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### The tender senior years

Increasing numbers of our cats are living longer, and face challenges brought on by their accumulated years. Many behavioural changes are common in older cats, such as weeing outside the litter box or yowling at night. Often conditions are disregarded or ignored as “old age”, but it is important to read on so you know what to look out for in your older cat so you can help to keep them well and comfortable, for as long as possible. It is also helpful to know what is normal for your cat NOW, regardless of their age, so you have a baseline to compare to. How much time are they sleeping, resting, eating, playing etc.? Start that spreadsheet for your highly individual cat(s).



**Osteoarthritis (OA)** is an often unacknowledged condition in old cats, yet over 60% of cats over 6 years of age (Clarke et al 2005) have radiographic evidence of arthritic change, most commonly in the elbows, hips, stifles, tarsus and shoulders. Arthritis can be easily overlooked because it creeps up subtly, is often bilateral, and cats are clever at modifying their lifestyle rather than showing obvious discomfort. The pain and immobility of OA can lead to many changes in your cat's behaviour, including decreased activity (less time playing or hunting and more time resting), less mobility (difficulty in jumping and climbing), lameness, increased aggression (particularly to other cats, children or when being picked up), altered interaction with family (avoiding play, escaping to avoid being picked up, or hiding), anxiety, increased vocalisation, reluctance to use the cat flap and loss of litter box training. Cats may find it hard to groom, resulting in a poor and unkempt coat, and can have difficulty squatting to go to the toilet, resulting in constipation or toileting outside the litter tray. Weight loss may be a sign if they are unable to reach food placed in a high position. It is also important to remember that they will be unable to avoid dogs or other dangers (closing doors), so it pays to make sure they have a bell on their collar so you know where they are, and look out for them.

Moving water bowls, food bowls and litter boxes to easily accessible places is the first thing to consider. Cats with sore necks or forelegs might appreciate the bowl being placed on a book to slightly elevate it. Providing ramps to the favoured sleeping areas and offering deep, comfortable beds to support and protect joints will be greatly appreciated. Heated resting areas will be even better! Low-sided litter boxes will also make it easier for your cat to get in and out.



As your cat will not be as active, it is important to regularly check their claws and make sure they're not getting overgrown and uncomfortable (clicking on floors and getting caught in carpet).

OA can be diagnosed by your vet by doing a physical examination and taking X-rays. Chat to your vet about safe use of non-steroidal anti-inflammatories in your older cat. Sometimes it is hard to know how much discomfort

they are in until they go on a trial of pain relief and you may see a major difference in their behaviour. Specialised diets can also help significantly (read on for more on that).

**Hypertension, or high blood pressure**, is often seen in older cats and can cause night-time crying, disorientation, circling and occasionally, seizures. Blood pressure evaluation is recommended as part of your older cats regular check-up. As high blood pressure can cause changes to the eyes, these should also be examined. Anti-hypertensive drugs are available for cats and can minimise long-term damage. High blood pressure is often secondary to other diseases such as chronic kidney disease, hyperthyroidism and diabetes.

**Chronic kidney disease and urinary tract infections** cause symptoms such as increased weeing, discoloured urine or pain on urinating. Kidney disease can also cause nausea, vomiting, loss of appetite and weight loss. Secondary dehydration can cause clinical signs such as confusion and depression. Any symptoms such as those require prompt veterinary attention and will be diagnosed by urine testing, blood sampling and ultrasonography. Straining to urinate without passing anything is a medical emergency. Management will depend on the diagnosis and severity of the condition, but feeding wet (tinned) food is a great way to help your cat stay hydrated and keep the urine dilute. Slightly warming the food can also increase the flavour appeal. Encourage water intake by using bottled water or adding some unsalted and onion-free chicken/meat stock.

**Dental disease** can creep up on your cat unnoticed. Gum infections (gingivitis) can cause ulcers, jaw bone infection, tooth loss and is obviously painful. As a result, affected cats may dribble, have bad breath, trouble picking up their food and chewing it, or go off their food and lose weight. They will be more prone to infections in other parts of the body as the bacteria can get in their blood stream. Regular check-ups (6 monthly or yearly) from your veterinarian should detect problems before they become serious, and to advise when a “clean up” under anaesthetic is required. Regular short anaesthetics to descale and polish the teeth will prevent advanced disease, and are much safer than one long anaesthetic to remove teeth due to advanced periodontal disease. Chewing on raw bones and specially designed teeth cleaning foods (eg Hills T/D® and Greenies®) can also help reduce tartar build up on teeth.



If your cat is losing weight, always hungry and meowing more than usual, they may have a condition called **hyperthyroidism**, meaning one or both thyroid glands have become overactive in the production of thyroid hormones. This causes an increase in metabolism, so the heart pumps harder and faster and high blood pressure can also result. Thyroxin effects on the brain can cause agitation, restlessness and aggression. Hyperthyroidism can be diagnosed by a blood test and can be managed a variety of ways which your veterinarian will explain. Hyperthyroid cats need careful management and monitoring for secondary problems. Poorly managed cases can become disoriented and lose their balance and develop thiamine deficiency (resulting in dilated pupils and a “floppy” head).

