

Buyer Beware, This Pet Food Mineral Damages Kidney Function

If your pet suffers from chronic kidney disease (many do, especially cats), this recent study should be a wake-up call. Certain foods may play a role in making existing kidney disease worse and can even damage healthy kidney function.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- A new study concludes high levels of phosphorus in commercial cat food can damage kidney function in healthy cats, along with hastening the progression of chronic kidney disease (CKD) in diagnosed cats
- Canned cat foods produced in Germany and tested for the study were found to contain up to nine times the amount of phosphorus cats require
- Other types of cat food and ingredients to avoid to protect your pet's kidneys include kibble, meat meals and prescription renal diets
- Cats with CKD should be fed a human-grade, fresh food diet formulated for kidney disease (recipe included!); cats with healthy kidneys should eat a varied diet of homemade raw (or cooked), commercially available balanced raw, dehydrated raw and/or human-grade canned
- Additional support for CKD kitties includes appropriate supplementation, a stress-free environment and regular monitoring of organ systems

Editor's Note: This article is a reprint. It was originally published July 03, 2018.

Estimates are that over half of pet cats 10 years and older suffer from chronic kidney disease (CKD), aka chronic renal disease and chronic renal failure.

There are many causes of CKD in cats, and a recent study published in the Journal of Feline Medicine and Surgery¹ suggests that high phosphorus levels in commercial cat food both exacerbate existing kidney disease, and also damage kidney function in healthy cats. These study results may represent a huge piece of the feline CKD puzzle.

Whereas earlier research concluded that high phosphorus intake worsens existing kidney disease, the Ludwig Maximilians University (LMU) researchers looked at the effect of excess phosphorus on mature, healthy cats with normal kidneys. The results showed the appearance of glucosuria (high levels of glucose in the urine) and albuminuria (abnormally high amounts of the protein albumin in the urine) — both markers of kidney damage — in cats eating diets high in phosphorus.

In addition, the cats' creatinine clearance (a measure of the overall performance of the kidneys), dropped significantly during the 28 days they were fed the high-phosphorus diet. The research team was surprised to see creatinine clearance so strongly affected within such a short timeframe.

According to study leader Ellen Kienzle, a professor at LMU in Munich, Germany, "The results of the new study suggest that excess phosphate has a deleterious effect on indicators of kidney function in cats, and could contribute to the high incidence of chronic kidney diseases in elderly cats."

Canned Cat Food in Germany Contains Up to Nine Times the Amount of Phosphorus Kitties Need

Tests of commercial cat foods sold in Germany revealed that canned formulas contain on average several times the amount of phosphorus required to keep cats healthy. This level of phosphorus in cat food has typically been viewed as harmless, however, the researchers now believe the maximum level tested (nearly nine times the required amount) "... might be sufficient to damage the healthy feline kidney within a few weeks."²

The phosphates in the tested pet foods come from "natural" sources (mainly bone and cereal), as well as from the inorganic phosphates pet food producers add to their formulas to achieve a certain texture and shelf life. Kienzle and her team are now looking at the impact of different sources of phosphate on feline kidney function, as well as phosphate solubility to evaluate the bioavailability of phosphate in the diet.

"We would predict that the water-soluble potassium monophosphate has a greater effect on kidney function than phosphate derived from the calcium salt," says Kienzle. Unlike the bound phosphate that comes from natural sources in processed pet food, water-soluble inorganic phosphate additives are immediately available for absorption.

The researchers are also evaluating the impact of excess dietary phosphate on the health of dogs, and their initial results suggest that the concentration of phosphate in the blood is significantly elevated following the intake of inorganic phosphates.

To Preserve Your Cat's Kidneys, Also Steer Clear of These Diets

- **Dry cat food (kibble)** — If you're a regular reader here at Mercola Healthy Pets, you know I'm absolutely not a fan of kibble for dogs or cats — especially cats. As I mentioned at the beginning of this article, there are many causes of chronic kidney disease in cats, and one of the most common and preventable influences is a dry food diet.

Kitties are designed to meet most or all of their body's water requirements through their diet, not at the water bowl, so they don't have the thirst drive of other species. Kibble provides a very small percentage of the water cats need in their daily diet. Kitties fed an exclusively dry diet suffer chronic mild dehydration that causes significant stress to the kidneys over time.

As Dr. Lisa Pierson, a feline-only practitioner and cat nutrition expert, writes at her wonderful [**CatInfo.org**](https://www.catinfo.org) website, "It is troubling to think about the role that chronic dehydration may play in causing or exacerbating feline kidney disease." In addition, the quality of protein in most dry pet food is very poor. It's rendered, feed-grade protein, which I believe is harder for cats to digest and process. Fed twice a day (or all day) every day for years, it can cause stress to the liver and kidneys.

- **Cat food containing meat meal (chicken meal, fish meal, turkey meal, rabbit meal, lamb meal, etc.)** — Speaking of protein, recent research shows that aging pets, including those with kidney disease, need more protein, not less.³ But it must be very high-quality protein, without excessive amounts of phosphorus.

