



## 'Trans-disciplinary' patient care: a vision for the future

**Working in a veterinary teaching hospital has specific professional challenges, as we understand that our students arguably learn as much from how we work as from what we teach them in the classroom, which is why individualised patient care is at the centre of what we do and how we do it.**

To agree and formalise our approach, the RVC's small animal referral hospital team has developed a new team-focused 'trans-disciplinary' vision:

- To be and to remain a clinic of reference and excellence
- To set standards in the education of under- and postgraduate students
- To offer outstanding, leading, expert clinical care
- To advance the specialty field through profession-shaping basic and clinical science, and sought-after, long-term employment opportunities.

The RVC is widely known to provide the greatest breadth and depth of any referral institution in Europe, having nationally and internationally recognised and accredited veterinary and nursing specialists in multiple disciplines including anaesthesia and analgesia, behaviour, cardiology, emergency and critical care, diagnostic imaging, exotics and small mammals, dermatology, dentistry, internal medicine, neurology and neurosurgery, nutrition, oncology, orthopaedics, sports medicine, and rehabilitation and soft tissue surgery...

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## WELCOME

*Welcome to Clinical Connections, which we hope will provide a window into the amazing range of clinical services available to you from the RVC.*

*State-of-the-art RVC hospitals continue to provide not only fantastic learning opportunities for the highest number of aspiring young vets, veterinary nurses and veterinary specialists in training in the UK, but also offer owners and practitioners the opportunity to access the trans-disciplinary case management, innovative techniques and specialised nursing care that these unique environments provide.*

*We hope you will enjoy our newsletter and find something new and surprising in its pages, and we look forward to working with you whenever you may need us!*

**Graham Milligan, Vice Principal (Clinical Services), Editor**

## In this issue:

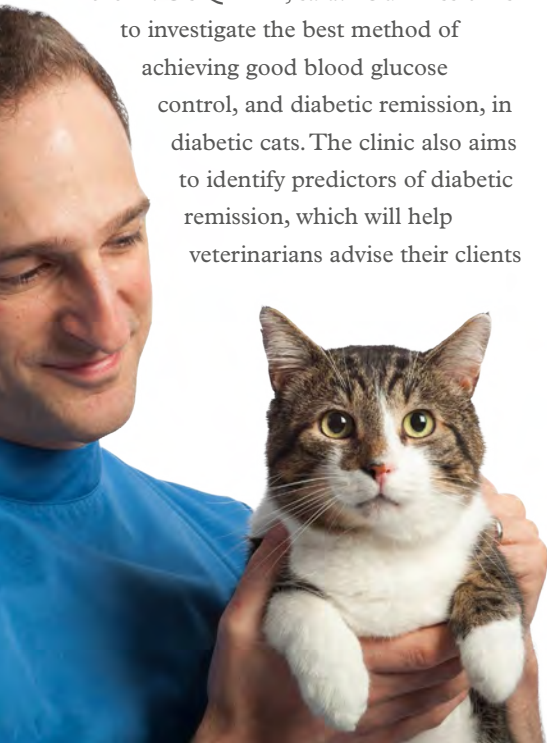
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## Experts seeking newly diagnosed cats for trial of new insulins

Diabetes mellitus is a costly, chronic disease, which can significantly decrease the quality of life of both cat owners and their pets. However, a proportion of diabetic cats can achieve remission and no longer require insulin therapy.

Dr Stijn Niessen, who heads up the new Feline Diabetic Remission Clinic at the RVC's QMHA, said: "Our mission is to investigate the best method of achieving good blood glucose control, and diabetic remission, in diabetic cats. The clinic also aims to identify predictors of diabetic remission, which will help veterinarians advise their clients



on the chance of their cat achieving diabetic remission in the future."

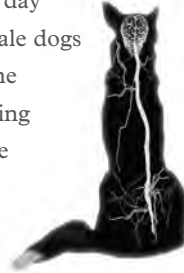
The clinic is now recruiting cats that have had diabetes for less than five months' duration for a clinical trial, examining the effect of new insulins on blood glucose control and remission rate.

