



PRACTICING CAT FRIENDLY

The articles presented by [American Association of Feline Practitioners](#) (AAFP) focus on feline-specific information on cats' unique behaviors; diagnosis and evaluation of disease and conditions; better approaches and techniques for cats; and strategies to decrease stress associated with the veterinary visit for cats, caregivers, and your team.

CONTINUING EDUCATION

BEHAVIOR

Understanding the Cat

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Cats are unique in that they are the only domestic animal derived from solitary hunters.¹ They are also the only solitary hunter to live amicably with people while still retaining the behaviors of their wild ancestors.¹ Cats are essentially solitary survivors and need to protect themselves at all times from potential dangers. A bad veterinary experience can negatively impact a cat's welfare both short-term and long-term.^{2,3} Fortunately, regardless of practice type, measures can be taken to prevent environmental and handling stressors, resulting in improved patient experiences, client acceptance of veterinary services⁴ and reduced injury rates to veterinary professionals.^{5,6,7}

UNDERSTANDING THE CAT

The domestic cat, *Felis sylvestris catus*, is a territorial animal with keen senses and communication methods to prevent physical fights. A cat's territory provides security, a sense of control, familiarity, predictability, and increased coping ability.⁸ Feline communication

includes scratching and other forms of marking with pheromones to protect their territory from physical altercations. When these signs go unrecognized by other species, cats then communicate with posturing and facial expressions. It is only when these survival methods fail that aggression occurs. These same behavioral trends occur in the veterinary practice. If we understand the cat's body language and learn gentle and respectful handling techniques based on these different communications, we can prevent cat's escalation to aggression.

Some cats may do better for veterinary visits by remaining in their own territory and having the veterinarian make a house call visit. However, many cats do well with visits to a practice that takes measures to provide a safe space, respectful handling, and familiarity of team members.⁹

It is crucial to understand why some cats are easy to work with while others are aggressive, perhaps even from the beginning of the appointment. How a cat responds is based

BEHAVIORAL RESPONSES

Cats caged against their will or not receiving enough attention tend to become frustrated and may act out by pawing, tearing paper, or other forms of responses.

on multiple factors, including its genetics and the individual cat's own experiences, especially during the sensitive period of development between 2 and 9 weeks of age.¹⁰ If a kitten is handled positively and frequently by multiple people during this stage, the cat will be more amenable to handling later in life.¹¹

It is understood that cats have long-term memory and previous negative experiences can impact how the cat later responds (**FIGURE 1**).^{12,13} Although no studies have been done in cats, there is evidence to suggest in dogs that negative veterinary experiences as puppies can impact their long-term welfare, leading to chronic fear or anxiety.³ For example, if a cat has unrecognized pain during its last veterinary visit and did not receive analgesia, the cat may associate the next visit at the practice with pain. This is also true if fear occurred. The cat may even react early on, hissing and lunging before the examination begins, in an attempt to protect itself.

