AUSTRALIAN

VETERINARIAN

Improving diversity and inclusivity in the veterinary profession p8

Overweight dogs respond well to high-protein, high-fiber diet p22

The Rise of the Mobile Vet -Mobile Vet Use Doubles Since Covid p27





Available now from your preferred wholesaler

Recommend Galliprant as first-line treatment

- ♦ FIRST-IN-CLASS non-COX inhibiting NSAID
- ♣ UNIQUE MODE OF ACTION specifically blocks the EP4 receptor, a key mediator of OA pain, but does not interfere with homeostatic mechanisms mediated through other prostanoid receptors
- S FOR ALL STAGES of OA from the earliest clinical signs

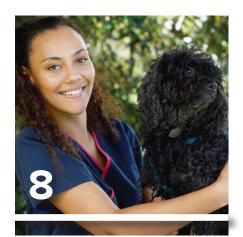


For more information contact Elanco Ph: 1800 995 709 or email: ANZCustomerAdviceLine@elanco.com

INDICATION For the treatment of pain and inflammation associated with osteoarthritis in dogs. Read product leaflet for full instructions. The safety of Galliprant has not been established in dogs less than 3.6 kg or less than 9 months of age.



CONTENTS



IMPROVING DIVERSITY
AND INCLUSIVITY IN THE
VETERINARY PROFESSION



OVERWEIGHT DOGS RESPOND WELL TO HIGH-PROTEIN, HIGH-FIBER DIET.



THE RISE OF THE MOBILE VET - MOBILE VET USE DOUBLES SINCE COVID

- Zoo enrichment could go further
 Improving elderly assisted living to prevent pets from being surrendered
- 8 Improving diversity and inclusivity in the veterinary profession
- 10 'Peas of Mind' Pulse Ingredients in Dog Food Not Linked to Heart Problems
- Animal diagnostic test kits enhance pet care by detecting multiple pathogens using one sample
- 9.5yo MN English Springer Spaniel with a lump noted on the left side of the nose
- **18** Pet Health Monitor Report 2023:

- 20 Tracking how magnetism affects animal behavior
- Overweight dogs respond well to high-protein, high-fiber diet
- Looking for the best travel inspo' for holidays with your furry friend?
- The ABCs of Veterinary Dentistry:
 I is For Interceptive Orthodontics
- 30 Moving on up New Head of Animal Health In Australia & New Zealand
- 31 The Australian Veterinary
 Association launches national
 psychological health and safety
 program

- The Rise of the Mobile Vet Mobile Vet Use
 Doubles Since Covid
- 34 Global First as WSAVA and Hill's Pet Nutrition Launch Certificate in Professional Development and Personal Wellbeing
- Hock injury: More than a pain in the rear!
- 40 Replacing the cone of shame, New start-up provides options
- Multimodal Imaging multimodal imaging facilitated a rapid and accurate diagnosis.
- 44 It's More Than Chiropractic!
- 46 Aquatic outbreak resources now available

THE AUSTRALIAN VETERINARIAN

Fortuna Villa, 22 Chum Street, Golden Square VIC 3555 Australia $\bf P$: 03 5441 8166 $\bf E$: info@theaustralianagronomist.com $\bf W$: www.theaustralianagronomist.com

PublisherPaul Banks

Email: paul@regionalreachpublishing.com Phone: 03 5441 8166 **Design & Production**Kate Milller
Email: kate@regionalreach.com
Phone: 03 5441 8166

Client Services
Avril Price
Email: administration@regionalreach.com
Phone: 03 5441 8166

ZOO ENRICHMENT COULD GO FURTHER

Zoos and aquariums could improve the lives of a wider range of their animals, new research suggests.

The use of "environmental enrichment" (giving animals stimulating environments) has become increasingly common in zoos and aquariums in recent years.

The new study, by the University of Exeter and Sparsholt College Hampshire, investigated whether zoos base their enrichment on evidence of what each species needs.

It found this was the case for certain animals — especially carnivores and parrots — and certain types of enrichment.

However, the study identifies opportunities to "diversify the enrichment types being offered and species being researched."

"Our study shows that environmental enrichment is important, and zoos and aquariums are taking it seriously," said Dr Paul Rose, of the University of Exeter.

"Enrichment is no longer an afterthought, as it was 15 or 20 years ago.

"Based on our findings, we would urge zoos to keep doing enrichment, but with a greater focus on using the available evidence on what works for each species.

"Keepers should ask themselves what behaviours are being promoted, and what evidence exists to show that this behaviour is natural and beneficial in the long term."

The study examined a database of peer-reviewed studies, and two publications for zoo professionals.

Of the enrichment articles identified, almost 77% focussed on mammals, with 11% on birds, 6% on multiple species, 4% on reptiles and only a handful on amphibians, fish and invertebrates.

This focus on certain "high-profile" species can lead to more and better-quality enrichment for some species than others.

However, the use of biological evidence to inform this enrichment was patchy in the case of mammals.

The researchers also noted other differences. For example, enrichment for parrots was more often evidence-based than enrichment for penguins.

The study identified a focus on certain types of enrichment, particularly nutritional enrichment — where food is provided in a way that mimics the animal's natural environment.

Meanwhile, there were far fewer articles on social enrichment, which focusses on the mix of individuals in a group, multiple mating options, etc.

James Brereton, of Sparsholt College Hampshire, said: "We encourage all zoos that practice enrichment to share their findings, as it may be that the range of enrichment being used isn't always in the literature."

Story Source:

Materials provided by University of Exeter. Note: Content may be edited for style and length.

University of Exeter. "Zoo enrichment could go further." ScienceDaily. ScienceDaily, 26 January 2022. www.sciencedaily.com/releases/2022/01/220126195328.htm>.

Journal Reference:

J Brereton, P Rose. An evaluation of the role of 'biological evidence' in zoo and aquarium enrichment practices. Animal Welfare, 2022; 31 (1): 13 DOI: 10.7120/09627286.31.1.002





Annual or triennial vaccination, the choice is yours.

Nobivac allows for the tailoring of vaccination programs to an individual patient's needs and the following of international guidelines.

Nobivac FLEX DHP and Nobivac FLEX DHPPi for dogs and Nobivac FLEX Tricat for cats are now registered to be given as part of either an **annual** or **triennial** vaccination program.

Discover how Nobivac vaccines provide tailored protection for dogs and cats.

Contact your MSD Animal Health Territory Sales Manager or call 1800 033 461 to speak to one of our Technical Service Veterinarians.







IMPROVING ELDERLY ASSISTED LIVING TO PREVENT PETS FROM BEING SURRENDERED

Australia has one of the highest rates of pet ownership in the world, enjoying the many physical and mental health benefits.

Yet, there is a painful absence of government support for elderly pet owners in in-home care, resulting in their much-loved animals being surrendered to shelters across the country, according to national animal welfare charity Companion Animal Network Australia (Australia CAN).

"Only 9% of in-home care providers offer a pet friendly service," said Trish Ennis, CEO of Australia CAN, which runs the Pet Aged Care program and has members across the country.

As Australia's struggling in-home aged care system is under Federal Government review, Australia CAN invites the public and stakeholders to complete a Pet Friendly Aged Care Survey to help preserve the bond between people and their beloved pets by keeping them together for as long as it provides the best health outcome for the animal and their owner.

"Many studies show caring for a pet can help to ease loneliness, relieve stress, anxiety and depression and provide unconditional love. Sadly, many elderly pet owners who depend on in-home assisted living and the daily companionship of their animals, lack the government support they desperately need," said Ms Ennis.

A Federal Government Service List Advisory Body will be considering pet care assistance/ pet support as part of the new federally funded In-Home Aged Care Program due to come into effect in July 2024.

The decision on this will likely be made by around mid-2023 and will be critically important for thousands of frail-aged people dependent on care at home and who rely on and benefit from daily pet companionship.

The results of Australia CAN's Pet Friendly Aged Care Survey aim to provide Federal Government decision-makers with valuable information about what older pet owners need and want in the new national In-Home Aged Care Program.

Ms Ennis said, "Our aim is to support the elderly and their pets by talking to Government about including pet support options in the Home Care Packages to prevent animals from being euthanised or surrendered to shelters and maximise the physical and emotional health of our pet-loving elderly.

"Please help to make pet care assistance/pet support possible by completing the quick survey on in-home pet support and share the survey widely with your pet-related networks and encourage them to help, too."

CALL FOR MORE AGED CARE FACILITIES TO ALLOW PETS!

Australia is a nation of animal lovers and yet very few aged care settings permit people to keep or have access to companion animals.

"Our research shows only 18% of aged care facilities consider







allowing residents to keep a pet," said Ms Ennis. "We also ask

the government to increase the number of pet friendly aged care facilities and promote the social benefits to aged care villages when they welcome pets into their facilities.

"People who are separated from their pets upon entering an aged care facility often experience an extra layer of grief at a time of loss and sadness. People are putting their lives on the line when they refuse to move into aged care because they can't bring their pet with them.

"If people were allowed to keep their pets, aged care take-up by elderly people will increase and the number of pets being surrendered to animal shelters will decrease. Now is the time to understand the value of pets and develop policies that recognise their role."

Australia CAN offers free resources, including pet-related policies, guidelines and documents, for aged care providers, support agencies and organisations to manage and care for pets in aged care settings.

"Pet-Friendly Aged Care website is a place where elderly pet owners, their families and aged care facility operators can find tips and advice that allow residents to keep their pets in safe and responsible ways," explained Ms Ennis.

"Whether it be residential care or home care, our members take in pets when their owner goes into hospital. Sadly, there is no government funding to support our emergency pet care programs.

"Now that the entire aged care industry is under review, it's important to look at the bigger picture and understand that if people need aged care and don't have support to keep their pets, they have to choose between going into aged care and abandoning their pet. It's a double-edged sword."

AUSTRALIA CAN NEEDS YOUR HELP!

Please help Australia CAN's Pet Friendly Aged Care movement by completing a Survey relating to General Aged Care, Residential Aged Care and In-home Aged Care.

This vital information will be used to inform both the aged care industry and government of what is truly required. Please encourage your friends, family and connections to take the survey and help us compile this most needed data.

Australia CAN represents the companion animal welfare work of member organisations across the country. The charity also celebrates the human-animal bond and promotes responsible pet ownership through national campaigns, partnerships and initiatives, such as the Rent with Pets program.

ABOUT PET FRIENDLY AGED CARE

Pet Friendly Aged Care is run by the Companion Animal Network Australia (Australia CAN) whose six member agencies aim to make the world a better place for pets through national campaigns, partnerships and initiatives.

Pet-Friendly Aged Care was established to highlight the oftencatastrophic emotional harm caused when older people are forced to give up their pets upon moving into an aged care home, and to provide a more practical way forward.

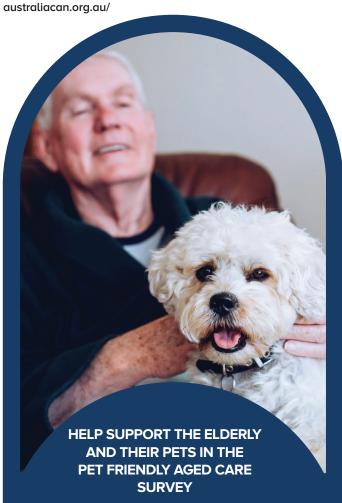
To discover more, visit https://petfriendlyagedcare.com.au/

ABOUT COMPANION ANIMAL NETWORK AUSTRALIA (AUSTRALIA CAN)

Companion Animal Network Australia (Australia CAN) is Australia's Peak Body representing companion animals. It comprises six member agencies, each aiming to make the world a better place

for pets. Through national campaigns, partnerships and initiatives, we celebrate the human-animal bond and promote responsible pet ownership.

We use our national voice to campaign for the humane treatment of all companion animals and we rally support for programmes that deliver high welfare standards. To discover more, visit https://



- 3 in 5 Aussie households have a pet*
- Only 1 in 5 aged care facilities permit pet ownership*
- 9% of in-home care providers offer a pet friendly service*
- By 2050, Australians aged 65 84 are expected to double and people aged 85 and over are expected to more than quadruple to 1.8 million*
- By 2066, there will be more than 4.5m people aged 65–74; with 34% of the population being aged 75-84 and 21% being aged 85 and over*
- Loneliness costs Australia \$2.7b each year*
- Government funding to assist pet ownership for the elderly is absent.



IMPROVING DIVERSITY AND INCLUSIVITY IN THE VETERINARY PROFESSION

PEAK BODY TALKS TO AUSTRALIAN UNIVERSITIES ACCORD PANEL ON HOW REFORM COULD HELP

Source: Australian Veterinarian Association

The Australian Veterinary Association (AVA) participated in a recent Industry Roundtable discussion with the Australian Universities Accord Panel where how to achieve a more diverse and inclusive profession was discussed.

In line with the theme of this year's World Veterinary Day (April 29th) which is focused on Promoting Diversity, Equity and Inclusiveness in the Veterinary Profession the AVA's vision for the future is that the demographics of the profession better reflect that of the Australian community. This starts with veterinary education.

"We live in an increasingly diverse community. Ensuring education and training programs are accessible to all, regardless of background or circumstances, will encourage diversity and inclusivity in the workforce," Dr Bronwyn Orr the President of the AVA said.

Increased government support to higher education is critical to deliver a more diverse and sustainable workforce that meets the growing demand for veterinary services, the industry peak body has warned.

In its submission to the Australian Universities Accord Panel Discussion Paper, the Australian Veterinary Association said under-represented groups in the profession can be deterred by the hidden costs of veterinary courses, which occurs as a consequence of inadequate government funding for essential courses that are expensive to deliver.

