

# ANXITANE

## DEFINITIONS

**Fear** is the normal reaction of an animal faced with a situation that it perceives as dangerous. When an animal is confronted with a fearful stimulus it is likely to freeze, attempt to flee or fight. Individual animals differ in what they perceive as fearful, and in their response to fear, and it is not always possible to predict how a particular animal will respond. Fear is accompanied by physiological signs such as trembling, hypersalivation, tachycardia, tachypnea, piloerection, sweating, submissive urination and defecation.

**Phobia** is a persistent and excessive fear in the face of a specific stimulus that may not present a real threat. Animals can develop phobias to loud noises (thunderstorms or fireworks), specific situations (car rides), to certain individuals (small children, veterinarians or groomers) and other animals.

**Anxiety** is the anticipation of danger, usually from unknown or imagined origin. Anxious animals may be hyper vigilant and show physiological signs of apprehension or fear as described above. In addition, animals may demonstrate subtle visual cues such as yawning, tongue flicking or licking, avoiding eye contact and showing the whites of their eyes when they are feeling anxious or uncomfortable about a situation.

**Stress** is any pressure or strain placed on a system. The stress response is a normal and adaptive mechanism that prepares an animal for activity or defense. However, when an animal experiences frequent or chronic stress, this can lead to several adverse health consequences such as inhibition of growth, inhibition of the inflammatory response and suppression of the immune system. Any situation that causes chronic negative impact on the behavior, health and welfare of an animal can be referred to as a stressor.

## WHAT ARE THE PRIMARY CAUSES OF ANXIETY?

**Inherited behavioral tendencies** – Nervousness/shyness are generally believed to be inherited traits.

**Inadequate early environmental experiences** – Animals that are not allowed normal interactions with a variety of other animals and people during the first 4 months of life are more likely to be afraid when encountering novel individuals as adults.

**A learned aversion due to a particular experience** – An intensely unpleasant or aversive experience can lead to a lasting fear of that stimulus (single-trial learning).

**Medical or behavioral pathology** – Some systemic illnesses, especially certain endocrinopathies (hypothyroidism, hyperthyroidism, Cushings) can lead to anxiety. Chronic painful conditions and cognitive dysfunction can also be associated with increased levels of anxiety.

**OR any combination of the above causes.**

Other things that might contribute to or worsen anxiety problems include: communication problems between the owner and the animal, such as those that might occur during training. Poorly timed punishment or inconsistent use of punishment is one such example.

Changes in family dynamics, such as the arrival or departure of an individual, moving, addition of another pet or loss of another pet, can all contribute to anxiety in some animals.

### **RECOGNIZING THE ANXIOUS OR FEARFUL ANIMAL**

The anxious animal is hyper vigilant even in the absence of specific stimuli. He/she is worried, startles easily and may act frightened of any new element in the environment. The animal generally anticipates "problem situations" by acting afraid or anxious even before being confronted with them. For example, the dog that is afraid of thunderstorms may start shaking when the sky darkens, the wind picks up or rain falls, even when there is no thunder. Many animals with specific fears or phobias may begin to show signs of a fear response to similar stimuli. This is called generalization. For example, the dog who is afraid of thunderstorms, may begin showing signs of fear when it hears any loud noise, such as fireworks or a car backfiring.

Fear, anxiety and phobias may all be accompanied by physiological signs such as trembling, salivations, diarrhea, involuntary urination and emptying of the anal glands. Physical illness, such as colitis, may also be associated with anxiety. When faced with a stimulus that an animal perceives as frightening, they may try to flee and if they cannot escape they may display aggression. Once an animal uses aggression in response to a fearful stimuli, they learn that aggression is a successful method for coping with their fear and are much more likely to use that method in future fear evoking situations.

The extremely fearful or phobic animal may not be able to calm down until they are at a significant distance from the frightening stimuli.

### **WHEN SHOULD THE FEARFUL ANIMAL BE TREATED?**

The earlier treatment is initiated, the easier it is to successfully resolve anxiety and fear related behavior problems. In most healthy, normal animals, the fearful response will disappear with regular exposure to the fearful stimulus, as long as the stimulus is presented so as not to cause extreme fear or pain. This process is called **habituation**.

When the animal fails to habituate to the stimulus and fear escalates with each successive exposure to the stimulus, a phobia may develop. This process is called **sensitization**.

