

Bristol Cats Study Newsletter - Spring 2016

The 'Bristol Cats' study is a pioneering study of cat health, welfare and behaviour run by vets, behaviourists and epidemiologists at the University of Bristol. The aim is to improve knowledge of common diseases and behaviour problems of cats, for example (but not exclusively), unwanted elimination, obesity and hyperthyroidism. Findings from the study may be used by veterinary practitioners, cat breeders, owners and the cat community to improve the health and welfare of cats in the future.

The second Bristol Cats 'Open Day / Conference' was held on Sunday 8th May 2016 (10.30am-3pm) at the University of Bristol's School of Veterinary Sciences at Langford. The day was a great success and the opening talk was delivered by **Dr John Bradshaw** (author of the best-selling book 'CAT SENSE' and known for his role in the BBC programmes: 'The Secret Life of the Cat' and 'Cat Watch 2014'). The day included short talks from members of the Bristol Cats study team, covering areas of research such as feline behaviour, lower urinary tract signs and feline gingivitis. Visitors were also invited to go on short tours of the feline hospital and site.

We are currently working on enabling owners to have access to video footage of the Open Day talks. Links to the videos will be circulated very soon, together with a feedback form that will enable us to gauge interest in the Open Day. Your feedback will be very helpful when planning future events.



Monday 9th May: Launch of the 'Companion Animal Cohort Group'.

The open day for owners was followed by an International meeting of 29 researchers, all with an interest in companion animal cohort studies. As the first kitten cohort study in the world, the experience of the Bristol Cats Study team, provides useful information to those interested in setting up similar studies elsewhere in the world.

Completed studies:



“Investigating the incidence of, and risk factors for, owner-reported signs of Feline Lower Urinary Tract Disease (FLUTD) in a cohort of young pet cats”. This study, supported by a grant from the Langford Trust for Animal Health and Welfare, has now been completed. Tony Buffington presented the key findings from our work at our 2016 Open Day and a summary is provided below. If owners would like a PDF copy of the full paper then please request it at: cat-study@bris.ac.uk. Thank you to all owners for their part in helping with this research.

Summary:

This study used data collected prospectively to investigate the prevalence of, and risk factors for, owner-reported LUTS in a cohort of young pet cats. Cat owners were recruited into a long-term longitudinal study (The Bristol Cats Study) and asked to complete questionnaires at specified age points for their cats. All cats were at least 18 months of age at the time of analysis. The prevalence of owner-reported LUTS at 18, 30 and 48 months of age was calculated, based on whether the owner had seen the cat urinating (Question D6 below, 18 month questionnaire), and whether the cat had displayed one or more of the following clinical signs: dysuria (painful/difficult urination), haematuria (blood in the urine) or vocalising during urination (Question D8 below, 18 month questionnaire). A case-control study to investigate the risk factors for owner-reported LUTS in study cats at age 18 months was also conducted, using a multivariable logistic regression model.

D6	During the last month, have you seen your cat drinking, urinating or defecating?		
	<i>Drinking</i>	<i>Urinating</i>	<i>Defecating</i>
	Yes		
	No		
D7	Please indicate whether you are aware of any changes in your cat in the areas of drinking and urination, during the last month.		
		<i>Amount of water that cat drinks</i>	<i>Amount of urine that cat passes</i>
	Not aware of any changes		
	No change during the last month		
	Increased during the last month		
	Decreased during the last month		
D8	Which, if any, of the following have you been aware of whilst watching your cat urinating?		
		Yes	No
	He/she strains or appears to have difficulty urinating		
	He/she has passed blood when urinating		
	He/she vocalises (e.g. miaows) before or during urination		

Results The prevalence of owner-reported LUTS in cats seen urinating by the owner was 4.3%, 3.8% and 6.0%, with 95% confidence intervals of 3.2–5.7%, 2.5–5.7% and 3.4–10.5% at ages 18, 30 and 48 months, respectively. An indoor-only lifestyle at the age of 18 months and a change in diet between the ages of 12 and 18 months were identified as risk factors for owner-reported LUTS at the age of 18 months from the multivariable model. No clear type of change in diet was identified in our sample of cats with LUTS. The prevalence of owner-reported LUTS in a cohort of young pet cats was higher than had been reported in cats presenting to veterinary hospitals for LUTS or other reasons. A novel risk factor of change in diet between 12 and 18 months of age warrants further investigation.

