Renal & Urinary Disorders

CHRONIC KIDNEY DISEASE (CKD) IN CATS

Chronic kidney disease is diagnosed in about 1 in 3 cats over 10 years of age.[1,2] In cats, although there are breed-related causes of CKD, such as polycystic kidney disease in Persian cats, the cause is usually idiopathic.[3]

Based on clinical exams and laboratory tests, CKD in cats can be "staged" and managed with a combination of medical treatments and therapeutic diets, according to guidelines developed by the International Renal Interest Society (IRIS).

Nutritional management for cats with CKD has four general aims: to maintain adequate nutrition; mitigate clinical consequences of CKD, including signs of uremia; address the changes in homeostasis that result from inadequate kidney function; slow disease progression and prolong lifespan.[4] Although the disease is progressive, individualized medical and nutritional management can help many cats live with CKD for years.[5]

Key Messages

- Serial evaluations of nutritional status and a patient-tailored nutritional plan are crucial to care.[6]
  - Assessing muscle mass is particularly important because creatinine may be misleadingly low in patients with reduced muscle mass.[7]
  - Loss of lean body mass is associated with increased mortality in aging and in CKD.[5,7]
- Ensure adequate calorie intake. If energy needs are not met, catabolism of body tissues occurs, leading to losses of lean body mass and increasing risk of morbidity and mortality in cats with CKD.[8]
  - Avoid unnecessary diet changes in ill cats to reduce the risk of food aversions leading to refusal of specific diets. When diet change is needed, do so slowly and while cat is feeling well.[6]
- Key nutritional factors include phosphorus, protein, potassium, omega-3 fatty acids and alkalinizing buffers. Therapeutic renal diets favor better clinical outcomes (longer survival and fewer uremic crises) than adult maintenance diets for cats with moderate to severe CKD.[4,9–12]
  - Phosphorus regulation is disrupted in CKD and hyperphosphatemia, as well as elevations in parathyroid hormone (PTH) or fibroblast growth factor 23 (FGF23), contribute to ongoing damage in the face of existing kidney disease. Manage serum phosphate levels based on the IRIS stage with dietary phosphorus restriction and phosphate binders.[4]

DID YOU KNOW?

Although dietary sodium restriction is recommended for people with CKD, evidence in cats suggests not only is this unnecessary but also that excessive restriction can be harmful.[2,10]

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Key Messages (continued)

- Cats require high levels of protein in their diets and senior cats may need even more. The goal is to avoid deficiency that can contribute to loss of lean body mass, yet also avoid excessive intake.[6]
  - Based on the available evidence, protein restriction per se is not warranted in cats with CKD.[10]
  - Maintaining higher protein levels in early stages of CKD may help preserve lean body mass.[13–15]
  - Moderate protein restriction in later stages may help reduce accumulation of nitrogenous wastes.[4]
- Maintaining adequate potassium is critical to normal renal function, and low potassium can cause or worsen CKD.[6]
  - Most therapeutic renal diets are supplemented with potassium, but blood levels should be routinely monitored in cats with CKD.[16–19]
- Omega-3 fatty acids from fish oil are often recommended for cats with CKD.[10,11, 20]

Additional Resources

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