STRESSORS, EMOTIONS AND ASSOCIATED BEHAVIORS

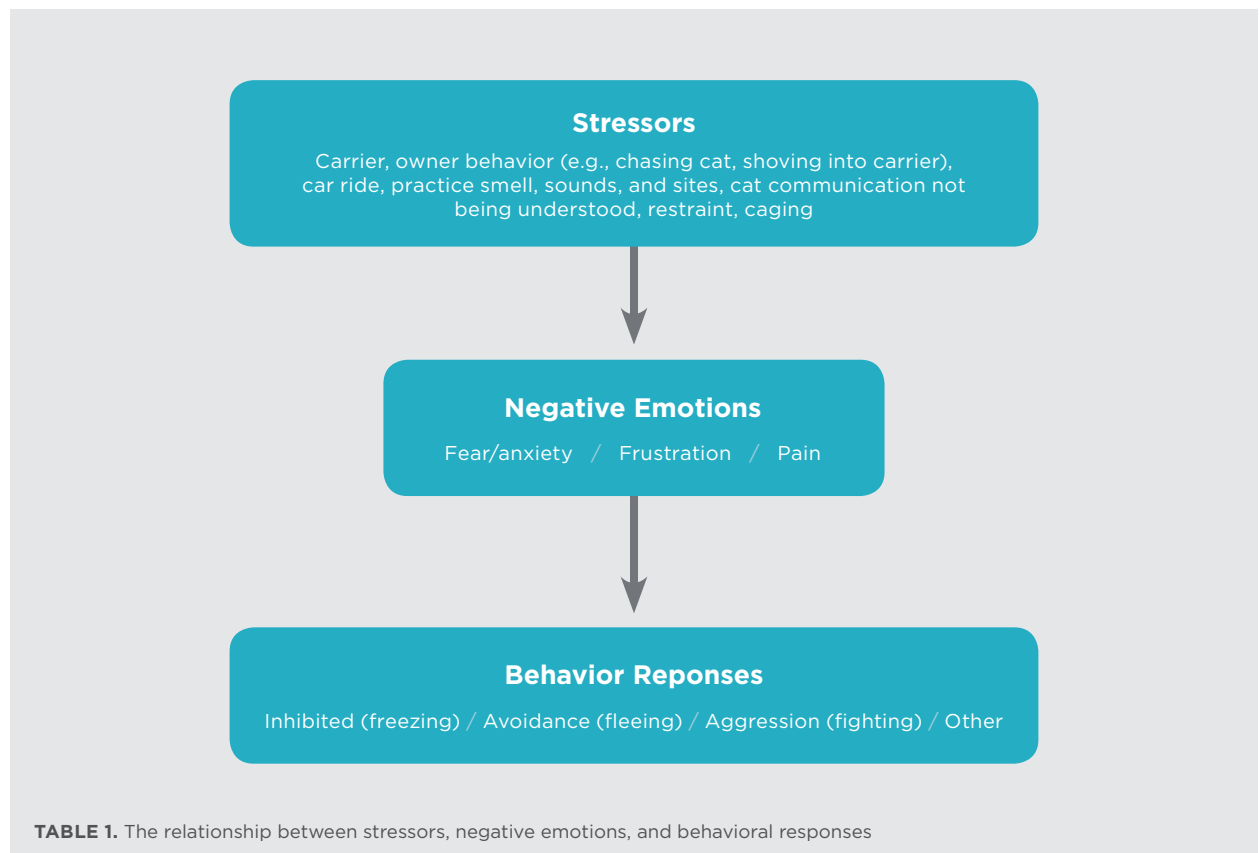
Preventing feline stressors greatly reduces the negative

emotions (e.g., fear) and the subsequent behaviors that people may consider unfavorable.^{14,15,16} See **TABLE 1** for the relationship between stressors, negative emotions, and behavioral responses.

Feline Stressors

The major stressors that have been noted to impact the welfare of feline patients are novel environment, olfactory and auditory stimulation, physical restraint, separation from owners and other pets, and lack of optimal analgesia.² These stressors more often start before the cat arrives at the clinic. If the cat is hospitalized, there are further stressors due to long term placement in an unfamiliar environment and because the cat is away from their people and perhaps other pets. It can take from 2 days to several weeks for a cat to adapt to the hospital environment.¹⁷ Any stressor can negatively impact the cat, but multiple stressors are cumulative.¹⁸

Additionally, response to stressors can also cause physiologic changes and it is important to differentiate these results from medical problems. Changes include increased heart and respiratory rate, elevated



temperature, hyperglycemia, neutrophilia and elevated blood pressure.^{19,20} Preventing stressors reduces potential for physiologic changes, allowing more accurate exam and diagnostic findings.

Emotions and Communication

Stressors trigger emotional responses in the brain that mediate functions contributing to the survival and well-being of the individual.¹⁷ Both positive and negative emotions occur in cats and the veterinary team can influence both. The negative emotions seen in the veterinary practice are fear, anxiety, frustration, and pain.^{18,21} More than one negative emotional system can be triggered at the same time, such as pain and anxiety.

