



Are Adult Cats Fed on Wet Maintenance Diets Less at Risk of Developing Chronic Kidney Disease Compared to Adult Cats Fed on Dry Maintenance Diets?

By Catherine McLenoard

Hi, my name is Catherine, and I'm doing a PhD and a residency in veterinary epidemiology. I wrote my Knowledge Summary entitled are adult cats fed on wet maintenance diets, less at risk of developing chronic kidney disease compared to adult cats fed on dry maintenance diets.

Since this is such a common problem seen in clinical practice, I wanted to write this and look into whether we could advise our clients on any ways to help to prevent the disease in their cats. It seemed hypothetically possible that if cats are fed on wet diets, that they might have a higher water intake, which could delay the onset of clinical signs of disease.

So, three papers directly answered the question two of which were case-control studies, and one was a cross-sectional study. Unfortunately, none of them found a significant difference in the prevalence of kidney disease, between cats that were fed a wet diet or fed a dry diet. However, all three of them did have some limitations which prevented them from completely answering the question. So, the first paper was a case-control study performed by Hughes et al. in 2002 and if you look at the criteria that they use to diagnose chronic kidney disease, it's actually quite different to our current IRIS guidelines, which obviously relies on both creatinine and urine specific gravity. So in the Hughes study, a proportion of their case cats were diagnosed as having chronic kidney disease based on a raised blood urea nitrogen plus a low USG, or even some of their cases were diagnosed based on kidney irregularities on either a fiscal exam or diagnostic imaging plus a low USG.

So, the second paper was a cross-sectional study, which was written actually in the form of a short communication. So the details of that were quite limited. So, we weren't told how they diagnosed kidney disease in their cats nor were we told how long they were fed on the dry or wet food, which made the analysis of that paper quite tricky. So finally, the third paper was by Greene et al. in 2014, and they also found no significant difference between the prevalence of CKD and the diet fed, although a large proportion of their case cats were fed both wet and dry food. Interestingly, this paper did find that cats that were previously diagnosed with having periodontal disease or previously diagnosed as having cystitis were at an increased odds of developing or being diagnosed as having CKD.

Unfortunately, the authors didn't analyze any confounding factors between those two co-morbidities and CKD. So, they didn't, for instance, look at whether the cats were advised to be fed on a specific diet. So, you can imagine that perhaps some vets would diagnose periodontal disease in the cats, and then encourage owners to feed their cats, dry food in order to encourage better dental hygiene, but then they didn't analyze whether that then led on to any development of CKD as a secondary factor. So in conclusion, there was no beneficial effect of being fed either dry or wet food on the development of chronic kidney disease in these cats. This is perhaps unsurprising if you consider how many different types of both dry and wet food are available to clients for them to feed their cats. And ideally you would

need something like a randomized controlled trial to look at whether specific dry or wet foods were able to delay the onset of CKD.

So in summary, there is insufficient evidence suggest that feeding a wet maintenance diet could delay the onset of CKD. However, the papers found were insufficiently designed to answer this question fully and further research is needed in this area.

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