

# Your Mixed Breed Cat

Caring for Your Faithful Companion



## Mixed Breed Cats: What a Unique Breed!

Your cat is special! She senses your moods, is curious about your day, and has purred her way into your heart. Chances are that you chose her because you like Mixed Breed Cats and you expected her to have certain traits that would fit your lifestyle, like:

- May meow to communicate with you
- Lively, with a friendly personality
- Agile, sturdy, and athletic

However, no cat is perfect! You may have also noticed these characteristics:

- Can become overweight easily if not exercised regularly
- Scratches when bored
- May be mischievous if not given enough attention

Is it all worth it? Of course! She is of a mixed background and can come in all sizes and colors. Her personality is just as varied as her looks, but she makes an excellent companion.

## Your Mixed Breed Cat's Health

We know that because you care so much about your cat, you want to take great care of her. That is why we have summarized the health concerns we will be discussing with you over the life of your cat. By knowing about the health concerns common among cats, we can help you tailor an individual preventive health plan and hopefully prevent some predictable risks in your pet.

Many diseases and health conditions are genetic, meaning they are related to your pet's breed. The conditions we will describe here have a significant rate of incidence or a strong



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impact upon this mixed breed particularly, according to a general consensus among feline genetic researchers and veterinary practitioners. This does not mean your cat will have these problems, only that she may be more at risk than other cats. We will describe the most common issues seen in Mixed Breed cats to give you an idea of what may come up in her future. Of course, we can't cover every possibility here, so always check with us if you notice any unusual signs or symptoms.

This guide contains general health information important to all felines as well as information on genetic predispositions for Mixed Breed cats. The information here can help you and your pet's healthcare team plan for your pet's unique medical needs together. At the end of the booklet, we have also included a description of what you can do at home to keep your kitty looking and feeling her best. We hope this information will help you know what to watch for, and we will all feel better knowing that we're taking the best possible care of your friend.

## General Health Information for your Mixed Breed Cat

### *Weight Management*

**Obesity** is a major disease that contributes to a surprisingly large number of illnesses and deaths in cats.

This revelation is more well-known and well-understood today than in the last few decades, but too many owners are still ignoring the dangers of extra weight on their pets. Excess weight is one of the most influential factors in the development of arthritis, diabetes, and other life-threatening diseases. Everyone knows—many firsthand from personal experience—how even shedding just a few pounds can result in improved mobility and increased overall motivation to be active. And the same is true for your pet.

Research suggests that carrying excess weight may shorten a pet's life by as much as two years, and can cause the onset of arthritis two years sooner. Diabetes, an inherited disease, has a much higher chance of developing in overweight pets, and may never become a problem for a healthy-weight cat. The more obese a cat becomes, the more likely it will become diabetic. **Hepatic lipidosis**, or fatty liver, is another potentially fatal disease in overweight pets; hepatic lipidosis can develop in as few as 48 hours when an overweight cat stops eating for any reason.

So how can we help our pets stay trim? Understanding your cat's dietary habits is key. The average cat prefers to eat about 10-15 times a day, just a few nibbles at a time. This method, free-feeding, works well for most cats, but boredom may increase the number of trips your cat makes to the food bowl. By keeping your cat playfully active and engaged, you'll help your pet stay healthy and have some fun at the same time! A string tied to a stick with something crinkly or fuzzy on the other end of the string, and a little imagination—you and your cat will both be entertained. Food puzzles, like kibbles put in a

paper bag or under an overturned basket or box, may help to motivate cats with more food-based interests to romp and tumble.

For really tough cases of overeating, you will have to take a firm stance, and regulate your cat's food intake. Instead of filling your cat's bowl to the top, follow the feeding guide on the food package and be sure to feed a high-quality adult cat diet as recommended by your vet. Replace your cat's habits of eating when bored with extra playtime and affection. Cats typically adjust their desires for personal interaction by the amount of affection offered to them, so in other words, ignoring your cat means your cat will ignore you. By the same token, loving on and playing with your cat a lot will cause your cat to desire that time with you. A more active cat means a healthier, happier pet—and owner!