Fear and *anxiety* are part of the same emotional system and are normal emotional responses to what the cat considers a threat.²² Fear occurs in response to a potential threat that might happen during a veterinary visit. Anxiety is the anticipation of a threat, such as a cat anticipating that handling will cause pain because of a previous experience. As territorial animals and solitary hunters, cats need to protect themselves continuously and they become fearful or anxious in situations that are unfamiliar and unpredictable, whether at home or in a veterinary practice.

There are three different behavioral responses associated with fear or anxiety. With mild fear, a cat freezes (also known as inhibition). With increased intensity of fear, they may flee (avoidance), and if they continue to feel unsafe, aggression (repulsion) will occur (**FIGURE 2A AND 2B**).^{16,22} The fear responses can escalate quickly based on the response of veterinary

teams. Remember that as a solitary survivor, the cat does not want to fight because it can threaten its own well-being and aggression is the last resort.

Frustration occurs in two different situations. The first is when access to safety is not possible, such as with tight restraint or removing a cat from a cage or carrier against its will.²³ This can quickly escalate to aggression. The second situation is not receiving the anticipated reward, such as desired attention.²⁴ In this situation, the frustrated caged cat will either paw at or through cage bars (**FIGURE 3**), pace, or disrupt the cage (e.g., tearing or disrupting papers or towels placed on the cage floor or tipping water, food, or litter).

Pain is both a sensory and an emotional response, which impacts both physical function as well as the

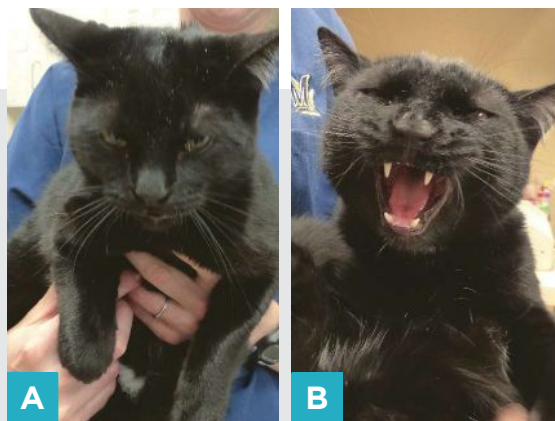


FIGURE 2. (A) While Ivan's ears are erect, they are planed to the sides, and he's looking down to avoid eye contact. He's giving you a clear signal to leave him alone. **(B)** The handler's further approach increased the intensity of fear and concern for lack of safety, leading to the aggressive response.

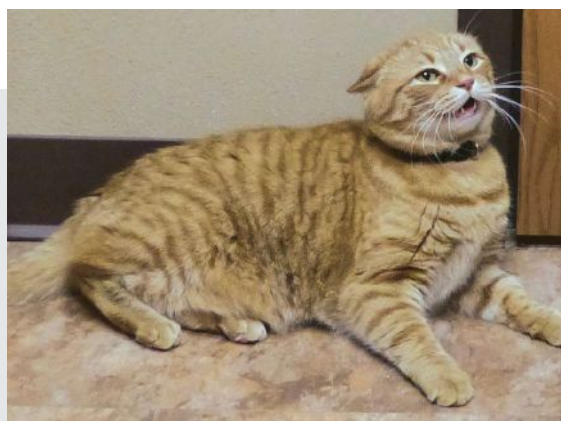


FIGURE 1. This cat was previously grabbed with a towel by someone standing in front of her. She is now highly frightened of veterinary personnel and towels held towards her.



FIGURE 3. Frustration from not receiving the human attention that he wants causes this caged cat to paw through cage bars.

emotional welfare of the patient.²⁴ Fear or anxiety can exacerbate pain and further impairs the animal's ability to cope.²⁵ In addition to analgesia, it is important to minimize stressors both at home and in the practice.²⁶ Chronic pain is common in cats, and signs vary depending on the location and severity of the pain. Up to 92% of cats have degenerative joint disease (DJD), a disease of the joints in limbs and/or spine.²⁷ Although more common in older cats, DJD can occur in cats of all ages.²⁷ Analgesia should be given to painful and potentially painful cats prior to examination and potentially painful procedures (e.g., radiographs or venipuncture).²⁸ The facial expressions most important to recognize with acute feline pain are widening of the muzzle and between the ears.^{29,30} The AAHA/AAFP Pain Management 2007 Guidelines are useful for unrecognized painful feline conditions and procedures and the updated 2015 guidelines provide further information about feline degenerative joint disease (catvets.com/guidelines).

