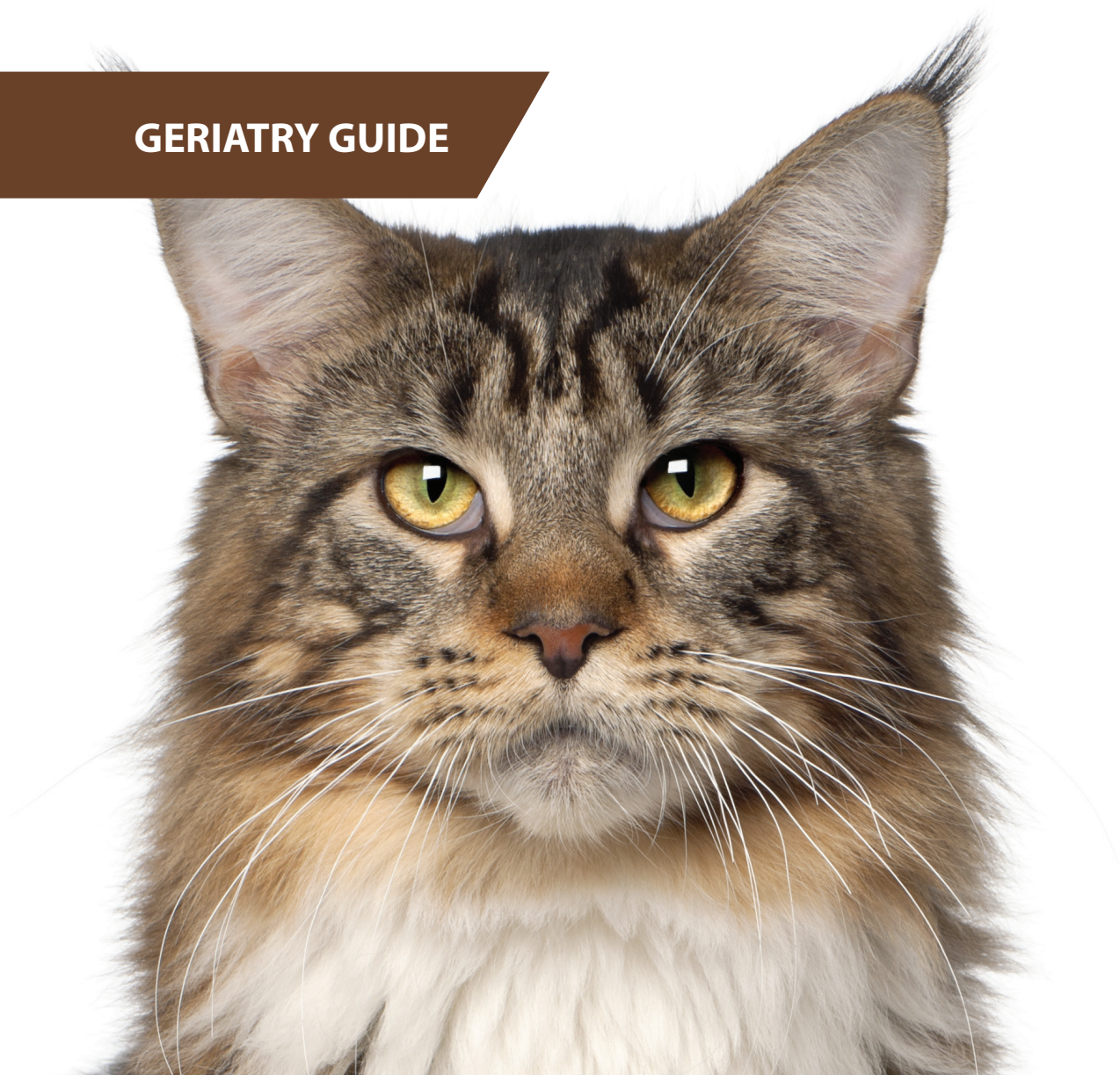




Groupe Vétérinaire MONVET Inc.

GERIATRY GUIDE



GERIATRICS

How old is my cat?

