

CATS THAT CHEW THEIR HOME OR HAIR

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Chewing, both environmental and self-directed may be normal behavior, a displacement behavior arising out of conflict, frustration and stress, or an abnormal repetitive behavior which may be a result of an underlying medical condition or a compulsive disorder. Stress may also contribute to both gastrointestinal and dermatologic disorders. The diagnosis is further complicated as the medical problem could be the cause or an effect of the behavior. For example, self-trauma can lead to pain, inflammation, and infection while pica can lead to gastrointestinal signs and foreign body obstructions.

Compulsive behaviors arise from normal behaviors that become exaggerated, repetitive, out of context, and fixated on a goal. They may be sufficiently intense or sustained that they cannot be easily interrupted or directed into alternate outlets. In addition, there may be a lack of control in terminating or initiating the behaviour. They behaviors may initially be seen in response to situations of conflict (competing motivations or uncertainty), frustration (motivation to achieve a goal that is behaviorally or physically prevented) and in environments that do not adequately meet the pet's behavioral needs. With repeated stress, the behavior may become compulsive with altered neurochemical responses, especially in individuals that are genetically predisposed. Abnormal serotonin transmission has been identified as a primary mechanism by which compulsive disorders are induced and drugs that inhibit serotonin reuptake can be effective e.g. clomipramine, fluoxetine^{1,2}. However, multiple neurotransmitters might be implicated including alterations in dopaminergic and glutamatergic pathways or opioid receptors.³

ENVIRONMENTAL CHEWING

Environmental licking, chewing and picas may begin as normal behaviors arising from play and exploration, or because of taste, texture or odor appeal. However, the behaviors become compulsive when they are repetitive, excessive and fixated on a goal including wool or fabric sucking, chewing or pica. In one focused on Siamese and Burmese cats, wool was most commonly chewed, followed by cotton, synthetic fabrics, rubber, and plastic.² In Siamese, Burmese and Birman cats, there appears to be a genetic predisposition, which may be triggered by social or physical stressors in the environment.^{2,4-6} In another study of 91 cats with pica, most of which were domestic shorthair, the most common targets were shoelaces, thread, plastic and fabric.⁷ No association was found between pica and a suboptimal environment or early weaning.⁷ Significantly more cats in the pica group were likely to self suck, indicating that there may be common contributing factors.⁷

Compulsive disorders are diagnosed by first ruling out medical conditions that might cause or contribute to the signs including anemia, FIP, hyperthyroidism, diabetes mellitus, cancers, and gastrointestinal disease.^{7,8} In a recent case series of cats with fabric sucking and ingestion, 7 of 8 had mild to moderate gastro-enteritis. However, only 3 improved with gastrointestinal treatment.⁸ Compared to a control group, cats with pica vomited more frequently and cats in the control group were more likely to be fed ad-lib.

SELF-TRAUMA

In cats, self grooming and scratching increases in response to conflict and with repeated stress which might progress to self traumatic disorders.^{3,9} In addition, stress might contribute to increased inflammation and pruritus.

Medical differentials include adverse food reactions, atopy, parasitic hypersensitivity, parasites, fungal infections, pain or discomfort at the site of licking and the dermatologic manifestations of systemic diseases e.g. hyperthyroidism, hepatocutaneous syndrome. Drug reactions including treatment with methimazole can also cause pruritus. In a clinical trial of 21 cats referred for psychogenic alopecia, each cat was examined, anal sacs expressed and

a trichogram, CBC, biochemical profile, T4, FeLV and FIV testing, urinalysis, fungal culture, skin scraping and biopsy performed. If there were no abnormal findings, a parasiticide (Revolution®) and an 8-week trial of hydrolyzed protein diet (Hills prescription diet Z/D) were dispensed. If the cat improved significantly, it was challenged with its own food. If there was no improvement, the cat was treated with 2 injections of methylprednisolone acetate 3 weeks apart to rule out pruritus. Using this protocol, 16 cats were diagnosed with a medical etiology, 2 were psychogenic, and 3 had both. A combination of atopy and adverse food reaction was most common (12 cats). Out of 20 cats biopsied, 14 had inflammatory skin lesions. All cats with histological evidence of inflammation had an underlying medical condition. However, of 6 cats with no histological abnormalities, 4 had atopy, an adverse food reaction or both.¹⁰