MAKING THE APPOINTMENT WORK

Understanding the cat can aid in developing a practice environment that respects the species, while facilitating the work of veterinary professionals. Although humans cannot detect the cat's chemical communication, we can learn to recognize the meaning of behaviors, vocalizations, body posturing, and facial expressions. Body postures are more readily detected from a distance, but it is the facial expressions that provide immediate indications of the cat's emotions.^{22,30} Educating all team members to recognize calm versus distressed behaviors can help formulate the best plan for handling individual patients and one that works for the practice.



FIGURE 4. Venipuncture is performed on a young adult cat that continues to eat through the procedure.

Understanding Feline Senses

Cats have keen senses to both hunt successfully and protect against predators. Understanding the cat's senses reduces stressors, alleviating anxiety and other negative emotions.

Olfactory and chemical messages: The cat's sense of smell is superior to ours and their nasal cavity also detects pheromones, chemical messages used to communicate within the species.³¹ Scents that humans may not notice can significantly impact feline welfare, so avoid perfumes and scented cleaning supplies in the practice.² Instead of isopropyl alcohol for venipuncture and catheter placement, use diluted chlorhexidine when possible.

The scent of unfamiliar people and non-feline patients, as well as the scent and pheromones of other cats, also causes negative emotions. Provide separate cat waiting areas, cat wards, and cat-only exam rooms when possible. If a cat rubs its facial glands or rest of the body on a part of an exam room, wipe away its pheromones or scent before another cat enters. Also, unless the cage is soiled, spot-clean cages instead of fully cleaning to retain the cat's own scent until discharge.³²

Scents and pheromones can also help cats feel more relaxed. Familiar items brought from home, such as the cat's favored treats and bedding, or an item of clothing with the owner's scent, are helpful during veterinary visits, hospitalization, and boarding. Synthetic feline facial pheromone analog may provide a calming effect throughout the practice and increase appetite in hospitalized patients.^{33,34-35} Feline synthetic facial pheromone is available in diffusers and sprays; wipes are available only in the United States.

Offering treats or cat food to cats that are not fasting, nauseous, or vomiting provides a more positive experience. Cats frequently enjoy treats during veterinary visits; some will eat even during minor procedures (**FIGURE 4**).

Hearing: Cats hear a broad range of frequencies, which makes their hearing superior to that of most mammals, including people and dogs.³⁶ This broad range includes ultrasound and detection of ultrasonic chatter of rodent prey.³⁷ The cat's pinnae are movable to help locate sounds of prey and predators.

With such a keen sense of hearing, auditory stressors such as noise, loud voices, and the sounds of other animals negatively affect welfare in the

practice.² Prevent these stressors by educating team members about this sensitive hearing and the need to speak in softer tones. Keep cats away from the sound of telephones, centrifuges, and other noisy equipment. Shushing sounds further exacerbate problems because they sound like a cat hissing. Cats prefer a quiet environment or classical music. Classical music has been shown to lower anesthetic levels needed during surgical procedures.³⁸

Vision: Feline vision is adapted to detect the rapid movement of prey, especially in dim light. As rapid movements may arouse the patient, use slow and smooth movements. An unfamiliar person who stares or looms over the cat is a threat. It is always less threatening to approach the cat at their level and from the side, or behind, in a calm manner. Prevent visibility of unfamiliar animals by keeping the cat in a covered carrier whenever it is not in the exam room.