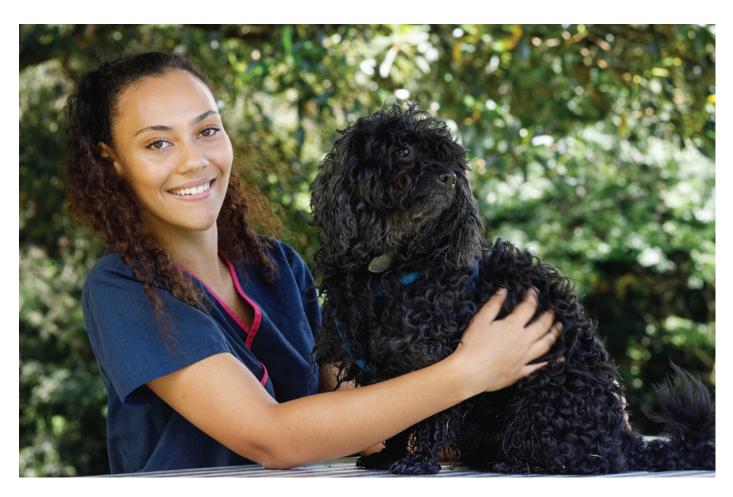
"In the context of the veterinary profession, the participation rate of First Nations people is 0.6%. Compared to the general population, where First Nations people make up 3% of Australians, we as a profession need to work together to improve this statistic." said Dr Bronwyn Orr.

"In order to increase the diversity of students entering the profession, universities must be funded to have programs and mechanisms in place to address the barriers that disproportionately impact some underrepresented groups." said Dr Bronwyn Orr

The AVA said veterinary students were particularly vulnerable to financial insecurity because of the absence of support for the veterinary profession, while working wages were low in the context of the cost of degrees.

"This is a profession that provides an essential service to the Australian community — a community that places high value on animal health and welfare. For those courses that provide essential services to the community the level of student contribution should be linked to the public value of the work and the earning capacity of that sector as a whole," Dr Bronwyn Orr said.

For more information on the veterinary profession, visit www. ava.com.au.

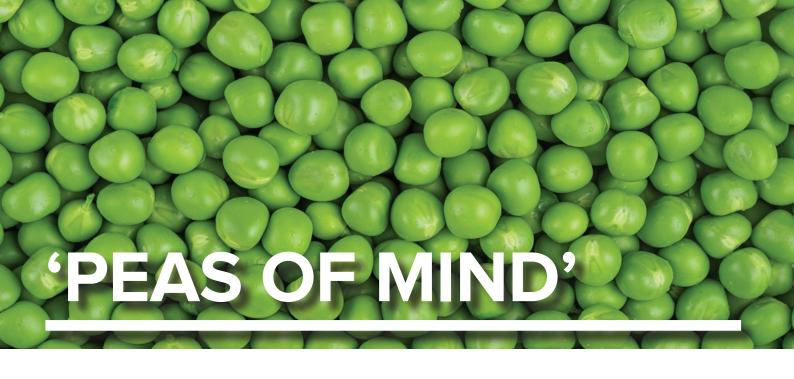




1300 838 438 / 1300 VET GET

sales@generalvetproducts.com.au





PULSE INGREDIENTS IN DOG FOOD NOT LINKED TO HEART PROBLEMS, SAYS NEW UNIVERSITY OF GUELPH RESEARCH

Ingredients such as lentils, beans and field peas typically used in grain-free dog foods are safe for healthy dogs, according to new University of Guelph research.

It's a reassuring finding for dog owners worried about grain-free diets, which have surged in popularity and now make up almost half of the dog food market in Canada. The diets have been under scrutiny after "pulses" – the collective term used for peas, lentils and beans – became associated with a serious heart condition in dogs called dilated cardiomyopathy, or DCM.

This latest U of G research, which appears this month in The Journal of Nutrition, found that dogs fed diets containing up to 45 per cent whole pulse ingredients and no grains over 20 weeks showed no indications of heart issues.

As well, the dogs' body composition altered less than 0.1 per cent from baseline no matter which diet they were on, suggesting they also maintained lean body mass.

"This study is the longest, controlled feeding study to date to assess cardiometabolic health in healthy adult dogs fed pulse-inclusive diets," said lead author Dr. Kate Shoveller, a professor in the Department of Animal Biosciences in the Ontario Agricultural College and Champion Petfoods Chair in Canine and Feline Nutrition, Physiology and Metabolism.

Dr. Adronie Verbrugghe, clinical studies professor and Royal Canin Veterinary Diets Endowed Chair in Canine and Feline Clinical Nutrition at the Ontario Veterinary College (OVC), added: "This research is important to help veterinarians make evidence-based diet recommendations for their patients. Some dogs might be healthy, but others could have specific health conditions for which protein sources and content are targeted."

Pulses a dependable protein alternative in pet food

Pulses are an attractive protein source in pet foods and need to be included in plant-based dog food formulations to provide sufficient dietary protein. Yet there have been concerns pulses may be limited in key amino acids for the body to make taurine, needed for proper heart.

Poor bioavailability of key amino acids has also been linked to inadequate protein absorption and muscle wasting in dogs.

To investigate the potential effects of pulse ingredients on cardiac function of healthy



dogs, the researchers recruited 28 Siberian huskies for a randomized, controlled trial. Huskies are not genetically at risk of DCM, meaning any changes to their heart health would reflect diet, not genetics.

Each dog was assigned to a diet containing either zero, 15, 30 or 45 per cent whole pulse ingredients, specifically green and yellow peas, pinto beans, chickpeas and lentils. All diets included chicken as the animal protein source and were formulated with the same protein and fat levels.

All pulse ingredient concentrations reflected current formulas in commercial dog foods, said lead author Pawanpreet Singh, a U of G PhD student in animal biosciences.

"We wanted to keep all aspects of the diets the same except the amount of pulse ingredients so that any changes we saw in the dogs' cardiac function could be attributed to the differing amounts of pulses and not nutrient intake," said Singh.

No changes to dogs' body composition or heart function

Champion Petfoods funded the study and all experimental diets were processed in its facilities. The company did not influence the findings or conclusions of the study.

Echocardiograms were performed by veterinary cardiologist Dr. Shari Raheb, a professor in OVC's Department of Clinical Studies, to detect heart changes. Singh routinely collected blood samples to assess cardiac biomarkers or amino acid changes.

Verbrugghe and registered veterinary technician Shoshana Verton-Shaw performed scans to assess body composition at the beginning and end of the study, and all dogs were weighed every week.

"We took the highest precautions to monitor the health of these dogs. We made sure to conduct monthly health checks and evaluate their heart blood markers to make sure there were no signs of cardiac stress," said Singh. "We found that regardless of the amount of pulses consumed, none of the dogs showed changes to indicate the development of DCM or body composition changes."

Shoveller said previous clinical studies were not able to pinpoint whether pulse ingredients played a role in DCM in dogs not genetically predisposed.

"Our data suggest the inclusion of pulse ingredients in dog food is not a causative factor and emphasizes the importance of understanding the nutrient composition of each ingredient and ensuring that foods exceed minimum nutrient requirements," she said.

"Ultimately, pulses are a dependable protein alternative in the food industry and this study emphasizes their safety even when incorporated at high concentrations."





Passionate about petcare & growing your business?

Help 4+ million Afterpay users* care for their pets. Let them access the services they need today and pay it in 4 over time.

Get more leads. Boost your business. You'd be barking not to try Afterpay.

*Afterpay user data







Pictured from left: Dr Meg Good (Head of Programs and Legal Counsel), Dr Bidda Jones AM (Director, Strategy and Research) and Dr Jed Goodfellow (Director, Policy and Government Relations).

Written By Australian Alliance for Animals

Australia's leading animal protection organisations, with a combined supporter base of over two million, have joined forces in a powerful new alliance to push for an overhaul of Australia's outdated animal welfare system.

The formation of the Australian Alliance for Animals is unprecedented in the sector with Animals Australia, Compassion in World Farming, FOUR PAWS Australia, Humane Society International Australia, World Animal Protection Australia and Voiceless, the animal protection institute, uniting as core members.

While the individual member groups will continue crucial campaigning on specific issues, such as ending live exports and banning puppy farming, the Alliance's unique focus will be on tackling barriers to change, including a failing regulatory system that stymies critical reforms for animal welfare.

The Alliance was founded by three highly experienced animal advocates with a strong track record in animal welfare law, science and policy — Co-Directors Dr Jed Goodfellow and Dr Bidda Jones AM, and Head of Programs and Legal Counsel, Dr Mea Good.

"The system used to create animal welfare policy in Australia is broken," Dr Goodfellow said.

"Our laws have failed to keep up with community expectations with weak regulations continuing to permit cruel practices like battery cages, sow stalls and painful procedures without pain relief

"Millions of Australians care about animal welfare but their views are not getting through to our political leaders. We're going to change that.

"By uniting the sector, we have the potential to reach over two million people to support critical reforms. We're going to make democracy work for animals.

"After many years trying to improve standards for animals, we recognise the entire system must be reformed before any real change can occur," he said.

"That's why we'll be focused on shining a light on the system's failures and promoting structural reforms to achieve systemic change for animals.

"The formation of the Alliance heralds a new era in animal welfare reform. It's time to make the interests of animals count," said Dr Goodfellow.

The Alliance's reform agenda includes the establishment of an independent national commission for animal welfare, the creation of ministerial portfolios for animal welfare and the introduction of a fair, consistent and transparent process for creating national animal welfare standards.

Dr Jones said there was ample evidence of the current system failing to produce acceptable outcomes and reflect current science.

"The review of national animal welfare standards for poultry has dragged on for seven long years with still no decision in sight," said Dr Jones.

"As a result of the excruciatingly slow pace of change, an estimated 70 million more layer hens have endured their entire lives in barren battery cages, despite community opposition to this housing system and extensive scientific evidence that it is inherently cruel.

"Draft national welfare standards for horses have been gathering dust since 2009; the review of pig standards has stalled since 2018, and it's been an agonising 10 years since standards for abattoirs were first drafted.

"These unacceptable delays are happening across the board. The lack of progress isn't just shockingly inefficient, it comes at a huge cost in terms of animal suffering," she said.

"A new approach is long overdue."

ANIMAL DIAGNOSTIC TEST KITS ENHANCE PET CARE BY DETECTING MULTIPLE PATHOGENS USING ONE SAMPLE

Animal diagnostic testing has become an essential tool for veterinarians in quickly identifying and treating illnesses and health issues in animals. Early detection of animal diseases is vital for maintaining the well-being of our beloved pets and ensuring the health of livestock.

Touch Biotechnology, an Australian-owned and operated company, has developed innovative animal diagnostic test kits for dogs, cats, and cattle. These kits can rapidly detect various pathogens, including viruses, bacteria, and other diseases, from a single sample in just 10-15 minutes.

The test kits are user-friendly, requiring minimal training, and provide high-quality results with a very high sensitivity rate of over 97%. They serve as valuable diagnostic solutions for veterinarians, animal care professionals, and animal caretakers, empowering them to make informed decisions regarding animal health and treatment.

The FastVET animal diagnostic test kit range includes the Giardia Rapid Antigen Test, 5in1 Diarrhoea Rapid Antigen Combo Test Kit, Toxo Rapid Antibody Test Kit, FCoV Ag + FCoV Ab Rapid Antigen Combo Test Kit, FIV Ab + FeLV Ag Rapid Antigen Combo Test Kit, CCV+CPV+Giardia Rapid Antigen Combo Test Kit and more.

Growth and Strategy Consultant at Touch Biotechnology, Steven Quinlan, highlights the benefits of using these animal diagnostic testing solutions for veterinarians and animals alike.

"The tests prioritise the animal's well-being by providing accurate and streamlined testing processes. They enable quick and early detection and differentiation between viruses using a single sample, reducing the dependency on laboratory or other test equipment," he says.

By incorporating these advanced testing solutions into their practices, veterinarians can enhance their ability to provide prompt and accurate diagnoses, ultimately improving animal welfare.



These diagnostic tools are essential for animal care professionals, as they contribute to the overall well-being of animals by enabling early intervention, improving treatment outcomes, and safeguarding the health of both individual animals and animal populations.

In addition to their practical benefits, the user-friendly nature of these test kits also makes them accessible to a wide range of professionals involved in animal care. From veterinary clinics and animal shelters to livestock farms and research facilities, the FastVET range caters to diverse needs within the animal healthcare community.

Incorporating these advanced testing solutions into their practices, veterinarians can ensure efficient and effective diagnoses,

leading to improved health outcomes and enhanced well-being for animals under their care. To access the FastVET Animal Diagnostic Test Kit range or for further details, veterinary practices are encouraged to visit the website: www.touchaustralia.com.au/animalrapidantigen.

- www.ncbi.nlm.nih.gov/pmc/articles/ PMC5711306/#:":text=It%20is%20estimated%20that%20 zoonoses,worldwide%20each%20year%20(5).
- www.health.gov.au/internet/main/publishing.nsf/Content/ cda-cdi3601a11.htm



9.5YO MN ENGLISH SPRINGER SPANIEL WITH A LUMP NOTED ON THE LEFT SIDE OF THE NOSE

Canine Species:

English Springer Spaniel Male Neutered **Breed**

Sex

Age

Clinical History:

There is a lump noted on the left side of the nose with deformation of the shape. It has firm and soft areas. He has been sniffing and sneezing a lot. Symptoms have progressed after course of nonsteroidal anti-inflammatories and antibiotics. There is now epistaxis. Mandibular lymph nodes are very slightly enlarged.

Anatomic regions: Head

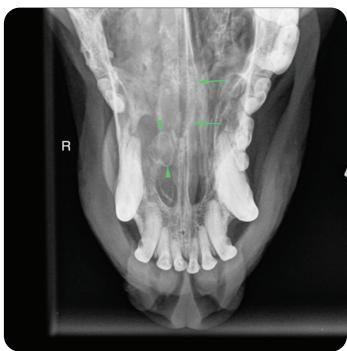
Details of study and technical comments: Radiographs of the skull including a ventrodorsal, open jaw ventrodorsal and lateral views are available for review.