### *Dental Disease*

**Dental disease** is one of the most common chronic problems in pets who don't have their teeth brushed regularly. Unfortunately, most cats don't take very good care of their own teeth, and this probably includes your cat. Without extra help and care from you, your cat is likely to develop potentially serious dental problems. Dental disease starts with food residue, which hardens into tartar that builds up on the visible parts of the teeth, and eventually leads to infection of the gums and tooth roots. Protecting your cat against dental disease from the start by removing food residue regularly may help prevent or delay the need for advanced treatment of dental disease. This treatment can be stressful for your cat and expensive for you, so preventive care is beneficial all around. In severe cases of chronic dental infection, your pet may even lose teeth or sustain damage to internal organs. And, if nothing else, your cat will be a more pleasant companion not knocking everyone over with stinky cat breath! We'll show you how to keep your cat's pearly whites clean at home, and help you schedule regular routine dental exams.

### *Vaccine-Preventable Infections*

Like all cats, mixed breed cats are susceptible to bacterial and viral infections such as **panleukopenia**, **calicivirus**, **rhinotracheitis**, and **rabies**, which are preventable through vaccination. The risk of your cat contracting these diseases is high, so the corresponding vaccines are called "core" vaccines, which are highly recommended for all cats. In addition, vaccines are available to offer protection from other dangerous diseases like **feline leukemia virus (FeLV)**. In making vaccination recommendations for your cat, we will consider the prevalence of these diseases in our area, your cat's age, and any other risk factors specific to her lifestyle.

### *Parasites*

All kinds of worms and bugs can invade your friend's body, inside and out. Everything from fleas and ticks to ear mites can infest her skin and ears. Hookworms, roundworms, heartworms, and whipworms can get into her system in a number of ways: drinking unclean water, walking on contaminated soil, or being bitten by an infected mosquito. Some of these parasites can be transmitted to you or a family member and are a serious concern for everyone. For your feline



common disease risks for other cat breeds. Based on these similarities, the following disease risks may carry higher risk, although supportive research has not been identified.

### *FLUTD*

When your cat urinates outside the litter box, you may be annoyed or furious, especially if your best pair of shoes was the location chosen for the act. But don't get mad too quickly—in the majority of cases, cats who urinate around the house are sending signals for help. Although true urinary incontinence, the inability to control the bladder muscles, is rare in cats and is usually due to improper nerve function from a spinal defect, most of the time, a cat that is urinating in “naughty” locations is having a problem and is trying to get you to notice. What was once considered to be one urinary syndrome has turned out to be several over years of research, but current terminology gathers these different diseases together under the label of **Feline Lower Urinary Tract Diseases, or FLUTD**. Many of these diseases cause similar symptoms, for example, a cat with urolithiasis, or bladder stones, shows many of the same symptoms as a cat with a urinary tract infection, which may also present like the symptoms of a blocked tomcat. Watching for any signs of abnormal urination, like urinating on cool surfaces (a tile floor or bathtub, for example), blood in the urine, straining to urinate with little or no urine production, or crying in the litterbox can help you identify the first signs of a FLUTD. If your cat demonstrates any of these symptoms, call us right away for an urgent appointment. Particularly for male cats, if the urethra is blocked with stones or crystals, the cat is not able to expel any urine, which can become an emergency within only a few hours. The inability to urinate is painful and quickly fatal, so if your cat may be blocked, seek emergency care immediately.

Cats are very good at hiding how sick they are, so the early signs of FLUTD are easy to miss. Bringing your cat in for regular urinalysis testing allows us to check for signs of infection, kidney disease, crystals in the urine, and even diabetes. X-rays and ultrasounds can also help detect the presence of stones in the bladder or kidneys. Lower urinary tract disease can be controlled with medications and special diets, though severe cases of FLUTD may also require surgery.

### *Renal Failure*

**Renal failure** refers to the inability of the kidneys to properly perform their functions of cleansing waste from the blood and regulating hydration. Kidney disease is extremely common in older cats, but is usually due to exposure to toxins or genetic causes in young cats. Even very young kittens can have renal failure if they have inherited kidney defects, so we recommend screening for kidney problems early, before any anesthesia or surgery, and then regularly throughout life. Severe renal failure is a progressive, fatal disease, but special diets and medications can help cats with kidney disease live longer, fuller lives.

