



Feline Fear and Anxiety



Fear and anxiety disturbances are sadly quite common among domestic cats. Our feline friends can often suffer significant fear and anxiety problems, just like some humans and dogs. These issues impair their functioning, health, quality of life, welfare and longevity. Fear and anxiety in cats may manifest behaviours that are very challenging, frustrating or dangerous for us as their human counter-parts. In fact, fear and anxiety in cats can lead to behavioural issues such as anti-social behaviour or “inappropriate urination” and are a leading cause and contributing factor to surrender and euthanasia. It is important that we are able to recognise normal and abnormal behaviour in our cats. We must understand them as a species and understand their needs as individuals if we are to live harmoniously with them. We need to be equipped to notice when they are struggling with their mental health so that we can intervene and give them the help they require.

Cats, as opposed to dogs, are only considered “semi-domesticated”. Cats have been only minimally or mildly modified in regards to physical, behavioural and social characteristics from their wild ancestors. The “domestication” or perhaps more accurately, the “co-habitation” of cats with humans, came about as we moved from a hunter-gathering life-style to an agrarian life-style. Agriculture and the storing of food led to inevitable problems with rodent infestations. This then brought the cats, who were welcomed as low-maintenance pest controllers. As we humans progressed, we only ever asked that cats hang around on the periphery of our society and aloofly address our rat and mouse problems. Thus we developed a loose and somewhat distant but mutually beneficial relationship between our two species.

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In contrast, dogs were selectively bred and dramatically genetically altered to fulfil certain purposes. They were invited to share our food, shelter and family lives more intimately. Cats have always been less reliant on us and us on them. The bodies and brains of cats have been far less remodelled by human intervention than those of dogs. This is worth remembering as it often underpins the conflicts and misunderstandings we have with cats.

Cats as a species are both predator and prey in their natural evolutionary setting. They can be very prone to fear and anxiety due to their genetic inheritance as a prey species. Cats are all individuals of course and there is a broad spectrum of temperaments and personalities among them. However, as a general observation, cats do not cope well with change. They are a species who chooses to occupy a particular set territory and tend to have fairly set social relationships. They are not very optimistic or resilient when it comes to environmental or social change once they have moved beyond their social maturity phase of development. They do not usually tolerate introduction to new places or new cats without experiencing a significant amount of stress. Some cats are “neophobic” which means they are highly fearful of anything novel or unfamiliar and very easily startled by anything unexpected. Hence the online video craze of cats freaking out at the sudden sight of cucumbers!

Interestingly and uniquely, cats evolved as hide-and-wait predators. Their strategy for catching prey was to sit very quietly and very still at sites where prey was likely to appear such as entrances to burrows, then react instantly with a catch and kill repertoire. This evolutionary niche influenced feline brain development in regards to cognitive, social and emotional parameters. Feline brains and behaviour became wired to move explosively between a state of very low arousal and very high arousal. This has implications for our domestic cats’ behaviour today. Cats can be very explosive and impulsive when fearful, enraged or otherwise stimulated or aroused. They can show minimal moderation or graduation of emotion between calm and extremely upset. Cats often have normal or baseline arousal levels that are different to dogs and people. This results in them having a low threshold for becoming stressed and means they are often not the most tolerant of creatures.

Furthermore, cats often have poor resilience and do not recover well after stress. After significant episodes of fear or distress, many cats do not return to normal levels of physiology and functioning for up to 72 hours. This is why a cat who has been through a stressful time may be terribly irritable and require some substantial time and space to re-adjust and re-set. In the vet profession when treating a cat, we often have only one chance to intervene. If that cat exceeds its stress threshold, the mission may have to be aborted as subsequent attempts to interact with the cat may be met with more and more fear and aggression. Stress is very cumulative in cats!

Importantly, cats who are stressed, frightened and aggressive must not be handled roughly or restrained forcefully. This is traumatic for the cat and dangerous for both cat and handler. The emotional state of the cat must be respected and it must be allowed to cool off so it can more calmly and rationally handle the next interaction.

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Why are some cats fearful and anxious?