Please contact [fdrc@rvc.ac.uk](mailto:fdrc@rvc.ac.uk) for more details or visit our facebook page at [www.facebook.com/RVC.Diabetic.Remission.Clinic](https://www.facebook.com/RVC.Diabetic.Remission.Clinic)

## RVC research sheds light on epilepsy treatments – Why don't the fits stop?

New research from the RVC canine epilepsy clinic has shed light on why some dogs do not respond to anti-epileptic drugs (AEDs).

The study analysed patient data from six years of medical history taken from the epilepsy clinic at the RVC's Small Animal Referral Hospital (QMHA). It was found that dogs who experience more than one seizure a day (cluster seizures) and male dogs were less likely to become seizure-free when receiving AED treatments. Seizure density, the temporal relationship of seizures, appeared to be more important for



successful treatment than any other factor measured. Border Collies and German Shepherds were also found to be at a significantly higher risk of not responding to epilepsy treatment than other breeds.

Prof Holger Volk, Clinical Director of the QMHA and specialist in Neurology and Neurosurgery, said: 'Canine epilepsy is a complex condition and can be very distressing for the dog and their owner. Drug treatments can be successful in reducing seizures, but it is important to note that consistent remission is difficult to attain.' Co-author of the study, Dr Rowena Packer, added: "Studies like this are important and can have wider implications for the treatment of epilepsy in humans as well as dogs."

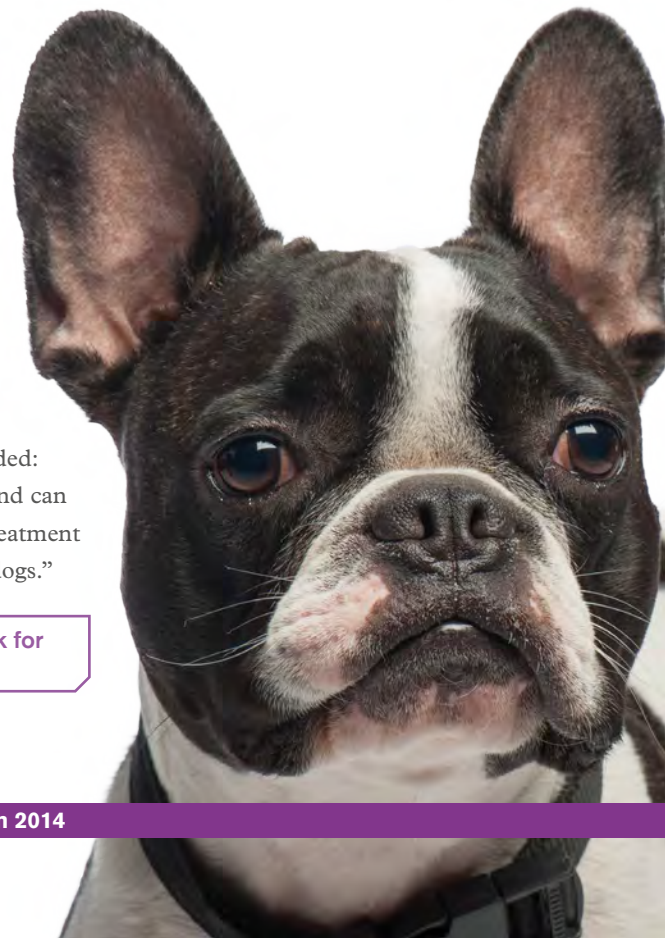
Please contact [hvolk@rvc.ac.uk](mailto:hvolk@rvc.ac.uk) for more details

## First specialist clinic in UK for short-muzzled dogs

On 1st July the RVC opened a Brachycephaly Clinic at the QMHA in Hertfordshire – the first of its kind in the country. The anatomical features in some members of these breeds can contribute to long-term health problems affecting their breathing, eyes, bones and gait, heart, skin and ears.

