

NEW

3 STEPS FOR LIFELONG KIDNEY HEALTH

Managing chronic renal insufficiency is more effective when you detect it early. You can help optimise your feline patients' kidney function by following 3 simple steps.

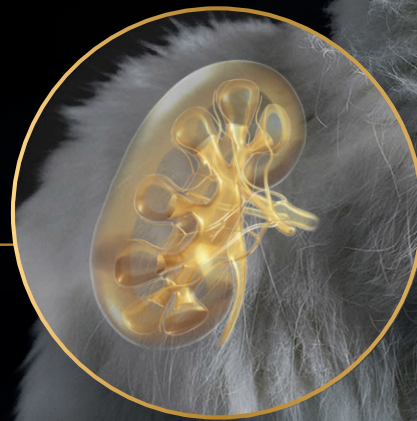


PURINA[®] PRO PLAN[®] VETERINARY DIETS

SCREEN OFTEN **1**

DETECT IT EARLY **2**

SUPPORT WITH SPECIALISED NUTRITION **3**



Your Pet, Our Passion.[®]

Managing chronic renal insufficiency (CRI) can sometimes feel challenging – particularly because clinical signs may not be obvious until the condition is quite advanced.

At PRO PLAN® we want to help you stay on top of CRI through early detection and successful management



Did you know that CRI is estimated to affect **1 out of 3 cats** over the age of 10 years^{1,2?}



Cats will **often not display any symptoms** of renal insufficiency until 2/3 of the functional nephrons are lost³



Early detection will allow you to start renosupportive interventions that can help slow its progression whilst helping improve your patient's quality of life



Veterinary diets specially formulated for renal conditions have a crucial role in the management of CRI, according to the International Renal Interest Society (IRIS)³

These 3 simple steps can guide you, as a clinic professional, in helping owners provide lifelong nutritional support for their cat's kidney health:

1 SCREEN OFTEN

2 DETECT IT EARLY

3 SUPPORT WITH SPECIALISED NUTRITION



1 SCREEN OFTEN

In feline patients **over 7 years of age**, we recommend health check-ups every six months, and routinely starting a conversation with their owners about chronic conditions such as CRI.

Regular screenings in older cats, ideally at least annually, are key to detect subclinical cases of CRI and enable management of the condition in the most effective way possible¹.

WATCH OUT!

The following clinical signs may be indicators of an underlying problem such as CRI:

- Polydipsia
- Polyuria
- Lethargy
- Poor coat quality
- Halitosis
- Vomiting
- Poor appetite
- Weight loss

2 DETECT IT EARLY

On diagnosis, CRI should be staged according to the **International Renal Interest Society (IRIS)**¹ staging system, and appropriate management based on the IRIS guidelines should be started. Diagnosis in the earlier stages may help to slow down progression of the condition.

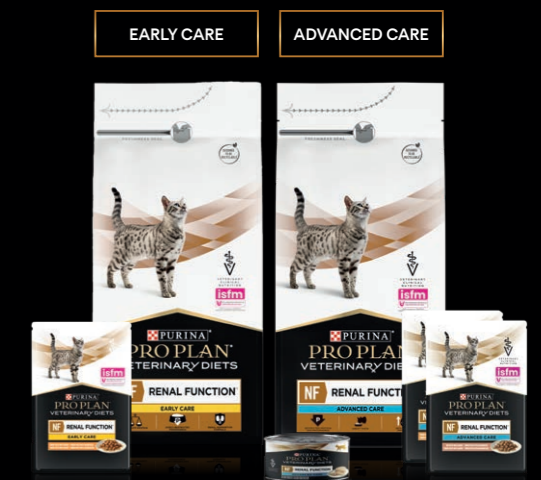
Once CRI has been diagnosed, pet owners should be encouraged to bring their cat in for **regular check-ups every 4 to 6 months**, in order to monitor progression and adjust management if required, including the feeding plan².

CRI can be managed with a combination of medical treatments and specialised nutrition to help slow its progression and help improve cats' quality of life, with different recommendations tailored according to the IRIS stage.