Behaviour is determined by 3 fundamental overlapping factors which are all as influential and important as each other:

- Genetics
- Experience
- Environment

If a cat is anxious it is due to the interplay between these 3 factors.

Genetics:

Cats can be genetically prone to fear and anxiety. In domestic cats it has been shown that the temperament of the Tom is more influential than that of the queen in determining temperament of the kittens especially in regards to broad traits such as boldness, friendliness or fearfulness.

Epi-genetic factors play a huge role too as stress acts on genes to make harmful changes. Stress or poor nutrition of the queen during pregnancy will alter genetic expression within the developing brains of the unborn kittens, rendering them more prone to fear and anxiety. Stress early in life also serves to change an animal's genes and behavioural traits. Exposure to too much stress alters general perception, resilience, optimism and coping ability.

Experience:

There is a component of learning and experience to the development of fear and anxiety problems. Socialisation is extremely important in kittens to help prevent emotional and behavioural issues later in life. The importance of appropriate socialisation in cats has long been under-emphasized compared to dogs, but the same principles apply. Kittens must be exposed to all relevant stimuli in a non-threatening (i.e. positive or neutral) way early in life so that they learn to tolerate them and generally become acclimated and habituated to the world in which they are expected to live. It is generally accepted that the socialisation phase in kittens is from about 2 weeks to about 9 weeks of age. This is the sensitive window of time which can make or break in regards to setting up emotional and behavioural templates and lasting perceptions of the world. What kittens learn during this time will have a big impact on their behaviour later on.

Research has shown that kittens who are handled frequently during the first few months of life show less fear and greater friendliness towards people later on. Conversely, cats who lack experiences or who have traumatic experiences will be at risk of manifesting fear and anxiety. During early development cats become prone to developing fear and anxiety if **things that should happen don't and/or things that should not happen do.**

Importantly, early weaning and hand-rearing of kittens is known to alter their social and behavioural development, often causing significant and irreparable changes to their brains. Hand-reared kittens commonly manifest very abnormal behaviour especially in regards to

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aggression and impulse control. Many hand-raised kittens inevitably become untenable as pets and later require euthanasia, despite the best intentions and efforts of their human carers. This evidence should be heavily considered in the decision to hand-rear kittens.

Environment:

Environment is hugely important in terms of fostering or hindering optimal feline behaviour. We are generally not very good at providing for the environmental needs of our cats. As discussed earlier, cats are prone to stress, especially associated with change. Therefore, cats like to have a consistent and predictable environment and need to be able to exercise control over their environment.

Environment includes both physical surroundings (where the cat lives) and social surroundings (who the cat lives with). Changes in either the physical or social environment can be very destabilising for cats. Even the addition of new furniture can perturb some cats to the point of a mental health meltdown.

Cats are often very restricted by domestic life. This is especially important in light of the fact that they are only semi-domesticated. They can find confinement very stressful as the need to roam and patrol their territory is strongly ingrained. I certainly do not suggest that cats are allowed free access to roam off our properties as this is not in the best interests of the cat, people or other animals. However, cats do benefit from enrichment in the form of outside time which is safe and supervised. Cats can be trained to walk on a harness or may enjoy a cat enclosure. Similarly, the instinct to hunt is strongly innate in cats (although it can be tempered if they are not taught to hunt by their mothers). Cats can experience high levels of frustration and stress if no suitable outlets are required to mimic hunting. Bursts of play involving chasing and catching objects or clever creative feeding can be used to address this need.

Ambient sensory input such as temperature, weather, sights, sounds and scents will often greatly affect feline mood and behaviour. Cats can commonly become acutely or chronically unwell due to stress. Stress impacts many systems in the body, especially the urinary tract, bowels and skin. Stressed out felines often present with ongoing or recurrent health problems such as urinary tract inflammation and infection, irritable bowel and dermatological conditions.

Many cats develop abnormal repetitive behaviour and especially self-directed behaviour as a means to cope with environmental stress. A common example is over-grooming where cats may lick and groom parts of their body to the point of significant hair loss or skin trauma. This is called “psychogenic alopecia”.

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Image above: Hair loss over flank and hind limb from self-trauma (excessive grooming).