Diagnostic interpretation:

There is moderately to marked increased opacity of the right nasal passage with poor distinction of the nasal turbinates (green oval). The nasal septum is mildly to moderately deviated to the left and poorly defined / lytic in the mid aspect of the nasal passage (green arrows). A 1cm diameter, well-defined, smoothly marginated, corticated, mineral opaque structure is in the rostral, right aspect of the nasal passage (green arrowheads). Teeth 105, 106 and 108 tooth are absent. There is moderate expansion of the periapical / periodontal space of 104 (pink arrowheads). Smooth, well-defined new bone is arising from the lateral margin of the right maxilla at the level of 104. The mesial periapical space of 107 is mildly to moderately expanded

(pink arrow). On the lateral view, there is irregularly marginated lysis of the rostral maxilla (orange arrowheads) and focal soft tissue swelling dorsal to the lysis. The cribriform plate is intact





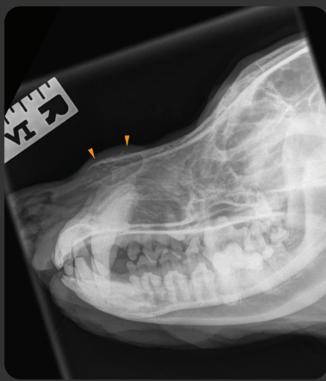
Conclusions:

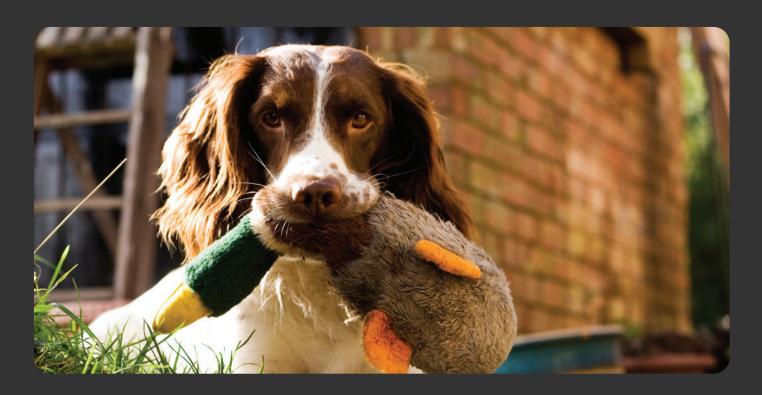
• Aggressive mass lesion of the right nasal passage with lysis of the maxilla and nasal septum and expansion of the periapical spaces of 104 and 107

Additional comments:

A mass lesion is present within the right nasal passage, though the complete extent cannot be fully characterised on radiographs alone. Computed tomography could be considered to further define the margins of the mass and further characterise its origin. A neoplastic process is the primary differential (nasal adenocarcinoma, squamous cell carcinoma, melanoma). A tooth root abscess (arising from 104) with osteomyelitis is considered less likely given the more caudal location of the soft tissue opacity.







PET HEALTH MONITOR REPORT 2023:

NEW REPORT AIMS TO DRIVE AWARENESS OF THE IMPORTANCE OF AT-HOME PET HEALTHCARE ROUTINES AMONG PET OWNERS

- Just one in 10 (10%) Aussie pet owners provide regular athome health routines for their pets, new PetSure research reveals
- To encourage pet parents to adopt regular at-home pet healthcare routines, PetSure's Pet Health Monitor 2023 white paper, draws on PetSure's extensive policy data to identify common pet health conditions and costs
- PetSure's MEOWS* tips can help vets educate clients about proactive pet healthcare

X May 2023, Sydney - With just one in 10 (10%) pet owners practising regular at-home pet health routines, the onus is on industry and veterinarians to educate Australians of the importance of taking action with proactive pet healthcare, according to new research from PetSure, Australia's leading pet insurance underwriter.

With pet owners not performing regular at-home pet health routines like brushing their dog's teeth or applying flea and tick preventatives, PetSure has released its new white paper, the PetSure Pet Health Monitor 2023, that draws on PetSure's extensive claims data to highlight key pet health trends and costs. The report also features insights from PetSure's veterinary

advisory board and expert MEOWS tips for proactive pet healthcare.

To encourage Aussies to take action, and to educate pet parents about common health trends and costs, the report reveals the top five conditions faced by dogs and cats based on PetSure claims data for 2022.

With industry research showing veterinary services are the <u>second</u> <u>largest</u>** cost for pet owners after food, it's important for vets to educate clients about potential treatment costs so they are financially prepared.

However, Roy Morgan research reveals that just $6\%^{***}$ of Aussie dog and cat owners have pet insurance, meaning many pet parents may be out of pocket for the full cost of treatment for an unexpected accident or illness. As a result, this could mean some Australians may struggle to afford the recommended course of treatment for their pet.

Research also indicates that difficult financial conversations are \underline{a} source of stress for vets not only in Australia but worldwide, and this has only been magnified by recent cost of living pressures.

Dr Betty Chan, Vet Advisor at PetSure said: "When speaking to clients, vets should remind pet parents of the different ways they

	DOGS			Cats	
Top 5 conditions, 2022*	Average cost of treatment*	Highest cost of treatment*	Top 5 conditions, 2022*	Average cost of treatment*	Highest cost of treatment*
Skin allergies	\$520	\$17,460	Vomiting	\$636	\$9,464
Ear infections	\$315	\$16,670	Gastritis	\$627	\$13,862
Arthritis	\$423	\$12,255	Dental conditions	\$815	\$4,928
Gastritis	\$523	\$28,232	Diarrhoea	\$376	\$8,836
Diarrhoea PetSu	\$416 re claims data for 2022.	\$20,663	Feline lower urinary tract disease (FLUTD)	\$1,330	\$19,414

"As vets, we often face difficult financial conversations with clients so we hope the research report will serve as a guide to help vets educate pet parents about common health conditions and associated costs, to encourage clients to be financially prepared so they can focus on what matters - getting the best possible care for their pet."

Dr Betty Chan, Vet Advisor at PetSure



can help support the wellbeing of their pet and address issues early on - whether that's through simple routines at home like checking for ticks or weighing their pet or by visiting the clinic for regular check-ups.

"As vets, we often face difficult financial conversations with clients so we hope the research report will serve as a guide to help vets educate pet parents about common health conditions and associated costs, to encourage clients to be financially prepared so they can focus on what matters - getting the best possible care for their pet."

PetSure's research shows there's a knowledge gap when it comes to identifying potential signs of health conditions in their pets. Just a third (38%) of respondents can spot signs of stomach or gut issues in their pets, despite gastrointestinal tract conditions being cited as one of the top five health conditions for dogs and cats in the Pet Health Monitor 2023 report. The data also shows treatment can cost up to \$28,000 in dogs and \$13,000 in cats.

Less than a third (28%) of pet parents brush their pet's teeth each week, despite it being effective in prevention of dental disease, and only 36% clean their pet's ears.

"It's also important for vets to educate clients about the signs of common pet health conditions their pet may be predisposed to, so they know when they may need to have their pet examined. Early intervention is key for vets and pet parents to work together to achieve better pet healthcare outcomes," Dr Chan said.

PetSure's MEOWS* tips were published in its Pet Health Monitor for vets to share with clients to remind them of common health issues and tips for proactive healthcare. Dr Chan urges pet parents to remember MEOWS* - MISHAPS, EARS, ORAL HYGIENE, WEIGHT and SKIN.

To learn more about pet health trends and proactive healthcare, download PetSure's Pet Health Monitor 2023 report: https://petsure.com.au/pet-health-monitor/

Health area / condition	Data	Tips		
Mishaps	Mishaps can include broken legs - in 2022, the average cost of a broken hind leg for a cat was \$3,805*.	 Ensure your pet is socialised from an early age and keep cats indoor to prevent fights and bite injuries Secure your property to avoid escapees, and secure balconies and windows to avoid any accidental falls 		
Ear infections	Ear infections were one of the top five health conditions experienced by dogs*.	 Remember to look into their ears every week Keep an eye out for signs of an ear infection - if you see your dog shaking their head, scratching their ears or if you notice any discharge, seek advice from your local veterinarian 		
Oral hygiene (dental disease)	For cats aged 3 years, the average claimed amount per case for dental disease was \$833*.	 Regularly brush your pet's teeth Consider feeding your pet kibbles that can help prevent build up of plaque, and help maintain healthy teeth and gums 		
Weight	Being overweight can predispose pets to a variety of diseases, including arthritis, cruciate disease and diabetes. In 2022, the average claim cost for cruciate ligament disease was \$2,408.**	 Keep up daily exercise, including walks and at-home play Feed your pet a balanced breed-specific diet - follow the feeding guidelines on packaging 		
Skin	Skin allergies were the top health condition for 2022 experienced by dogs, with an average cost of \$520 for treatment.**	 Stay up to date with flea and tick preventives Regularly brush your pet's coat and check their skin to identify problems early 		

TRACKING HOW MAGNETISM AFFECTS ANIMAL BEHAVIOR

SCIENTISTS SUMMARIZE THE METHODS USED TO EXPLORE HOW THE EARTH'S MAGNETIC FIELD INFLUENCES THE BEHAVIOR OF A WIDE VARIETY OF ANIMAL SPECIES. THIS REVIEW IS AN IDEAL STARTING POINT FOR SCIENTISTS WHO WISH TO ENTER THIS FASCINATING BUT STILL POORLY-UNDERSTOOD TOPIC IN MODERN SENSORY BIOLOGY.

For over 50 years, scientists have observed that the behaviour of a wide variety of animals can be influenced by the Earth's magnetic field. However, despite decades of research, the exact nature of this 'magnetic sense' remains elusive. Will Schneider and Richard Holland from Bangor University in Wales and their coworker Oliver Lindecke from the Institute for Biology, Oldenburg, Germany have now written a comprehensive overview of this cross-disciplinary field, with an emphasis on the methodology involved. This work is now published in EPJ ST.

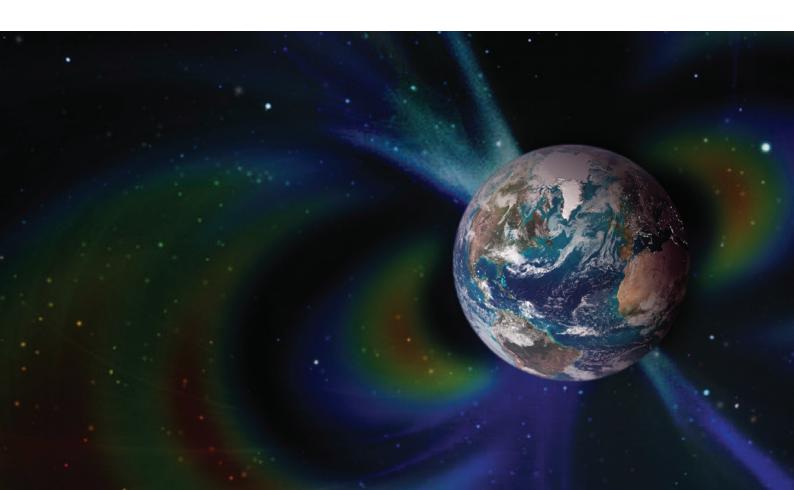
This magnetic sense, or 'magnetoreception', was first noticed in birds, and particularly in migratory songbirds. It has now been observed in many other species including mammals, fish and insects. However, the exact relationship between the magnetic field and the behaviour is difficult to pin down because it can be masked by other environmental factors. Experiments must be very carefully designed if their results are to be statistically sound.

"We aim to provide a balanced overview for researchers who wish to enter this exciting area of sensory biology," explains Schneider. He and his co-authors outlined a range of methods

that are used to deduce whether an animal's behaviour is affected by a magnetic field. These include using GPS to mark animals' alignment with the Earth's field during normal activities, such as cows grazing; observing behaviour after tissues thought to be responsible for magnetoreception have been removed, or genes knocked out; and attaching small magnets on or near the animals' bodies to disrupt the mechanism. Further work by animal physiologists, neuroscientists, geneticists and others will also be necessary to truly understand this phenomenon.

And this research is not only of academic interest. "Understanding animal magnetoreception will help us to protect animals released into unknown environments in the wild," adds Lindecke.

Reference: Schneider, W.T., Holland, R.A. & Lindecke, O. Over 50 years of behavioural evidence on the magnetic sense in animals: what has been learnt and how? Eur. Phys. J. Spec. Top. (2023). https://doi.org/10.1140/epjs/s11734-022-00755-8



* THE GLOBAL NAME IN VETERINARY DENTISTRY

IM3° Dental Solutions

Leading the way with product innovation, enhanced patient care and the greatest range of ergonomic and customisable equipment, iM3 has all your veterinary dentistry solutions.

iM3 X-Ray Generators & Scanners



Revolution 4DC

X-ray Generator

The iM3 Revolution 4DC X-Ray Generator with full-swivel balljoint and wireless control, is available as a free standing or wall mounted unit.

ORDER CODE: X1300 / X1100



PORT-X IV

Portable Generator

Light and small, the Port-X IV X-Ray Generator enables total portability combined with the very latest digital technology.

ORDER CODE: X4000



CR 8 VFT

X-Ray Scanner

The CR 8 provides twice the scanning power with two image plate slots. Scanning sizes 0-5, R3 rabbit plate plus the NEW size 6 plate.

ORDER CODE: X8101



CR 7 VET

X-Ray Scanner

The unique design of the iM3 CR 7 Vet protects radiographs from dust and hair. The CR 7 scans plate sizes 0-5 including the R3 rabbit plate.

ORDER CODE: X7000



DR Sensor

X-Ray Sensor

Digital Radiography provides real-time imaging after being exposed with your x-ray generator. The image is displayed on your screen in seconds.

ORDER CODE: X5100

iM3 Dental & Surgical Tables



TARA TABLE

Dental & Surgical Table

The Tara Table has been ergonomically designed to provide the best experience during dental and surgical procedures for staff and patients.