HYPERESTHESIA AND TAIL ATTACKING

Hyperesthesia can be attributed to multiple behavior or medical conditions including dermatologic (pain, pruritus, infectious), neurologic (central, spinal, neuropathy), and musculoskeletal (inclusion body myopathy, FeLV induced myelopathy), a compulsive disorder or a response to high arousal or conflict. While rippling, twitching and spasm of the epaxial muscles is the hallmark sign, self-directed aggression, redirected aggression, vocalization, running, housesoiling, excessive licking, self-mutilation, tail chasing and tail mutilation may also be seen. Most episodes commonly begin without apparent stimulation; however some cats exhibit skin rolling and vacuum licking when aroused or if touched in the dorsal lumbar area. As with psychogenic alopecia a multi-disciplinary diagnostic approach is needed for dermatologic, painful, neurological, systemic illness and behavioral causes.¹¹ In a recent case series, despite a comprehensive workup including hematology, biochemistry, MRI, CSF, electrodiagnostic tests, and serology for FIV, FeLV and toxoplasma, a definitive diagnosis was not reached, although 2 cases were suspected to be hypersensitivity.¹¹ Therapeutic response trials might include single treatments or combinations of medication including drugs for compulsive disorders (fluoxetine, clomipramine), gabapentin for behavioral calming, and potential effects on seizures and pain; clonazepam for its anxiolytic, muscle relaxation and seizure effects; additional pain management, and possibly prednisone for inflammation or phenobarbital for seizure control.¹¹ With tail mutilation, amputation proximal to the injury is not indicated unless the damage is sufficiently extensive to be medically necessary as addressing the underlying medical or behavioral cause is essential to prevent recurrence.

TREATMENT

As stress is an underlying factor in initiating and maintaining the behavior and may be a contributing factor to gastrointestinal and dermatologic disorders, stress assessment and management (both social and environmental) is an integral part of both diagnosis and treatment. However, a combination of both behavioral management and drug therapy will generally be required for successful improvement of most compulsive disorders.

First insure that all of the cat's behavioral needs are sufficiently and appropriately being met for bedding, perching, climbing, hiding, scratching, elimination, food and water, and object and social play as well as sufficient resources to avoid conflicts with cats, dogs, and family members. Desirable behaviors should be rewarded and sources of stress identified and prevented or resolved. Evaluate for owner responses that inadvertently reinforce the behavior or further add to the pet's anxiety including. Unpleasant interactions and fear evoking stimuli must be identified and avoided e.g. handling, visitors, children, other cats. Train with rewards to reinforce what is desirable, including one or more cues to train alternate behaviors (mat, come/touch). Punishment must be avoided, since even if it suppresses the undesirable behavior, it will cause fear, conflict, and avoidance and negatively impact the human animal bond.

Provide constructive activities to maximize enrichment including working for food (food filled toys), multiple small meals, outlets to explore, chew and chase, positive social interactions including play and reward training, and resting places and bedding that are elevated and secure. An e-collar might prevent self-trauma and provide temporary relief, while separation or cat proofing will prevent access to objects that might be chewed or ingested; however,

unless positively conditioned to wearing collars or to confinement this will add to further anxiety.

If observed in the act, cue, lure or reorient the pet into a desirable behavior or ignore the pet until it settles. A leash might be left attached (to a body harness) to prevent undesirable and prompt the pet into an acceptable outcome. For stimuli or situations that lead to fear and anxiety, avoid exposure or desensitize and countercondition to change the response.

Together with behavior management and modifications, drugs or supplements may be indicated to reduce fear, anxiety, stress, impulsivity and reactivity. These might include natural products such as pheromones, L-theanine, alpha-casozepine or combinations of ingredients; benzodiazepines, buspirone, gabapentin, clomipramine or selective serotonin reuptake inhibitors. For situational or as needed use, gabapentin, trazodone, and benzodiazepines such as alprazolam, lorazepam or clonazepam might be considered.

For compulsive disorders, treatment with a selective serotonin reuptake inhibitor (fluoxetine or paroxetine) or with clomipramine should provide some measurable improvement within 4 to 6 weeks. If there is insufficient response, a higher dose, drug combination or change in medication will be required.

Drug	Dose
Alprazolam	.125 mg - .25 mg per cat prn up to tid
Lorazepam	.05-.25 mg/kg (0.125-0.25 mg/cat) prn up to bid
Clonazepam	0.02 – 0.25 mg/kg prn or up to bid
Fluoxetine, paroxetine	0.25-1.0 mg/kg q 24h
Clomipramine	0.25-1.0 mg/kg q 24 h
Trazodone	50-100 mg / cat prn
Gabapentin	10-30 mg/kg (50-100 mg/cat) prn up to tid
Buspirone	.5 to 1 mg/kg bid

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