With the potential for multiple co-morbidities, patients can often be passed from specialist to specialist with inefficient use of time and resources. Senior Lecturer in Soft Tissue Surgery and the Brachycephaly Clinic lead, Dr Gert Ter Haar, said: "We have found the most effective way to treat an animal is our trans-disciplinary approach. This means at our clinic we will have all the specialties under one roof so the patient and their owner can be rest assured they are receiving the best possible bespoke care, all during the same visit."

Please contact [gterhaar@rvc.ac.uk](mailto:gterhaar@rvc.ac.uk) for more details



### Continued from front page

Many of these services have further developed sub-specialties or treatment programmes, such as interventional cardiology, respiratory therapy, continuous renal replacement therapy, diabetes remission, radioactive iodine treatment for hyperthyroidism, advanced neurosurgery, epilepsy, lithotripsy, gastrointestinal disease, chronic kidney disease and hypertension, porto-systemic shunt surgery, minimal invasive surgery, genitourinary tract and interventional radiology, to name just a few. But does this specialisation and sub-specialisation always guarantee the best approach to patient care?

Veterinary medicine has been following in the footsteps of its big brother human medicine for many years, which is reflected in the drive to specialisation. But the medical profession has found that as doctors specialise they

can also lose sight of the patient as a whole, focusing only on their own area of expertise. This can lead to a patient being passed from specialist to specialist and institution to institution, with the root cause of their symptoms never really being found, or with inefficient use of time and money and the need for repetition of medical procedures. The RVC has a long-standing reputation not only for advancing the scientific field but also for changing the way future generations think, problem-solve and work. Working in synergetic teams utilising a 'trans-disciplinary' approach ensures that each animal will get the best holistic and individualised patient care all under one roof, providing a great service for patient, owner and the referring practice.

Our recently launched brachycephaly clinic at the Queen Mother Hospital for

Animals is a prime illustration of our vision to create synergistic teams of highly specialist multi-disciplinary professionals all focusing on individualised patient care and is already proving to be a great success.

We have also ensured that every new patient referred to the RVC can be evaluated by all the relevant specialties for a fixed first consultation fee, enabling the development of a thorough and integrated treatment plan. We strongly believe this approach offers the best potential outcomes for our patients and their owners, and will continue to develop and refine our approach as we learn more about its impact.

Please contact [hvolk@rvc.ac.uk](mailto:hvolk@rvc.ac.uk) for more details

## Corneal tissue bank established at the RVC

**Patients with severe corneal damage can now benefit from corneal transplantation to restore vision, following the creation under strict ethical standards of a "corneal tissue bank" at the RVC.**

The bank could only be established with the understanding and support of owners willing to consent to the donation of healthy corneal tissue from their own pets within eight hours of death. There is a strict selection procedure for donors, with otherwise healthy young animals that die from non-infectious and non-neoplastic diseases making the best candidates.

Tissues from the donor are harvested under sterile surgical conditions by the ophthalmology team, and preserved frozen. Some scleral tissue is harvested along with the corneal tissue, which can then be used to support healing when for example resecting scleral tumours.



"Having the corneal tissue available 24/7 gives a great advantage to patients with severe corneal diseases that otherwise could result in severe visual impairment or loss of the eye, and enables our ophthalmology team to offer cutting-edge surgical treatments otherwise rarely

available in the UK" says Lecturer in Ophthalmology Màrian Matas Riera.

To find out more or to refer a case please contact a member of our Ophthalmology team on our referral line 01707 666365

# Advanced veterinary nursing

## an interview with Belinda Andrews-Jones

**We talk to senior emergency and critical care (ECC) veterinary nurse Belinda Andrews-Jones.**

Belinda was an RVC student 20 years ago and returned to the College in 2001 to work at the QMHA. She is currently undertaking the RVC's MSc in Veterinary Education.

### *What is your current role and what did you do previously?*

I have been a senior ECC veterinary nurse (VN) for six years and I recently moved into a position where my time is divided between that role and VN clinical educator. The new aspect of my job involves: being a clinical tutor for VN students – teaching and overseeing



practical assessments in the ECC and anaesthesia modules of the VN degree and Graduate Diploma in Veterinary Nursing; acting as a deputy module leader on the Graduate Diploma; and contributing to student recruitment.