In regards to social environment, a very common cause of fear, anxiety and undesirable anti-social behaviour is the presence of another cat in the home. One of the biggest stressors in cats is having to live with another cat who they do not get along with. Even the presence of a foreign or feral cat that visits the property occasionally can induce massive stress in a cat.

It is important to recognise that in their natural state, cats will simply elect to leave a given territory if there is social stress or conflict. However, in the domestic setting they are instead forced to remain and inhabit a household.

We must understand the type of relationship that exists between cats living under the same roof. Cats are either in the same social group or not. Cats in the same social group are bonded friends. They choose to spend time together and show affiliative behaviour towards each other such as grooming and sleeping together in close contact. They are usually comfortable to share resources.

By contrast, cats who are not in the same social group consider each other to be enemies. In this case they will need to completely avoid each other or worse, may be in overt conflict - fighting and harming each other. In these situations, subtle conflict or competition over resources can cause considerable stress without their owners even noticing. Cats can be masters of passive aggression. Often an anxious cat will subtly stare or body block another cat which is very threatening and stress-provoking for the victim but may go undetected by people.

The concept of social groups is often not well understood or recognised by owners of multiple cats which can lead to stress and behaviour problems in cats.

See link below for a handy video on how to tell if cats are friends or foes.

<https://www.youtube.com/watch?v=bPgreEUV5vM>

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What does fear and anxiety look like in cats?

Fearful cats will show one (or more) of the “4 F” behaviours. These are the only 4 behavioural options that they can use to cope when they are feeling anxious or fearful.

The four F's are: FIDDLE, FLIGHT, FIGHT, FREEZE

Which one a cat chooses at any given time is dependent on many factors such as genetics, prior learning and the given situation or context.

It is important to recognise that when a cat is using one of the 4 Fs it is in a heightened and negative emotional and arousal state. It is not calm and rational and is struggling to deal with the situation.

FIDDLE:

The correct term for fiddling is “**displacement behaviour**” because fiddling in effect displaces emotion and arousal into active behaviour so that the animal can act to feel better.

When an animal is fiddling it is in a moderately high state of arousal and anxiety and is starting to get very worried and feel unsafe. Fiddling is often seen first before an animal escalates to an intense state of fear or panic and deploys one of the other 3 strategies of flight, fight or freeze

Fiddling can be an important warning sign prior to impending aggression. If we do not recognise a cat's distress at the fiddle stage and alter our interaction, it may then switch to aggression as an attempt to deal with the situation. Unfortunately, fiddling is often completely missed, overlooked or misinterpreted by people if they are not familiar with or trained to read cat body language. But once aware of it, it becomes very obvious.

- The purpose of fiddling is to:
 - Self-soothe – reduce arousal state
 - Deal with an internal emotion or conflict i.e. displacement
 - Communicate to others a state of anxiety / distress in the hope of defusing the situation
 - Disengage from the environment ie appear distracted in order to stop or avoid an interaction
- Common examples in cats:
 - Looking away – averting gaze or turning head
 - Yawning
 - Lip-licking
 - Body shake / shake off
 - Tail flicking
 - Skin rippling
 - Pacing

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- Self-directed behaviour e.g. pretending to groom or scratch themselves, licking paws or chasing tail
- Human examples include:
 - Nervous laughter
 - Playing with hair or accessories
 - Tapping fingers or moving body parts
 - Checking phone or device



Above images: cat doing a shake off, cat scratching itself

FLIGHT:

This is an attempt to move away from the threat or fearful stimulus. It is a distance increasing behaviour. This is often the first choice for cats – at least initially or early in the development of fear and anxiety. The cat may try to flee, withdraw, hide or make itself inconspicuous.

Importantly, flight is not an option when cornered, restrained or confined. In these situations the cat will need to use one of the other options instead. This is why cats may be more readily defensively aggressive when confined or restrained.



Above image: Fearful cat trying to hide

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FIGHT:

The fight response is the use of anti-social behaviour or aggression. This includes the entire ladder of aggression from body posturing, stiffening and staring through growling and hissing or spitting to actually lunging, swiping, snapping and biting. A fearful and aggressive cat will often show the classic “halloween cat” body language of arched back, puffed up fur and erect brush-tail, dilated pupils, tight face and pinned back ears.



