

Feline advocates

In conversation: Mark Peterson



Mark E Peterson, DVM, DACVIM, has, for more than three decades, been advancing our understanding of feline endocrine diseases, emphasizing the important but often unrecognized differences between cats and dogs. After graduation from the University of Minnesota in 1976, he completed further studies to postdoctoral fellowship level in endocrinology and nuclear medicine at The Animal Medical Center and The New York Hospital-Cornell Medical Center. With an awesome number of publications (over 500) already achieved, Dr Peterson continues to engage in active research into feline endocrine disease at his speciality referral hospital Animal Endocrine Clinic, New York, which he opened in 2009, after over 30 years as head endocrinologist at the Animal Medical Center. He is also adjunct Professor of Medicine at the New York State College of Veterinary Medicine, Cornell University. His many awards include The Excellence in Feline Research Award (1997). Many of us subscribe to his blog www.endocrinevet.blogspot.com, and know his book BSAVA Manual of Canine and Feline Endocrinology (Wiley).

His lectures at the upcoming AAFP conference on Saturday and Sunday September 20 and 21 promise to be stimulating and informational. For more information visit: www.catvets.com/education

Continuing her series of interviews with key figures in feline medicine, Nicolette Joosting, of the Vancouver Feline Hospital, Canada, talks to Dr Mark Peterson, a distinguished speaker at this month's AAFP conference whose name is synonymous with feline hyperthyroidism.

Q How did you first get interested in feline medicine?

A I grew up on a dairy farm in rural Minnesota and we always had many barn cats – about 18 cats during my high school days. Most were semi-feral but some loved to be handled and petted (and, of course, be fed milk straight from the cow). New kittens were always being born so I quickly learned about feline reproduction!

While at veterinary school, I wasn't taught too much specifically about cats, but I certainly did see many cat owners who cared tremendously for their indoor cats. I adopted two Siamese cats during my time in school. These cats taught me a lot about having indoor cats (rather than barn cats). I also learned that the Siamese breed could be very loud!

During my internship and residency at The Animal Medical Center (AMC) in 1976, I was surprised to find that over half of our caseload was cats. I learned tons about them in my first 2 years of training at the AMC. Then feline hyperthyroidism changed my life – as far as I know, I was the first veterinarian to document hyperthyroidism in cats (1979) and the first to treat hyperthyroid cats with radioiodine (1980). I soon became a certified cat 'expert'. That extended to being the first to document a number of 'new' diseases in cats, including acromegaly, hypoparathyroidism, insulinoma and feline Addison's disease. I didn't make any of these discoveries alone – collaboration is a very important part of any research discovery. The best thing about it is that the longer I work with cats the more I continue to learn from them.

Q What is it about feline endocrine disease that you find so interesting?

A Most feline disorders are very similar to the corresponding human disease. Cat endocrine diseases make a better animal model for the human disease than does the corresponding canine endocrine disease. For example, feline hyperthyroidism is a classic animal model for toxic nodular goiter, and diabetes in cats is very similar to type 2 diabetes in man. Other examples include Cushing's disease and acromegaly in cats, both of which are much more similar to the human disease than are the corresponding canine diseases. If you have a cat with a rare disease, don't look at the canine counterpart, look at the human disease!

Q What is the most rewarding thing you have done in your career?

A My only regret is that I didn't start my own referral practice sooner, because that has been the most rewarding. In particular, making my practice and the Hypurcat radioiodine facility the most cat-friendly that I could has made caring for these cats so much more gratifying. Environmental enrichment is key for any cat hospital – we don't want our cats to be either frightened or bored. It also allows me to *never* see cats and dogs on the same day – although these days, my canine practice is diminishing (that's on purpose – I'd rather see cats!).

Q What would you like to achieve before you retire?

A I would like to figure out the primary cause of why cats develop hyperthyroidism and then try to determine a way to prevent the disease from developing. For the past

few years, almost all of my clinical research has been directed at learning more about hyperthyroidism and the best way to diagnose and treat it. We've been involved in studies of thyroid scintigraphy and have developed a method for estimating thyroid tumor volume, which is very useful when using individual radioiodine dosing for hyperthyroid cats. We have also been looking at the best way to handle hyperthyroid cats with concurrent chronic kidney disease, and have worked out treatment protocols to best manage these cats. Finally, we are currently doing a prospective study of cats treated with radioiodine to determine the prevalence of overt and subclinical hypothyroidism. In particular, we want to learn how best to diagnose and treat hypothyroid cats. The one thing we have certainly learned is that cats don't follow *any* of the rules that can be used for dogs with hypothyroidism. But this is feline medicine, so why should cats be like dogs!