3 SUPPORT WITH SPECIALISED NUTRITION

Numerous studies have shown that **veterinary diets specially formulated** for renal conditions favour better clinical outcomes, improve quality of life, and can extend lifespan in cats, when compared to feeding maintenance diets^{3,4,5,6}.

PRO PLAN® Veterinary Diets offers a complete range to help support lifelong kidney health.



1. Lulich JP, Osborne CA, O'Brien TD, et al. 1992. Feline renal failure: Questions, answers, questions. *Compendium of Continuing Education for Practicing Veterinarians*, 14(2), 127-151.

2. ISFM Consensus guidelines on the diagnosis and management of Feline Chronic Kidney Disease. 2016. *J Fel Med and Surg*, 18, 219-239

3. International Renal Interest Society. IRIS staging of CKD (modified 2019). Available at: http://www.iris-kidney.com/pdf/IRIS_Staging_of_CKD_modified_2019.pdf

1. International Renal Interest Society. IRIS staging of CKD (modified 2019). Available at: http://www.iris-kidney.com/pdf/IRIS_Staging_of_CKD_modified_2019.pdf

2. ISFM Consensus guidelines on the diagnosis and management of Feline Chronic Kidney Disease. 2016. *Journal of Feline Medicine and Surgery*, 18, 219-239.

3. Elliott J, Rawlings JM, Markwell PJ, et al. 2000. Survival of cats with naturally occurring chronic renal failure: effect of dietary management. *J Small Anim Pract*; 41:235-42.

4. Cupp CJ, Kerr WW, Jean-Philippe C, et al. 2008. The role of nutritional interventions in the longevity and maintenance of long-term health in aging cats. *Int J App Res in Vet Med*. 6(2), 69-81.

5. Plantinga EA, Everts H, Kastelein AMC, et al. 2005. Retrospective study of the survival of cats with acquired chronic renal insufficiency offered different commercial diets. *Veterinary Record*, 157(7), 185-187.

6. Ross SJ, Osborne CA, Kirk CA, et al. 2006. Clinical evaluation of dietary modification for treatment of spontaneous chronic kidney disease in cats. *Journal of the American Veterinary Medical Association*, 229(6): 949-957.


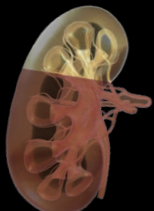


IRIS staging and nutrition

IRIS provides practicing veterinarians with evidence-based guidance to help better understand, diagnose and treat chronic kidney disease (CKD) in cats and dogs. They have created an internationally recognised set of guidelines for classifying and managing CKD (Table 1).

The staging system facilitates appropriate treatment and management recommendations, and advises on monitoring and further diagnostics¹.

Accurate staging of CKD is key in order to provide the right management to your feline patients at every stage.

Table 1. Adaptation of the IRIS staging of feline CKD based on fasting blood creatinine and SDMA concentrations.

IRIS STAGE	BLOOD CREATININE μmol/l	SDMA* μg/dl	COMMENTS
STAGE 1  Filtration performance 100%-33%	<140	<18	Normal blood creatinine or normal or mild increase blood SDMA. Some other renal abnormality present (such as, inadequate urinary concentrating ability without identifiable non-renal cause, abnormal renal palpation or renal imaging findings, proteinuria of renal origin, abnormal renal biopsy results, increasing blood creatinine or SDMA concentrations in samples collected serially). Persistently elevated blood SDMA concentration (>14 μg/dl) may be used to diagnose early CKD.
STAGE 2  Filtration performance 33%-25%	140 – 250	18 – 25	Normal or mildly increased creatinine, mild renal azotemia (lower end of the range lies within reference ranges for creatinine for many laboratories, but the insensitivity of creatinine concentration as a screening test means that patients with creatinine values close to the upper reference limit often have excretory failure). Mildly increased SDMA. Clinical signs usually mild or absent.
STAGE 3  Filtration performance 25%-10%	251 – 440	26 - 38	Moderate renal azotaemia. Many extra-renal signs may be present, but their extent and severity may vary. If signs are absent, the case could be considered as early Stage 3, while presence of many or marked systemic signs might justify classification as late Stage 3.
STAGE 4  Filtration performance <10%	>440	>38	Increasing risk of systemic clinical signs and uraemic crises.

