



# THE NATURAL AUTHORITY™

## ON URINARY TRACT HEALTH IN CATS

### Introduction

Urolithiasis, or urinary stones, is one cause of feline lower urinary tract disease (FLUTD). Urine acidity and urine volume both influence urinary tract health. Maintaining acidic urine within an optimal pH range of 6.0 to 6.5 has a beneficial effect on feline urinary tract health. A higher pH can lead to the growth of struvites (magnesium ammonium phosphate crystals), whereas a lower pH can cause the formation of calcium oxalate crystals. Over time, both of these types of crystals can form painful urinary stones which can block the passage of urine and require emergency veterinary intervention.

### How does diet influence urinary tract health?

The dietary nutrients known to play a role in urine pH and feline urinary tract health are magnesium, calcium, phosphorus, potassium, and sodium. Of these minerals, magnesium, calcium and phosphorus should be controlled under a maximum level to promote urinary tract health. Conversely, potassium and sodium need to be supplied above adequate levels to support overall wellbeing as well as promote urinary tract health. Therefore, a diet with the appropriate balance of these essential minerals is important to supporting urinary tract health, not the overall restriction of these minerals.

Urine volume is also an important factor in urinary tract health. Increased urine volume results in less concentrated urine to help prevent the formation of crystals, and increased frequency of urination to help flush extra minerals out of the body. To increase urine volume, it is recommended to have moderate inclusions of dietary salt to encourage drinking, feed wet foods to increase water intake through food, and feed highly digestible foods to help minimize fecal water loss through loose stools.

### What are the regulations on urinary tract health formulas?

“Ash” on the guaranteed analysis of a pet food label is an estimate of total mineral content. Ash is measured as the material left after the carbon and nitrogen containing nutrients like protein, fat and carbohydrates have been burned off. Ash content does not give any indication of which minerals are present and at what levels. Since the relative amounts of specific minerals are more important than the total mineral content for urinary tract health, there is no reason to reference the relative ash content on the product label other than in the guaranteed analysis. Therefore, the claim “low ash” is not allowed on cat food labels because it is considered false and misleading with respect to an implied effect on urinary tract health.

In order to claim that a product supports urinary tract health in cats, extensive testing must be performed according to FDA guidelines. The product must demonstrate by means of a well controlled, scientifically sound study that it can induce production of acidic urine in a group of cats compared to a control group of cats fed a non-acidifying diet. The study needs to be at least six months in duration and include measurements of body weight, food consumption, urinalysis, serum chemistries, blood gases, and mineral balances.

**Currently, the NUTRO® MAX® CAT and NATURAL CHOICE® Cat Foods have not undergone the necessary studies to demonstrate a urinary tract health benefit. Although NUTRO® Cat Foods support overall health and may be safely fed to cats without disease, it is recommended that pet owners consult a veterinarian if their cat has feline lower urinary tract disease.**



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