Before becoming a senior ECC nurse I was a surgical nurse and ECC nurse at the QMHA. Prior to working at the RVC I was head VN in a large mixed practice for two years and a locum for three years. I started my career in a tiny practice in my home town before becoming one of the first nurses to study at the RVC.

### *What are your particular interests within your role?*

I have always loved ECC nursing and also love teaching in the clinical setting as well as to larger groups, but I have never wanted to give up clinical nursing fully to teach. I have the perfect balance of practising as a VN to the highest standards in an area I love, managing a great team and disseminating my knowledge and passion to undergraduate and postgraduate VNs. This balance gives me a really good standing of clinical relevance and credibility in my teaching and nursing.

### *What do you enjoy most about your work at the RVC?*

There have been many changes in the 20 years since I was a student. The QMHA was about a quarter of the size it is now and there were about 10 nurses then – we now employ around 80. Even though the hospital has massively grown over the years, I still feel part of an intimate team. I don't know anywhere else where I would feel so valued and respected by colleagues while working in a specialty as rewarding.

### *What qualifications do you have?*

I have been a qualified VN since 1996 and in 2003 I gained the Diploma in Advanced Veterinary Nursing (surgical). In 2006 I became the first person in England to become a certified Veterinary Technician Specialist in Emergency and Critical Care (VTS ECC) and became a member of the Academy of Veterinary Emergency and Critical Care Technicians.

I am currently studying towards the RVC's MSc in Veterinary Education. I have already gained the certificate and

diploma in Veterinary Education and am in the final phase to achieve the MSc. I chose the course because I wanted to gain a master's degree and am interested in all aspects of teaching, so it was extremely handy that the only course in veterinary teaching at master's level is delivered at my workplace.

### *How do you think the master's degree will support your work?*

Studying for my master's has been a great deal of hard work and commitment but it is so rewarding to put new techniques into practice. It informs all of my teaching, from one-to-one teaching of practical tasks to large groups at conferences. Learning to be a good teacher never stops but my master's has given me an excellent grounding to build from.

The RVC is proud to provide opportunities that help VNs move to the next level of their professional career, and Belinda's story illustrates the range of career and professional opportunities available to VNs at the RVC. Registered VNs employed in our teaching hospitals can work towards specialisms in their chosen areas of clinical interest and work as part of a trans-disciplinary team.

RVNs in practice can also develop the knowledge and skills to provide added value to the veterinary team and to deliver exemplary levels of patient care via a range of continuing professional qualification courses, such as the Graduate Diploma in Professional and Clinical Veterinary Nursing.

To find out more about developing your career with the RVC please contact [shellens@rvc.ac.uk](mailto:shellens@rvc.ac.uk) or [vnschool@rvc.ac.uk](mailto:vnschool@rvc.ac.uk), or visit our website at [jobs.rvc.ac.uk](http://jobs.rvc.ac.uk)

# RVC veterinary students in the spotlight

**It's not uncommon for the RVC to be approached by broadcasters and production companies interested in making animal-related programmes, and last year when Emma Reid from ITN productions shared with us a proposal to make an objective documentary series that recorded what it takes to make the grade as a young vet, as well as examining Britain's relationship with pets and other animals, we felt this would be an ideal fit with our work at the RVC.**

The result was a ten-part series, Young Vets, recently screened on BBC2, which featured a group of final-year RVC veterinary students as they negotiated the final stages of their veterinary clinical education, delivered both in state-of-the-art RVC clinical teaching facilities and on placements around the country working with small animals, horses and farm animals. The programme illustrated the

**"I feel I have grown enormously transitioning from student to vet"**

range of backgrounds that our students can come from, and the different routes they followed to get onto the

BVetMed course, as well as following the stories of the tremendous variety of patients they cared for.