ORDER CODE: TB0001



SHONA TABLE

Dental & Consult Table

The dental table that requires no plumbing, is ergonomically designed, height adjustable at the touch of a button, and can double as an extra consult table.

ORDER CODE: SHN001

The iM3 Dental Tray can be added to either table for edge to edge drainage during dental procedures.

ORDER CODE: TB0007

Veterinary Software



Vet-Exam PRO

Dental Software

The fast, reliable and modern veterinary dental x-ray software, that pairs perfectly with the iM3 CR7 & CR 8 Vet Scanner.

- Veterinary specific layouts
- Integrated capture & viewer allows for immediate comparison between x-rays
- ·Images are automatically saved in the background
- Full DICOM compliance

OVERWEIGHT DOGS RESPOND WELL TO HIGH-PROTEIN, HIGH-FIBER DIET, STUDY FINDS

A study of overweight dogs fed a reduced calorie, highprotein, high-fiber diet for 24 weeks found that the dogs' body composition and inflammatory markers changed over time in ways that parallel the positive changes seen in humans on similar diets. The dogs achieved a healthier weight without losing too much muscle mass, and their serum triglycerides, insulin and inflammatory markers all decreased with weight loss.

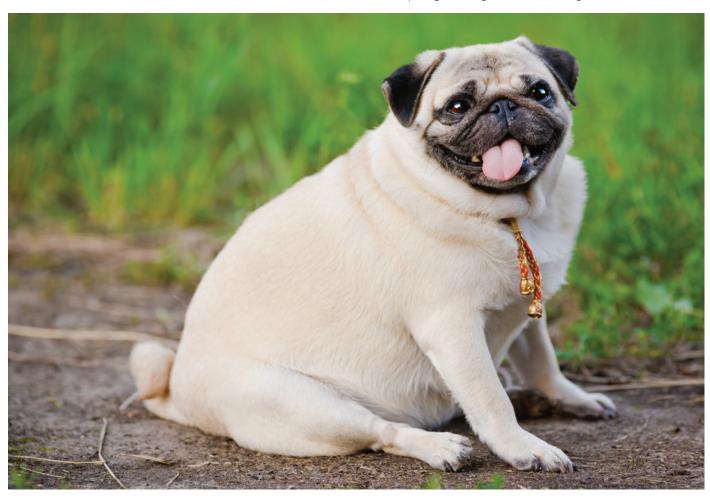
All such changes are beneficial, said University of Illinois Urbana-Champaign animal sciences professor Kelly Swanson, who led the new research.

Previous studies have shown that overweight and obesity lead to a shorter lifespan and a lower quality of life -- in dogs and humans, Swanson said.

"Some of the problems we see in humans with obesity also occur in pet dogs," he said. "There's added stress on the joints, there's an intolerance to exercise and heat; there's also glucose intolerance, insulin resistance. And if you look at pet insurance claims, obesity is a big factor there."

Reported in the Journal of Animal Science, the study is unusual in that it also measured changes in the dogs' fecal microbiota over the course of losing weight, Swanson said.

Even though there are similarities in dog and human metabolism and digestive processes, dogs and humans differ in the species of microbes that inhabit the gut, he said. These microbes perform similar functions, however. They metabolize proteins, carbohydrates and other molecules that are derived from food but escape digestion by the host; and they break down fiber to



produce short-chain fatty acids that are important in regulating glucose and appetite, reducing inflammation, bolstering the immune system and providing energy to cells in the colon.

Some of the microbial changes observed in the dogs were difficult to interpret, Swanson said, but a reduction in fecal ammonia — probably the result of eating less protein on the calorie-restricted diet — was likely beneficial.

"High concentrations of ammonia are toxic," he said.

Dogs that lost weight also had increases in the proportion of bacteria of the genus Allobaculum. Higher Allobaculum populations correlated with an increase in fecal butyrate, a short-chain fatty acid that is a byproduct of the fermentation of dietary fiber. Previous studies have shown that butyrate has anti-inflammatory and anti-carcinogenic effects in the gut.

Total short-chain fatty acid concentrations did not change over time, however. This may reflect the fact that most of these organic acids are absorbed and not excreted, the researchers report.

Most studies of gut microbiota focus on humans, so the new research offers insight into the similarities and differences between dogs and humans, and how they respond to dietary changes and weight loss. More research will be needed to clarify the findings, Swanson said.

Story Source:

Materials provided by University of Illinois at Urbana-Champaign, News Bureau. Original written by Diana Yates. Note: Content may be edited for style and length.

Journal Reference:

Thunyaporn Phungviwatnikul, Anne H Lee, Sara E Belchik, Jan S Suchodolski, Kelly S Swanson. Weight Loss and High-Protein, High-Fiber Diet Consumption Impact Blood Metabolite Profiles, Body Composition, Voluntary Physical Activity, Fecal Microbiota, and Fecal Metabolites of Adult Dogs. Journal of Animal Science, 2021; DOI: 10.1093/jas/skab379

University of Illinois at Urbana-Champaign, News Bureau. "Overweight dogs respond well to high-protein, high-fiber diet, study finds." ScienceDaily. ScienceDaily, 24 January 2022. <www.sciencedaily.com/releases/2022/01/220124115040.htm>.

Funding for this project was provided by Perfect Companion Group Co. Ltd., Thailand.



Backbone Academy



2023 IS A TIME OF OPPORTUNITY

The course is certified through the BackBone Academy and recognised internationally by the IVCA, AVCA, and

We teach you to diagnose and adjust horses and small animals with light hands.

We teach veterinary chiropractic therapy in Australia to Veterinarians and Chiropractic Doctors to:

- Enhance diagnostic skills.
- Add value to existing business.



For all inquiries: www.backbone-academy.com



Summer Course 2023 Schedule



FOR TECHNIQUE LABS MODULES

Module 1 - October 27th – October 29th - 2023

Module 2 - December 1st - December 3st - 2023

Module 3 - January 26th – January 28th - 2024

Module 4 - March 1st - March 3rd - 2024

Module 5 - March 29th- March 31st - 2024

Course Registration is only through the Academy website: www.backbone-academy.com

The course fee for the Australian Summer 2023 course is \$9,500.00 Australian Dollars for all five modules.

Please note registration is only complete when payment is received.

Join us in Biarra, Queensland, in 2023 for this ground-breaking opportunity. Instead of travelling overseas to obtain international animal chiropractic certification, we have the curriculum to fast-track new opportunities and your professional careers right here.

LOOKING FOR THE BEST TRAVEL INSPO' FOR HOLIDAYS WITH YOUR FURRY FRIEND?

"Whether it's hiking, paddle boarding or chilling on the beach, taking your dog on holiday adds some challenges, but it's also so much more rewarding and fun!"

Kerry Martin, Puppy Tales

PUPPY TALES' DOG TALES OF AUSTRALIA BUCKET-LIST GUIDE OF DOG FRIENDLY DESTINATIONS HELPS YOU FIND THE BEST HOLIDAYING ADVENTURES WITH YOUR BARKING BESTIE!

Victorian dog adventurer and award-winning pet photographer Kerry Martin and husband Sam dig nothing more than travelling Australia with their two furry companions, Keiko and Summer. In fact, they spend up to six months of the year traveling to amazing dog friendly destinations throughout the country.

They even em-bark-ed on a **13-month**, **56,400 km** 'lap' of Australia that was meant for a coffee table book and transformed into a 290-page bucket-list guide of dog friendly travel and destinations Down Under!

"It wasn't difficult to find pet friendly accommodation in Australia. It was harder to find what to do to have an incredible time with





your dog," said Kerry, who is also editor of *Puppy Tales*, a website aimed at helping pet parents make the most of life with their fur family.

Puppy Tales' <u>Dog Tales of Australia</u> book is packed with real locations, real world advice and real experiences, perfect for when you really want to share some special times with your very special holiday-bound hounds!

"Whether it's hiking, paddle boarding or chilling on the beach, taking your dog on holiday adds some challenges, but it's also so much more rewarding and fun!" said Kerry. "When you're traveling with your dog, sometimes you let your dog lead the way. It's a slower, more meaningful travel experience where you can see more and take it all in.

Kerry and her fur family stayed in caravan parks, free camping sites, luxury accommodation, station stays, cabins and at friends' farms. They also explored the best of doggo-friendly attractions, beaches, parks and gardens, the bush and so much more!

Kerry captured more than 100,000 photos and logged more than 140 hours of drone flight to create the collection of photography and fur-tastic memories to illustrate *Dog Tales of Australia*.

"We show you the BEST places! Where the locals go, those hidden gems of a beach or stunning view that are off the track!" said Kerry. "We also thank our Puppy Tales followers for sharing their destination tips during our journey."

Kerry would love to be interviewed and share on pet-friendly travelling and destinations to help fellow dog lovers make the most of their 2023 and beyond with their furry friend! For more information or to purchase Dog Tales of Australia, visit

https://puppytales.com.au/product/dog-tales-of-australia-book/

About Kerry Martin & Puppy Tales

Kerry Martin of Puppy Tales considers pets very much part of the family so lives this adage to help and inspire fellow pet parents to create incredible memories of a most pawsome life together!

Kerry's Melbourne-based but is often on the road throughout Australia offering her award-winning dog photography. She's known throughout the country for her seasonal photography experiences, most notably Snow Dogs, and her studio-based Project Dogalogue. Of the many national and international photography awards she's received over the past decade, the highlights have been Master of Photography and Australian Pet/ Animal Photographer of the Year.

As she travels with her own adored furry companions Keiko & Summer, Kerry writes to share her knowledge and experiences of all things dog, photography and travel. She creates content for the Puppy Tales website, a social media community of over 500,000 and other publications to promote the wonderful relationships between dogs and people. This includes encouraging doginclusive activities and lifestyles, telling of her travels & adventures, providing resources for keeping dogs happy & healthy, sharing dog photography how-to and recounting heartfelt dog stories. All accompanied by her stunning photography!

Puppy Tales is a business for good with a mission to make a paw-sitive difference. Puppy Tales operates as carbon negative; supports many local organisations through photography, fundraising and more; and plays a part in the global community's effort to protect the planet, take action on climate change and care for animals and wildlife. She's also the founder of the Australian Dog of the Year Awards which recognises the incredible contribution of dogs to people, communities and society. To discover more, visit https://puppytales.com.au



THE ABCS OF VETERINARY DENTISTRY:

I IS FOR INTERCEPTIVE ORTHODONTICS

Tracey Small BA (Soc Sc), VN, Dip VN (Dentistry)

Dr David E Clarke BVSc, DAVDC, FAVD, DAVC-ZWD, MANZCVS, Cert IV TA

Registered Specialist, Veterinary Dentistry and Oral Surgery

www.vdec.com.au

As we move through the dental alphabet, this issue brings us to the letter I. In this article we continue our journey into the discipline of orthodontics and look at juveniles and interceptive orthodontics.

When a puppy or kitten presents to the veterinarian for vaccination, a full examination is performed. At this visit an examination of the mouth should be conducted to assess occlusion and any oral or dental abnormalities. In both puppies and adults, a healthy occlusion is when the maxillary incisors sit slightly rostral to the mandibular incisors. The mandibular canines sit between the maxillary third incisor and canine creating a dental interlock. The premolars sit in an interdigitating format. In adults, the maxillary 4th premolar occludes with the mandibular 1st molar¹. Normal bites of puppies (Figure 1) and adults (Figure 2).

Any deviation from this configuration is considered a malocclusion, often causing trauma and pain even when there are minimal or no clinical signs, therefore treatment must be acted on quickly to alleviate discomfort to the patient².

Malocclusion can be caused by a number of factors such as hereditary origins, nutrition, infectious diseases, endocrine imbalances, environment and trauma^{1,4}. Early loss of teeth due to injury or delayed exfoliation of deciduous teeth can change the orofacial complex. Premature tooth loss provides space for other teeth to migrate and alter occlusion. Conversely, delayed exfoliation of deciduous teeth can result in overcrowding or tooth impaction also altering occlusion⁴.

The maxilla and mandible jaws grow in intermittent, independent spurts³ In due course the jaws even out once the mandible has completed its last growth⁴. However, during these growth periods, discrepancy of jaw lengths can lead to the mandibular teeth occluding with the maxillary teeth, indenting into the hard palate or soft tissues, thereby, mechanically preventing the mandibular jaw from growing forward, this is known as an adverse interlock²⁻⁴. There is also the possibility that the mandibles if unable to grow forward will bow downwards instead⁴

An untreated malocclusion has a multitude of pathological consequences such as soft tissue, gingival, palatal trauma and oral nasal fistulas due to displaced tooth penetration. Periodontal disease from overcrowding, fractured teeth and or attrition due to tooth displacement, temporomandibular joint and mastication functions due to disproportionate jaw lengths^{1,4}.

Deciduous malocclusion should be treated once noted, firstly, to alleviate pain and trauma, and secondly, to remove the mechanical interlock thereby providing the opportunity for the mandible to grow independently forward²⁻⁴.

Interceptive orthodontics involves extracting selective deciduous or permanent teeth that are impinging on jaw growth and will force misalignment of erupting permanent teeth^{1,4}. By extracting selective deciduous teeth, the jaws are freed to continue to grow forward independent to each other and prevent future jaw growth impediment^{2,4}.

Figure 1



Figure 2





Fiaure 3

Figure 4 above. Figure 5 right.

Determining which teeth need to be extracted can be challenging. Teeth causing trauma need to be extracted along with teeth that are predicted to inhibit jaw growth. Selected teeth are most commonly extracted from the jaw that needs to grow forward. All the while leaving the teeth that foster a healthy occlusion².

Interceptive orthodontics begins with assessing the occlusion, patients bite and what movement is required³. A treatment plan is formulated, evaluating teeth that are obstructing jaw growth and which teeth will prevent future growth².

Radiographs are essential to assess the root structure of teeth to be extracted, to visualize the periodontal structures and to assess the health of the permanent dentition².

