

BEHAVIOR: CAUSES AND DIAGNOSIS OF PROBLEMS

What makes a pet misbehave?

Behavior problems can be due to medical or behavioral causes, or both. A clinical history, physical examination, and diagnostic testing will determine if there are underlying medical conditions contributing to the problem. Although there may be a single cause for a behavior problem it is often the combined effect of the environment and learning on the pet's mental and physical health that determines behavior.

For example, the pet that is fearful of children, may begin to become more reactive, irritable, and aggressive as diseases such as dental problems or arthritis make the pet more uncomfortable, in pain or less mobile.

Another example is the cat that had been exposed to other cats roaming across its territory, but only began to mark when it developed an overactive thyroid at 10 years of age. Correcting the thyroid problem as well as behavior modification techniques resolved the problem.

What are some behavioral causes of behavior problems?

Any change in the environment may contribute to the emergence of behavior problems. For example, schedule changes, a new member of the household (baby, spouse), moving, loss of a family member or pet, or the addition of a new pet can have a dramatic impact on behavior. Any medical or degenerative changes associated with aging may cause the pet to be even more sensitive to these environmental changes.



Learning (e.g. reinforcement, punishment) also plays a role in most behavior problems. When a pet's actions result in unpleasant consequences (discomfort, lack of attention) i.e. punishment, the chances of repeating the behavior will decrease. If the behavior is followed by pleasant consequences such as obtaining food, attention, or affection (rewards), the behavior is likely to be repeated. These consequences could occur unintentionally when the pet gets into the garbage and finds some appealing leftovers, or could be administered by the owners, when a reward is given following a behavior. It can be difficult to determine what might be reinforcing a behavior, but reinforcement maintains behavior problems.

Some of the most important causes of behavioral problems and the ones that might be most difficult to improve are genetic factors that influence or even dictate the pet's response to stimuli, and the environment that the pet grew up in during its most sensitive periods of development including a) the socialization period from 3 to 12 weeks b) prenatal and neonatal experiences and c) secondary socialization and development through to maturity. Lack of stimulation, lack of handling, lack of exposure, insufficient socialization, and particularly stressful or traumatic events can have a major impact on the pet's behavior.

What tests can be done to determine a behavioral cause?

A good history is one of the most important means of determining the cause of a behavioral problem. This involves an in depth analysis of the pet's medical and behavioral past including any training, as well as the circumstances surrounding the problem

itself. Daily interactions with the pet and any changes in schedule need to be explored. Often the event that precipitated the behavioral change may be different from that which maintains it.

Based on the behavioral problem, the pet's age, and a physical examination, the veterinarian first determines if there are any medical causes or contributing factors. *Diagnosis of a behavioral cause can only be made after all medical factors have been ruled out.*



What medical conditions can cause or contribute to behavior problems?

A decline in the pet's hearing, sight or other senses, organ dysfunction (e.g. liver or kidney disease), hormonal diseases, diseases affecting the nervous system, diseases of the urinary tract (infections, tumors or stones), any disease or condition that might lead to pain or discomfort, and those that affect the pet's mobility can all cause or contribute to behavior problems.

a) Any condition that leads to an increase in pain or discomfort can lead to increased irritability, increased anxiety or fear of being handled or approached, and ultimately an increased aggressiveness. If these aggressive displays are successful at removing the "threat" (and they usually are) the behavior is reinforced. Medical conditions that affect the ears, anal sacs, teeth and gums, bones, joints, or back (disks) are some of the more common causes of pain and discomfort. If the pet's mobility is affected, it may become increasingly aggressive, choosing to threaten and bite, rather than retreat. A decrease in mobility could also affect urination and defecation by reducing the pet's desire or ability to utilize its elimination area.

b) Sensory dysfunction: Pets with diminished sight or hearing may have a decreased ability to detect or identify the stimuli, and might begin to respond differently to commands, sounds or sights. Sensory decline is more likely to be seen as pet's age.

c) Diseases of the internal organs, such as the kidneys or liver, can cause a number of behavior changes, primarily due to the toxic metabolites that accumulate in the bloodstream. Organ decline and dysfunction is more common in the older pet. Any medical conditions that cause an increased frequency of urination or decreased urine control, such as kidney disease, bladder infections, bladder stones, or neurological damage might lead to an increase in house soiling. Similarly, those problems that affect the frequency of bowel movements or bowel control, such as colitis or constipation might lead to house-soiling with stools.

d) Diseases of the nervous system (brain and spinal cord) can lead to a number of behavior and personality changes. Conditions such as epilepsy, brain tumors, infections, immune and degenerative diseases can all directly affect a dog or cat's nervous system and therefore its behavior. In the older pet aging changes can have a direct effect on the brain, leading to cognitive dysfunction and senility.

e) The endocrine (hormone) system also plays a critical role in behavior. Over-activity or under-activity of any of the endocrine organs can lead to a number of behavior problems. The thyroid and parathyroid glands (in the neck), the pituitary gland (in the brain), the adrenal gland (by the kidneys), the pancreas, and the reproductive organs can all be affected by conditions or tumors that lead to an increase or decrease in hormone production. Endocrine disorders are more likely to arise as the pet ages.

f) The aging process is associated with progressive and irreversible changes of the body systems. Although these changes are often considered individually, the elderly pet is seldom afflicted with a single disease, but rather varying degrees of organ disease and dysfunction. Cognitive decline and senility have also been recognized in older dogs (and perhaps cats). See our handout on geriatric behavior problems for more details.

What tests need to be done to determine if my pet's behavior problem is due to a medical condition?

Clinical history and physical examination

The assessment begins with a clinical history and physical examination. Remember the history that you provide may be the only way to determine if there are behavioral or medical changes that occur in the home, so be certain to mention any changes or problems that you may have noticed in your pet's behavior. If you can catch the problem on videotape, this can be a valuable diagnostic aid for the veterinarian. Based on the signs that you report and the findings of the examination, laboratory tests and a more comprehensive examination such as a neurological examination or sensory testing may be required. For some of these tests your pet may need to be referred to a specialist.

Medical, surgical, dietary or pharmacologic treatment

Before beginning behavior therapy, any medical problem that has been treated. A change in diet or a drug trial may be an important aspect of from a behavioral cause (as a food trial or steroid trial might be used to rule out cause). Surgery may also be indicated such as when a tumor is diagnosed or indicated to reduce male sexually influenced behaviors. Your veterinarian may behavioral treatment for long standing behavior problems.



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