


# Science Shorts

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## Changes in gut microbiota after faecal matter transplantation in horses with diarrhoea


 Marcio Costa and others, University of Montreal, Quebec

Faecal matter transplantation (FMT) has been successfully used in treating humans with chronic *Clostridioides difficile* (C. diff) infection but there is only

limited evidence of the effectiveness of this method in treating gut microbiota abnormalities in horses. The authors describe the use of FMT in six horses with chronic or acute diarrhoea. The clinical signs improved in four horses, while the other two animals did not survive to discharge. However, there was no evidence of significant changes in the composition of the intestinal microbiota in the surviving horses when examined 7 days after treatment.

Canadian Veterinary Journal 62(10), 1123-1130

## Management of a large bite wound in a dog using a fish-skin graft

 Caroline Choi and others, VCA West Los Angeles Animal Hospital

Skin grafts using material from tilapia, a group of African freshwater fish, have been used successfully to repair burns, diabetic ulcers and traumatic injuries in human patients. The authors describe using tilapia skin grafts to manage the wounds on a dachshund that had lost 30% of its skin surface following an attack


*‘The wound was completely closed with no evidence of wound contracture’*

by another dog. They report that the strategy was successful, with epithelialisation occurring at a rate of 1.76 mm/day. As a result, the wound was completely closed with no evidence of wound contracture by 102 days after treatment.

Canadian Veterinary Journal 62(10), 1071–1076




## Reducing vocalisations in dogs with separation anxiety

 Katriina Tiira, University of Helsinki

Barking and howling are frequently associated with separation anxiety in domestic dogs and are likely to produce complaints from neighbours. The author investigated the efficacy of a technology called the Digital Dog sitter, which detects the sounds of a dog’s vocalisations and responds by playing a short audio file recorded by the owner. The study showed that the total noise produced by dogs was significantly reduced after 2 weeks. The technology was considered very effective by 68.7% of the 35 owners, while 14.3% felt the results were only short lasting. After using the device for 8 months, many owners also reported a reduction in their dog’s destructive behaviour.

Applied Animal Behaviour Science  
<https://doi.org/10.1016/j.applanim.2021.105460>

## Prevalence, causes, symptoms and control of cat allergies in humans

 Andrew Sparkes, Simply Feline Veterinary Consultancy, Shaftesbury, Wiltshire

Sensitisation to feline allergens is present in between 5% and 20% of the human population in the UK. Many cat owners or their family members are likely to be affected and veterinary staff may be asked for advice on managing this condition. The author reviews

current understanding of the prevalence and causes of cat allergies, explains the symptoms in affected people and describes strategies for minimising exposure to, and the impact of, feline antigens. Dietary choices could influence levels of the Fel d 1 antigen produced in cat saliva and distributed (through the cat’s grooming behaviour) on dander around the home.

Journal of Feline Medicine and Surgery  
<https://doi.org/10.1177/1098612X211036793>



## Impact of water depth and walking speed on dogs' muscle activity in a water treadmill


 Anne Desire Viger and others, University of Copenhagen

Water-treadmill exercise is effective in rebuilding muscle strength in dogs, following surgery. However, there is little published data on the optimum conditions for dogs in these facilities. The authors used acoustic myography to assess hind-limb muscle activation in 25 healthy large-breed dogs, and the effects of different walking speeds and water depths. Their findings show that walking in water up to the level of the mid-femur is more demanding for the *biceps femoris* muscle than for the *vastus lateralis*. These findings may assist in developing more precise rehabilitation protocols.

Acta Veterinaria Scandinavica  
<https://doi.org/10.1186/s13028-021-00612-z>

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## Effect of warming food on appetite in ageing cats

 Ryan Eyre and others, Royal Canin Pet Health and Nutrition Centre, Lewisburg, Ohio

Inappetence is common in older cats and the resulting lack of key dietary components may have adverse effects on muscle mass and other aspects of the pet's health. The authors investigated the effects of warming food on the appetite of cats over 7 years old. Bowls of food were presented at 6°C, 21°C and 37°C. Warming the food did not affect the viscosity of the product but was found to increase levels of 11 out of 15 volatile compounds measured using mass spectroscopy. These cats preferred the warmed food, particularly when presented at 37°C, as this appears to enhance the flavour profile. Warming food appears to be a useful strategy for encouraging cats that have lost interest in feeding.

Journal of Veterinary Behaviour  
<https://doi.org/10.1016/j.jveb.2021.09.006>

## Non-adherence to follow-up recommendations after orthopaedic surgery

 Kevin de Moya and others, University of Florida, Gainesville


The owners of veterinary patients discharged following orthopaedic surgery will usually be asked to attend a follow-up examination to monitor recovery and identify potential complications. The authors investigated the extent of client compliance with discharge recommendations and sought to identify factors associated with non-adherence. They found that 34.2% of cats and dogs treated at a university centre were lost to follow-up. They suggest that efforts to improve adherence should focus on cases where the animal underwent emergency surgery, where pets only had one owner, and where cases were feline patients.

Journal of the American Veterinary Medical Association  
<https://doi.org/10.2460/javma.21.01.0019>





## Nutritional composition of commercial rabbit foods


 Katarzyna Kazimierska and Wioletta Biel, Szczecin University of Technology

A balanced diet of grass, hay and green leafy plants is ideal for rabbits, but many owners choose to give their pets commercial mixed diets. The authors examined

the nutritional composition of commercial rabbit foods available in Poland. In the foods tested, they found there was considerable non-compliance with current EU guidelines on pet food composition and divergence from the manufacturers' own compositional claims, as reported on the labelling.

Journal of Exotic Pet Medicine  
<https://doi.org/10.1053/j.jepm.2021.06.006>

## Use of intravenous fluid bolus therapy in veterinary emergency care

 Bradley Harris and others, Blue Pearl Veterinary Partners, Tampa, Florida

Fluid bolus therapy is a standard first-line treatment for companion animal patients that present with cardiovascular shock. However, there is considerable debate about the most appropriate methods, including

the type of fluid, volume and rate of administration. The authors sent an online survey to 222 emergency care veterinarians, asking them to describe their methods. The majority favoured balanced isotonic electrolyte solutions and hypertonic sodium chloride solutions. Their monitoring of patients tended to focus on heart rate, blood pressure, capillary refill time and plasma lactate levels.

Journal of Veterinary Emergency and Critical Care  
<https://doi.org/10.1111/vec.13091>