	Cat's age	Human age
Teenager < 1 year 15 years	1	15
	2	24
	3	28
	4	31
	5	35
Adult 1 to 8 years 15 to 45 years	6	38
	7	42
	8	45
	9	49
	10	52
Senior 9 to 14 years 49 to 66 years	11	56
	12	59
	13	63
	14	66
	15	70
	16	74
	17	78
	18	82
	19	86
	20	90

Preventive care

Since cats are "programmed" to hide their weaknesses, owners often do not notice the symptoms of diseases before they are much advanced.

Therefore, a cat that "looks" healthy is not necessarily so. The best way to find out if he really is healthy and to keep him that way for as long as possible is to take him regularly to the veterinarian, early on, to receive preventive care.

Preventive care is very important:

- to avoid many diseases;
- to identify diseases soon after their onset so that we can act quickly. This improves our chances of getting the cat cured or, at least, of slowing down the progression of his disease(s).

Life expectancy

Human life expectancy has increased considerably compared to the beginning of the 20th century. Today, cats also live longer than before, on average 14 years more. Their life expectancy has increased thanks to:

- **the improvement in their nutrition's quality.** Indeed, it is a proven fact that healthy food extends life expectancy;
- **research.** It leads to important discoveries about veterinary diseases and their treatment;
- **diseases being detected faster.** Today, very good diagnostic tests are available for animals;
- **disease prevention** through vaccination, administration of antiparasitic medications, sterilization, etc.



GERIATRICS

Remember that all that is done for a cat while he is young will have an impact on his health and quality of life later.

Preventive care should include the following:

- a physical exam once a year before the age of 7, then twice a year;
- a geriatric profile twice a year from 7 years old;
- a stool test at least once a year to detect intestinal worms, for cats that go outside;
- Feline leukemia (FeLV) and Immunodeficiency virus (FIV) screening at the time of adoption and every year;
- other tests as needed;
- vaccination and deworming adapted to the cat's lifestyle;
- food adapted to his age and needs;
- sterilization between 3 and 6 months old;
- daily dental care at home;
- teeth cleanings done in the clinic regularly.

Why do a physical exam twice a year after 7 years old?

Because after that age, cats age about 3-4 "human years" each year and some diseases develop very quickly. By examining them more often, we are less likely to miss illnesses that could have been treated if they had been detected soon after they had appeared.



What is included in a geriatric profile?

- **A hematology.** This test can detect infections, anemia, certain types of cancer and immune and clotting problems;
- **A biochemistry.** This test can identify changes in the liver, kidneys, proteins in the blood, electrolytes (potassium, sodium, chlorine), glucose, calcium, etc.;
- **An urinalysis.** This test checks the kidneys' ability to concentrate urine and identifies the presence of sugar, bacteria, inflammatory, kidney or tumor cells, and crystals.
- **A T4 Snap test.** This test verifies the thyroid gland's function.

Did you know that ...

Older cats' immune systems are less effective in protecting them against viruses, bacteria and parasites than young adults? Vaccination and deworming are therefore even more important for old cats.

Can old cats be anesthetized?

The answer is yes! However, certain precautions should be taken to minimize the risk of complications during anesthesia. This risk is higher in geriatric patients because their organs do not work like they used to. Therefore, they metabolize and eliminate anesthetic drugs differently.

The following procedures are important with any general anesthesia, and even more so in older cats. Indeed, every old cat should:

- be examined by a veterinarian before being anesthetized;
- have a geriatric profile done;
- undergo further testing if necessary;
- have an IV line set up;
- receive intravenous fluids.

GERIATRICS

Physical examination and tests help us determine if the animal can be safely anesthetized or if further examinations and measures need to be taken before. The tests also make it possible to adapt the choice and doses of anesthetic drugs to each patient.

For example, if a heart murmur is heard during auscultation, we might recommend that a cardiac ultrasound be performed to check whether the murmur is caused by a heart disease or not. We would also make sure to choose drugs that are known to be safer to use in cats with heart diseases.

The IV line provides constant venous access during anesthesia. Thus, in an emergency, medications can be administered quickly.

Finally, intravenous fluids help keep cats well hydrated during the procedure. They also help maintain their blood pressure normal so that the blood circulates well in their organs.

Old age is not a disease!