Care must be taken when extracting deciduous teeth as these teeth are slender, longer compared to permanent dentition and therefore more fragile and prone to fracture². Furthermore, care must be taken to prevent iatrogenic damage to the permanent tooth²⁻⁴.

Dental elevators must be slender and small, leverage mostly placed on the sides of the tooth opposed to the permanent bud, pressure should be constant and gentle and extraction forceps to be utilized only once the tooth is very mobile⁴.

Post extraction radiographs must be taken to confirm complete extraction².

Due to the fragility of the deciduous tooth, root fractures are common during extractions. It is imperative that remaining root fragments are removed, if left they can potentially lead to infection, inflammation and alter the eruptive pathway of the permanent tooth²⁻⁴.

CASE STUDY

Bella, a 12-week-old, 6.5kg, speyed female Border Collie dog was referred to the practice for a bite assessment after the referring veterinarian noted a malocclusion during her vaccination visit.

On examination it was noted that Bella had a significant Class 2 malocclusion observed as a short mandible in relation to the maxilla resulting in the thin sharp deciduous mandibular canines (704, 804) traumatising the hard palate. Figure 3. In addition, there was lower lip entrapment mechanically preventing further growth of the mandible due to an adverse interlock.

Interceptive orthodontics was recommended to relieve pain and provide the genetic potential of the mandible to



elongate if present. Without interceptive orthodontics, the hard palate will continue to be traumatised, become ulcerated and potentially become infected. The inflammation may damage the permanent teeth development and the jaw will remain at its current length.

Bella was admitted for her dental procedure. She was examined and found to be in good health, well hydrated, heart rate of 180bpm, 40bpm, body temperature 37.5 °C. A 22g intravenous catheter was placed aseptically in the right cephalic vein to administer a balanced electrolyte solution of Hartmanns 2.5mls/kg/hr. A pre-anaesthetic of methadone 0.3mg/ kg was administered intravenously. An induction of Alfaxan 2.5mg/kg was given intravenously. A size 6 mm cuffed endotracheal tube was placed, inflated, tied and connected to the anaesthetic machine. Anaesthesia was maintained with a combination of 2% isoflurane in 100% oxygen. Anaesthetic monitoring included visual assessment, reflex activity, oxygen saturation, end tidal CO2, heart rate,









respiratory rate, ECG and blood pressure. These values were recorded every 5 minutes on an anaesthetic monitoring form.

A comprehensive oral health assessment was performed, Oral examination revealed a deciduous dentition consistent with age. A Class 2 malocclusion with an overjet of 10mm. Consequently, the mandibular deciduous canines were sitting caudally and penetrating into the hard palate adjacent to the ipsilateral canines, creating 3mm defects and an adverse dental interlock. Figure 3 and 4.

Dental radiographs visualised location and integrity of deciduous canines and the permanent dentition². Figures 5 and 6.

A local nerve block of 0.15ml 3% mepivavaine was placed bilaterally into the middle mental foramina. A 1.3mm straight root elevator was placed down the buccal side of the right mandibular deciduous canine (tooth 804), exerting minimal pressure and care to sever the periodontal ligament. A small curved deciduous tooth elevator was placed following the mesial curve of the tooth ending at the distal curve of the root and was used to continue to weaken the periodontal ligament till it became mobile. The tooth was then extracted using extraction forceps. These steps were repeated for the contra lateral canine (tooth 704).

Once teeth had been extracted, radiographs were taken to confirm complete extraction. Figures 7 and 8. Extraction sites were left open to allow the permanent teeth to erupt without a mechanical barrier. Figures 9 and 10.

The patient was turned onto left lateral recumbency. Isoflurane was turned off and the patient was left on oxygen until first sign of swallowing, the endotracheal tube was deflated and removed. The patient was moved to a recovery cage to be monitored. Fluids were turned off one hour post-surgery, a small meal was offered and meloxicam was administered subcutaneously.

At discharge, the owners were instructed to feed soft food for 1 week and to return to the practice once the permanent mandibular canines had erupted 2-3 mm for a bite assessment.

Conclusion:

Deciduous malocclusion has the potential to cause many pathologies to oral structures within the mouth such as: soft tissue, gingiva, palate, teeth wear and fractures. In addition, jaw discrepancy can lead to an adverse dental interlock which prevents the jaw from growing forward. If the jaw is mechanically trapped during a jaw growth spurt, then the opportunity is missed.

A wait and see approach is not acceptable, treatment must be immediate to alleviate pain, trauma and provide the best opportunity for jaw growth.

References:

Perrone, Jeanne R. Small Animal Dental Procedures For Veterinary Technicians and Nurses. Ames: Wiley-Blackwell; 2013

Niemiec Brook A. A Color Handbook Small Animal Dental, Oral & Maxillofacial Disease. Florida: CRC Press; 2012

Holmstrom SE, Frost P, Elsner ER. *Veterinary Dental Techniques for the Small Animal Practitioner*. 3rd ed. Philadelphia: Saunders; 2004

Lobprise Heidi B, Dodd Johnathon R. *Wiggs's Veterinary Dentistry Principles and Practice*. 2nd ed. NJ: Wiley & Sons Inc; 2019



Figure10



The Veterinary Dental Education Centre offer **24/7 access** to web-based and on-demand veterinary dental continuing education (CPD), as well as, practical dental wetlabs in small groups of like-minded veterinarians and nurses.

CPD topics include:

WEBINARS:

Fundamentals Series

- Radiology Dental Radiology Interpretation Made Easy
- Periodontal Disease 10 Steps to Scale Like a Pro
- 3. **Saving Teeth** Want to do Less Extractions and More Procedures
- 4. **Analgesia** Let's Achieve Reliable and Repeatable Nerve Blocks
- Oral Surgery Difficult Extractions Made Easu
- Marketing Business Get Ready for Pet Dental Month
- 7. Oral Examination and Dental Charting

Advanced Series

- Endodontics Vital Pulpotomy and Direct Pulp Capping
- Periodontal Disease Making a Perfect Flap, Open Root Planing and GTR
- Prosthodontics Restorations and Crowns
- 4. Oral Surgery Mandibular Fracture Repair Techniques
- 5. Orthodontics What's Happening in the Young Mouth
- 6. Marketing Business Setting Up a Referral Dental Practice

Clinical Videos – How To Do a Procedure: e.g., Extraction of the maxillary canine tooth

Case Studies - The theory and Practice of Dental Cases

The Incisal Edge: Short Pieces and Topics Relevant to Clinical Practice e.g., How to use a periodontal probe; Which Bur do I Use

Reference Section: Dental Anatomy, Dental pathology, Radiographs – what's normal – What's Not....

Access to the Upcoming Workshops and Seminars....

Visit vdec.com.au to view course descriptions, speaker information, and educational objectives.

MOVING ON UP

NEW HEAD OF ANIMAL HEALTH IN AUSTRALIA & NEW ZEALAND

Boehringer Ingelheim, today announced the appointment of Christoph Tautphaeus as Head of Animal Health Australia and New Zealand, succeeding Daniel Watkins who has been promoted to Vice President, Pets in the United States. Christoph Tautphaeus is currently the Head of Finance and Administration for Boehringer Ingelheim Australia and New Zealand, and will commence his new role 1 July, 2023.

Daniel Watkins has led Animal Health in Australia and New Zealand since January 2022 and been with Boehringer Ingelheim since 2012. Daniel also served as a Director of Animal Medicines Australia, the peak industry body representing the leaders of the animal health industry in Australia.

"Daniel has been an integral part of our team as Head of Animal Health. He has captained with integrity and vision and his promotion to the world's largest pets market is testament to his successful leadership here. I thank Daniel for his invaluable contributions, and I wish him all the best in his new US role," said Dirk Otto, General Manager, Boehringer Ingelheim Australia and New Zealand, commenting on Daniel Watkins' promotion.

"Christoph Tautphaeus will succeed Daniel as Head of Animal Health Australia and New Zealand, ensuring a seamless transition as the baton is passed into safe and trusted hands," Dirk Otto said.

Christoph has been with Boehringer Ingelheim since 2008, where he has led various teams and departments across Germany, Denmark and Asia Pacific, prior to taking his current Head of Finance Australia and New Zealand position in 2018. Christoph holds postgraduate and Honours degrees in Business Administration and International Business from United Kingdom and German universities.

Christoph joins the Australia and New Zealand Animal Health team that is strategically focused and united. The business is looking ahead to an exciting period defined by innovative new product launches, strong technical leadership, and an unwavering customer focus.

Speaking about his appointment, Christoph said: "I'm excited to step into such an energised Animal Health team. This business leadership opportunity reaffirms my great respect for Boehringer Ingelheim as an organisation dedicated to its people, and I look forward to working with my new team and our valued customers and industry partners to transform lives and deliver better health to animals across Australia and New Zealand."







THE AUSTRALIAN VETERINARY ASSOCIATION LAUNCHES NATIONAL PSYCHOLOGICAL **HEALTH AND SAFETY PROGRAM**

TO POSITIVELY IMPACT INDUSTRY MENTAL HEALTH AND WELLBEING.

The peak professional body for veterinarians, the Australian Veterinary Association (AVA), announced the THRIVE Cultivating Safe Teams pilot program during their annual conference in Adelaide this week.

"The importance of psychological health and safety in the workplace cannot be underestimated. Mentally healthy people and workplaces are good for animal welfare, staff productivity, staff retention and individual well-being and satisfaction," said Dr Bronwun Orr. AVA President.

The association will work with Aspect Group, a leading provider of workplace psychological health and safety solutions, to co-design and deliver the training program in-house to fifty veterinary workplaces across Australia over an 18-month period. Participants and their workplaces will sign an industry pledge stating their commitment to cultivating a safe and mentally healthy workplace and will be provided with resources to support their training, including an industry-specific mental health and suicide prevention framework.

"We are investing in this pilot program as we believe a cultural shift is needed in our profession. Our goal is to raise awareness of the integral responsibility we all share in preventing harm from psychosocial hazards in the industry, promoting the rewards of working in this profession and protecting all of us when we experience stress and are unwell. We want this program to flourish beyond the pilot phase and we will need the support of all veterinary stakeholders to do this," said Dr Orr.

THRIVE Cultivating Safe Teams represents the first initiative of a long-term, industry-informed and led mental health and wellbeing platform.

To learn more about the work of THRIVE or to express your interest in participating in the pilot program visit: THRIVE (ava. com.au)

Real people...real answers!

Partnering with VetCT, means together we see more. Enjoy diagnostic confidence by sending us your radiographic and/or CT/MRI images to make the best next step in your patient care.

How would you like?:



Detailed, annotated radiology reports



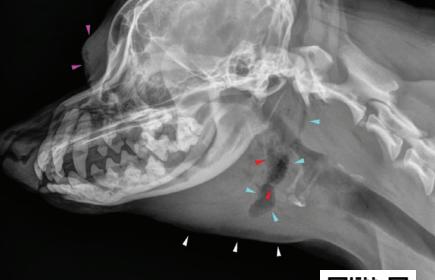
Access to 130+ board-certified radiologists



Urgent x-ray reports delivered within 1hr

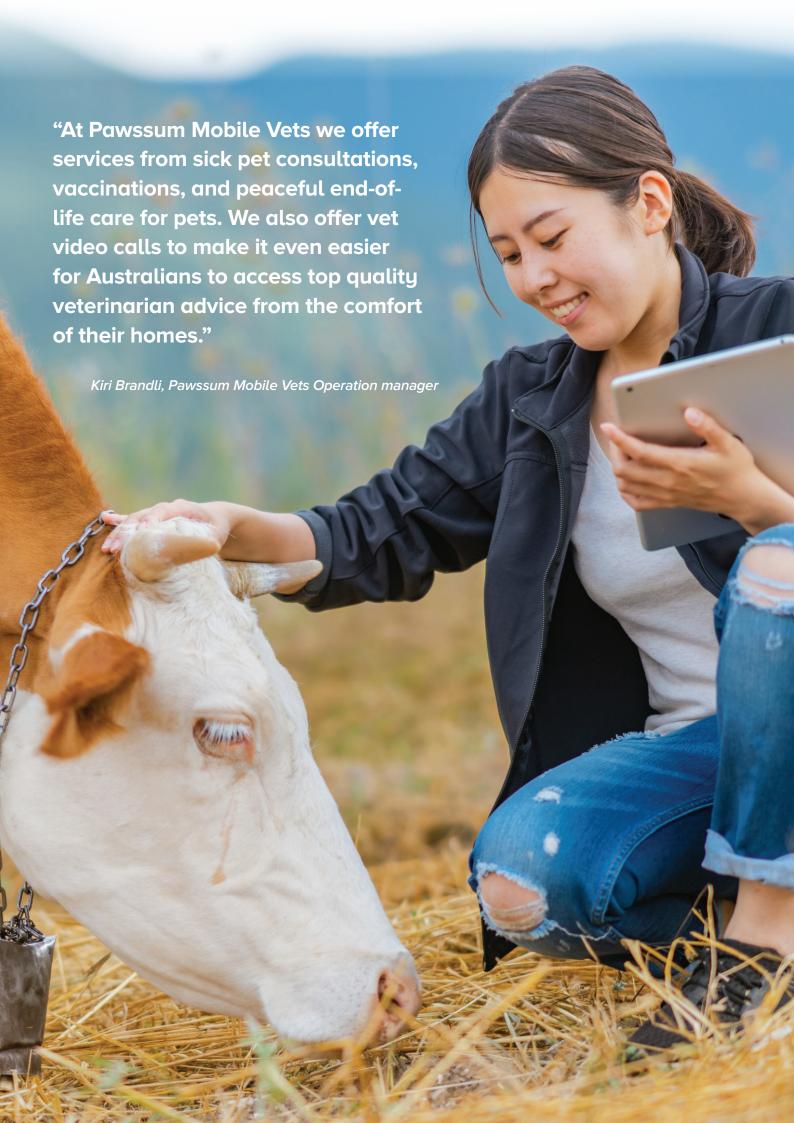


Clinical support across all small animal disciplines, whenever and wherever you are









THE RISE OF THE MOBILE VET USE DOUBLES SINCE COVID

After the Covid-19 pandemic, many sectors noticed an upturn in business, particularly those that offered mobile services. Mobile veterinary care has undoubtedly seen a boom in recent times, and it's apparent why many Australians now see this type of service as an essential aspect of pet care.