Speaking at the end of filming, 2014 BVetMed graduate Matt Wilkinson said: "The programme was a great idea as it is important that the public sees the

challenges we must overcome in our seemingly endless quest to become qualified vets. The crews were keen to get our insight on a huge variety of topics, ranging from the simplest of vaccinations to the most complicated procedures, and followed us through some of the most intimate and emotional moments during our final year – some of which were very difficult to talk about on camera.

"It has been a tremendously novel year for me, with so much learned and so much gained, and I feel I have grown enormously transitioning from student to vet. I am glad that I have been able to share a few of my incredible experiences with an audience and hope they enjoyed our journey through our last year at the RVC."

Fellow 2014 graduate Judy Puddifoot added: "The crew were very friendly and quickly learned how to not get in the way. They started following me in early July

2013 and I soon got used to having them around. The crew were interested in how I was coping with the demanding process of rotations and wanted to know about the highs, lows and the upsets."

We hope the programme gives an accurate insight into our work, and although there are times when things don't go perfectly, this is all part of the learning process. We are hugely grateful to



all those who helped make the programme possible, and perhaps even more importantly, to all of our colleagues in practice who support all our students during their training, by offering EMS placements and advice, and by referring cases to our teaching hospitals.

**For more information on the series see [youngvets.rvc.ac.uk](http://youngvets.rvc.ac.uk)**

## 24-Hour referral service for livestock

**The RVC Farm Animal team are always pleased to support referring veterinary surgeons with livestock cases.**

Located at our Hawkshead Campus, our Farm Animal Clinical Centre has full hospitalisation and surgical facilities for the whole range of livestock, and we have a special interest in individual small ruminant cases, calves and camelids. In some cases, which are of special interest



or teaching value, we may be able to offer a subsidised price by prior arrangement.

We are also able to provide advice and consultancy on herd issues, including

issues with infectious diseases and lameness.

We are always pleased to discuss individual or herd problems with colleagues over the phone and can arrange referral or consultancy as appropriate.

**Referring veterinary surgeons wishing to discuss cases are encouraged to contact Dr Alex McSloy in the Farm Animal Clinical Centre on 01707 666667**

# Small animal referrals back in London!

The RVC has now introduced exotics and dentistry referral services alongside our existing dermatology service and from November all three will operate from a newly refurbished facility adjacent to the BSAH at its London campus in Camden, with convenient transport links to Kings Cross and Euston stations.

A single first consultation fee covers an initial case assessment from all relevant services, with no need to transport animals to our Hertfordshire campus unless support is required from an additional specialist service.

## Exotics referral service

Headed by European Exotics Specialist Joanna Hedley, our team, which also



includes Dr Nadene Stapleton and Abi Edis, will be happy to take referrals across a range of species including small mammals, birds, reptiles, amphibians and fish, and is the only referral service in central London with an exotics specialist.

We offer appointments for referral and first opinion cases Monday to Friday and first opinion cases on weekends, with an Email Advice service for referring vets.

## Dental referral service

Our new dental referral service is run by European Dental Specialist Simone Kirby, with appointments available on

Tuesdays and Wednesdays. The service covers a wide range of dental conditions, including periodontal disease, fractured teeth, challenging extractions, feline resorptive lesions and endodontic disease, as well as jaw fractures and jaw locking, oral tumour surgery, stomatitis, malocclusion, crowns and restorative cases.

We have a dedicated dental suite with digital dental radiography, which is now included in our undergraduate teaching and also marks the first time in the UK that it will be formally included in the veterinary curriculum.

## Dermatology referral service

We also offer a small animal dermatology referral service and have a special interest in ear disease, food hypersensitivity and feline atopic syndrome.

This service is available on Thursdays and Fridays, and once per month on a Saturday.

