PURINA Institute

Advancing Science for Pet Health

HOT TOPIC

Challenges in Feeding Dogs and Cats with Chronic Kidney Disease

In focus

A poor appetite and weight loss are common in chronic kidney disease (CKD) making nutritional intervention crucial to successful case management.[1–7]

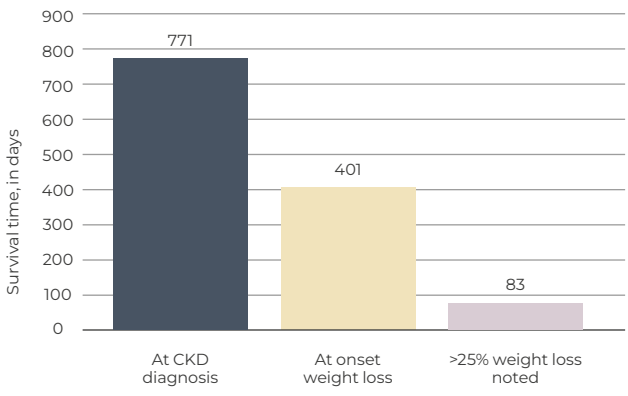
The Purina Institute provides the scientific facts to support your nutritional conversations.

let's takeback the conversation.

Learn more about the power of nutrition at
PurinaInstitute.com

What feeding challenges are associated with CKD in pets?

Appetite and fluid intake may be depressed due to nausea from circulating uremic toxins, electrolyte imbalances, and metabolic acidosis.[8,9] Although a poor appetite is more likely as CKD progresses,[8–11] weight loss has been reported months to several years before diagnosis.[2,12] Body condition and muscle losses significantly impact mortality, underscoring the need for nutritional intervention.[1,2,5–7,13]



In cats with CKD, survival in days from when diagnosed, consistent weight loss documented, and loss of more than 25% of initial weight noted.[1]

PURINA Institute

Advancing Science for Pet Health

Why are therapeutic renal diets recommended?

Therapeutic renal diets are formulated to limit uremic toxins, provide needed nutrients, and mitigate acidosis, which when addressed, may improve quality of life and life span.[6]

How best should a pet with CKD be transitioned to a therapeutic diet?

The transition to a therapeutic renal diet should be gradual over 2–4 weeks.[8,9,14] The exact protocol will depend on the individual pet. Some pets rapidly accept the new diet, while others need a slower transition.

Screening and early diagnosis of older pets for renal disease allow for transitioning to an appropriate diet prior to the onset of nausea and other clinical signs. A hospitalized or otherwise stressed pet should not be transitioned to a therapeutic diet as doing so may lead to development of a conditioned taste aversion.[8,9,14]

To reduce stress, particularly in cats, renal diets should be provided in separate bowls and wet and dry foods should not be mixed together.[14] To maintain intake, cats may need to be offered a variety of foods and forms on rotation.[9,15] If the pet will not eat a commercial renal diet, a home-cooked renal diet formulated by a veterinary nutritionist is another option.[8,10]

What strategies may help increase food intake?

- Addressing nausea and inappetence with appropriate medications.[8,9,16]
- Utilizing palatability enhancers.[8,9] Added calories that are not complete and balanced should account for no more than 10% of daily calories.
- Providing small meals frequently.[9] Gently warming wet food to body temperature heightens aroma, which may stimulate appetite.
- Cleaning food bowls frequently.
- Feeding in an easily accessible location separate from other pets.[9]
- Hand feeding provided it does not stress the pet.[8]

For pets that remain inappetent, a feeding tube should be placed.[8,9,15] If not possible, feeding a senior food with controlled phosphorus and monitoring of blood phosphorus and FGF-23 (cats) to determine if a dietary phosphate binder is needed are recommended. This is not ideal as all over-the-counter diets must meet minimum requirements for phosphorus, a level higher than recommended for CKD.

How can water intake be improved?

- Feeding a wet renal diet or a dry diet with added water.[9,11]
- Offering a nutrient-enriched water supplement (cats).[9,10]
- Providing options of water source, container, and location.[10]
- Ensuring water is always clean and fresh.[10,11]

In pets with CKD, nutritional plans should be adapted as needed based on:

- Laboratory results.
- Close monitoring of weight plus body and muscle condition scores.
- Owner diaries of diet and daily food intake.