The phobic animal should be treated as quickly as possible, especially if the consequences are unacceptable for the owner (for example, house soiling which occurs because the animal is afraid to go outside). Similarly, an anxious or fearful animal should be treated as early as possible. Each fear eliciting event that does not have a positive outcome is likely to lead to a worsening of the problem. Animals that are in a constant state of anxiety or fear from which they cannot escape may suffer a variety of physiological consequences including a decreased ability to fight off infection, decreased attention span and possibly cognitive deficits as they age. These animals are experiencing impaired welfare.

## HOW TO MANAGE ANXIETY

The greatest chance of success occurs when medical treatment and behavioral modification are combined. In order for behavioral modification to be initiated, the specific causes of anxiety need to be identified and eliminated where possible. Any medical conditions that might be contributing to the anxiety should be treated. Communication between the owner and pet must be improved by using training methods that do not induce anxiety. **All forms of punishment should be discontinued as they may worsen signs of fear and anxiety.**

Once the fear provoking stimuli have been identified, behavior modification techniques such as desensitization and counter conditioning may be used to change the animal's response to the stimulus.

**Desensitization** is the process of making an animal less sensitive or reactive to a particular stimulus. This is accomplished by presenting the stimulus that normally causes fear at such a low level that it does not cause the fear response. For example, the animal that is afraid of thunderstorms could be exposed to a recording of a thunderstorm at a very low volume that doesn't elicit a fearful response. Over time, in a very controlled manner, the level of the stimulus is increased (volume of the recording is increased) until eventually, then animal can experience the full level of stimulus without responding fearfully. Used alone, desensitization can be a very slow, tedious process. For that reason, it is usually combined with counter conditioning.

**Counter conditioning** is a learning process that helps an animal to change a negative emotional response to a stimulus by pairing the event with a powerful, opposite, emotional response. For example, most animals experiencing intense fear or anxiety will not eat. Eating and the anticipation of food are incompatible with fear and anxiety. Presenting the fearful stimulus at a very low level, as described above, while offering the animal small bites of an extremely palatable treat, changes the animal's emotional response from a negative one to a positive one. Combining desensitization and counter conditioning is a very effective technique for reducing an animal's fearful and anxious response to specific stimuli.

**Medical intervention** is necessary when the anxiety or phobic behaviors are so intense that behavior modification techniques are too difficult to apply. For example, the anxious dog is too afraid to eat even when the volume of the thunderstorm recording is very low. In these cases, treatment options include pheromones, psychotropic drugs (anxiolytics, beta-blockers, antidepressants) and now, also a nutraceutical. These options are all intended to raise the animal's threshold for exhibiting anxiety or fear so that behavior modification techniques will be easier to apply and the animal will be in a better "state of mind" for learning to occur. Veterinarians should be aware that acepromazine, while commonly used to treat fearful animals, is NOT an anxiolytic and should not be the drug of first choice to treat fearful or anxious animals. Anxitane (l-theanine), whose calming and anxiolytic effects were first demonstrated in rats

and humans, has now been shown to have important anxiolytic effects in dogs and cats, as well. This highly palatable, safe nutraceutical is an excellent first choice for treating the anxious dog or cat.

### **ASSESSMENT OF THE ANXIOUS PATIENT**

In general, the following guidelines are followed: Once the diagnosis of anxiety is established, medical and behavior therapy are instituted and the dog is rechecked one month later in order to assess the status of the problem. In fact, an improvement in behavior is generally noticed during the first month of anxiolytic treatment. Compliance with the recommended behavior therapy as well as with the medical treatment protocol is verified and the improvement in clinical signs is assessed. For this assessment, the practitioner can make use of the owners' observations (noted as a percent improvement, for example, overall and with respect to each "problem situation" if possible. Assessment of degree of improvement is also based on observing the dog in the exam room and also out in the parking lot, street, or outdoors if possible. If satisfactory improvement is noted, the current treatment is continued. If not, the treatment plan is modified (dose is adjusted, medication is changed, or another medication is added.) Behavior therapy is continued as well, and other advice may be given based on the specifics and evolution of the case. In refractory cases, in the case of aggression, or if clients are frustrated or losing motivation, referral to a behavior specialist is appropriate.

### **SUMMARY AND KEY POINTS**

Fear, anxiety and phobias are fairly common problems among veterinary clients. They often lead to relinquishment and even euthanasia because the human – animal bond may be damaged beyond repair by the pet's difficult behavior. The sooner treatment is initiated, the greater the chances for a successful outcome. Response to treatment may be more rapid when medical treatment is combined with behavior modification. Anxitane is a nutraceutical so it is an alternative to pharmaceuticals for first intention treatment of the anxious or fearful pet. Clients generally appreciate the fact that it is safe and non-habit forming. Anxitane has been proven effective in clinical trials of anxious and fearful dogs and cats.