For all our small animal referral services please call 020 7554 3528 or email [londonreferrals@rvc.ac.uk](mailto:londonreferrals@rvc.ac.uk)

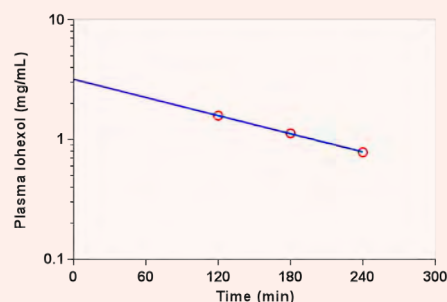
# Glomerular filtration rate in cats and dogs

**The RVC has launched an on-demand service for the measurement of glomerular filtration rate (GFR) in cats and dogs, widely considered to be the gold standard test for kidney function.**

Measurement of GFR can help identify early renal dysfunction in a dog or cat that produces diluted urine but is not yet azotemic. It is a useful test for the clinical exploration of polyuria/polydipsia and may also be effective as a screening tool for older cats or for some dog breeds known to be at risk of nephropathies. Earlier diagnosis of renal dysfunction may be of significant benefit.

The test itself involves the bolus injection of a solution of iohexol, best

known as the contrast agent Omnipaque (Omnipaque® 300). Three blood samples are taken over four hours and serum is sent to deltaDot's laboratories at the RVC, where iohexol concentration is measured for GFR calculation. Previous history and laboratory results are required at the time of sample submission. A clinical interpretation of GFR is provided by RVC clinicians Dr Ludovic Pelligand, veterinary



Normal GFR in a non-azotaemic cat presented with diluted urines

pharmacologist, and Dr Rosanne Jepson, specialist in internal medicine – both of whom have a special interest in nephrology.

Dr Ludovic Pelligand said: “We believe the iohexol serum clearance test will be of great use to vets treating companion animals. We are the only organisation in Europe that offers this test commercially, which is simple to carry out, safe and has a rapid turnaround time.”

Vets who wish to carry out the test at their own practices can find further details at [www.rvc.ac.uk/therapeutic-drug-monitoring](http://www.rvc.ac.uk/therapeutic-drug-monitoring). Alternatively, please contact [samwilliams@rvc.ac.uk](mailto:samwilliams@rvc.ac.uk) or visit us on stand E48 at the London Vet Show.

on-demand assay available

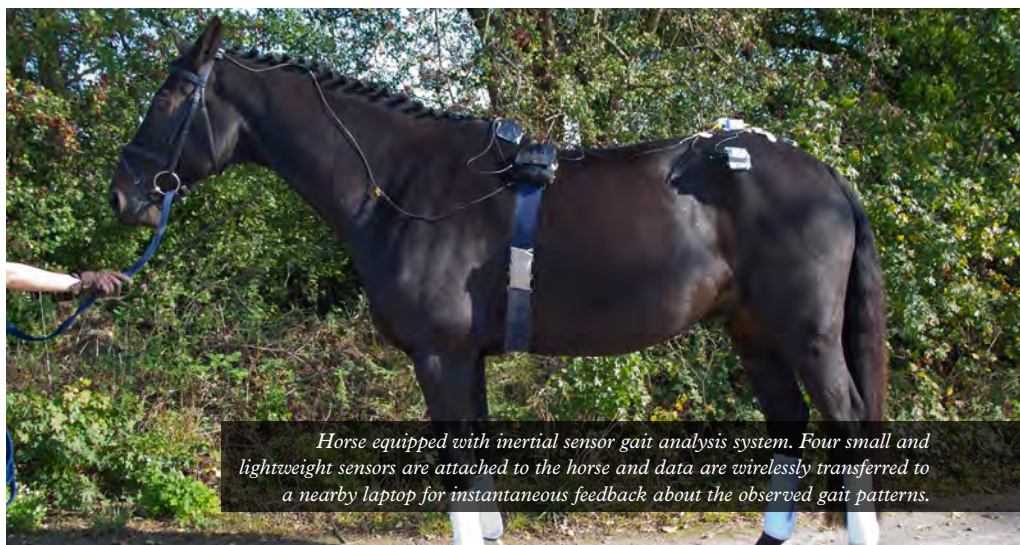
# Biomechanics of the equine athlete in health and disease

The RVC's Equine Referral Hospital and Structure & Motion Lab have teamed up to further understand the locomotion of horses in both health and disease and to apply this to clinical lameness diagnosis.