**Stay up to date with us on twitter (@UniofBristolCats),
Facebook (www.facebook.com/bristolcats.study) or on our website,
(www.bristol.ac.uk/vetscience/cats).**

Study updates:

“Risk factors for road traffic accidents in the first year of a cat's life ”. This study, based on Bristol Cats Study data, was completed by Jess Wilson at the University of Bristol whilst in the third year of her BSc in Animal Welfare and Behaviour. Jess presented the results of her study at the British Small Animal Veterinary Association Congress (April, 2016) and the full paper has now been submitted for publication. The abstract is available on page 9 of the online Journal of Small Animal Practice at: <http://onlinelibrary.wiley.com/doi/10.1111/jsap.12472/epdf>

Claire Roberts (Zoetis feline scholar, at the University of Bristol): has been busy working with Bristol Cats Study data.

Claire also presented work at the British Small Animal Veterinary Association Congress (April, 2016). The title of Claire's talk was: **“Management decisions in a cohort of UK pet kittens, and changes made up to 18 months of age”**. The abstract is available on page 1 of the online Journal of Small Animal Practice at: <http://onlinelibrary.wiley.com/doi/10.1111/jsap.12472/epdf> **Key findings were as follows:**

- 81% of cats had no change in their indoor/outdoor access between 6 & 18 months of age.
- 77% of cats remained in single-cat households, between recruitment (2-4 months) & 18 months of age
- 94% of cats received their two kitten vaccines by 6 months of age.

Claire is also working on a poster that she will be presenting at the International Society for Feline Medicine conference in June: **‘Factors associated with retention of cats up to 18 months of age in a UK longitudinal study’**.

If the above is not enough, Claire has also been helping Jess in her visits to examine the mouths of Bristol Cats (see page 4), and is working with Lauren Molyneaux (BSc Animal Welfare and Behaviour 3rd year student) on a study investigating vaccination within the Bristol Cats!!!

Further updates on these projects will be provided in the next newsletter.

Ongoing studies:

Jess Wilson (BSAVA Petsavers MSc student) presented the following poster at the annual Society of Veterinary Epidemiology and Preventive Medicine conference, summarising her work to date.. Jess is now preparing her data ready for analysis this summer. Thank you to all the owners who have responded to Jess's request for permission to examine the mouths of some of the Bristol Cats in their own homes. We would like to thank the University of Bristol Alumni Foundation for awarding Jess a travel grant.



A Longitudinal Study of Gingivitis in Cats

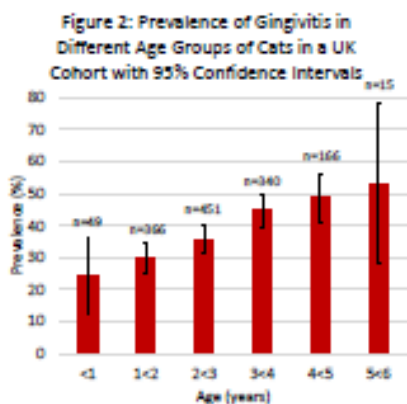
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Background

- Periodontal disease, including gingivitis, is the most common dental disease in cats and is estimated to affect up to 85-95% of cats over two years of age (Bonello 2007)
- If left untreated, gingivitis can develop into irreversible periodontitis
- Severe gingivitis can cause signs of pain, excess salivation and difficulty eating (Rudd 2005)
- Aim of study: To estimate the prevalence of gingivitis grade ≥ 1 (Figure 1) in cats up to 6 years of age, using data from the 'Bristol Cats' study - a longitudinal study of owned pet cats in the UK