Maintaining a Sense of Control

Much of the distress and negative emotions that cats experience at the veterinary practice are due to a loss of sense of control, which leads to a loss of predictability and security. Creating this sense of control starts at home. Placing the cat's favorite cat bed or bedding within the carrier and bringing favored treats and toys ease the experience. Recommend a cat carrier that either can be taken apart in the middle or has a large enough opening that the cat can remain within the carrier during most of the examination (**FIGURE 5**). Advise new cat owners and those who call for preventive care appointments to train their cats to the carrier and schedule their appointment 2 to 3 weeks later to allow time for training. Although a kitten or

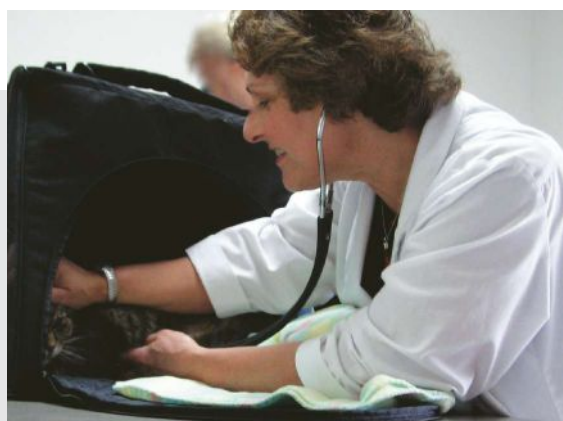


FIGURE 5. This soft-sided carrier with a large opening in front facilitates examination with the patient inside.

cat that has not had a negative experience in a carrier may learn more quickly, it is still easy to train a food-motivated older cat. If the cat has previously been at the clinic, it is ideal to schedule the appointment with the same doctor and veterinary team, as cats do better on subsequent appointments with the familiarity of people and handling techniques.¹⁰

For transportation to the clinic, recommend that the client cover the carrier with a towel that smells like home or has been impregnated with synthetic feline facial pheromone to avoid visual stressors. Reduce motion sickness and increase interest at the practice with treats by asking the owner to ensure the cat fasts prior to transport. Some cats need additional anti-nausea medication such as maropitant prior to the appointment.³⁹ Placing the carrier on the floor of the car, in front of the back seat, is usually the safest location. The American Association for Feline Practitioners (AAFP) provides many client resources to aid in transporting feline patients.

Once at the veterinary clinic, outpatients should ideally be kept in the exam room to reduce stress and visibility of unfamiliar animals and people, and to minimize sounds and smells of the busy practice. Take the cat directly to an exam room to prevent distress and negative emotions, allowing the cat to acclimate to that one room.² If an exam room is not immediately available, have a separate waiting area for cats, keeping carriers covered, raised off the floor, and facing away from unfamiliar animals. To prevent waiting room stressors, offer owners the option to remain with their cats in their vehicle and to contact them when an exam room is available.

Prepare the exam room in advance with all that may be needed for the feline patient (e.g., towels, a scale, stethoscope, otoscope, ophthalmoscope, blood pressure machine and blood and urine collection equipment) to prevent the commotion of frequent trips in and out of the exam room. Perform the examination, diagnostic testing and most treatments in the exam room. Letting owners observe all procedures also enhances their respect and appreciation for veterinary care. If owners prefer to not observe sample collections or treatments, minimally they should remain for the blood pressure, and then be escorted to the reception area so that the cat may remain in the exam room. The AAFP's Cat Friendly Practice® program contains full details on a practice environment that respects the cat (catvets.com).

Most cats prefer to stay within their carrier, and the majority of the examination and a portion of the diagnostics and treatments can be performed with the cat facing away from the veterinary professional and hidden within the carrier. If the cat still displays fear, cover it with a towel. Remove the cat from the carrier one time only, to complete all necessary remaining procedures that could not be completed while in the carrier. Providing other hiding options in the exam room, such as towels and high-sided cat beds, facilitates completion of the exam (FIGURE 6).

The Option to Hide

Hiding is an important coping strategy when a cat feels threatened, such as in an unfamiliar environment.^{40,41,42,43} A hiding place provides a safe haven and sense of control, increasing their security. Cats provided with the option to hide during appointments,

hospitalization, and boarding have reduced negative emotions and distress.^{42,43} Good options that allow the cat to feel hidden are carriers, high-sided or igloo cat beds, toweling, and hiding boxes.