### *Hyperthyroidism*

The thyroid gland is located at the front of the throat, and has a very important function. It produces a hormone called thyroxine, or T4. Thyroxine regulates the overall speed of

friend, these parasites can cause pain, discomfort, and even death, so it's important that we test for them on a regular basis. Many types of parasites can be detected with a fecal exam, so it's a good idea to bring a fresh stool sample (in a stink-proof container, please) with your pet for her twice-a-year wellness exams. We'll also recommend preventive medication as necessary to keep her healthy.

### *Spay or Neuter*

One of the best things you can do for your cat is to have her spayed (neutered for males). In females, this procedure includes surgically removing the ovaries and usually the uterus; in males, the testicles are surgically removed. Spaying or neutering your pet decreases the likelihood of certain types of cancers and eliminates the possibility of your pet becoming pregnant or fathering unwanted litters. Both sexes usually become less territorial and less likely to roam, and neutering particularly decreases the occurrence of urine spraying and marking behaviors in males. Performing this surgery also gives us a chance, while your pet is under anesthesia, to identify and address some of the diseases your cat is likely to develop. For example, if your pet needs hip X-rays to check for **dysplasia** or a thorough dental exam to look for **stomatitis**, these procedures can be conveniently performed at the same time as the spay or neuter to minimize the stress on your cat. Routine blood testing prior to surgery also helps us to identify and take precautions against common problems that increase anesthetic or surgical risk. It sounds like a lot to keep in mind, but don't worry - we'll discuss all the specific problems we will look for with you when the time arrives.

## **Genetic Predispositions for Mixed Breed Cats**

### *General Disease Risks*

Some cat breeds seem to be predisposed to all the diseases. Other cats, like your mixed breed cat, are remarkably healthy, with little or no increased risk for inherited disease. In order to make preventive healthcare recommendations for these cat breeds, we generally make some educated guesses based on

metabolic processes throughout the body. Cells in every part of the body start to work faster when T4 levels in the blood rise; when T4 levels fall, the thyroid gland produces more T4, thereby continuously and closely regulating T4 levels in the body. Many middle-aged cats, however, develop a benign (non-cancerous) tumor in the thyroid gland. The cells that make up this tumor still produce T4, but their control mechanism is faulty. The normal feedback system that maintains a balanced T4 level in the body has no effect on these tumor cells, so that they continue to pump out T4 despite signals to stop. Cats with these tumors have their “go” switch permanently stuck in the “faster” position. This illness is termed hyperthyroidism. Typically, hyperthyroidism affects cats about ten to twelve years of age—the cat will become more active, but with a nervous energy that masks the true illness they are feeling. Vomiting, weight loss, and increased thirst are common symptoms of this disease, but they often come on so gradually that the problem is not easily noticed. In advanced cases, hyperthyroidism can lead to heart failure, kidney failure, and fatal blood clots. Hyperthyroidism can be readily detected with a standard blood test performed as part of your cat’s routine wellness plan. Today’s effective treatment options can actually cure the disease by killing off the abnormal tumor cells while leaving the normal thyroid cells undamaged, resulting in a normal life span for many affected cats.

### *Diabetes Mellitus*

**Diabetes mellitus** is a genetic disease that can occur in any cat breed. With some forms of diabetes, a cat will become diabetic regardless of other health problems. Other cats may have a susceptibility to diabetes, but will only become overtly diabetic if they are allowed to become overweight or eat a poor diet. If a cat’s weight and diet are managed appropriately, the risk for diabetes in your pet is much lower. Recently, indoor inactive lifestyles have caused a tremendous increase in the number of diabetic cats. Cats were not bred to be only window gazers, but the majority of feline pets live exclusively sedentary lives indoors. Keeping your indoor pet active with daily exercise is very important to keeping your cat slim and preventing illnesses related to weight gain. Diabetes can also be related to a painful condition called pancreatitis. Chronic pancreatitis, which is thought to be genetically inherited, can lead to damage of the cells in the pancreas that produce insulin, and therefore can lead to a diabetic state in the cat.

Symptoms of diabetes include weight loss despite a good appetite, excessive thirst, and increased urination. We will test for the disease at least once a year and more often as your cat ages. As with people, many diabetic cats do not need to receive insulin injections if they lose weight and switch to a high-protein, low-carbohydrate prescription diet. Because diabetes is thought to be a genetic predisposition in mixed breed cats, managing the type and quantity of food that your pet eats and incorporating exercise into your cat’s daily routine is essential!