Reproduced with permission of the IRIS board¹.

*The recommendations for SDMA are based on published literature which utilises proprietary IDEXX technology for measuring SDMA. At this time, it is not known if other assays will provide equivalent results.

1. International Renal Interest Society. IRIS staging of CKD (modified 2019). Available at: http://www.iris-kidney.com/pdf/IRIS_Staging_of_CKD_modified_2019.pdf

According to the IRIS board¹, renal diets are formulated to:

- Ameliorate or prevent the clinical consequences of CKD, including signs of uraemia
- Slow progression of CKD and prolong survival
- Minimise derangements of electrolytes, calcium and phosphorus, and acid-base balance
- Maintain adequate nutrition

As well as consideration of the total dietary level, the biological value of protein, including a complete amino acid profile and high protein digestibility, is key to help maintain lean muscle mass and prevent weight loss at any stage of CKD.

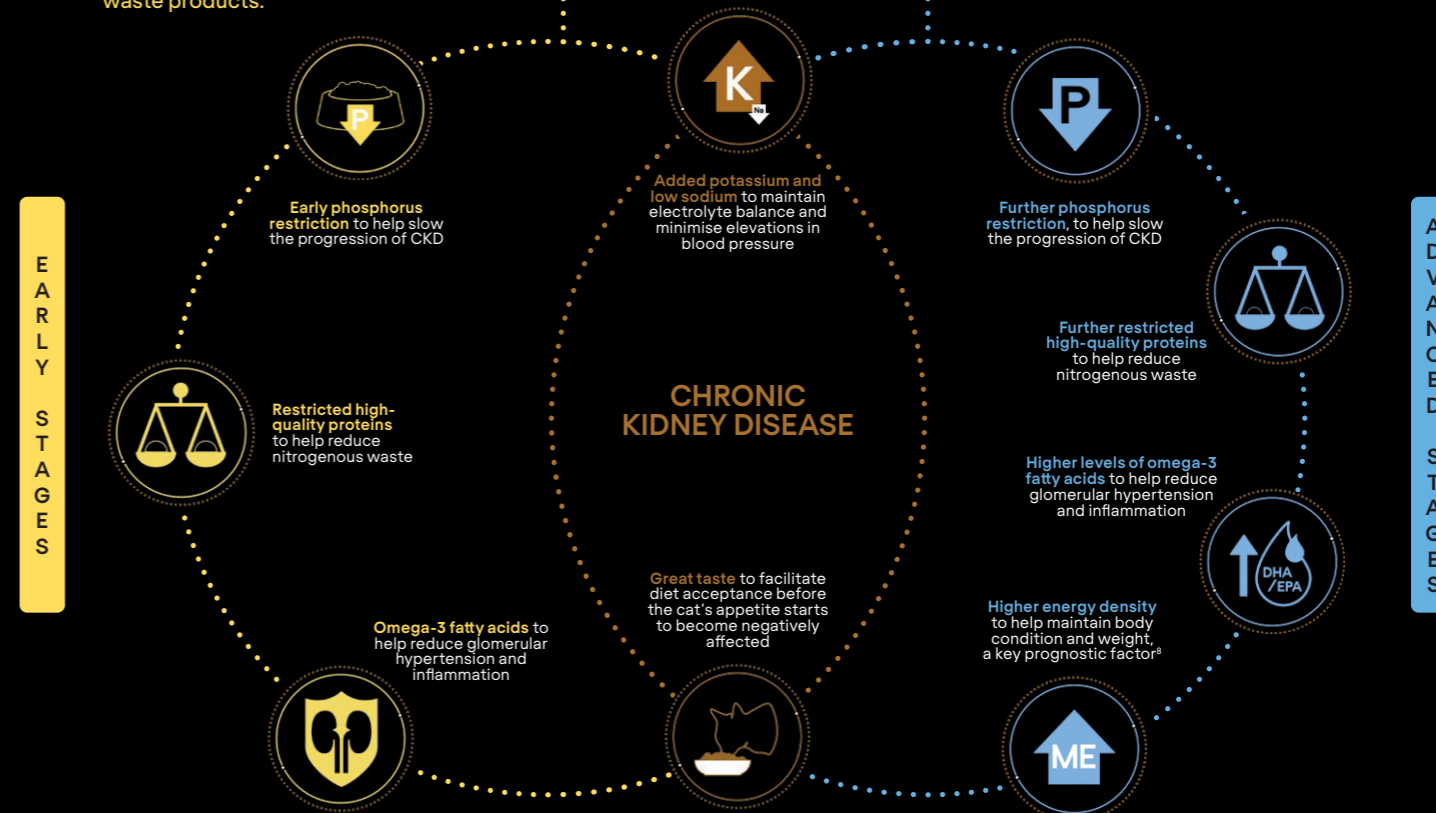
Renal diet ranges now offer different formulations depending on the IRIS stage of CKD.