When cats are hospitalized or boarding, hiding options in cages help cats to cope better, sleep more peacefully, and approach people more frequently rather than retreat.⁴⁰ If a hiding place is not provided, cats will attempt to find one either within the litter box, behind it, or under bedding placed on the floor of the cage. If the cat's carrier fits into the cage, it is best to use it or a sturdy box.

RESPECTFUL HANDLING

Handling techniques based on an understanding of the cat greatly reduce feline negative emotions and are much safer for everyone involved. While greeting the client, do not look directly at the cat,



FIGURE 6. Cats often do not like to stay on the scale. Always provide a towel to stand on or a hiding place for them to feel more secure.



FIGURE 7. Note the doctor positioned to the side of this patient being examined within its carrier.



FIGURE 8. This cat is facing the client as the veterinarian greets them both.



FIGURE 9. The semi-lateral position, with the cat snuggled by the technician, allows the cat to feel hidden during blood collection.

but assess the cat from a distance to help develop a handling plan. Let the cat remain where it wants to be to reduce both fear and pain, whether in the carrier (FIGURE 7), in the examiner's lap facing the client, or hidden within bedding (FIGURE 8). The fewest handlers (with a maximum of two) is best and sedation or analgesia is recommended if the cat cannot be handled without negative emotions. As cats do not like to have their feet touched or to be stretched tightly, allow the cat to remain sternal or semi-sternal (FIGURE 9) during sample collection. "Scruffing," tight restraint, and restraint gloves lead to loss of sense of control and result in fear, frustration, and possible pain, which increases the potential for aggression. They are unnecessary in feline practice and should be replaced with non-threatening handling.

The order of the examination should focus on doing the least stressful regions first, which is usually auscultation of the heart and lungs. Most cats do best if orthopedic and oral examinations are performed at the end of the examination. Many feline practitioners do not take temperatures on apparently healthy cats to prevent patient arousal.

The facial glands that produce pheromones are preferred areas of touch. Massaging, petting, or gently rubbing these glands—the temporal, the cheek, perioral, and the submandibular—while remaining to the side or behind the cat helps to reduce negative emotions (FIGURE 10A AND 10B).^{44,45} The vast majority of cats don't want their belly stroked or their feet touched. Frequent unsolicited petting or removing a hand and then returning to petting the cat multiple times, can lead to unwanted arousal and should be avoided.

The fearful cat that "freezes" (inhibition) might seem easy to work with but it is important to recognize that cats that "freeze" are fearful. If we allow the cat to remain in a hiding place, the cat will likely remain quiet, and may even relax. For future visits, recommend carrier training and possible anxiolytics.

When clients or staff chase a cat that flees, it exacerbates fear and greatly increases the potential for self-protective aggression. Instead, give the cat time to calm down and the option to return to the carrier or another hiding area with several hiding options. If the cat is apparently healthy, the owner may prefer to reschedule the appointment after carrier training and bringing familiar items to the visit. These cats often

require an anxiolytic for upcoming visits. Fearfully aggressive cats should be administered sedation or anesthesia with analgesia to prevent potential injury and exacerbated feline fear and anxiety at future visits.

CONCLUSION

A respectful environment and handling can be incorporated successfully into any type of practice. It reduces feline stressors, leading to more relaxed cats, happier clients and increased job satisfaction and safety. **TVP**