### *Allergies/Atopy*

In humans, an allergy to pollen, mold, or dust makes people sneeze and their eyes itch. In cats it makes the skin itchy. We call this form of allergy “**atopy**.” Commonly, the legs, belly,

face, and ears are very likely to have this problem. Symptoms typically start between the ages of one and three and can get worse every year. Licking (over grooming) the affected areas, rubbing the face, and frequent ear infections are the most common signs. You may notice thinner or shortened hair in those areas or red, sore skin lesions. We will need to investigate the cause of the problem since food allergies and mites can cause similar signs. The good news is that there are many treatment options available for this condition.

### *Heart Disease*

**Cardiomyopathy** is the medical term for heart muscle disease, either a primary inherited condition or secondary to other diseases that damage the heart. The most common form, called hypertrophic cardiomyopathy, or HCM, is a thickening of the heart muscle often caused by an overactive thyroid gland. Another example is dilated cardiomyopathy, or DCM, which can be caused by a dietary deficiency of the amino acid taurine. While DCM was a big problem in the past, all major cat food producers now add taurine to cat food, so DCM is rarely seen in cats with high-quality diets today.

Catching signs of cardiomyopathy early is important, but a cat’s normal tendency to hide illness can make symptoms difficult to spot. The first thing a pet parent usually notices is rapid breathing, lethargy, and a poor appetite. These symptoms may appear to come on suddenly, often between a few hours to a few days, but in most cases, the cat has actually been suffering quietly for weeks to months and is now in serious trouble. In addition, HCM can cause blood clots to form inside the heart. These clots can then leave the heart and become lodged in the major arteries that transport blood to the rear legs. If this happens, the cat will suddenly lose the use of both rear legs and the tail—the legs will become cold to the touch and will seem extremely painful. In either case, whether rapid breathing or painful paralysis, the cat is experiencing a medical emergency, and needs immediate veterinary care.

For a few breeds of cats, genetic testing is available for a specific gene abnormality that causes HCM. Most cats with cardiomyopathy have a heart murmur that can be detected during a wellness physical exam, but a specific diagnosis requires more advanced medical imaging. Finding this problem early, when treatment is most effective, is another important reason to have your pet evaluated twice a year for life.

### *Feline Oral Resorptive Lesions*

**Resorptive oral lesions:** Resorptive oral Lesions, or RLs, are erosions of the enamel on the surface of teeth, at or below the gum line. About 70% of purebred cats and 40% of mixed breed cats get them, and if a cat has one RL there is a 72% chance the cat has or will develop additional ones. Tooth resorption begins as a small erosion in the enamel and over a short period of time, the lesions progress, growing larger and deeper, eroding more and more of the tooth. Once the enamel is eroded enough to expose the dentin layer underneath, they become painful. In fact, they become so painful, cats will often ‘chatter’ their lower jaw when their teeth are exposed to anything cold – food or air. The affected tooth may fracture, or

the gums may grow up onto the side of the tooth, and eventually the tooth will be lost. These lesions are very painful to your cat and should be treated promptly when found. That's why we recommend twice yearly visits to evaluate your pet. No one likes excruciating tooth pain!

## Taking Care of Your Mixed Breed Cat at Home

Much of what you can do at home to keep your cat happy and healthy is common sense, just like it is for people. Watch her diet, make sure she gets plenty of exercise, regularly brush her teeth and coat, and call us or a pet emergency hospital when something seems unusual (see "What to Watch For" below). Be sure to adhere to the schedule of examinations and vaccinations that we recommend for your pet. During your cat's exams, we'll perform her necessary "check-ups" and test for diseases and conditions that are common in mixed breed cats. Another very important step in caring for your pet is signing her up for pet health insurance. There will certainly be medical tests and procedures she will need throughout her life and pet health insurance will help you cover those costs.

### *Routine Care, Diet, and Exercise*

Build your pet's routine care into your schedule to help your mixed breed cat live longer, stay healthier, and be happier during her lifetime. We cannot overemphasize the importance of a proper diet and exercise routine for your pet.