References

1. Boyd, L. M., Langston, C., Thompson, K., et al. (2008). Survival in cats with naturally occurring chronic kidney disease (2000-2002). *Journal of Veterinary Internal Medicine, 22*(5), 1111–1117.
2. Freeman, L. M., Lachaud, M. P., Matthews, S., et al. (2016). Evaluation of weight loss over time in cats with chronic kidney disease. *Journal of Veterinary Internal Medicine, 30*(5), 1661–1666.
3. Markovich, J. E., Freeman, L. M., Labato, M. A., & Heinze, C. R. (2015). Survey of dietary and medication practices of owners of cats with chronic kidney disease. *Journal of Feline Medicine and Surgery, 17*(12), 979–983.
4. O'Neill, D. G., Elliott, J., Church, D. B., et al. (2013). Chronic kidney disease in dogs in UK veterinary practices: Prevalence, risk factors, and survival. *Journal of Veterinary Internal Medicine, 27*(4), 814–821.
5. Parker, V. J., & Freeman, L. M. (2011). Association between body condition and survival in dogs with acquired chronic kidney disease. *Journal of Veterinary Internal Medicine, 25*(6), 1306–1311.
6. Pedrinelli, V., Lima, D. M., Duarte, C. N., et al. (2020). Nutritional and laboratory parameters affect the survival of dogs with chronic kidney disease. *PLoS One, 15*(6), e0234712.
7. Perini-Perera, S., Del-Angel-Caraza, J., Perez-Sanchez, A. P., et al. (2021). Evaluation of chronic kidney disease progression in dogs with therapeutic management of risk factors. *Frontiers in Veterinary Science, 8*, 621084.
8. Carciofi, A. C., & de Castro, A. (2023). Chronic kidney disease and proteinuria in dogs. In C. Lenox, R. J. Corbee, & A. Sparkes (Eds.), *Purina Institute handbook of canine and feline clinical nutrition* (2nd ed., pp. 268–274). Embark Consulting Group, LLC.
9. Quimby, J. (2023). Chronic kidney disease. In C. Lenox, R. J. Corbee, & A. Sparkes (Eds.), *Purina Institute handbook of canine and feline clinical nutrition* (2nd ed., pp. 262–267). Embark Consulting Group, LLC.
10. Sparkes, A. H., Caney, S., Chalhoub, S., et al. (2016). ISFM consensus guidelines on the diagnosis and management of feline chronic kidney disease. *Journal of Feline Medicine and Surgery, 18*(3), 219–239.
11. Bartges, J. W. (2012). Chronic kidney disease in dogs and cats. *Veterinary Clinics of North America: Small Animal Practice, 42*(4), 669–692, vi.
12. Bartlett, P. C., Van Buren, J. W., Bartlett, A. D., & Zhou, C. (2010). Case-control study of risk factors associated with feline and canine chronic kidney disease. *Veterinary Medicine International, 2010*(1), 957570.
13. Rudinsky, A. J., Harjes, L. M., Byron, J., et al. (2018). Factors associated with survival in dogs with chronic kidney disease. *Journal of Veterinary Internal Medicine, 32*(6), 1977–1982.
14. Scherk, M. A., & Laflamme, D. P. (2016). Controversies in veterinary nephrology: Renal diets are indicated for cats with International Renal Interest Society chronic kidney disease stages 2 to 4: The con view. *Veterinary Clinics of North America: Small Animal Practice, 46*(6), 1067–1094.
15. Burkholder, W. J. (2000). Dietary considerations for dogs and cats with renal disease. *Journal of the American Veterinary Medical Association, 216*(11), 1730–1734.
16. Odunayo, A. (2023). Practical tool: Assisted feeding and using feeding tubes in canine and feline practice. In C. Lenox, R. J. Corbee, & A. Sparkes (Eds.), *Purina Institute handbook of canine and feline clinical nutrition* (2nd ed., pp. 61–64). Embark Consulting Group, LLC.