"There are a huge number of benefits of taking up the services of a mobile veterinarian," Nadia Crighton from Pet Insurance Australia says. "The percentage of Pet Insurance Australia customers using Mobile Vets has more than doubled since just before covid (2018 / 2019)."For many pets, the thought of heading to the vet can bring on a whole host of anxious behaviours and stress while for pet owners, making an appointment for their local vet, particularly for routine care, can endure long wait times.

With the veterinarian industry seeing extreme shortages in qualified vets nationwide, these services are becoming increasingly critical to ensure all Australian pets have readily available and reliable veterinarian care. With an estimated 28.7 million pets residing in 6.9 million households, high-quality veterinary access is vital for many Australians.

According to Animal Medicines Australia recent survey, Australia witnessed a pandemic pet boom, with 69% of all households owning a pet. This is significantly higher than the consistent 61% recorded in 2016 and 2019, before the pandemic. However, the result is also on par with thier 2021 Pets and the Pandemic findings - suggesting the pandemic pet ownership boom has plateaued into a 'new normal'.Kiri Brandli, Pawssum Mobile Vets Operation manager, agrees that during the Covid pandemic, many Australia's realised the importance of mobile vets throughout this time.

"Pawssum Mobile Vets experienced an increase in demand for two main reasons," she says. "Since covid, people got used to ondemand services in all aspects of their lives. Same with their pets — people now tend to get food delivered and now invite Pawssum vet care to the home. We also witnessed a massive growth in pet ownership during covid."These services also allow veterinarians to cope with the stresses of long and often highly emotional working hours. Permitting them to continue doing the job they love while having the flexibility they need is a win-win for veterinarians and the pet-loving public."It's no surprise to many in the industry that

veterinarians have one of the most stressful jobs on the planet," Crighton says. "Mobile vet services allow our hardworking and much-needed registered veterinarians to continue to work their magic while maintaining stress levels that go hand-in-hand with premium pet care."Benefits of Mobile Vets

Registered mobile veterinary services offer many benefits for both pets and their owners. Some of the benefits of using a mobile vet include the following:

Convenience: With a mobile vet, you don't have to worry about transporting your pet to a clinic, which can be stressful for you and your pet. Instead, the vet comes to your home or workplace, saving you time and hassle. Personalised care: Mobile vets offer personalised care for your pet, as they are able to get to know your pet's unique needs and personality.

Reduced stress: Visiting a traditional vet clinic can be stressful for some pets, especially those with anxiety or fear of new environments. A mobile vet can provide your pet with a more relaxed and comfortable environment.

Flexibility: Mobile vets offer more flexibility in terms of scheduling appointments. They can often work around your schedule, making finding a time that works for you and your pet easier.

End-of-life care: Mobile vets can also provide end-of-life care and euthanasia services in the comfort of their homes, allowing you to say goodbye to your pet in a familiar and peaceful environment.

"At Pawssum Mobile Vets we offer services from sick pet consultations, vaccinations, and peaceful end-of-life care for pets," Brandli says. "We also offer vet video calls to make it even easier for Australians to access top quality veterinarian advice from the comfort of their homes."

The growth in this sector is great news for Australian pet owners and their beloved feline friends and canine companions.

"More services such as these can literally be a lifesaver for many Australian pets," Crighton says. "Offering high-quality veterinarian care in the comfort of your home is a huge benefit to vets, pets, and their owners."









GLOBAL FIRST AS WSAVA AND HILL'S PET NUTRITION LAUNCH CERTIFICATE IN PROFESSIONAL DEVELOPMENT AND PERSONAL WELLBEING

The World Small Animal Veterinary Association (WSAVA) and Hill's Pet Nutrition are marking Mental Health Awareness Month this month with the announcement of a new Certificate in Professional Development and Personal Wellness.

In the face of an increasingly challenging working environment for companion animal veterinary professionals, this online course will help learners to create a career development roadmap and develop strategies to safeguard their wellbeing. It will be available later this year, free of charge to members of WSAVA member associations, made possible by support from Hill's Pet Nutrition.

Content for the WSAVA Certificate in Professional Development and Personal Wellness will be delivered via video lectures from experts in veterinary professional development, supported by case studies, a downloadable workbook, space for reflection, and links to further "In response, we are providing evidence-based resources and tools resources. As they work through the modules, learners will explore for our member associations to help them counter the problems different ways to learn new skills linked to personal goals, create new habits and track their progress. Engagement with the course will be assessed by quizzes at the end of each module.

The content has been designed to be accessible for those with neurodiversity and is underpinned by the principles of wellbeing and self-care as set out in the WSAVA's first Global Guidelines on Professional Wellbeing. The Guidelines will be launched at WSAVA and an opportunity to build a roadmap for success, both at work Congress in September.

The Certificate in Professional Development and Personal Wellbeing is the latest in a series of WSAVA qualifications, based on its highlu-regarded Global Guidelines. Long-time Industry Partner. Hill's Pet Nutrition has also supported the WSAVA Professional Wellness Group since it was founded.

"Since our inception, Hill's has supported the veterinary

profession. As we celebrate our 75th anniversary this year, we're proud to be involved in a new way to support the profession as mental health is one of the most pressing issues facing the industry we love so much," said Dr Jolle Kirpensteijn, Global Chief Veterinary Officer for Hill's Pet Nutrition. "Thank you to WSAVA for the opportunity to collaborate to offer free resources and tools to support wellbeing."

"The demands of the veterinary profession, exacerbated by factors including staff shortages, barriers to accessing veterinary medicines, and the legacy of the COVID-19 pandemic, are adversely affecting the wellbeing and physical health of many veterinary professionals, causing unacceptable levels of stress and burnout," said WSAVA President Dr Ellen van Nierop.

that so many of their members face. The new WSAVA Global Guidelines on Professional Wellbeing, created by our Professional Wellness Group for launch at WSAVA 2023 are the first step.

"However, in developing this new Certificate in Professional Development and Personal Wellness, we are going one step further by offering our members a practical, structured learning experience and in their personal lives. The launch of this WSAVA Certificate is an exciting moment for us and we thank Hill's Pet Nutrition for its long-standing commitment to veterinary wellbeing."

The WSAVA Certificate in Professional Development and Personal Wellness course will be available in English and is being submitted for RACE accreditation. Interest in the Certificate can be registered here: https://bit.ly/42dgwjv

"The demands of the veterinary profession, exacerbated by factors including staff shortages, barriers to accessing veterinary medicines, and the legacy of the COVID-19 pandemic, are adversely affecting the wellbeing and physical health of many" veterinary professionals,

WSAVA President Dr Ellen van Nierop









Introducing the powerful broad spectrum disinfectant that won't clean out your wallet

NEOGEN® VIROXIDE SUPER contains the same active ingredients as Virkon® S, so now's the time to make the clean switch for all your vet clinic disinfection needs.



Meet the broad spectrum disinfectant that's tough on germs, but easy on your budget. Proven effective against bacteria, viruses and fungi, **NEOGEN® VIROXIDE SUPER** works rapidly. It is an environmentally friendly comprehensive disinfectant for use on hard surfaces and is available in a range of pack sizes to suit all vet clinics no matter how big or small.



The cleanest switch you'll ever make

For more information, contact:

Central & Northern QLD:
Jay Richards
m: 0472 535 565
e: jay.richards@abbeylabs.com.au

Northern NSW & Southern QLD: Brett Wisemantel m: 0428 357 109 e: brett.wisemantel@abbeylabs.com.au

Tiffany Gordon m: 0448 902 524 e: tiffany.gordon@abbeylabs.com.au Darren Rutley
m: 0499 323 053
e: darren.rutley@abbeylabs.com.au









HOCK INJURY: MORE THAN A PAIN IN THE REAR!



Cruz waiting to see Dr Rob Zammit after his hock injury for diagnosis

Written by Caroline Zambrano, Pet Journalist

Originally published on the Australian Dog Lover Website (www.australiandoglover.com) March 2023



Caroline Zambrano Pet Journalist knows full well how distressing and challenging a major hock injury can be, especially if you're mum to a supersized senior dog like her Anatolian Shepherd Dog, Cruz.

She shares her story - warts and all - hoping this will help other dog owners put things into perspective, should they face a similar

The accident occurred the night before we moved house mid December 2022. Cruz, our 8-year-old Anatolian Shepherd, was in the backyard for most of the evening while we finished packing the remaining few boxes. When we called him in for the night, we noticed him limping on his back leg.

It wasn't the first time our 'livestock guardian' hurt himself chasing birds and other wildlife that dared to enter his outdoor space, so I thought, as I felt around his leg, that he probably sprained a muscle

By morning the lower hock area was a little swollen and we left Cruz on his bed out on the deck to keep him safely out of the way of the movers while they loaded furniture and boxes into the truck. In the meantime, I could see him running around the deck,

barking at magpies and dogs passing by, so I thought it couldn't be anything serious, otherwise he wouldn't be acting like a clown.

I was so wrong! Our Vet Dr Rob Zammit at Vineyard Vet Hospital (Vineyard NSW) took one look at Cruz's leg and said, "it is an orthopaedic catastrophe!" My heart sunk.

I asked him about our treatment options, and he said "surgery or worst-case scenario... euthanasia" because there's a chance the surgery may not work! Cruz is a 63kg senior dog with medical issues, including hypothyroidism and arthritis, and would live the rest of his life in pain. "Let's see what the X-rays show, and we go from there," advised Dr Rob.

It wasn't the kind of conversation I was expecting to have, especially during the holiday season, and was in disbelief and scared to think of the excruciating decision we may need to make as a family in the coming weeks.

A few days later, I brought Cruz back to Vineyard Vet Hospital to get the X-rays done. I stood by Dr Rob to keep Cruz calm as he manipulated Cruz's leg under the machine to get images of different angles. Dr Rob was right – it was an orthopaedic catastrophe; his hock was dislocated with a fracture that would require a large plate to be screwed in.

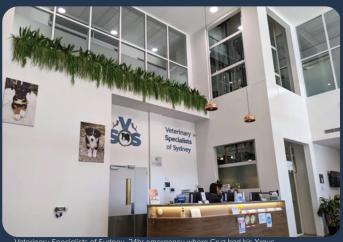
Different types of canine hock injuries and their causes

Dr Rob sent the X-rays to his colleague, a "superbly skilled surgeon" named Dr Andrew Levien, for his opinion about surgery. A couple days later I got a call from Dr Andrew, who I learned to be also the director of 24-hour emergency hospital Veterinary Specialists of Sydney (VSOS).

He wasn't concerned about Cruz's X-rays, explaining that it was a common injury and he'd performed this type of surgery countless times with great success.

"There are two main types of injuries to the hock - degenerative and traumatic," he said.

"I generally see cases that are more of a degenerative type issue of the ligaments supporting the ankle – much like a cruciate ligament in the knee — and for that reason we see it more in middle age or older dogs."



Veterinary Specialists of Sydney, 24hr emergency where Cruz had his Xrays

"Also, hock injuries are seen more in athletic animals than sedentary ones, more common in large dogs and working dogs because they put strain on that ligament that support the ankle."

Certain breeds, like Shetland Sheepdogs and Border Collies, are also predisposed to hock injuries that are more degenerative in nature.

Occasionally hock injuries occur due to a traumatic accident, caused for instance by jumping off the deck or getting hit by a car. It's not related to cancer, said Dr Andrew.

In Cruz' case, it was a traumatic accident (a break) caused most likely when he was running in the backyard and his foot got caught in a pothole and twisted.

His official diagnosis was: left tarsometatarsal subluxation — a fancy name for the metatarsal bones becoming disconnected from the tarsus or 'ankle' of the dog. The recommended treatment was a partial tarsal arthrodesis — in other words, a surgery used to fuse the leg and foot bones together to salvage some joint function.

"Cruz's surgery is pretty standard from the point of view of a repair. But he's an exceptionally large dog compared to your average Border Collie that weighs only 18-24 kgs; Cruz is three times that size!" said Dr Andrew.

"For that reason, we need to beef up the hardware in his leg to account for that. He'll get a strong plate in there to make it stronger and we'll meticulously close the soft tissue to avoid complications."

The cost would be around \$7,000 – thank goodness for our pet insurance (personally, a must for big dogs)! We've had cover with Pet Insurance Australia since the day we got Cruz and have saved many, many thousands of dollars over the years with 80% money back for claims. (And he's not even a working dog!!)

When Cruz's insurance renewed in December last year, we decided to lower the cover to 60% to save money on the increased monthly premium due to his age. It was a good deal, we thought, and hoped he'd stay out of trouble! A few days later, Cruz went and fractured his leg!

The risks of this type of surgery

There are few risks involved in this surgery if done by a competent trained surgeon, explained Dr Andrew.

"The main risks everybody should be educated on are infection," he warned. "There's not a lot of tissue coverage over the hardware. So, it's not difficult for bacteria to work their way through the skin and towards the plate.

"Sores caused by the bandaging on Cruz' leg look worse than they actually are" said Dr Andrew

Other risks are antigen (markers that tell your body that something is foreign) complications and pressure sores from bandaging problems that can be very nasty and take weeks to get better!

"Tendons and bones can be exposed from bandaging complications. That's why I'm protective over my cases and make sure they get the appropriate bandaging after surgery to avoid complications," he added.

"Other risks, theoretically, can be the fusion of the ankle doesn't occur for one reason or another and the hardware got removed, causing an infection in the surgical area and required another surgery."