Above image: illustration of fearful body language in a frightened cat.

Aggression is a distance increasing behaviour, it is an attempt to try and get the threat to move away.

A very important point is that feline aggression towards people is ALWAYS defensive and always secondary to fear and anxiety. There is no such thing as “offensive” aggression and there is certainly no such thing as “dominance” aggression – this is a complete myth. Even when a cat is actively moving aggressively and assertively towards the target it is still defensive aggression – the animal is fearful, perceiving a threat and following an “I must get you before you get me” philosophy. In this case, the cat is confident the aggression is an effective strategy (due to previous learning experience), hence it appearing assertive. Often we misinterpret fearful behaviour in cats as the cat being “angry” or “vicious” when in fact it is simply scared.

Aggression is usually a last resort – at least initially. However, it is easily and quickly reinforced by prior learning of success. When a cat is pushed to use the fight response it may quickly learn that this is the extent it needs to escalate to in order to deal with the threat and make itself feel safe again. This means aggression is quick to develop and worsen with time as it becomes a reliable coping strategy and the “go to” strategy as soon as the cat is afraid. In this way, people often make aggression worse by not recognising or responding to the cat’s prior strategies of trying to flee, fiddle or freeze.

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FREEZE:

This is when a cat stops moving in order to appear non-threatening and prevent provoking or escalating any further interaction or conflict. This is a way of ceasing to act on the environment in the hope that the threat passes. It can be a shut down and inhibited state. It can often be a consequence of learned helplessness which is a state in which the cat has learned there is no point in trying to flee or fight because it does not work. This can happen in cases of heavy prolonged restraint or physical punishment where the situation gets worse or continues despite the cat's attempts to cope. When its coping strategies are exhausted then it may give up. This manifests as being behaviourally still but the cat is in an internal state of fear and distress. **This must not be confused with being calm.** Often animals who are frozen may be in an even worse emotional state than those using the other strategies because they are not confident enough to do anything to try and help themselves despite being terrified.



Above image: Fearful cat freezing.

Remember, if you see a cat doing one of the above 4 F behaviours then it is clear that it is suffering anxiety and fear and needs help to cope with the situation and calm down.

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How can we help?

The natural behavioural repertoire and behavioural needs of cats need to be considered if we are to provide them with a happy and healthy life. The need for appropriate environmental enrichment and mental stimulation is often not as well publicised or addressed in cats as in dogs but is just as important to ensure optimal mental health and reduce incidence of behavioural disturbances. Cats need outlets to express their innate highly motivated behaviours and closely follow their natural preferences.

Cats are naturally most alert and active at dawn and dusk – with periods of sleep during the middle of the day and night. Cats evolved to fluctuate between several periods of rest and several brief periods of high arousal and activity during a day. Their periods of activity should be followed by a small meal ie the pattern of their natural hunting. They prefer to work for and eat 10-12 small meals each day. This is in stark contrast to a twice a day feeding schedule that many modern cats have to make do with.

Access to vital resources such as food, water, hiding places, scratching places and toileting spots are super important to cats. They can easily become stressed if they do not feel they can safely access desirable resources. Cats like to be able to hide in dark quiet spots so boxes or enclosed sleeping areas such as igloos are recommended. Cats love to be able to get up high to monitor their environment from a secure location. Allowing access to shelving or other spots up off the ground is usually appreciated. Generally, cats like to have their food and water segregated in different locations and often prefer to drink from novel or running water sources. Cats can be very particular about their toileting and often need or want a lot more space and options than what we provide with the modern litter tray. Inadequate toileting resources can commonly manifest problems with undesirable urination and defecation in cats. Providing multiple litter trays with different litter substrates in different locations can be a huge help to cats. Cats should never be expected to share litter trays with other cats, although sometimes they will tolerate it if they are in the same social group.

What should I do if my cat is anxious?

