part of the University of Guelph, a registered charity. You can visit our website to support companion animal health at www.pettrust.ca.