Cats' behavior tends to change with age. Contrary to popular belief, these changes do not happen simply because they are getting older. In most cases, there are physical and/or mental causes involved. Furthermore, some seemingly physical problems are actually mental problems, and vice versa.



An old cat might pee outside his litter box because he:

- has a disease that makes him pee more;
- has joint pain and has difficulty climbing over the box's walls;
- suffers from cognitive dysfunction syndrome (the equivalent of Alzheimer's disease in humans).



An old cat might lose weight because:

- his bad teeth make eating painful;
- he is sick and not hungry;
- he suffers from hyperthyroidism, which makes him lose weight even though he eats a lot;
- he suffers from cognitive dysfunction syndrome, which makes him forget to eat.



An old cat might get bigger because:

- he eats too much;
- he is constipated;
- has liquid or a mass growing in his abdomen;



An old cat might sleep more because he:

- is in pain;
- has cancer or is sick from another disease;
- has poor dental health;
- suffers from cognitive dysfunction syndrome.

GERIATRICS



An old cat's appetite might be decreased because he:

- is in pain;
- has cancer;
- is sick;
- has poor dental health;
- suffers from cognitive dysfunction syndrome.



An old cat might be suddenly aggressive because:

- he is in pain;
- he has a brain tumor;
- his vision/hearing is impaired: he didn't see/hear you coming towards him;
- suffers from cognitive dysfunction syndrome.



An old cat might drool a lot because he:

- has lesions in his mouth (eg. dental abscess, periodontal disease, tooth fracture);
- is nauseous;
- is in pain.



An old cat's coat might be dull, dry, or greasy because he:

- has a skin condition associated with a hormonal disease (eg. hyperthyroidism);
- is sick;
- has back pain, which prevents him from grooming properly;
- is obese or too thin.



An old cat might meow more because he suffers from:

- a disease that makes him vocalize (eg. hyperthyroidism);
- a disease that makes him hungrier (eg. diabetes);
- cognitive dysfunction syndrome.



Jumping up might be difficult for an old cat because he:

- is sick and weak;
- suffers from diabetes, which causes muscle weakness;
- has arthritis.

Has your old cat changed? Do you want to know if the symptoms he is showing could be caused by a physical and/or mental geriatric illness? Go to the « **symptoms of geriatric disease** » section at the end of this guide and fill out the questionnaire!

AGING: "PREDICTABLE" CONDITIONS

Pain

Pain is in affliction with which many old cats live. Would you notice it if yours was in pain?

Contrary to popular belief, cats do not complain when they are hurting. Rather, they tend to be less active, sleep more and eat less. They can sometimes even become aggressive.

Which of the cats below do you think is in pain? The one that:



A

Stands with his back arched, his legs stiff, his ears down and his eyes half closed.



B

Is lying on his side with his ears down and his eyes half closed.



C

Becomes aggressive when touched.



D

Keeps his head and ears down, with an imaginary line linking the middle of his eyes to his nose forming a V.

AGING: "PREDICTABLE" CONDITIONS

Loss of senses

As they get older, cats often see, hear and smell less than before. Losing the senses of eyesight, hearing and smell impacts significantly their quality of life.

When they can no longer see/hear well, cats lose their bearings. They can become anxious and overreact to stimuli.

The loss of smell, on the other hand, directly affects their health. Indeed, a cat can lose interest in food if he can't smell it anymore and become sick.

Here are some tips to help your old cat who has lost the sense of:

Vision:

- Get his attention by calling, trample on the floor or tapping a table to create vibrations before you approach him;
- Continue to speak to him quietly while slowly getting closer;
- Do not move objects or furniture around.

Hearing:

- Get his attention by gently waving your arms before approaching him;
- Trample on the floor or tap the table;
- Make sure he looks at you before touching him.

Smell:

- Give him canned food;
- Enhance the flavor of his food: heat it in the microwave for a few seconds, add a little bit of warm water to it, sprinkle Fortiflora® on it or add salt-free chicken broth to it (unless he has food allergies).

Do you think your pet sees, hears or smells less than before? Talk to one of our veterinarians: he or she will be able to determine whether you are right or not.