Through work funded in part by the Horserace Betting Levy Board (HBLB) ([www.hblb.org.uk](http://www.hblb.org.uk)), Dr Thomas Witte, Dr Thilo Pfau, and co-authors Professor Renate Weller and Professor Alan Wilson, have applied miniature inertial sensor technology to the question of how a horse's musculoskeletal system functions in a variety of environments and with pathology.

Minimally invasive sensors have allowed the team to capture movement in the real world to quantify the impact of surface, terrain and even jockey technique on the mechanics of high-speed gaits. Dr Witte describes the project which is being undertaken in close collaboration with the British Racing School ([www.brs.org.uk](http://www.brs.org.uk)):

“We know from earlier work ([goo.gl/cCyVus](http://goo.gl/cCyVus)) that jockey technique affects race horse performance. Now we want to find out which features of technique make a jockey more or less effective. For example, we will measure the symmetry of loading in the stirrups, balance between strides and timing of jockey movements relative to movements of the horse. At the same time we will look at the horse's movements and see



*Horse equipped with inertial sensor gait analysis system. Four small and lightweight sensors are attached to the horse and data are wirelessly transferred to a nearby laptop for instantaneous feedback about the observed gait patterns.*

how their performance is affected by what the jockey is doing.”

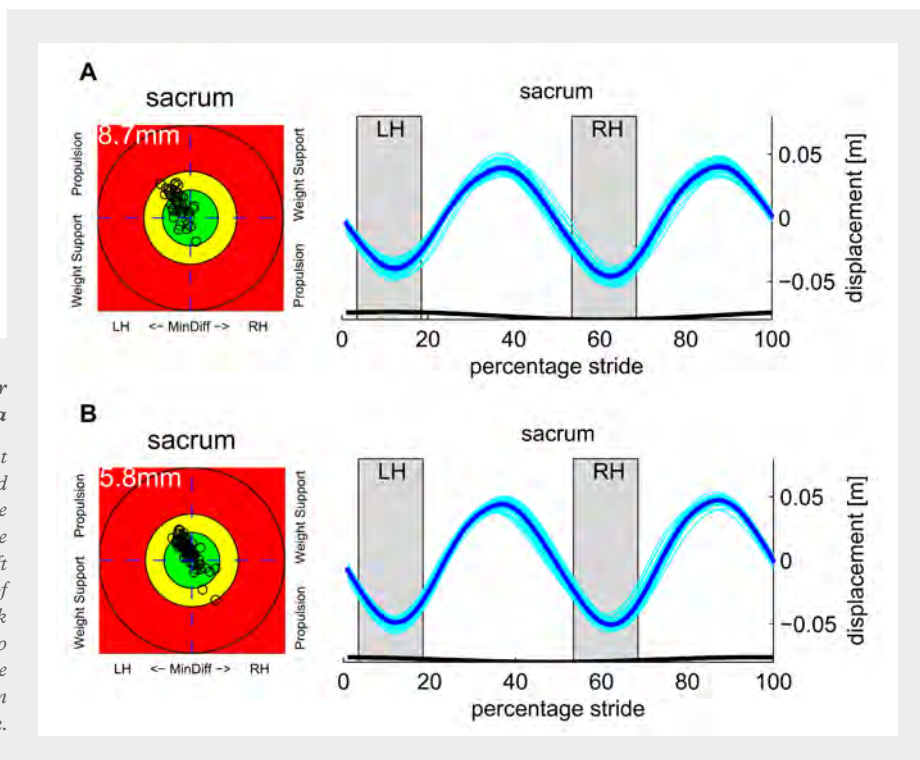
The same advanced technology is being used routinely in the clinical setting. The system – backed by a series of scientific publications – is proven to capture small movement deficits that are difficult to appreciate by eye and provides information about the gait changes observed in lame horses. When conducted in conjunction with a clinical lameness examination or an investigation into poor performance by our team of

expert veterinarians, the readily available output allows for a truly evidence-based decision-making process.