- ✓ Supervise your pet as you would a young child. Keep doors closed, pick up after yourself, and block off rooms as necessary. This will help keep her out of trouble, off of inappropriate surfaces for jumping, and away from objects she shouldn't put in her mouth.
- ✓ She has a low maintenance short coat. Brush as needed, at least weekly for a healthy shine.
- ✓ Mixed breed cats have generally good teeth, and you can keep them perfect by brushing them at least twice a week!
- ✓ Check her ears weekly for wax, debris, or signs of infection and clean when necessary. Don't worry—we'll show you how!
- ✓ She needs daily play sessions that stimulate her natural desire to hunt and explore. Keep her mind and body active or she may develop behavior issues.
- ✓ Cats are meticulously clean and demand a clean litter box. Be sure to provide at least one box for each cat and scoop waste daily.
- ✓ It is important that your cat drinks adequate amounts of water. If she won't drink water from her bowl try adding ice cubes or a flowing fountain.
- ✓ Feed a high-quality feline diet appropriate for her age.
- ✓ Exercise your cat regularly by engaging her with high-activity toys.

### *What to Watch For*

An abnormal symptom in your pet could be just a minor or temporary issue, but it could also be the sign of serious illness or disease. Knowing when to seek veterinary help, and how urgently, is essential to taking care of your cat. Many diseases can cause cats to have a characteristic combination of symptoms, which together can be a clear signal that your mixed breed cat needs help.

#### Office calls

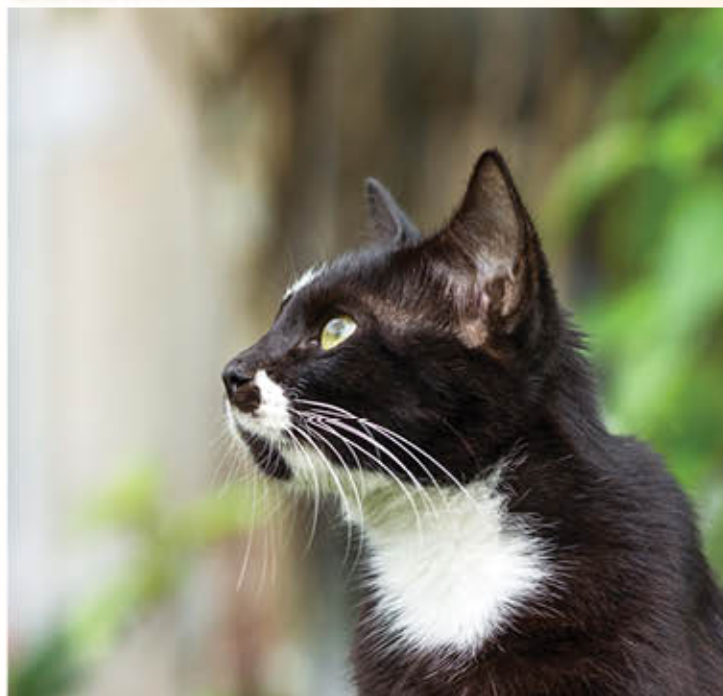
Give us a call for an appointment if you notice any of these types of symptoms:

- ✓ Change in appetite or water consumption
- ✓ Tartar build-up, bad breath, red gums, or broken teeth
- ✓ Itchy skin (scratching, chewing, or licking), hair loss, or areas of shortened fur
- ✓ Lethargy, mental dullness, or excessive sleeping
- ✓ Fearfulness, aggression, or other behavioral changes
- ✓ Poor appetite, weight loss, lethargy, increased thirst and urination
- ✓ Voracious appetite, weight loss, excessive thirst and urination
- ✓ Abnormal skin or coat, excessive grooming

#### Emergencies

Seek medical care immediately if you notice any of these signs:

- ✓ Scratching or shaking the head, tender ears, or ear discharge
- ✓ Cloudiness, redness, itching, or any other abnormality involving the eyes
- ✓ Inability or straining to urinate; discolored urine





- ✓ Weakness or exercise intolerance; rapid, labored, or open-mouth breathing; sudden-onset of weakness

## Partners in Health Care

DNA testing is a rapidly advancing field with new tests constantly emerging to help in the early diagnosis of inherited disease even before your cat shows symptoms. For the most up-to-date information on DNA and other screening tests available for your pal, visit [www.wisdompanel.com](http://www.wisdompanel.com).

