

**RINSE, REPEAT**

Sustained self-licking and overgrooming are common behaviors associated with compulsive disorders in felines.

## MANAGEMENT STRATEGIES

# Managing Compulsive Disorders in Cats

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Compulsive disorders can be defined as normal behaviors that are abnormally repeated, sustained, and out of context. However, all repetitive behaviors should not be considered compulsive. Diagnostic criteria generally include an abnormal repetitive behavior performed excessively and out of context, which is difficult to interrupt and is performed in replacement of other normal behaviors.<sup>1</sup> Although compulsive disorder is a relatively rare diagnosis for cats, this behavior can lead to a significantly decreased quality of life for both cat and owner.<sup>2</sup> The analogous human condition, obsessive-compulsive disorder (OCD), differs by the presence of intrusive thoughts precluding a compulsive episode. No current evidence indicates that animals experience intrusive thoughts; rather, compulsive episodes in animals are often triggered by stressful or high-arousal situations.<sup>3</sup>

For dogs and cats, these behavior patterns can be classified as locomotor, oral, aggressive, vocalization, or hallucinatory. These distinctions are important because the rule-outs differ, depending on the proposed underlying dysfunction. For example, oral behaviors may be primarily related to gastrointestinal inflammation rather than just behavioral pathogenesis. Overgrooming by cats often results from pruritic skin disease and cannot be diagnosed without a complete

dermatologic workup.<sup>4</sup> Alternatively, overgrooming can be directed to a body part that is painful, such as the abdomen during bouts of feline lower urinary tract disease or chronic pancreatitis.<sup>5</sup> For hallucinatory, aggressive, and some locomotor behavior patterns, neurologic differential diagnoses must be considered.<sup>5</sup> For hallucinatory behaviors, ocular differentials should also be considered.<sup>5</sup> To identify the underlying motivation for all abnormal repetitive behaviors and rule out other behavior differentials, a complete history should be taken to determine context, triggers, frequency, and duration of the behavior (**TABLE 1**).

Compulsive disorders are associated with underlying anxiety disorders that, unfortunately, often cannot be cured. More realistically, they can be managed for the duration of the cat's life. Treatment of compulsive disorder is aimed at reducing the frequency, intensity, and duration of compulsive episodes so that alternative behaviors can be trained and reinforced instead. Clients should be aware that treatment of these disorders will often require lifelong care to ensure that the cat maintains a good quality of life.

This article provides a guide for initiating treatment and educating clients after a diagnosis of compulsive disorder has been made. A 5-step process for setting up

**TABLE 1** Common Compulsive Disorder Behaviors and Medical Differentials

BEHAVIOR CATEGORY	BEHAVIOR	NONCOMPULSIVE-BEHAVIOR DIFFERENTIALS
Locomotor	<ul style="list-style-type: none"> <li>■ Tail chasing</li> <li>■ Light/shadow reflection chasing</li> <li>■ Freezing</li> <li>■ Skin rippling</li> <li>■ Circling</li> </ul>	<ul style="list-style-type: none"> <li>■ Partial/focal sensory seizure</li> <li>■ Pain (neurologic, orthopedic, generalized)</li> <li>■ Primary dermatologic (ectoparasites, allergies, infection)</li> <li>■ Normal nonpathologic behavior</li> </ul>
Oral/Ingestive	<ul style="list-style-type: none"> <li>■ Overgrooming</li> <li>■ Self-chewing of legs or feet</li> <li>■ Licking objects</li> <li>■ Wool sucking</li> <li>■ Pica</li> </ul>	<ul style="list-style-type: none"> <li>■ Primary gastrointestinal/nutritional</li> <li>■ Primary dermatologic (ectoparasites, allergies, infection)</li> <li>■ Pain (neurologic, orthopedic, generalized)</li> </ul>
Aggression	<ul style="list-style-type: none"> <li>■ Self-directed</li> <li>■ Often a component of feline hyperesthesia syndrome</li> </ul>	<ul style="list-style-type: none"> <li>■ Pain (neurologic, orthopedic, generalized)</li> <li>■ Primary dermatologic (ectoparasites, allergies, infection)</li> <li>■ Partial/focal sensory seizure</li> </ul>
Vocalization	<ul style="list-style-type: none"> <li>■ Rhythmic, persistent, monotonous meowing or yowling</li> </ul>	<ul style="list-style-type: none"> <li>■ Partial/focal sensory seizure</li> <li>■ Cognitive dysfunction</li> <li>■ Pain (neurologic, orthopedic, generalized)</li> </ul>
Hallucinatory	<ul style="list-style-type: none"> <li>■ Avoiding imaginary objects</li> <li>■ Stargazing</li> <li>■ Startling without trigger</li> </ul>	<ul style="list-style-type: none"> <li>■ Primary ophthalmic</li> <li>■ Hypertension</li> <li>■ Primary neurologic</li> </ul>

a comprehensive treatment plan can help practitioners ensure that the foundational steps of environmental management and behavior modification are not bypassed in favor of prescribing a behavior medication.<sup>6</sup>

## STEP 1. ENVIRONMENTAL MANAGEMENT

A cat's environment should be set up in a way that provides sufficient mental stimulation, provides plentiful and easily accessible resources that meet basic species-specific needs, and minimizes frustrating or fear-provoking stimuli.<sup>7</sup> An easily accessible and well-designed resource designed for laypersons is the Indoor Pet Initiative sponsored by Ohio State University ([indoorpet.osu.edu/cats](http://indoorpet.osu.edu/cats)).