The greatest challenge is to balance the unique nutritional requirements of cats, as obligate carnivores, and the dietary modifications that will help ameliorate clinical signs and slow the progression of CKD.

Nutritional modifications and benefits of diets specially formulated for renal conditions in cats^{2,3,4,5,6,7}

Maximising dietary support to kidney function in the early stages of CKD is important to help maintain an appropriate electrolyte balance, control calcium-phosphorus levels, minimising the risk of secondary renal hyperparathyroidism, and help reduce the formation of nitrogenous waste products.

In advanced stages, dietary phosphorus and protein levels should be further restricted because the levels of excretion through urine decrease as the condition progresses.



1. International Renal Interest Society. IRIS staging of CKD (modified 2019). Available at: http://www.iris-kidney.com/pdf/IRIS_Staging_of_CKD_modified_2019.pdf

2. Plantinga EA, Everts H, Kastelein AMC, et al. 2005. Retrospective study of the survival of cats with acquired chronic renal insufficiency offered different commercial diets. *Veterinary Record*, 157(7), 185-187.

3. Ross SJ, Osborne CA, Kirk CA, et al. 2006. Clinical evaluation of dietary modification for treatment of spontaneous chronic kidney disease in cats. *Journal of the American Veterinary Medical Association*, 229(6): 949-957.

4. Laffamme D, Backus R, Brown S, et al. 2020. A review of phosphorus homeostasis and the impact of different types and amounts of dietary phosphate on metabolism and renal health in cats. *J Vet Int Med*, 34(6), 2187-2196.

5. Barber PJ, Rawlings JM, Markweu PJ, et al. 1999. Effect of dietary phosphate restriction on renal secondary hyperparathyroidism in the cat. *J Small Anim Pract*, 40(2):62-70.

6. Syme HM, Markwell PJ, Pfeiffer D, et al. 2006. Survival of cats with naturally occurring chronic renal failure is related to severity of proteinuria. *J Vet Intern Med*, 20(3):528-535.

7. Polzin D, Churchill J. 2016. Controversies in veterinary nephrology: renal diets are indicated for cats with international renal interest society chronic kidney disease stages 2 to 4; the pro view. *Vet Clin North Am Small Anim Pract*, 46(6):1049-1065.

8. Freeman LM, Lachaud MP, Matthews S et al. 2016. Evaluation of weight loss over time in cats with chronic kidney disease. *J Vet Intern Med*, 30(5):1661-1666.

Discover the complete range of PRO PLAN® Veterinary Diets for lifelong kidney health

2 distinct formulations of complete dietetic pet food for adult cats, for **early and advanced stages of CRI**, to meet your feline renal patient's nutritional requirements, help slow down CRI progression, increase survival and improve their quality of life.

PRO PLAN® Veterinary Diets NF Renal Function™ Early Care

NEW



NEW FORMULA

Key Benefits

- Moderate amount of high quality protein** to help support kidney function from the early stages of chronic kidney insufficiency and help maintain an adequate muscle mass
- Restricted level of phosphorus** to help slow progression of chronic kidney insufficiency from the early stages
- With restricted phosphorus levels and added omega 3 fatty acids, potassium and antioxidants** to help support kidney function

Key Nutrient Values

	Dry (% as fed)	Pouch (% as fed)
Protein	29	8.5
Ca	0.6	0.17
P	0.35	0.11
Na	0.2	0.07
K	0.8	0.34
EPA +DHA	0.23	0.11
Metabolisable Energy*	379 kcal/100g	99 kcal/100g

*Calculated following NRC 2006 equations.