**Loss of certain senses** occurs with age. The loss of the sense of smell and taste will contribute to a decreased appetite. Progressive blindness is often coped with quite well by cats, but deafness seems to be more problematic, with the cats sleeping very soundly and but will startle easily when touched, and meowing more loudly. Sensory loss can also place them in dangerous situations with traffic.

As if the above conditions aren't enough, older cats are more at risk of **cancer, diabetes mellitus, inflammatory bowel disease, pancreatitis and liver disease**. These conditions may present in a variety of ways, but any deviation from normal in your cat's appearance, body weight, appetite (increase or decrease), thirst and toileting habits warrants investigating as they may be the first indicators of a treatable disease.

## Cognitive Dysfunction Syndrome

Behavioural changes aren't always caused by a medical condition and may well be an indicator of another age-related condition often ignored in cats; **cognitive dysfunction syndrome (CDS)**. Senior moments such as the odd sign of confusion as to where the cat flap has gone might be slightly amusing; however it is worth noting that these cats can get very stressed and disturbed. Part of our duty of care is to protect them from mental anguish just as it is to keep them physically comfortable. CDS is primarily caused by a combination of reduced blood flow to the brain, and free radical damage to brain cells. A survey looking at older cats (7-11 years of age) revealed that 36% of owners reported behavioural problems in their cats (Landsberg 1998), and this increased with age to 88% in cats between 16-19 years of age. Symptoms include memory loss (of toilet training or when last fed), irritability, anxieties, aggression, attention-seeking behaviour or reduced responsiveness to family members, disorientation (such as getting trapped in corners), altered sleeping patterns and excessive vocalising. As you have read, these symptoms are similar to those of arthritis and other conditions, which is why your cat needs a thorough medical check-up before CDS can be diagnosed (by excluding other causes). CDS is not curable, but there are things that can be done to decrease the stress your confused cat may be experiencing, and ways to slow progression of CDS.

Trials are showing that anti-oxidants can be very helpful, however there are no registered supplements available for cats, and do not give preparations made for dogs as they can contain substances that are toxic to cats ( $\alpha$  lipoic acid). Some diets designed to ease arthritic pain and reduce joint damage (Hills Feline J/D®, Nestle Purina Pro Plan senior 11+®) have a high content of anti-oxidants and essential fatty acids, and have been proven to significantly improve cognitive (brain) function in elderly cats (as well as ease arthritic symptoms).

The other valuable thing you can do is give your cat more to do! The old saying "use it or lose it" applies to all species including humans and cats. Environmental enrichment can increase nerve growth factors and brain cell survival. You can provide more toys (and rotate them daily so they don't get used to them), ramped access to window views, plenty of company and interaction (if they want it), and food hunting games for your cat.



Be aware though, if your cat has significant signs of CDS, they may not cope well with changes made to their environment, routine, diet or members of the household and may show stress by hiding, anorexia, or worsened signs of CDS. These cats may do better if confined to a few rooms of the house that stay safe and constant. If change is introduced, it should be gradual and done with lots of encouragement.

A pheromone-based product called Feliway® (Ceva) may be of benefit in reducing anxiety, (this just gets plugged into a power point and diffuses through your house). Vitamin E supplementation as an antioxidant, non-steroidal anti-inflammatories to protect neurons, and anti-anxiety medications may also help your cat. It would be of value to talk to your vet about these options.

## Preparing for the end

As your cat ages and quality of life is in question, you may ask “how do I know when the time has come?”

One suggestion is to consider what your cat enjoys doing when well, and review what has changed (Scherk 2008). An emergency contact is essential in case of sudden deterioration in their condition, and it helps to have a copy of their latest blood results and treatment on hand. Euthanasia is a kind and compassionate ending. Despite knowing this, it will also be quite normal to cry, laugh, feel grief, guilt, anger, uncertainty and emptiness, all at once or one at a time, for days or weeks. Life is not easy, and ending it is harder still. To grieve is a tribute to the love you feel and a reflection of the depth and complexity of your wonderful relationship with your dear geriCATric.

<b>Mobility / Cognitive Dysfunction Questionnaire*</b>			
<b>My cat ...</b>	<b>Yes</b>	<b>Maybe</b>	<b>No</b>
Is less willing to jump up or down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Will only jump up or down from lower heights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shows signs of being stiff at times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is less agile than previously	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shows signs of lameness or limping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has difficulty getting in or out of the cat flap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has difficulty going up or down stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cries when picked up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has more accidents outside the litter tray	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spends less time grooming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is more reluctant to interact with me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plays less with other animals or toys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sleeps more and/or is less active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cries out loudly for no apparent reason	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appears forgetful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*Ensure there have been no environmental reasons for the change(s).

It can be difficult to differentiate between many of the changes caused by CDS and/or other behavioural/neurological diseases in old cats, and those caused by OA. In addition, it is not unusual for an individual cat to have multiple interacting conditions. This table is copied from Behavioural Problems in Older Cats by Danielle Gunn-Moore, professor of Feline Medicine, University of Edinburgh, with permission.

Some useful websites:

[www.catvets.org](http://www.catvets.org)

[www.fabcats.org](http://www.fabcats.org)

<http://www.thecatclinic.com.au/medical-health-info/>

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