Ideally, a behavioural consultation is needed for cats that are showing signs of fear or anxiety. Cats showing abnormal behaviour should always be assessed by a veterinarian to rule in or out contributing medical causes. Many conditions such as hormonal imbalances, metabolic or organ problems, discomfort or pain can cause or worsen behavioural and mental health issues. A full history collection, examination and blood and urine analysis is a minimum database to collect for cats suffering behavioural disturbances.

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Diagnosing normal vs abnormal behaviour in cats.

Once medical causes have been ruled out and a behaviour is considered psychological in origin, the first step is to triage behavioural complaints in cats and ascertain whether they are a “problem behaviour” or a “behaviour problem”.

A “problem behaviour” is of concern to the owner and is considered undesirable but is actually normal for the cat. In this case, the cat is not mentally unwell. For example a cat scratching furniture to maintain its claws and mark. A “behaviour problem” is abnormal and is a sign of poor mental health and psychological malfunction. It is diagnosed where behaviour is abnormal in regards to one or more of 4 parameters:

- Context – in what situations and at what times does the behaviour occur?
- Frequency – how often does the behaviour occur?
- Intensity – when the behaviour does occur, how severe is it? How escalated is the emotional state of the animal?
- Duration – when the behaviour occurs, for how long does it happen? How difficult is it to distract, redirect or stop the behaviour?

If the behaviour is abnormal in regards to the above parameters, then there is an underlying diagnosis of a mental health disturbance – usually an anxiety disorder of some sort.

Treating behaviour problems in cats.

Once a diagnosis of an anxiety disorder is made, then treatment can begin.

Treatment always needs to be multi-modal. A three-pronged approach involving MEDICINE, MODIFICATION, and MANAGEMENT (the 3 Ms) is required. These 3 interventions address the 3 underlying causes of behavioural problems: Genetics, Experience and Environment as discussed above.

Medicine

Medicine is used to alter genetic disturbances as much as possible. Just like in human psychiatry, medical treatment in anxious cats aims to correct abnormalities and disturbances present in the brain and body of the patient. Anxious cats have abnormalities and impairments of many systems such as neurochemistry, stress, emotionality, arousal, reactivity, impulsivity, learning and information perception and processing. To put it bluntly, their brains are diseased and not working properly. Anxiety and stress also negatively affects the immune, hormonal and metabolic systems of the body to harm health. The aim of medicine is to render the brain and body as normal, optimal and functional as possible to improve health, quality of life and longevity. This is no different to the principles and goals that apply to treating any other disease process such as diabetes or kidney disease. Fortunately, medicine will often quickly help cats become far more calm, relaxed, rational, functional, happy and healthy.

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Medicine can also include intervention with nutritional support and pheromone therapy. “Zylkene” is an anti-anxiety calming nutritional supplement for cats which can be effective and is now commercially available in Australia at last. “Feliway” pheromone can also assist some cats to feel more calm.

Management

Management is used to address the environment. The environment must be made optimal so the cat’s stress can be reduced and they can be set up for success. Triggers must be avoided and all of the cat’s needs must be provided for. This often involves assessment of resources as discussed above. Feeding, play, activity, social and resting programs should be established that best mimic the cat’s natural preferences and engage their mind and bodies in productive healthy ways.

Modification

Modification is used to address learning and experience. The aim of this is to teach the cat to relax and feel better. Modification tries to establish a new emotional response and behavioural pattern to a trigger ie teach the cat to feel less afraid, cope and remain calm. For most cats a program of counter-conditioning and desensitisation (involving high value food) will be the most successful way to acclimatise the cat to the stimuli that cause the fearful response. This needs to be done very carefully in a controlled way to ensure no further harm is done.

A behaviour modification plan should be devised and implemented with the help of a suitably qualified vet or force-free behavioural trainer.

In summary, cats are a unique and special species that share our lives. Their evolutionary history has given rise to certain behavioural traits which can predispose them to fear and anxiety and cause conflict with people. Cats have been left a legacy of behavioural needs which are often poorly understood or met by people in a domestic setting which further contributes to anxiety and emotional problems. We need to endeavour to be mindful of their mental health and be equipped to recognise when they need assistance. In this way we can improve our long-standing relationship and with them and be worthy cat companions.

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