AGING: "PREDICTABLE" CONDITIONS

Dental problems

Everyday, plaque and tartar build up on cats' teeth and trap bacteria present in the mouth. Those bacteria cause inflammation and infection, gingivitis and, possibly, periodontal disease (destruction of the tissues surrounding the teeth). This disease leads to premature teeth loss and to other diseases.

Daily care of cats' teeth, starting when they are very young, is essential throughout all their lives. Teeth brushings, dental foods, dental gels, water additives, etc., and regular teeth cleanings in the clinic are the best ways to keep your cat's mouth healthy long-term.

The only effective way to treat periodontal disease is to perform a teeth cleaning and to remove affected teeth. Before the procedure, or if it is not an option, it is best to avoid brushing and giving dental kibbles that could worsen the pain. However, dental gels or water additives can still be used to reduce the amount of bacteria in the mouth and improve the breath's smell.

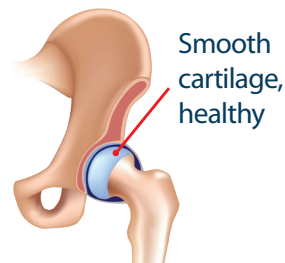
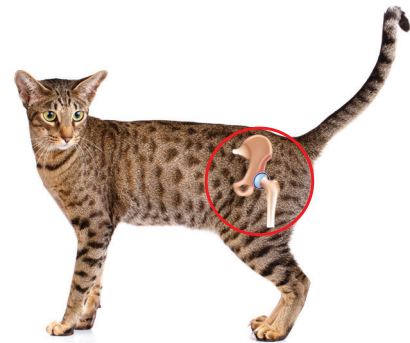


Cats often lose their appetite when they get old. Although this might be caused by a serious illness, it might also simply be the result of poor dental health, which can be prevented with proper dental hygiene.

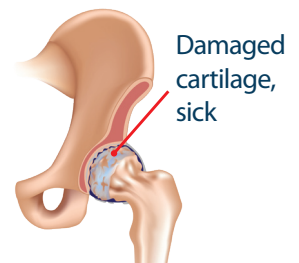
Osteoarthritis

Just like humans, aging cats often suffer from osteoarthritis. This is an inflammatory condition that causes articular cartilage deterioration. This chronic, progressive and permanent joint disease is painful and creates lameness.

Anti-inflammatory drugs and painkillers can help improve their comfort. Commercial food made for joint problems and various over-the-counter products are also available to help slow the joints' degradation and to decrease the amount of drugs required to control the pain.



Normal
hip



Osteoarthritic
hip

AGING: "PREDICTABLE" CONDITIONS

Skin aging

Young skin easily:

- replaces dead cells with new cells;
- stays hydrated;
- prevents entry of bacteria, chemical irritants and allergens.

With age, the skin is less efficient at performing these functions. As a result, it becomes drier or more oily, the coat loses its luster, dandruff and dander build up, etc. The skin also allows bacteria and toxins to enter more easily, which can lead to skin infections.

There are foods that can help restore the integrity of the skin as well as over-the-counter products : shampoos, conditioners, topical solutions, dietary supplements, etc.



Cognitive dysfunction syndrome

Cognitive dysfunction syndrome is a degenerative and progressive neurological disease that causes older cats' cognitive skills to deteriorate. It is the equivalent of Alzheimer's disease in humans. Manifestations of this syndrome include disorientation (eg. confusion, wandering) and changes in:

- social interactions with humans and other animals in the house;
- sleep patterns;
- elimination habits (ex. urine puddles and feces outside the litter box, etc.

Once again, medications and over-the-counter products can be used to help slow down cats' cognitive function deterioration, as long as their symptoms are detected and treated quickly after their onset.



QUALITY OF LIFE

Old cats' quality of life also tends to deteriorate with age. Fortunately, we can improve it in many ways by:

- providing them with good quality food adapted to their needs;
- making it easier for them to move around and by increasing their comfort;
- making them exercise;
- treating them with specific medications and • over-the-counter products;
- using ancillary therapies.