Then there's breeds like Anatolian Shepherd Dogs being at increased risk for anaesthetic complications, such as hypotension, hypothermia, abnormal heart rate, hypoventilation, and difficult recovery (eg, prolonged duration, dysphoria, pain).



Dr Andrew with Vet Nurse changing Cruz' bandage for the third time after his hock surgery

Post operative care is the most important!

It was good to be informed of the risks of this major surgery. But what Dr Andrew was most concerned about was the post operative care — the surgery can be for nothing if we don't provide him the proper care and time for his leg to heal properly.

"Dogs can walk on the leg relatively early, four to six weeks after the surgery. However, fusions are inherently a slow process, taking weeks and months to happen. So, we don't want dogs running around on the repair until some sort of fusion has happened," he said.

"In Cruz's case, we can expect full recovery to take four to five months before fusion is strong. Otherwise, the implant can take all the load and the metal could snap. That would be uncommon. But I've heard of bones breaking around the metal object."

So general recovery is eight to ten weeks, followed by an X-ray to see where we're at with the fusion. I would have to restrict Cruz's movements to a small area of the house and take him to see Dr Andrew at VSOS (65km from my home) once a week for a check-





up and bandage change.

When Cruz has to do his doggy business in the backyard, we need to support him with a sling. I thought, how complicated can it be to manoeuvre a huge limo of a dog forward whilst simultaneously hold a sling to support his back?

Also, he'll have a fibreglass cast on and I would need to keep the bandaging dry at all times. No worries, I should be able to do that whilst manoeuvring and supporting his back end with a sling when he's pooing in the rain. I got this .. I think?

Patient-proofing the house

The date was set for his surgery in a week's time and in preparation, my family and I started patient-proofing the house to make it safe and comfortable for Cruz during his long and risky recovery.

- Choose a safe, quiet space. We decided to set Cruz up in the family 'movie room' downstairs; it's a small room beside the sliding door to the backyard so he didn't have to walk far for toileting. Any movie watching would be done on low volume and turn the captions on!
- Cosy bed. We dragged in Cruz's new giant orthopaedic bed that we got him for Christmas, and placed his soft bed as back-up in case he didn't feel comfortable.
- 3. Containment. We ordered a mesh gate for the doorway so he could see through it into the living room and not feel isolated.
- 4. Safety. We placed a large rug in the room and more rugs in the living area to prevent slipping and piled large pillows on the movie room pull-out couch to prevent him from climb it. We also connected the Furbo Camera in the room so I could check on him throughout the night.
- 5. Food and water. We placed his elevated water and food bowl stand near his bed.

The surgery!

The surgery went well; the procedure taking a couple hours and no complications to report. Cruz would stay for a couple days at Vineyard Vets for monitoring, confined to a crate to keep him quiet and off his paws.

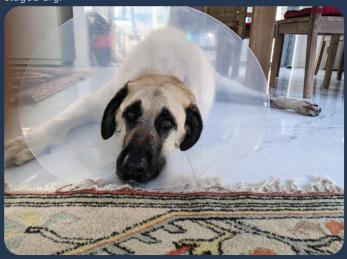
It wasn't long before we got a call from Dr Rob that Cruz was okay to go home. My teen daughter Isabel and I arrived at Vineyard with great excitement and were certainly not prepared for what we saw when Cruz walked out of the recovery room.

His left side had been shaved from the stomach all the way down his leg and a blue bandage was wrapped tightly around the hock joint, down to the paw. A nurse was supporting Cruz's backside with a large sling and he was walking like a drunk. I felt the anxiety rising in my chest and wanted to cry. Dr Rob walked into the consult room at that moment and braced himself for the zillion questions I started blurting out. Eventually he and Isabel calmed me down, assuring me everything would be ok and we could handle this.

Isabel guided Cruz out of the consult room with a lead and I shuffled behind, supporting him with the sling. To my horror, it began raining ... hard! I remembered Dr Andrew's advice to use a plastic cover to protect the bandage. A nurse brought out a modified, disposable, plastic blood collection bag that was cut across the top so I could simply slip Cruz's paw into the hard, thick plastic and protect the bandage. Genius!

As for the rest of the bandage poking out from the top of the plastic, we put his leg into a large supermarket bag and tied the handles around the top of his thigh, then used bandage tape to seal off any openings. We shuffled out of the building – Isabel guiding Cruz with one hand and a large umbrella in the other, and me supporting his back end with the sling. Cruz made a beeline to the closest tree for a wee and walked under a bushy branch, releasing over a dozen stink bugs on top of us!

A nurse came running to help as we desperately tried to flick the stink bugs off Cruz and from inside our shirts while balancing the sling, umbrella and bag of meds. We couldn't stop laughing all the way home, soaked to the bone! It was a miracle Cruz's bandage stayed dry!



Cruz recovering at home post surgery and contemplating the meaning of life!





Dr Robert Zammit sharing the X-ray results

At home recovering

Cruz is a very chilled dog by nature – hence his name – but keeping him calm and restricting his movements was a bit more challenging than we expected. The mesh gate we ordered didn't arrive on time, so we blocked the entryway to the movie room with heavy wooden kitchen chairs.

In the middle of the night, we heard a loud noise. I checked our Furbo dog camera and saw he had pushed the chairs away to get out of the room!

The next night, we reinforced the chairs with a box of books which we placed on the floor. It worked ...until the following night when he managed to push passed the heavy barricade and even jumped over the box!

The daytime wasn't any easier – he wanted out all the time. I found Dog TV on YouTube – 8 hours of ducks by a stream. Yeah, nah, this wasn't going to work. (Frankly, I'd go a bit bonkers, too!)

Cruz won – we placed his bed in the living area, moved rugs around and blocked the stairs with the dog gate mesh that had finally arrived.

I moved my office to the kitchen table where I could keep an eye on him and went through the daily cycle of covering his bandage with the plastic blood collection bag and supporting him with a sling when he needed to go out to do his toileting.

By around Week 3, he could walk much better on his own so we stopped using the sling. His leg trembled a little as he put pressure on it, but that was expected.

As we couldn't play any activity games, we spent time cuddling on his bed and playing hide and seek with treats in my hand. We had to be careful not to feed him too much as he wasn't getting any exercise.

I felt bad leaving him at home when I went out for my morning exercise. He sat by the front window, like a cat, watching the world pass by and occasionally barking at people — I swear he loves to make them jump! (Don't get me started about the neighbour's cat!) I was happy to see Cruz was making friends with the neighbourhood kids who came to play basketball with Isabel outside our house.

One day I caught up on a video call with Andre Cato, founder of Presents for Paws, and introduced him to Cruz and how he's home recovering from a major surgery.

A few days later, we got a lovely surprise in the mail – a personalised box with wonderful toys to keep him entertained! Cruz chose his favourite – a red, cuddly dinosaur that we named Dinosaur – which become a permanent fixture on his orthopaedic bed.

During the initial six weeks of recovery, we made weekly trips to see Dr Andrew at VSOS for Cruz's bandage change and checkup, and lots of pats and cuddles from the staff. (Cruz was milking it bigtime!)

"So far it's healing well," said Dr Andrew in week 2, "Albeit a bit slower than expected but it could be because of his age."

Let's fast forward to week 6 when he finally got his bandage off and Dr Andrew was very happy with the result, despite observing a couple of pressure sores around the paw.

He said, "The difference with Cruz compared to other dogs is the bandaging situation (with pressure sores) has been a lot better. He's a quiet dog, not boisterous and bouncy. For that reason, he laid about and rested more compared to an active dog."

X-ray results are in!

Finally, the date arrived in Week 8 for Cruz's follow-up x-rays at Vineyard Vet Hospital. Dr Rob called me into the imaging room and showed me the X-ray of Cruz's leg. He pointed to the computer screen showing Cruz's leg held together by a large metal plate and several screws.

I held my breath for a moment, not quite sure what he was going to say, and saw a big smile grow on his face. "It looks amazing!" he said.

Dr Andrew certainly did a brilliant job with the surgery, and we were very strict with his recovery which made the difference in the end. But we won't be running anytime soon. Frankly, I'm too scared to ever let him off the leash! "You can go for walks but take it easy, maybe start with 10 minutes around the block and gradually increase over time," advised Dr Rob. Sounds good to me! We just need to get to the car without releasing any stink bugs!

About the writer

Caroline Zambrano is a Sydney-based pet writer with nearly 20 years of experience in journalism and public relations specialising in the Australian pet industry. Her qualifications include a Bachelor of Arts in Journalism and a Master of Arts in Journalism and Mass Communications in the United States.

Caroline is a PR & clinic volunteer for Pets in the Park, a national charity that cares for pets owned by people who are homeless or at risk of becoming homeless, and is a rescue volunteer for Sydney Metropolitan Wildlife Services Inc. She is also a member of the Australian Canine Scent Work Association.

You can contact her at www.petjourno.com.au and follow her & Cruz on Instagram @petjourno

REPLACING THE CONE OF SHAME, NEW START-UP PROVIDES OPTIONS



An innovative new Australian initiative for postoperative wound care wear. Developed in collaboration with the award-winning Swiss company HeiQ, is specifically designed for a variety of procedures, including surgeries, desexing, injuries, oncology, ear procedures, orthopedic surgeries, tumor removals, and allergies.

What makes this petwear unique?

As a pet-friendly alternative to the dreaded "Cone of Shame." this innovative solution offers exceptional antimicrobial properties, odor control, hypoallergenic materials, and breathable fabric technology, all crafted from organic cotton.

In collaboration with the renowned Swiss company HeiQ, New-start-up PetRhb™ have developed a product that significantly enhances the post-operative healing process for pets, greatly improving their quality of life during recovery. With PetRhb™, pet owners can expect better compliance, and what's more, our products are claimable under eligible insurance policies.

The soft, organic cotton suit protects the pets from licking, biting or scratching the area, it offers a professional alternative to the cone collar. Allows free movement while maximising wound protection.

Postoperative wound care following injury or surgery.

Helps ensure compliance by reducing the risk of post-surgical complication. Orthopaedic surgeries, desexing, injuries, ear infections, allergies, protects IV lines and bandages, helps prevent skin irritation and hot spots.

We are proud to say that PetRhb™ is an Australian venture with Australian Design Right Registration: 202216729.



INNOVATIVE DESIGN



Made from 95% organic cotton, 5% lycra Treated with HeiQ Pure from Award winning Swiss Company (3)

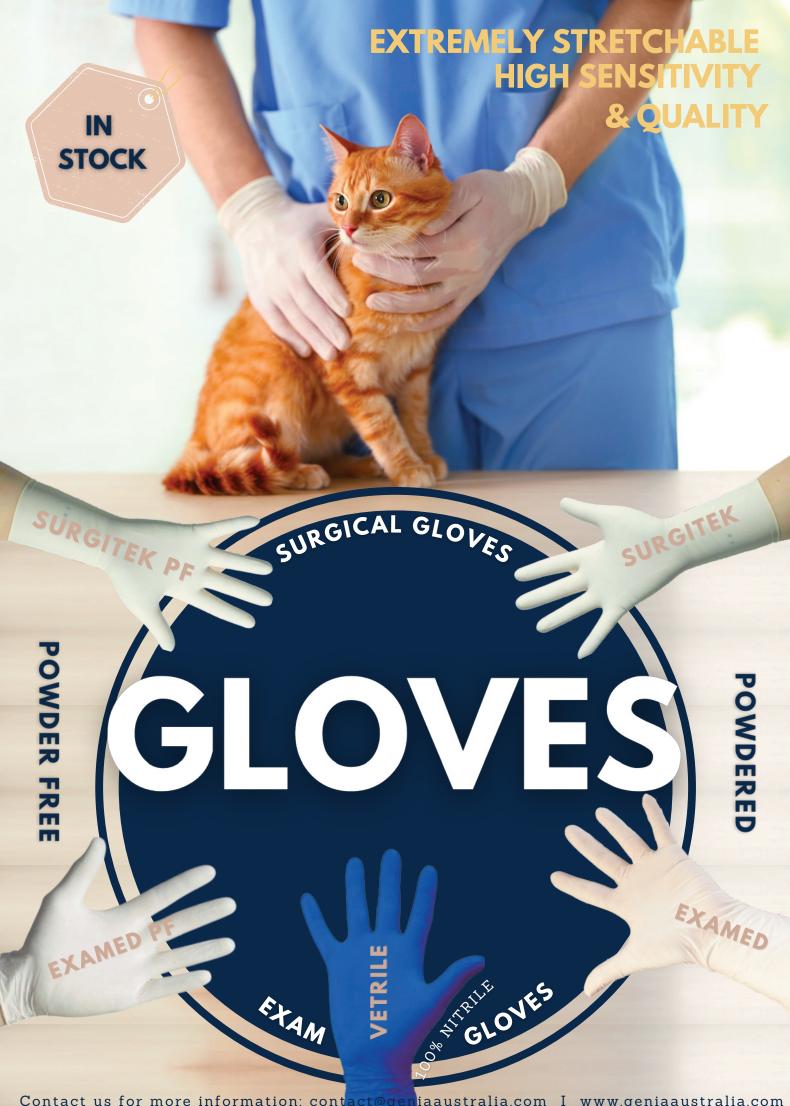
Unique versatile design using two way zippers, ribs and elastics Machine washable, excellent wash durability at 50°C (up to 50 washes)











Contact us for more information: contact@geniaaustralia.com I www.geniaaustralia.com

MULTIMODAL IMAGING

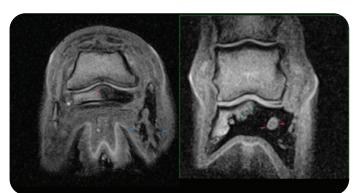
In our campaign to #imagemorehorses we present a complex and unusual case in which multimodal imaging facilitated a rapid and accurate diagnosis.

History: A 6 year old Irish sports horse with a history of grade 3/5 left hind lameness. The lameness had improved following an abaxial sesamoid nerve block. Radiographs taken by the referring vet had revealed an abnormal lucency in the distal phalanx and MRI was recommended for further investigation.