The enrichment provided by clients should be evaluated to ensure that it is not inadvertently causing underlying frustration. Common enrichment techniques that should be used with caution include laser pointers or blinking lights. These objects stimulate cats' natural hunting instincts as they chase the moving light target; however, because cats are not able to complete the hunting sequence of catching, killing, and ingesting their prey, frustration ensues and they might look for other accessible outlets for this behavior, including their own paws or tail. For some cats, bird feeders can cause the same level of frustration, but this response is very individualized. Hence, follow-up to evaluate consequential behavior after environmental enrichment is recommended.

Compulsive behaviors are also often highly contextual.<sup>3</sup> This means that there may be areas of the cat's environment in which an episode is more likely than others to be triggered. It is important to identify client-specific situations, activities, or locations that trigger the behavior and then have the client block or avoid them as much as realistically possible.

## STEP 2. RELATIONSHIP BUILDING

Compulsive behaviors are often displayed during periods of acute conflict or high arousal. One theory on the etiology of compulsive disorder suggests that these behaviors develop as a coping or self-soothing mechanism in the face of acute conflict, similar to OCD in humans.<sup>3</sup> Therefore, any form of punishment or aversive measures are contraindicated for these cats because they will only serve to increase fear, anxiety, and distress, further compounding the problem, even if they might temporarily inhibit the behavior.<sup>8,9</sup> Owners who are using aversive techniques should discontinue them immediately.

Instead, owners should have predictable positive interactions with their cats to establish a clear form of communication, leading to reduced overall anxiety and conflict. This communication style was popularized by Ian Dunbar and is also known as "Nothing in Life Is Free,"<sup>10</sup> "Learn to Earn,"<sup>11</sup> and "Sit to Say Please."<sup>12</sup> For cats and their owners, this interaction pattern would look similar to the following:



*Please ignore all attention-seeking behaviors from your cat. If you wish to interact, first ask your cat for a behavior that it is already good at or you have trained, such as “come” or “touch.” (Most cats will come running if you say their name or open the food container. The act of coming to the owner is a rewardable behavior.) If the cat performs the behavior when cued, then the cat receives something pleasant, such as a food treat, play with a toy, or petting. If the cat does not perform the behavior, then the owner continues to ignore the cat. Over time, this interaction pattern between the cat and the owner becomes consistent, predictable, and positive, helping to increase trust and decrease social anxiety.*

A more complete example of this interaction pattern is available online as a client handout at [todaysveterinarypractice.com/resources/handouts](https://todaysveterinarypractice.com/resources/handouts).

### STEP 3. TOOLS

Using the correct tools will dramatically aid in the success of steps 1 and 2. Just switching out the spray bottle for a wand toy and some catnip will provide a much less anxiety-provoking environment, giving cats the opportunity to develop other skills when stressful situations occur. This step should be tailored to each individual cat and owner. For example, cats with high

#### BOX 1 Response Substitution Example

This example describes use of response substitution for a cat that directs aggression toward its tail. This behavior can be predicted by piloerection, vocalizing, back arching, and skin rippling.

When one of the predictors of the behavior is observed (A), first an interrupter is used (whistling or lightly clapping). Then after the cat’s attention is on the owner (B), a behavior physically and emotionally incompatible with tail chasing is requested of the cat. This cat has been trained to “touch” a target stick on cue (C). The cat is rewarded with a food treat and praise. This cue is repeated several times in quick succession. Last, the cat is given a final “sit” cue (D), for which it is rewarded. The cat then continues to be rewarded for showing calm and relaxed behavior.





levels of frustration may benefit from window film, blocking their view of potential prey or other outdoor cats with whom they have an adversarial relationship. Food puzzles and food toys can provide excellent innately rewarding enrichment that fulfill cats' instincts to search, hunt, and complete the predatory sequence ([foodpuzzlesforcats.com](http://foodpuzzlesforcats.com)). If outdoor noises trigger a compulsive episode, a white noise machine could reduce the intensity of the stimuli. Positive, consistent, and predictable interactions with the owner can be created by using positive-reinforcement training. Clicker training is particularly well suited to this. It also holds the additional benefit of setting up foundational behaviors that the owner can ask for during behavior modification, as described below.

#### STEP 4. BEHAVIOR MODIFICATION

Although owner-directed training is not as common for cats as for their canine counterparts, recent research has shown that cats are just as capable as dogs at mastering cues given via positive-reinforcement training.<sup>13</sup> When first starting a treatment plan, owners should help the cat develop a strong foundation by using positive reinforcement-based training for simple behaviors such as look, touch, and sit, which can be used for cue-response-reward interactions and for response substitution (**BOX 1**).