Nutrition

Old cats' nutrition must take into account the changes associated with aging: a slower metabolism, a reduced activity level, a less efficient immune system, etc. Sick old cats should eat therapeutic food prescribed by a veterinarian specially for their disease. Compared with adult maintenance food, food for healthy old cats should:

- **contain high quality, highly digestible proteins:**

Because as they get older, some cats' ability to digest proteins decreases and they lose muscle mass;

- **contain as many calories:**

Caloric needs of old cats are the same as adults'. However, some very old cats need more calories to keep their weight optimal.

- **contain the same amount of fat:**

Except for cats predisposed to obesity. They should eat food with less fat.

- **contain antioxidants:**

To limit dead cell degradation by free radicals (reactive oxygen derivatives). This normal process is essential for the body to work properly, but over time affects also healthy living cells, thus contributing to organ aging, including the brain.

- **contain high levels of fatty acids:**

To help slow down the osteoarthritis process, to maintain a good kidney function and to limit damages caused by free radicals.

Environment

Here is how you can set up your old cat's environment to "make life easier" for him and improve his comfort:

- Put a small staircase next to the bed or sofa;
- Do not move objects or furniture if his eyesight is impaired;
- Use a shallow litter box that he can easily climb in. Or else, use a board as an access ramp.



Exercising

Exercising is beneficial for older cats because it:

- helps them lose weight and keep a healthy weight;
- increases the mobility and flexibility of their joints;
- develops their muscle mass, which then better supports their joints;
- increases the production of endorphins (natural painkillers produced by the body);
- stimulates them mentally and helps keep them sharp.



In general, exercises that cause strong impacts on the joints should be avoided (eg. jumping in the air and landing roughly, running back and forth with sudden starts and stops, etc.). By creating an overload on the joints, these types of exercises can worsen osteoarthritis.

Moderate weight bearing exercises are better: cat teasers, exercise wheel, feeding toys, etc.

The exercise program must be adapted to each animal according to his condition and preferences. It is also very important not to force cats to exercise during periods of severe pain because it might get worse.

Medication

Many drugs are available to treat a variety of illnesses in older cats. They can either eliminate the disease completely (eg. antibiotics for a urinary tract infection) or control the symptoms (eg. Insulin for diabetes, anti-inflammatory drugs and painkillers for osteoarthritis, etc.).

Over-the-counter products

In recent years, veterinary medicine and animal care have evolved considerably. Before, we treated diseases and conditions in old cats only with prescription drugs. Now the veterinarian can recommend complementary over-the-counter products. As mentioned before, those are useful to help treat many conditions.

Unless he or she says otherwise, it is important to use those made specifically for animals. Indeed, human products available in drugstores may seem identical, but most are not suitable for the specific needs of cats. After all, they are not little humans!



QUALITY OF LIFE

Omega fatty acids

These molecules are present in cell membranes. Although they are necessary for good cellular function, they also are involved in causing inflammation. There are 2 types of omega fatty acids: 3 and 6. Cats get them solely from food: their bodies do not produce them. Normal cats need about 5 times more omega-6 than omega-3.

When there is inflammation, these proportions change. For example, cats with osteoarthritis need as much, if not more, omega-3 than omega-6. Commercial articular diets usually contain enough omega-3. If this is not the case, omega-3 nutritional supplements can be added to the diet.

Omega-3 fatty acids are also beneficial for other organs, including the skin, the immune system, the heart, the kidneys and the brain. Fish oils, flaxseed oil and green mussel extract, among others, are rich in omega-3 fatty acids.

If you are interested in giving these products to your cat, please talk to a veterinarian first. To make sure your companion gets the right amount.



Chondroprotective agents

Chondroprotective agents (protectors of articular cartilage) are products used to help treat cats with osteoarthritis. They protect the joints from damage caused by inflammation by:

- stimulating the production of articular cartilage components;
- increasing the viscosity of the articular fluid, which better lubricates the joint;
- reducing cartilage breakdown;
- improving blood circulation in the joints.

Glucosamine and chondroitin are examples of chondroprotective agents found in commercial foods and in over-the-counter products. They are also found in New Zealand green mussel extract, devil's claw, cat's claw, collagen hydrolyzate, turmeric, ginger, green tea, methylsulfonylmethane (MSM), pine bark extract, rosehip fruit powder, rosemary, etc.



Pentosan polysulfate (Cartrophen®) is another chondroprotective agent. It is available, with a prescription, as an injectable solution.