Recommended for:
Early stages (IRIS stages 1 & 2) of chronic renal insufficiency.

PRO PLAN® Veterinary Diets NF Renal Function™ Advanced Care

NEW



NEW ADVANCED CARE FORMULA

Key Benefits

- Restricted but high quality proteins** to help minimise loss of muscle and toxin formation and restricted phosphorus to help slow the progression of chronic kidney insufficiency
- Increased levels of omega-3 fatty acids: with EPA and DHA** to help support kidneys in the advanced stages of kidney insufficiency
- Great taste** to satisfy cats with reduced appetite

Key Nutrient Values

	Dry (% as fed)	Can (% as fed)	Pouches (% as fed)
Protein	28	7	7.2
Ca	0.6	0.23	0.18
P	0.33	0.09	0.11
Na	0.2	0.06	0.07
K	0.8	0.44	0.34
EPA +DHA	0.6	0.14	0.14
Metabolisable Energy*	407 kcal/100g	115 kcal/100g	122 kcal/100g

*Calculated following NRC 2006 equations.

Recommended for:
Later stages (IRIS stages 3 & 4) of chronic renal insufficiency.

Maintaining adequate hydration is also a key therapeutic goal for cats with CRI

Dehydration is a common complication of CRI and can lead to inappetence, lethargy, constipation and an increased susceptibility to uraemic crises¹.

Several physiological mechanisms are triggered when the body senses dehydration, and chronic subclinical dehydration may result in compensatory effects that ultimately have a negative effect on the kidneys.

When dehydration is a concern for a cat, switching the diet to 100% wet food or supplementing a dry diet with nutrient-enriched water like PRO PLAN® Hydra Care™ can be effective strategies for improving hydration.

PRO PLAN® Hydra Care™ is a complementary pet food that can be supplemented along with the PRO PLAN® Veterinary Diets NF Renal Function™ to help increase cats' total daily water intake and support hydration.



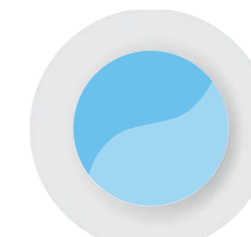
*For each 2kg of body weight

It's a soft textured jelly, served on its own in an extra third bowl, that encourages cats to happily lick it up due to its **great taste**.

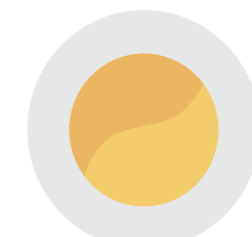
Hydra Care™ can help cats consume on average 28% more liquid every day than drinking water alone^{2,3*}.



PRO PLAN® Veterinary Diets NF Renal Function™



Fresh Water



PRO PLAN® Hydra Care™

*Compared to cats consuming only water in addition to dry feeding. Cats must consume at least 25ml/kg of body weight daily for benefit.

- Feehally J, Khosravi M. 2015. Effects of acute and chronic hypohydration on kidney health and function. *Nutr Rev* 73 (Suppl2):110-119.
- Zanghi BM, Gerheart L, Gardner CL. 2018. Effects of a nutrient-enriched water on water intake and indices of hydration in healthy domestic cats fed a dry kibble diet. From Nestlé Purina Research. *American Journal of Veterinary Research* 79(7):733-744.
- Wils-Plotz E, DeGeer S, Zanghi BM. 2019. Nutrient-enriched water supplements nutritionally support hydration in the domestic cat. From Nestlé Purina Research. 2019 ACVIM Forum. Research Abstract Program.



VETERINARY
CLINICAL
NUTRITION



PURINA[®]
PRO PLAN[®]
VETERINARY DIETS



PRO PLAN[®] VETERINARY DIETS
NF RENAL FUNCTION[™]

Nutritional support for your feline patients, from
the early stages into the more advanced stages of CRI.



Please speak to your PURINA[®]
representative for more information