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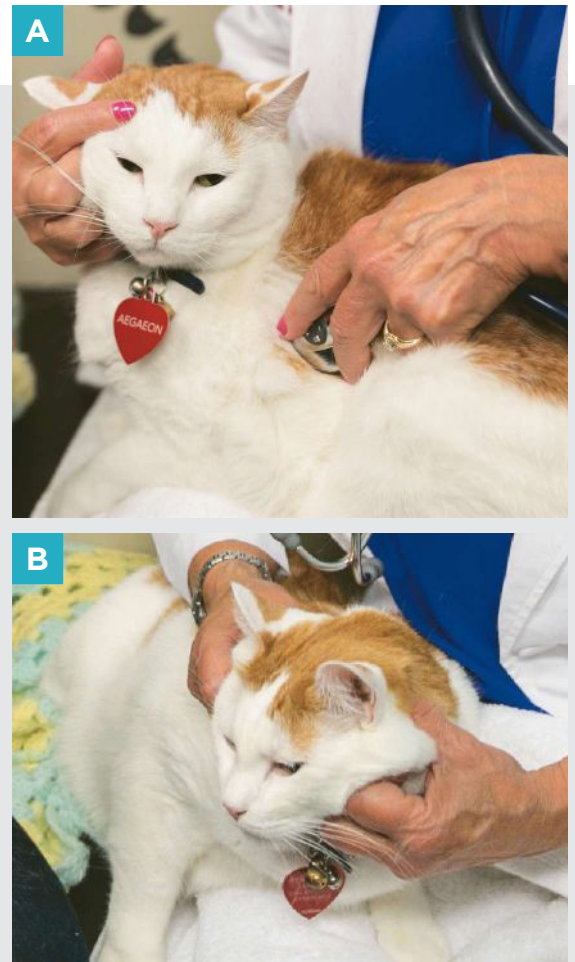


FIGURE 10. (A, B) Massaging, petting or gently rubbing the cat in only preferred areas helps to reduce negative emotions.

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Dr. Rodan is an active volunteer of the American Association of Feline Practitioners, a past-president, and co-chair of several guidelines and welfare position statements. Rodan is a co-editor and co-author of the book *Feline Behavioral Health and Welfare* published in 2015.

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CONTINUING EDUCATION

Understanding the Cat

LEARNING OBJECTIVES

Learn to recognize and prevent the feline stressors surrounding veterinary visits. Regardless of practice type, these measures result in improved patient experiences, client acceptance of veterinary services, and reduced injury rates. Handling techniques specific to the situations and knowing when to use chemical restraint will improve the experience for all involved.

TOPIC OVERVIEW

Understanding the protective behaviors of the cat as a solitary hunter aids in our understanding and prevention of their stressors associated with veterinary visits. When stressors cannot be prevented, learning the signs of feline distress and specific handling techniques can prevent exacerbation of problems and injury.

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- 1. As domestic cats are solitary hunters:**
 - a. They are always asocial with unrelated cats
 - b. They are territorial and become aggressive if approached by veterinary personnel
 - c. Predictability and familiarity better facilitate repeat veterinary visits
- 2. Common stressors associated with the veterinary visit:**
 - a. Start as soon as the cat arrives at the veterinary practice
 - b. Are forgotten as soon as the cat returns home
 - c. Start at home prior to the visit
- 3. Feline emotions are:**
 - a. Pleasure, fear and spite
 - b. Fear, pain and frustration
 - c. Anxiety, fear and aggression
- 4. Cats' preferred areas of touch are:**
 - a. Temporal, submandibular and cheek glands
 - b. Supra-caudal, perioral and submandibular glands
 - c. Tail gland, perioral and cheek glands
- 5. Handling techniques that respect an understanding of the cat result in:**
 - a. More human injuries than restraint
 - b. Less human injuries than restraint
 - c. The same amount of human injuries as restraint
- 6. To best assess the cat's most immediate emotions:**
 - a. Monitor body postures
 - b. Monitor facial expressions
 - c. Monitor behavior
- 7. Cats that are more challenging to work with include all except:**
 - a. An obese cat that is unable to be "scruffed" adequately
 - b. Geriatric arthritic cat with previous negative experiences
 - c. Orphaned kitten found at 10 weeks of age
- 8. A cat that is painful:**
 - a. Does not require analgesia if handled respectfully
 - b. Is suffering both physically and emotionally
 - c. Is suffering physically as pain is an exclusively sensory condition
- 9. Feline patients that are hospitalized need the option of a place to hide within the cage because:**
 - a. They can cope better and are more likely to approach people
 - b. They prefer privacy
 - c. The cage itself is a sufficient hiding area
- 10. Cats that have negative veterinary experiences should receive the following prior to future visits:**
 - a. NK-1 receptor antagonist
 - b. Sedative
 - c. Anxiolytic

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