Before retiring (and I am not thinking of that yet!), I'd like to simply finish the many clinical research studies we are doing and get all of the data written up and published. The problem, of course, is that clinical research is a never-ending journey, and once you learn one thing, many new questions arise. The hardest aspect of my job is lack of enough time to get everything done that I'd like to accomplish. Clinical research and writing research papers take a lot of time!

Q What advice would you give to anyone wanting to start a career in feline medicine?

A Learn all that you can about cat behaviour and the nature of cats. Find the best feline veterinarian you can to work with and learn from; someone who knows how to handle cats and treat them without undue stress, pain or fear. While I had to learn most of what I know about cats pretty much by myself, I did pick up a number of great 'tips' from truly excellent cat vets, including my good friend Dr Susan Little.

In addition, learn all you can about feline nutrition, but realize that the best place to learn may not necessarily

be from the cat food industry. Finally, keep an open mind and don't be afraid to try new ways to make cat visits, treatment or hospitalization better for the cat and the owner.

Q What advice would you give to anyone wanting to start a career in feline research?

A Any feline practitioner can do 'clinical' research. That's exactly what I do every day I go to work, and that's the type of research I've done for the past 35 years. We also need veterinarians to do basic research on cat diseases, of course, but that may not be for you – it's certainly not for me: I need to touch, stroke, and personally examine my feline patients to learn and be happy.

Clinical research simply is a logical means to figure out the answer to a clinical problem. Once I identify a question/clinical problem to which I do not know the answer – and this happens almost every week – I work on a protocol to study it. In most cases, of course, it's best to work on smaller problems (how many hyperthyroid cats have urinary tract infections?) rather than major ones (what is the cause of hyperthyroidism?).

Q If you had to campaign on a particular feline issue what would it be?

A My issue would be the care of senior and geriatric cats, especially dealing with issues of proper feline nutrition. It is well known that cats are obligate carnivores and have a high protein need. As cats age, however, their protein requirement continues to go up, which explains why many older cats develop sarcopenia of aging. My favorite article in *JFMS* last year was written by Dottie Laflamme and Steve Hannah, entitled 'Discrepancy between use of lean body mass or nitrogen balance to determine protein requirements for adult cats' (*JFMS* 2013; 15: 691–697). Looking at lean body mass to determine protein requirements was very interesting, and the fact that they calculated minimum protein needs as 5 g/kg is important. That's much higher than we might have expected, and helps explain why so many cats develop muscle

wasting on the classic senior diet, one in which protein content is lowered. I think that feeding a better diet would help prevent such muscle wasting from developing in the older, geriatric cat.

Q Tell us something you found useful to know about cats?

A In cats that I see at my clinic that are stressed or frightened, I've found that simply touching them gently and holding the touch for a minute or two helps calm them. Of course, you want to either remain quiet or speak gently while doing this. I also find that breathing deeply and slowly seems to help calm me (sometimes needed for the fractious cat), and that cats can sense that you are calmer and not afraid. I believe that using this technique you can sometimes transmit your calm to the cat (maybe this is a form of Reiki?). Of course, this isn't going to work if you only have 10 mins per exam, but stopping to relax, breathe and gently touch the cat definitely helps.

For some cats, I will softly sing to them while holding the touch. I'm not sure if it matters which song you sing, as long as it's slow and soft – I generally sing an old German drinking song that my grandmother taught me over 50 years ago!

Q Tell us about the cats you live with

A My oldest is Thomas Earl (TomE), an 8-year-old American shorthair. He's a sweet cat but totally spoiled with separation issues – he doesn't really want me to ever go to work! My younger cat is Richard Earl (RickE), a 5-year-old domestic shorthair. He was left in a box in front of my clinic when he was about 6 weeks old and, as you might expect, he was quite ill with upper respiratory disease. By the time he had recovered, there was no way he was going anywhere but home with me. He is one of the best cats I've ever had and loves to sleep on top of me every night.

And why do both of my cats have Earl as their second name? Well, my full name is Mark E Peterson, so you can probably guess what my middle name is! My father Earl, the dairy farmer, might be turning over in his grave, or he might be very proud ...

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