Methods & Results

- Owners recruited into the 'Bristol Cats' study are sent an oral health (OH) score card (figure 1) annually to be completed by each owner's vet
- A total of 1387 OH cards returned by the end of December 2015 were included in the prevalence calculations
- The results shown in figure 2 demonstrate a clear progressive increase in gingivitis as cats age

Bristol Cats



Figure 1: Oral Health Card completed by the vets of 'Bristol Cat' owners



Figure 3: An oral examination of a study cat

Further Research

Validation of Scoring

- In addition to OH card data, a trained independent observer is conducting OH scoring at home visits on 60 cats (figures 3 and 4):
- 30 cats with no OH data to assess non-response bias
- 30 cats with OH data to assess inter-observer variability

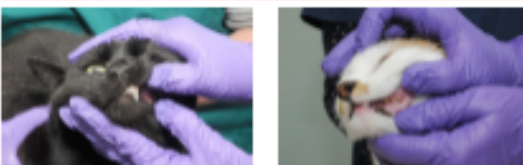


Figure 4: Oral examinations of study cats

Risk Factor Analysis

- The 'Bristol Cats' study uses prospectively collected questionnaire data to identify risk factors for various outcomes
- For the outcome of interest (gingivitis grade ≥ 1) data relating to cat signalment (breed, gender, neuter status), diet (wet versus dry), outdoor access (i.e. whether the cat has the opportunity to hunt) and home dental care (e.g. brushing teeth, dental treats) will be analysed in order to identify factors significantly associated with the risk of gingivitis
- Univariable and multivariable logistic regression models will be used to analyse the data

References: Bonello, D. (2007) Feline Inflammatory, Infectious and other oral conditions. In: Tuff, C. Deproese, J. and Crossley, D. (eds.), BSAVA Manual of Canine and Feline Dentistry, 3rd ed. Gloucester: British Small Animal Veterinary Association, pp. 126-147

Rudd, S. (2005) Cat's teeth and their care Journal of the Feline Advisory Bureau 40(1), 26-29

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Moving house / changed your email address / need to contact us?

If you have changed email address, moved house or have a new contact number it is easy to update these online by visiting the website:

<https://smvsfa.onlinesurveys.ac.uk/update>
and following the instructions.

Alternatively you can get in touch using our contact details below:

Tel/text: 07827 981412

Email: cat-study@bristol.ac.uk

Freepost RSHR-AGRJ-UABZ

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Cats lead the way! Cats first, dogs next..... “Generation Pup”

Further to information circulated in our Autumn 2015 newsletter, the name of this study has now been finalised as ‘Generation Pup’ (not ‘Puppies of our Time’). This study (funded by Dogs Trust) was launched in early May 2016 and puppies can now be registered with the study. This new project is run by researchers at the University of Bristol and knowledge gained from the Bristol Cats Study has been used to develop this equivalent study of puppies. Similarly to the Bristol Cats Study, medical and behavioural problems will be investigated, as these can have considerable welfare implications for dogs. The project team will be recruiting over 3000 puppies (of any breed or crossbreed) aged 6 – 16 weeks of age. The progress of these puppies will be followed through questionnaires, providing huge insight into the development, health and welfare of our beloved canine friends. Keep a look out for details of this study, and/or contact Michelle Lord for further information (michelle.lord@bristol.ac.uk).



<http://generationpup.ac.uk/>



Collection of Clinical Records from Veterinary Practices

Our research administrator Emma Gale is continuing her work to gather clinical information about the ‘Bristol Cats’ from veterinary practices of owners who kindly provided consent for us access their veterinary records. We plan to use these data to compare with information provided in your questionnaires, for example, the age at which neutering took place and details of vaccinations received. This information will help to minimise the number of questions on our questionnaires. We now have clinical notes for more than **750** of our study cats. The next stage is to use computer script to extract free text from these notes, so that we can use the information we have collected!

Thank you for your help — the Bristol Cat owners and cats are helping to make a difference to our knowledge of factors affecting feline welfare.

We would also like to thank Waltham for funding Emma Gale’s post and Cats Protection for funding Jane Murray’s post.