Antioxidants

Free radicals produced by the cells' metabolic activity are normally neutralized by the body's natural antioxidants. In the presence of inflammation, many free radicals are not neutralized and cause cell damage. Antioxidant supplements (eg. methionine and vitamin E) are therefore very useful in any inflammatory condition.

Ancillary treatment

In addition to medications and over-the-counter products, there are now less conventional treatments available to help manage several geriatric conditions, including osteoarthritis.

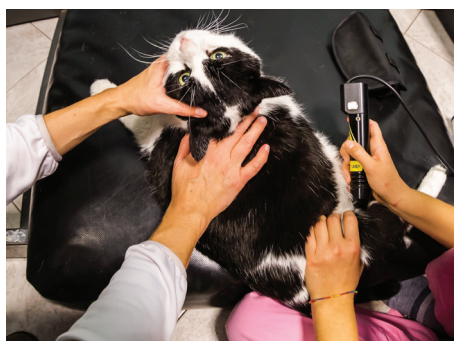
Physiotherapy

Physiotherapy is particularly indicated for treating osteoarthritis. It consists of alternatively flexing and extending joints manually, a few times in a row. Those passive movements are beneficial because they help keep the joints flexible while avoiding painful muscle contractions.



Therapeutic laser

A therapeutic laser is a device that uses a probe to project a light beam. This light improves blood circulation and energy production by the cells in the treated area. As a result, inflammation and pain decrease.



Thermotherapy

Thermotherapy for joint disease consists in applying heat or cold on the joints. During the active phase of inflammation, cold is used (eg. Ice packs, frozen peas bag, etc.). Between the active phases of inflammation, heat is used (eg. Magic bag®).

Osteopathy

Osteopathy uses various gentle manipulation techniques to detect and relieve blockages in soft tissues, organs, muscles and bones.

In addition to being useful for osteoarthritis, this ancillary treatment is indicated for several other acute and chronic musculoskeletal disorders (eg. lameness, back pain, kneecap dislocation, muscle stiffness, etc.)

Acupuncture

Acupuncture is a technique that comes from traditional Chinese medicine. Following a network of meridians, specific points in the body are stimulated with special needles. The network is made of small electrical circuits spread on the surface of the body.

Acupuncture has anti-inflammatory and analgesic effects. In addition, it activates blood and lymphatic circulations, stimulates the nervous system and strengthens the immune system.



QUALITY OF LIFE

In a word

We hope this guide has convinced you of how important it is to pay attention to the smallest changes in behavior in your old four-legged friend. Those might be clues to a disease that could possibly be treated, and not just be signs of aging.

Even better! Have him checked regularly while he's doing great. That way, we might be able to act before symptoms appear. We could perhaps even avoid the onset of certain diseases. If not, at least we might be able to slow down their progression.



SYMPTOMS OF GERIATRIC DISEASES

Is your cat showing symptoms of a geriatric disease? Please check the situations below which apply to him. Then talk to one of our veterinarians about it.

Appetite / Thirst / Weight

- He eats more ☐ less ☐
- He drinks more ☐ less ☐
- He gained weight ☐ lost weight ☐

Breathing

- He breathes with his mouth open ☐
- He pants a lot ☐
- He coughs ☐
- He makes noises while breathing ☐

Elimination:

- He urinates more ☐ less ☐
- He urinates/defecates outside his litter box ☐

Mobility

- He has difficulty:
 - going up or down the stairs ☐
 - jumping ☐
 - getting up ☐
- His legs are stiff when walking ☐
- He limps ☐
- He staggers ☐

Sleep

- He sleeps more ☐ less ☐
- He sleeps during the day and is awake at night ☐

Behavior

- He is more active ☐ less active ☐
- His body shakes ☐
- He walks around in circles ☐
- His movements are repetitive ☐
- He seems confused ☐
- He meows more ☐ less ☐ for no apparent reason ☐

Skin/eyes

- His coat is dry, dull and / or oily ☐
- He seems blind ☐
- His eyes are cloudy ☐

Mouth

- He drools a lot ☐
- He has bad breath ☐
- He chews more on one side than on the other ☐
- He swallows his food whole ☐
- He drops his food on the floor ☐





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