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such as muscle meat.

All these nutritional peculiarities come from the fact that the cat is a carnivore, and these necessary nutrients are not generally found in plant tissue. As a result, the cat needs a source of animal tissue in its diet; a vegetarian diet for cats would have to be formulated extremely carefully, and include supplementation. (Do not attempt to supplement your cat's diet on your own, consult your veterinarian.)

In addition to a balanced diet, cats need plenty of fresh clean water. A cat can have a serious health problem with only a 10 percent water loss. During the summer months, water is essential to prevent dehydration and water loss. Cats fed a canned food diet will probably not drink any water at all, since meat-based diets contain about 75 percent moisture. Cats on a dry food diet will drink about twice as much water as they consume in dry food.

Dr. Kane spoke about the pros and cons of feeding cats specific foods. For instance, the lactose in milk causes digestive upset, especially diarrhea, in most cats. Skim milk is not necessarily more easily digested.

Cats do not do well on raw fish, especially carp, because such fish contains an enzyme that destroys thiamin, or Vitamin B-1. Otherwise, fish is a good balance of protein, taurine, niacin, choline and Vitamin A.

A variety of recent studies have shown that aroma texture, taste and consistency enhance the palatability of the cat's diet. Still, cats will have special preferences for certain foods. "Treats — yogurt, broccoli, or whatever a cat fancies — should only make up about 10 to 15 percent of the cat's diet," Dr. Kane said. "For example, by feeding a single ingredient such as hamburger, the calcium to phosphorus ratio can be significantly affected."

Not surprisingly, calorie needs vary at different points of the life cycle. The inactive and active adult needs roughly 70 to 85 calories per kg of body weight. But a lactating queen, or a very young kitten, needs three times that amount.

Ideally, when feeding canned food (which provides roughly one to one-and-a-half calories per gram), one ounce per pound of body weight is the 'golden rule,' Dr. Kane said. That will maintain the cat at a healthy body weight. The appropriate serving size of dry food (which generally provides at least four calories per gram) is roughly one-third ounce per pound of body weight. These are only guidelines; the needs of individual cats will vary.

Males, who grow a bit faster, reach a higher body weight than females. Studies show that at least 90 percent of the feline population maintains a proper body weight if left on their own and fed free choice. Feeding cats more often, but feeding a smaller amount, can help overweight cats lose some weight — and you can also cut back a cat's caloric intake by one-third if it needs to lose some weight. Toys, or other objects that trigger play, are also very important because they help cats burn off excess calories.

The pet food label provides a great deal of information. The phrase "nutritionally balanced" means the product offers the right combination of nutrients in the proper amount. A "100 percent nutritionally complete" product will be identified as satisfying a cat's nutritional requirements, regardless of its stage of life.

Despite previous thought to the contrary, ash content per se is not related to Feline Urinary Syndrome (FUS). Nor is magnesium as primary a factor as initially concluded. Studies showing an increase in FUS, in tandem with increasing levels of magnesium, involved unnaturally high levels of this element.

FUS starts with an irritation of the lining of the urinary bladder. Affected animals experience pain and difficulty when trying to pass urine. In the most severe form, FUS involves complete blockage of the urethra, the tube emptying the bladder. Male cats experience this blockage much more commonly than females because the urethra is narrower in the male. In about 80 percent of FUS cases, the blockage is caused by a plug comprised of a combination of mucus and a crystalline mineral known as struvite.

A slightly acid urine (below a ph of 6.5) is essential to a healthy feline urinary tract, and the cat benefits from a diet that promotes a slightly acid urine. A slightly acid urine keeps the elements of the struvite crystals in solution; if the urine becomes less acidic, these elements may form crystals and begin to precipitate, leading to FUS problems. A high protein meat-based diet provides a slightly acid urine. Dry cat foods can also be properly formulated to do so. Again, lots of fresh, clean water should be provided.

The age group most frequently afflicted by FUS is the young adult between one and six years old. Cats prone to FUS usually experience their first episode by the age of three. Although FUS is a major health concern of cat owners, a recent survey has shown that FUS occurs in less than one percent of all cats. And diet is only one cause of FUS.

LF

Centennial Medal for Dr. Allam

The highest honor of the School, the Centennial Medal, was presented to Dr. Mark W. Allam, dean emeritus, during the dinner celebrating the successful conclusion of the Second Century Fund Campaign.

University President Sheldon Hackney made the presentation and read the following citation:

Mark Whitney Allam, surgeon, educator, a veterinarian of world stature, University Vice President and eighth Dean of the School of Veterinary Medicine.

As a surgeon you were a pioneer in bringing veterinary surgery from the Dark Ages to its present highly sophisticated level. You were a founding Father of the American College of Veterinary Surgeons and you were a vital force in developing the revolutionary Core Elective Curriculum in the Veterinary School. Your reputation in surgery, education, as in professional affairs, carried far beyond the boundaries of the University of Pennsylvania and brought the School international attention.

In overseeing the remarkable evolution of the Veterinary School's fabric between 1953 and 1973, you were unafraid to embark upon uncharted courses and your vigor and vision inspired the Faculty and others to lend their support and efforts to bring the School from a small, provincial institution to one of the top flight veterinary schools in the world. You were the architect and prime-mover in developing New Bolton Center from a simple farm to a premier center for research and clinical work on livestock and horses. As Dean you oversaw a major growth of the Philadelphia Campus and a radically different and more efficient administrative structure. Under your guidance the Faculty grew from a small, relatively untrained, body to one of the best in all veterinary medical education.

Through all of this you enriched the Veterinary School's relationship to the University Administration, to governmental agencies, agricultural and pet associations and to foundations and private supporters of the School.

Your years as Dean can truly be looked upon as "Golden Years" for the School of Veterinary Medicine and your legacy lives today. We applaud your extraordinary efforts, and at this time we invite you to accept the School's highest accolade, the Centennial Medal.

A group of Russian officials visited New Bolton Center in March. Shown here are, left to right, Yuri G. Nikulin, deputy department head, administration for foreign relations, USSR Agroindustrial Committee; Victor A. Ivanov, deputy general director, All Union Association of Horse Breeding, and chairman, All Union Association of Foreign Economic Relations of Horse Breeding; Dr. David Nunamaker; Dr. Arnold Laskov, chief of the laboratory of the physiology of horse training of the USSR; Victor Tentikov, chief zoo technician at the Chreesovsky stud farm.