Your Mixed Breed Cat counts on you to take good care of her, and we look forward to working with you to ensure that she lives a long and healthy life. Our goal is to provide you both with the best health care possible: health care that's based on your pet's breed, lifestyle, and age. Please contact us when you have questions or concerns:

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*References: Bell JS, Cavanagh KE, Tilley LP, Smith FW. Veterinary medical guide to dog and cat breeds. Jackson, Wyoming. Teton New Media; 2012. Gough A, Thomas A. Breed Predispositions to Disease in Dogs and Cats. 2nd Edition. Wiley-Blackwell; 2010. Feline Advisory Bureau.*

## Kitten to Adolescent Health Care Recommendations

How We'll Keep Your Mixed Breed Healthy	Kitten to Adolescent: Infant to 27 in People Years	(√)	Age	Services We'll Provide	Mixed Breed Cat-Specific Problems We're Looking For
		<input type="radio"/>	6–9 weeks	Head-to-tail physical examination Parasite detection/prevention Vaccinations Discuss socialization and at-home kitten care	Dental alignment, heart murmur, hernia
		<input type="radio"/>	10–13 weeks	Head-to-tail physical examination Parasite detection/prevention Vaccinations Discuss grooming basics	Breed-specific physical abnormalities
		<input type="radio"/>	14–16 weeks	Head-to-tail physical examination Parasite prevention Vaccinations Schedule spay/neuter surgery Discuss obedience	Breed-specific physical abnormalities
		<input type="radio"/>	4–6 months	Head-to-tail physical examination Skin and coat exam Pre-surgical diagnostics Spay/neuter surgery Discuss microchipping and declaw options	Breed-specific physical abnormalities plus Allergies
		<input type="radio"/>	6 months through 2 years	Head-to-tail physical examination Skin and coat exam Parasite prevention Vaccinations Discuss lifetime genetic considerations	Breed-specific physical abnormalities plus Allergies  All major diseases important in the breed with diagnostic plan

# Adult to Golden Years Health Care Recommendations

How We'll Keep Your Mixed Breed Cat Healthy	(✓)	Age	Services We'll Provide	Mixed Breed Cat-Specific Problems We're Looking For
	○	3 years through 6 years	<ul style="list-style-type: none"> <li>Head-to-tail physical examination</li> <li>Oral health assessment</li> <li>Heart health check</li> <li>Skin and coat exam</li> <li>Internal organ health evaluation</li> <li>Parasite prevention</li> <li>Vaccinations</li> <li>Discuss behavior and nutrition</li> </ul>	<ul style="list-style-type: none"> <li>Breed-specific physical abnormalities plus</li> <li>Feline odontoclastic resorptive lesions (FORL)</li> <li>Hypertrophic cardiomyopathy (HCM)</li> <li>Allergies</li> <li>Feline lower urinary tract disease (FLUTD)</li> </ul>
	○	7 years through 10 years	<ul style="list-style-type: none"> <li>Head-to-tail physical examination</li> <li>Oral health assessment</li> <li>Heart health check</li> <li>Skin and coat exam</li> <li>Internal organ health evaluation</li> <li>Endocrine screening</li> <li>Parasite prevention</li> <li>Vaccinations</li> <li>Discuss mental and physical well-being</li> </ul>	<ul style="list-style-type: none"> <li>Breed-specific physical abnormalities plus</li> <li>Feline odontoclastic resorptive lesions (FORL)</li> <li>Hypertrophic cardiomyopathy (HCM)</li> <li>Allergies</li> <li>Feline lower urinary tract disease (FLUTD) and Kidney failure</li> <li>Diabetes mellitus</li> </ul>
	○	11 years and older	<ul style="list-style-type: none"> <li>Head-to-tail physical examination</li> <li>Oral health assessment</li> <li>Heart health check</li> <li>Skin and coat exam</li> <li>Internal organ health evaluation</li> <li>Endocrine screening</li> <li>Bone and joint exam</li> <li>Parasite prevention</li> <li>Vaccinations</li> <li>Discuss mental and physical well-being</li> </ul>	<ul style="list-style-type: none"> <li>Breed-specific physical abnormalities plus</li> <li>Feline odontoclastic resorptive lesions (FORL)</li> <li>Hypertrophic cardiomyopathy (HCM)</li> <li>Allergies</li> <li>Feline lower urinary tract disease (FLUTD) and Kidney failure</li> <li>Hyperthyroidism and Diabetes mellitus</li> </ul>

Note: We recommend twice-a-year examinations so that we may diagnose problems sooner. This approach also gives you the budget-friendly option of spreading preventive testing over two visits rather than one.