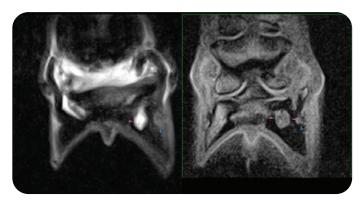
MRI findings

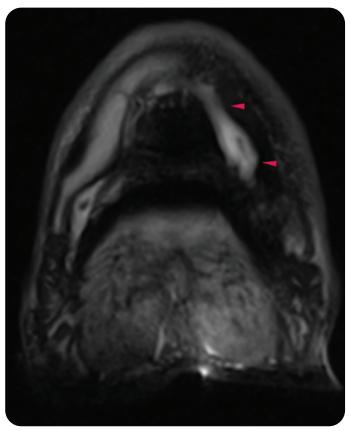
- Marked dilatation of the lateral vessels of the distal phalanx with surrounding fluid signal and sclerosis of the lateral half of the distal phalanx as well as marked thickening of the lateral plantar process, with aberrant vascular channels within this. The fluid signal within the bone may indicate that active modelling is ongoing.
- Mild to moderate fluid signal within the navicular bone, likely consistent with altered loading of the bone.
- Moderate distal interphalangeal joint effusion, which is a non-specific sign and may be secondary to other inflammation within the foot.
- Mild distal interphalangeal joint osteoarthropathy.
- Differential diagnoses for the dilated vasculature include:
- Marked chronic pedal osteitis, with possible thrombosis and secondary dilatation of the vascular channels
- Aneurysm of the lateral half of the proper plantar digital artery, with formation of collateral circulation
- · Aneurysmal bone cyst (less likely).

Frontal and transverse images of the left hind foot. The dilated foramen of the plantar digital artery is indicated by the red arrows. The extent of signal alteration within the distal phalanx is indicated by the green arrows. The enlarged lateral plantar process of the distal phalanx is indicated by the blue arrows. The signal alteration in the lateral half of the navicular bone can be appreciated (pink arrows).



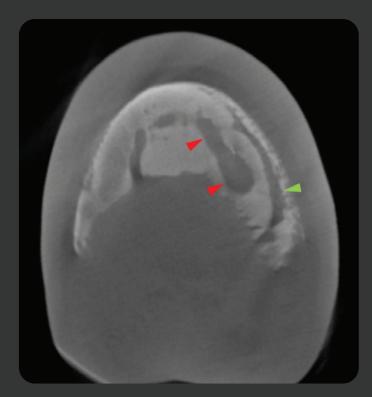
Frontal images of the left hind foot showing the dilated vascular foramen laterally (pink arrows). The dilated vessel coursing laterally along the lateral plantar process of the distal phalanx is indicated by the blue arrows.





Transverse image of the left hind foot showing the dilated foramen of the proper plantar digital artery.

Given the thickening of the lateral plantar process and the suspected aberrant vascular channels, it was decided to proceed to CT examination of the foot, to give greater osseous detail and delineate the suspected aberrant vascular channels.



CT findings

CT examination confirmed the dilation of the vascular channels of the lateral half of the distal phalanx, with a prominent laterally located channel, which was thought to represent collateral circulation.

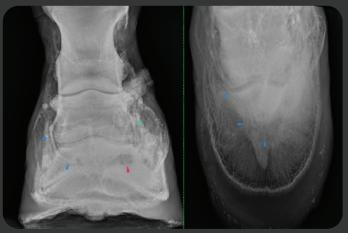


Transverse and frontal images of the foot showing the markedly enlarged lateral portion of the terminal arch (red arrows) and the small collateral vessel (green arrows).

The cause of the marked dilatation of the lateral portion of the terminal arch was not established.

Contrast venography findings

CT angiography was discussed, however this was not possible. Positive contrast venography was carried out, which revealed filling defects in the lateral proper plantar digital artery, extending from the mid point of the terminal arch to the mid diaphysis of the middle phalanx. There remained good contrast filling of the remainder of the lateral vasculature, likely indicating adequate collateral circulation.



DP and DPrPlDiO views of the left hind foot showing the normal appearance of the medial proper plantar digital artery (Blue arrows). The enlarged lateral foramen is indicated by the red arrow — note that there is no visible contrast within this. The lateral proper digital artery is indicated in the mid diaphyseal region of the middle phalanx (green arrow).

Conclusions

The patient was diagnosed with thrombosis of the lateral proper digital artery with dilatation portion of the terminal arch, which was presumed to be due to pressure necrosis secondary to enlargement of the vasculature.

The MRI and CT showed that the unusual lucency detected radiographically within the distal phalanx represented the lateral portion of the terminal arch. MRI examination showed fluid signal within the bone surrounding this, likely indicating osseous activity. The CT examination confirmed the dilatation of the terminal arch and highlighted the presence of a collateral vessel. The cause of the dilatation was confirmed as thrombosis using venography.#imagemorehorses



IT'S MORE THAN CHIROPRACTIC!

Author: Dr. William Ormston, DVM

"Sorry doc, but it's more than chiropractic! No need to come adjust my animal." It is amazing how often we have clients tell us this as we discuss the health of their animals. These clients are so close to the truth, but they don't even know it.

Chiropractic care is good for pain. The Harvard School of Medicine recently released a study that recognized chiropractic care as a viable treatment for pain. When an animal is consumed with pain it is difficult for them to relax and allow the sympathetic nervous system to do things like digest food, heal damaged tissue and eliminate toxins. Your patient has more than pain.

An animal with a subluxated rib will experience an inability to breathe deeply. This inability to control oxygen and carbon dioxide levels will alter the pH of the blood. An altered blood pH will lead to things like gastric ulcers, kidney problems and muscle fatigue. It is more than chiropractic.

Chiropractic care helps the body resume normal motion. When an animal has one area of the body that can't move properly, compensation must be made in other areas of the body. This abnormal motion leads to altered function of the limb. This altered motion can lead to injuries and chronic joint changes. Evidence based medicine proves that chiropractic care helps restore a more normal movement in the quadruped. Your patient has more than altered motion.

A female animal with a subluxated pelvis will not be able to squat properly to eliminate waste products from her body. This will cause these products to pool in the vagina and enter into the uterine cavity. Once in the uterus the bacteria that these waste products carry lead to inflammation and irritation. This female will be unable to conceive. Once this inflammation cascade is turned on in one place in her body, it gets turned on everywhere, leading to a decline in her ability to respond to minor irritations appropriately. It is more than chiropractic.

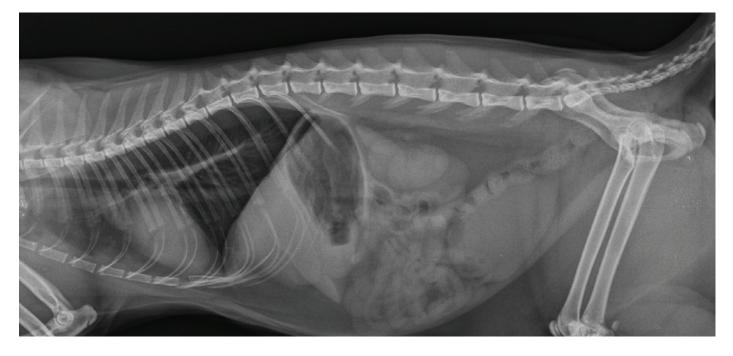
Chiropractic care
has been proven by
Dr. Ron Pero to improve
immune competence in
adjusted individuals 200% when

compared to non-adjusted individuals

and 400% when compared to individuals that were known to be sick. Studies have shown that chiropractic care may influence T and B lymphocytes, natural killer cell numbers, antibody levels, phagocytic activity and plasma bet-endorpin levels. The nervous system regulates ALL function throughout the body; the production of immune cells is NO exception. Remember this when deciding whether to add chiropractic care for the animals in your care. Everything about the life they enjoy, they can enjoy with their owners because of their nervous system and the power running through it. An efficiently functioning immune system protects your patients from all sorts of bacterial and viral challenges. Your patients have more than just an improperly functioning immune system.

A of animals that don't receive regular chiropractic care may contract an opportunistic viral infection. This leads to sustaining the cost of medications to help the animals clear an infection that those with a functioning immune system wouldn't have been phased by. Louis Pastueur once said that "In a state of health, the body is shut off from the invasion of Germs." Being sick leads to time spent recovering, not training. increases the likelihood of injury and prolonged rehab time. Any medications lead to increased possibilities of side effects that lead to long term complications. It is more than chiropractic.

Chiropractic is about power, not pain and motion. The power that turned two cells into the amazing mass of cells that is now your patient is the power that controls every reaction that occurs in that animal's body. Chiropractic care is not about curing your patient's disease; it is about helping restore normal communication between their brain and every part of its body. Restoring this



communication allows the brain to resume appropriate control and guide the organs to function at optimal levels. As far as you can tell, the animals in your care appear to have functioning nervous systems.

An animal with subluxations will experience improper nerve flow to and from the organs of the body. Without this power, cellular dysfunction begins to occur. Cellular nutrition requires glucose and insulin levels to be in balance. Diabetes is a name for when cells and hormones are not working together to control and provide appropriate nutrition to the cells of the body. Inappropriate responses cause the cells to be resistant to the function of insulin which causes glucose and cortisol levels to be elevated all of the time. Cushing's is an inappropriate level of cortisol. Metabolic disease syndrome occurs and causes severe debilitating problems for your patients. These are more than chiropractic.

As a trained veterinarian you are certain the issue your patient has is so much more than chiropractic; it has a diagnosis that doesn't even involve the nervous system. The nervous system is the first system formed as 2 cells develop into the majestic being that became your patient. It is formed first because it is needed to control every other organ and tissue in the body. Giving medication to resolve an issue created by nervous system interference will do nothing more than manage the symptoms, unfortunately giving a false sense of health. Until the cause (nervous system interference) is addressed, health will continue to dwindle, leading to more symptoms and more medications. Your patient has so many things deteriorating it must be more than chiropractic.

Yes, it is more than chiropractic. It is about restoring the power that made the body to allow it to heal the body. Equine chiropractors focus on restoring life, not eliminating symptoms or curing disease. The reason is simple... only the power that made the body can heal the body. With life restored via chiropractic adjustment, the

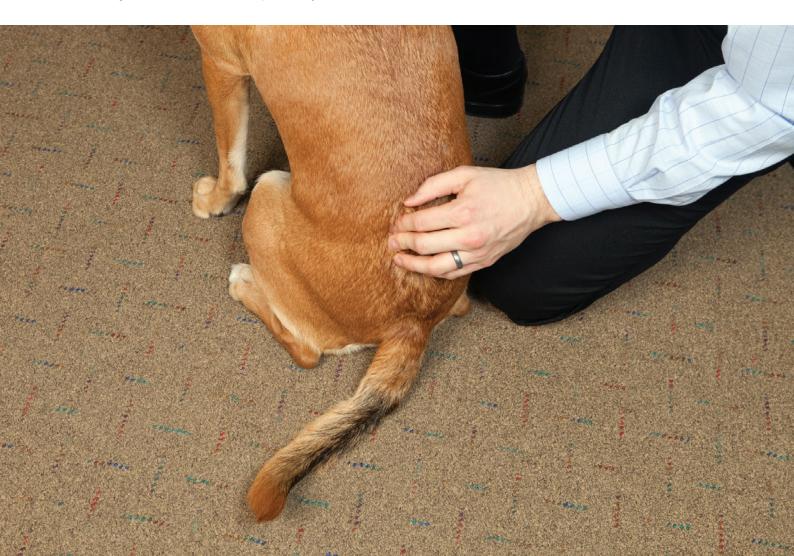
body is free to work as intended, curing disease and eliminating symptoms on its own! Add Chiropractic adjustments to your treatment plans today.

About Dr O

Dr. O started his veterinary career as a mixed animal mobile practitioner. That is when he discovered animal chiropractic. Through animal chiropractic, Dr. O found a sense of belonging, as well as an opportunity to help animal patients resolve their ailments. Animal chiropractic helped him to build a foundation for understanding health in animals that he was eager to share with other doctors like himself. Because of this he has been the backbone of more than one animal chiropractic program.He continues to find innovative ways to help animal chiropractors grow their practice, educate their clients and help more animals. He is the author of the book "Yes! It is Really A Thing" and currently teaches at Animal Chiropractic Education Source. Visit him at www.animalchiropracticeducation.com.

it is more than chiropractic. It is about restoring the power that made the body to allow it to heal the body.

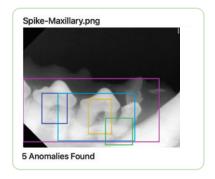


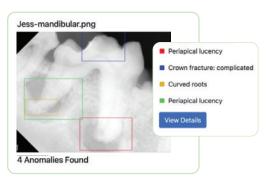


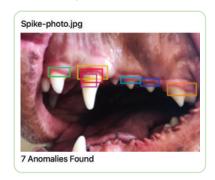




D.A.V.I.D - the new wave in dental X-Ray AI







HAVING TROUBLE INTERPRETING YOUR X-RAYS?

- D.A.V.I.D is the answer
- As simple as taking an X-Ray and uploading to the app to get pathologies marked up
 - Returns pathology in seconds
- X-ray interpretation is now affordable and accessible to all clinics with cost never being a concern. A monthly subscription of \$58 grants unlimited access. There's no need to pay per case. Load as many images you need.
 100 cases a month makes each case only 58 cents.

Results are almost instant, returned in seconds. There is no long wait so that treatment plans can fit right into a fast surgical workflow.



DAVID is an artificial intelligence device that provides veterinarians, technicians and nurses with decision support for the interpretation of dental x-rays and images.



Since 2004, Advocate has been trusted to protect Australian cats and dogs from fleas, worms and heartworm disease.

Trusted partner of the RSPCA***

advocate[™]
trusted to protect

Fleas, heartworm & worms