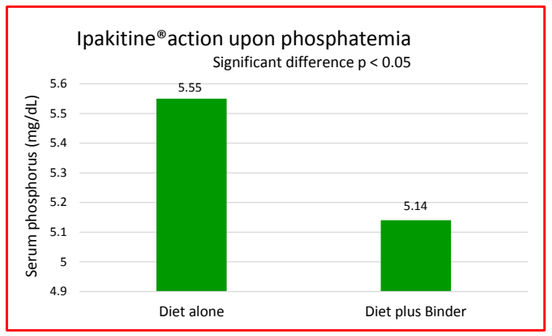
Supporting Pets With Chronic Renal Failure

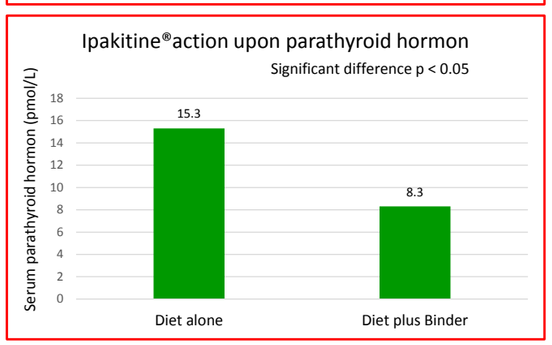
Chronic Renal Failure (CRF) is particularly common in geriatric cats and a leading cause of mortality. By disturbing the phosphate homeostasis, it has adverse impacts on many biological processes including energy metabolism, cell signalling or skeletal health and integrity.

With the development of renal lesions and nephron losses, the Glomerular Filtration Rate (GFR) decreases and nitrogenous waste products build up. Plasma creatinine raises leading to azotaemia and phosphorus retention occurs associated with a fall in intrinsic renal secretion of active vitamin D. Hyperphosphatemia and hyperparathyroidism develop as a result of CRF and proteinuria, as well as uraemia, are common complications of CRF.

Reducing plasma phosphorus blood concentration is a key strategy for CRF treatment. The therapeutic goal is to limit parathyroid hormone (PTH) synthesis, which can be done by restricting phosphate intake and binding ingested phosphate.

Dietary phosphorus restriction is therefore commonly recommended for cats with CRF. In addition, experimental studies have demonstrated that supplementing the normal maintenance feline diet with intestinal phosphorus binder (Ipakitine®, Vetoquinol) lower serum phosphorus and PTH concentrations.[1]



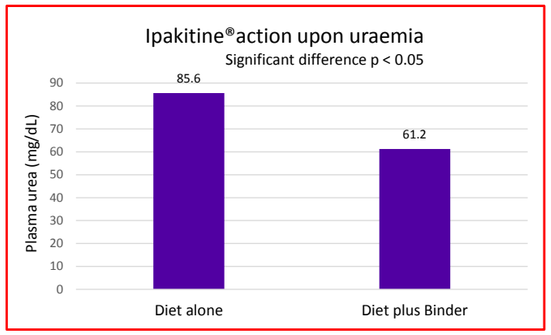


(BROWN and al., 2008)

As they are good phosphorus chelators, supplement with calcium carbonate and chitosan, are advocated to control hyperphosphatemia and to reduce uraemia with a decrease of Blood Urea Nitrogen (BUN).[2]

PRODUCT DESCRIPTION AND MECHANISM OF ACTION

Ipakitine® is a complete and optimised combination of chitosan and calcium carbonate. Both substances play their role in binding phosphate and therefore assists in controlling hyperphosphatemia. Ipakitine® acts to reduce the phosphorus blood concentration and uraemia, resulting in an increase in feline life expectancy.



(WAGNER and al. 2004)

Chitosan is produced by deacetylation of the chitin of crabs. The polymer chain resulting from this reaction can take suitable configurations for the complexation with phosphorus and therefore can effectively decrease blood phosphorus.

Ipakitine® is a pragmatic alternative to a renal diet and contributes to maintain serum phosphorus concentrations within the IRIS target range for cats with CRF (i.e. 2.5–5 mg/dL).

Years of use in the field has confirmed the very high palatability of the product. It is especially important for cats resistant to dietary changes due to reduced appetite or anorexia, both common clinical signs of CRF.

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References:
[1]S.BROWN and al., Effects of intestinal phosphorus binder on serum phosphorus and parathyroid hormone concentration in cats with reduced renal function, Intern J Appl Res Vet Med Vol. 6, No. 3 (2008)
[2]E. WAGNER and al., Effects of a dietary chitosan and calcium supplement on Ca and P metabolism in cats, BMTW 117:07/08 (2004)