If you would like more information about the benefits of objective clinical gait analysis carried out at the RVC, and to check on its relevance to specific cases, or to learn more about any of our active research projects, please contact the Equine Referral Hospital or visit our webpage [www.rvc.ac.uk/gait-analysis](http://www.rvc.ac.uk/gait-analysis)

## Gait analysis output before and after diagnostic analgesia

Small asymmetries in vertical movement symmetry of the pelvis before (A) are ameliorated by diagnostic analgesia (B); note in particular the clustering of strides (small black circles) in the green centre part of the target plot on the left (panel B) compared to the higher number of strides in the yellow and red area before the block (panel A). The reduced differences between the two peaks and the two troughs after the block indicate a more even weight distribution and propulsion between left and right hind limb after the block.



Please come and meet us at the London Vet Show on Stand E48. We would love to see you there!

# RVC Clinical Services

**Our range of clinical services offer practitioners and clients the opportunity to access the trans-disciplinary case management, advanced diagnostics, innovative techniques and specialised nursing care that can be provided in state-of-the-art veterinary teaching hospitals.**

Importantly, every new patient referred to the RVC can be evaluated by all relevant specialties for a fixed first consultation fee, enabling the development of a thorough and integrated treatment plan.



**Small animal referrals**  
With over 200 dedicated professionals, the RVC small animal team offers the widest range of small animal specialty elective and emergency referral services anywhere in the UK. Our receiving specialty

services are available 24 hours a day, 365 days a year, and include behaviour, cardiology, critical care, dentistry, dermatology, exotics, internal medicine, neurology and neurosurgery, nutrition, oncology, ophthalmology, orthopaedics and soft tissue surgery.

We operate primarily from the Queen Mother Hospital for Animals (QMHA), near Potters Bar in Hertfordshire, although access to a number of our referral services is now available in central London through the Beaumont Sainsbury Animal Hospital.



**Equine referral services**  
Staffed by a dedicated team of accredited, internationally recognised clinical specialists, specialists in training, professional equine veterinary nurses, equine technicians and administrators, our state-of-the-art

equine hospital offers practitioners and owners round-the-clock access to comprehensive and sophisticated services including medicine, surgery, diagnostic imaging and emergency referrals.

We are committed to achieving the highest standards of patient care for all types of horses from the family pony to elite athletes.



**Farm animal service**  
Our dedicated farm animal team provides a 24-hour referral service for all farm animal species and camelids in a fully equipped, purpose-built facility at our Hertfordshire Campus.

We are available for advice, emergency referral and routine cases and offer a comprehensive service and facilities including medicine, surgery, diagnostic imaging and critical care.

## Contact us

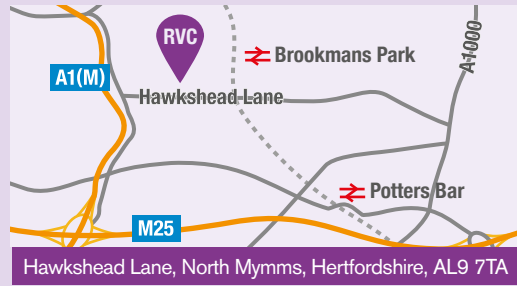
Small animal referrals line .....	+44 (0) 1707 666 365
Small animal emergencies .....	+44 (0) 1707 666 399
Small animal referrals (London) .....	+44 (0) 20 7554 3528
Equine and farm animal hospital referrals line ..	+44 (0) 1707 666 667
Equine and farm animal emergencies .....	+44 (0) 1707 666 304
Diagnostic laboratories .....	+44 (0) 1707 666 208

- [www.rvc.ac.uk/small-animal-referrals](http://www.rvc.ac.uk/small-animal-referrals)
- [www.rvc.ac.uk/rvc-equine](http://www.rvc.ac.uk/rvc-equine)
- [www.rvc.ac.uk/farm-animal-clinical-centre](http://www.rvc.ac.uk/farm-animal-clinical-centre)
- [www.rvc.ac.uk/beamont-sainsbury-animal-hospital](http://www.rvc.ac.uk/beamont-sainsbury-animal-hospital)



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