According to my friend and veterinarian Dr. Elisa Katz in her article at the Feline Nutrition Foundation, this rules out meat meals, which are primarily ground up bones and connective tissue. Muscle meat is removed before rendering, so meat meals can contain levels of phosphorus (and calcium) high enough to damage the kidneys.⁴

- **Prescription renal diets** — Prescription renal diets, many of which are dry diets (e.g., Hill's k/d), are routinely recommended for cats with kidney disease. This has never made sense to me. These formulas do not meet the dietary hydration requirements of cats, especially kitties who are losing large amounts of water due to worn out kidneys.

"I must say that I find it truly amazing when I hear about the very large numbers of cats receiving subcutaneous fluids while being maintained on a diet of dry food," writes Lisa Pierson. "This is an extremely illogical and unhealthy practice and every attempt should be made to get these cats on a diet that contains a higher moisture content."

Prescription renal diets also typically have reduced levels of protein, which is not ideal for cats, who are obligate (strict) carnivores requiring high levels of high-quality animal protein for optimal health. According to Pierson:

"Renal diets restrict protein to the point that many cats — those that are not consuming enough of the diet to provide their daily protein calorie needs — will catabolize (use for fuel) their own muscle mass which results in muscle wasting and weight loss.

This internal breakdown of the cat's own muscle mass will cause an increase in creatinine (and BUN) which needs to be cleared by the kidneys. The rise in creatinine and BUN, and muscle wasting, can lead to an often-erroneous conclusion that the patient's CKD is worsening."

The Diet I Recommend to Maintain Your Cat's Kidney Function

If your kitty has been diagnosed with CKD, I recommend a human-grade, fresh food diet formulated for kidney disease, either homemade or a prepared diet like Darwin's Intelligent Design. Darwin's has created the only excellent-quality, fresh food diet specifically formulated for **cats with CKD**. Intelligent Design contains the natural phosphorus binder chitosan, plus increased calcium to minimize absorption of phosphorus. The diet can be fed lightly cooked or raw.

Unless your cat absolutely refuses to eat anything else, I don't recommend feeding prescription dry kidney diets. These diets are formulated with reduced phosphorus levels; however, there are ways to accomplish this with a much healthier, high-quality, fresh food diet.

I recommend feeding healthy cats (with healthy kidneys) a varied diet of a combination of homemade raw (or cooked), commercially available balanced raw, dehydrated raw and/or human-grade canned. For a comprehensive list of phosphorus levels in canned cat food, see Dr. Lisa Pierson's **Cat Food — Nutritional Composition** chart. The chart also lists the percent of protein, fat and carbs in each food, as well as calories.

The diet you feed your kitty should be **nutritionally balanced, species-appropriate** and made with high-quality protein sources. If you're interested in preparing a low-phosphorus homemade cooked meal for adult cats you can try this recipe:

AMOUNT		INGREDIENTS
16	Oz	85% lean ground beef, cooked and crumbled
8	Oz	Beef heart, cooked and crumbled
3	Oz	Beef kidney, cooked and crumbled
1	Oz	Beef spleen, cooked and finely chopped
4	Oz	Butternut squash, cooked and pureed
8	Gram	Carlson's brand cod liver oil* (for vitamins D and A)

Additional Recommendations for Cats With CKD

Vitamins and minerals can sometimes be beneficial for kitties with CKD. I often add a variety of the B vitamins to a cat's sub-Q fluids. B vitamins can help with anemia, relieve nausea and improve a cat's overall feeling of well-being.

Antioxidants, L-carnitine and medium-chain triglycerides (**coconut oil**) can also be beneficial. Adding a source of blood-building supergreens, such as chlorophyll or chlorella, can help fight a low red cell count. I also recommend adding detoxification support, such as dandelion and SOD (superoxide dismutase), if your kitty will consume it.

Probiotics that contain specific kidney supportive strains such as Lactobacillus acidophilus, casei and plantarum, Streptococcus thermophiles, and Bifidobacterium longum can also be extremely beneficial. These strains, which support healthy urea metabolism, are available in "kidney-specific" products, as well as OTC probiotics, so read labels carefully.

Feline Renal Support by Standard Process can also be very helpful, as well as phosphorus binders and sodium bicarbonate, if appropriate. Your veterinarian will help you decide if these are indicated based on your cat's specific situation. Making your kitty's environment as stress-free as possible is also extremely important.

And most important of all in the prevention or management of kidney disease is vigilant monitoring of organ systems. The goal should be to identify risks and subtle changes long before kidney failure occurs. Many cats live long full lives when kidney disease is identified early and managed proactively.

Sources and References

[PetfoodIndustry.com](#) March 28, 2018

¹ [Journal of Feline Medicine and Surgery](#), June 1, 2017

² [LMU Press Release](#), March 20, 2018

³ Finko DR, et al. Protein and calorie effects on progression of induced chronic renal failure in cats, [Mousabilities.com](#)

⁴ [Feline Nutrition Foundation](#)