After the cat has learned 1 or 2 simple behaviors, behavior modification can then be implemented. The behaviors associated with a compulsive episode should be interrupted without frightening the cat (e.g., distract the cat by whistling, clapping hands, making a kissing noise) and then asking the cat to perform an alternative behavior that is incompatible with the compulsive behavior and immediately rewarded. The alternative behavior should be physically incompatible with the compulsive behavior (i.e., the behaviors cannot be performed simultaneously). This technique is often referred to as response substitution, operant counterconditioning, or differential reinforcement of an alternate or incompatible behavior.<sup>14,15</sup>

Owners may find training to be challenging at first, but the help of a trainer can help alleviate their frustration and speed the learning process for both owner and cat. Excellent additions to any treatment team are local qualified, humane, force-free trainers who base their training philosophy on current science and operate under the least intrusive, minimally aversive training principles. To locate local trainers, consult the

International Association of Animal Behavior Consultants ([iaabc.org](http://iaabc.org)).

#### STEP 5. MEDICATION

Information about the effects of behavior medications on compulsive disorders in cats is limited. Few studies have examined these effects, and use of all medications to treat compulsive disorders in animals is considered off-label.

Medication use is aimed at treating the underlying neurochemical imbalance in the brain when an animal experiences an anxiety-associated behavior disorder. Because the literature suggests a high rate of relapse when behavior medication use is discontinued, clients should be counseled that the medication might need to be continued throughout the animal's life.<sup>1</sup> Although several antidepressant and anxiolytic medications are available, those showing the most efficacy for treating compulsive disorders in animals are fluoxetine and clomipramine.<sup>1</sup>

**Fluoxetine** is a selective serotonin reuptake inhibitor (SSRI). For humans, fluoxetine has been approved for treatment of OCD. This medication is theorized to improve compulsive disorders by reducing the underlying anxiety that leads to the abnormal repetitive behaviors. Fluoxetine's immediate effects are inhibition of the presynaptic serotonin reuptake channel, thereby increasing the overall serotonin available in the neural synapse. However, the clinical effects of fluoxetine are often not seen for 4 to 6 weeks because of downstream changes in the expression of serotonin autoreceptors.<sup>1</sup> Therefore, clients need to know that they must give the medication to the cat daily as prescribed for at least 6 weeks before they can expect much change in the frequency and intensity of the compulsive behaviors. Dosing starts at 0.5 mg/kg PO q24h and can be increased to 1.5 mg/kg q24h.<sup>16</sup> Side effects include loss of appetite, vomiting, sedation, and increased irritability. If side effects are severe or last longer than 1 week, the medication should be discontinued.

**Clomipramine** is a tricyclic antidepressant (TCA). For humans, it is the only drug in its class that is approved for treatment of OCD. Although the veterinary formulation Clomicalm (Virbac, [virbac.com](http://virbac.com)) has been labeled only for separation anxiety in dogs in the United States, it has also been approved for use in dogs with compulsive disorders in Australia and Canada. Unlike SSRIs, TCAs have effects at multiple receptor



sites. Apart from sharing similar serotonergic effects with SSRIs, TCAs also affect norepinephrine, acetylcholine, histamine, and other neurotransmitters, depending on the specific TCA selected. These interactions can be especially useful when a concurrent dermatologic problem is suspected. Although the side effects profile includes those listed for most SSRIs, TCAs can result in additional anticholinergic side effects, therefore appropriate precautions and patient selection should be followed. Dosing starts at 0.25 mg/kg PO q24h and can increase up to 1.3 mg/kg total daily dose.<sup>16</sup> As with SSRIs, it may take several weeks of consistent daily dosing before any appreciable effect on the behaviors associated with the compulsive disorder is noted.

If patients are refractory to initial treatment and require multimodal medications, consultation with a specialist is recommended due to the elevated complexity of the case.

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Dr. Bennett received her DVM degree in 2006 from Purdue University and later completed a residency in animal behavior with a focus on shelter medicine, obtained a master of science degree, and became certified as a diplomate of the American College of Veterinary Behaviorists in 2012. She is currently a clinical assistant professor of clinical sciences in the behavior department at the College of Veterinary Medicine at North Carolina State University, as well as a co-instructor for the University of Florida College of Veterinary Medicine online course Shelter Animal Behavior and Welfare, which is part of the Maddie's Shelter Medicine Program. Dr. Bennett particularly enjoys addressing problem behaviors in sheltered and rescued animals through clinical practice and research, thereby helping to protect animal welfare, make the sheltering experience less stressful, strengthen the human-animal bond, and increase the likelihood that pets' new homes become their forever homes.



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## SUMMARY

Abnormal repetitive behaviors can be observed in cats. Medical causes and comorbidities must be investigated before making a behavioral diagnosis of compulsive disorder. A comprehensive treatment plan can be created by following a stepwise plan. The treatment plan does not have to be complex to be complete, and many of the same treatment premises used for dogs can be modified for cats. In addition, psychopharmaceuticals are a useful, but not the only, part of a successful treatment plan for cats with a compulsive disorder. As with any case of chronic illness, a follow-up plan must be included to ensure that the patient is improving and maintains an acceptable quality of life and a positive human-animal bond. **TVP**

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