Life Expectancy and Environmental Factors: Maintaining Behavioral Health

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Introduction

I have not found any publications that studied the relationship between stress and longevity in dogs. However, the documented detrimental effects of stress on physiological and behavioral wellbeing allow the conclusion that appropriate management of distress will contribute to welfare and longevity of our dogs.

Signs of Stress

Stress in dogs can be recognized by various physiological signs (Lindsay, 2000), such as:

- Pupillary dilatation
- Dilatation of blood vessels in the retina of the eye (change of eye color)
- Decreased pain sensitivity
- Decreased appetite and thirst
- Panting
- Increased perspiration on pads of the feet
- Increased heart rate
- Increased sympathetic arousal
- Frequent defecation, diarrhea
- Frequent urination
- Stronger startle and withdrawal reflexes

Behavioral signs include:

- Body language (ears back, tail tucked, body lowered)
- Conflict behavior (yawning, scratching, shifting eyes, scanning, pacing, etc.); compulsive disorder
- Escape behavior, scurrying, hiding
- Hyperactivity, hyper-reactivity
- Destructiveness, chewing licking
- Self-directed behaviors
- "Sexual" mounting
- Vocalization (high-pitched screaming, repetitive barking)
- Survival behaviors such as aggression (initially defensive, but may become offensive through conditioning with negative reinforcement) Inability to learn, focus
- Not accepting treats

Consequences of Stress

Stress, especially if frequent or chronic (non-avoidable) and anxiety have detrimental consequences:

- Atrophy of lymphatic glands and immunosuppression
- Changes in red-cell and white-cell blood values
- Gastric ulcers
- Degenerative effects on the brain that reduce ability to cope (less inhibition by higher brain centers)
- Increase in cortisol secretion
- More frequent and irregular urination, loss of house training
- Decreased appetite

Causes of Stress:

Stress can be caused as a result of genetic predisposition and the way we raise a puppy. Stress may also be caused by environmental conditions, including by how we manage the dogs, and by the nature of our interactions with dogs.

- Genetic predisposition: Some dogs are genetically predisposed to develop generalized fear or anxiety, sometimes very early in life. Others have a predisposition for developing specific fears, such as fear of loud noises (frequently late onset). Dogs that have been selected to be highly trainable are particularly prone to suffering from an inconsistent, unpredictable and uncontrollable environment.
- Early experience: A restricted early environment inhibits learning ability probably because of increased emotionality. Early removal from the litter has been shown in other species such as rats and cats to increase emotionality and anxiety (increased stress hormone turnover, decreased serotonin production). Severe disease in the first 16 weeks of a dog's life an also adversely affect emotionality (as evidenced by increased incidence of owner-directed aggression). Puppies that are not exposed to normal every-day stimuli between 3-14 weeks ofage will be fearful and anxious as adults. If they are left in a restricted environment until 12-14 weeks of age, the chances of establishing normal responses are virtually non-existent. Psychological trauma in a fear period may result in generalized anxiety or specific fear.
- Traumatic experience: An adverse experience in a particular situation will cause anxiety and fear in that situation or to the aversive stimulus in the future (classical conditioning). Dogs can also suffer from post-traumatic stress syndrome.
- Environment: Unpredictable environment and social interactions, lack of consistent rules, loss of control over environment and over pleasant and aversive stimuli can result in learned helplessness.
- Motivational conflict: Strong opposing motivations resulting in conflict and conflict behavior. Frequently caused through inconsistent interactions and, especially, inappropriate use of punishment.
- Frustration: resulting form thwarted motivation, e.g., caused by social isolation, lack of exercise or lack of opportunity to investigate ("cabin fever").

Treatment of Stress and Anxiety:

Treatment needs to be specific to the cause, or to the specific anxiety-related behavior problem (e.g., compulsive disorder or separation anxiety). However, there are some general measures that can help alleviate stress:

- Consistent environment: Absolute rules and predictable and consistent interactions empower dogs by giving them the ability to control appetitive and aversive stimuli. Obedience training and command-response-reward type interactions contribute much to stress reduction.
- No punishment: Punishment is a very complex technique and difficult to use correctly. In addition, punishment is only appropriate for a very limited number of problem behaviors. Alternatives to punishment include, e.g., avoiding triggers, removing the reward, giving acceptable alternatives, and teaching an alternate behavior (response substitution).
- Exercise: Physical exercise has *a* modulatory effect on stress hormones, increases brain serotonin, boosts the immune system and reduces impulsive behaviors. Exercise off the property also allows for investigation of novel stimuli. Regular (twice-daily) walks off the property greatly reduce anxiety and alleviate behavior disorders that involve anxiety.
- Outlet for normal behavior: Investigation, chasing (predatory behavior), chewing, play, social interactions, etc, are normal dog behaviors that need an appropriate outlet.
- Environmental stimulation: All sensory systems, in particular the vomeronasal organ, give input into the limbic system that controls emotions. A very monotonous environment will increase anxiety (this may be why meal feeding is better than free-choice feeding in dogs), a more complex (albeit consistent and predictable) environment will decrease it. Commercially available pheromones (DAP) can be used to reduce anxiety.
- Pharmacological treatment: Because of the limitations of and requirements for behavior modification techniques, temporary pharmacological intervention is often necessary to reduce the anxiety to a level where the animal can learn and behavior modification techniques can be effective.
- Specific treatment of behavior disorders: There are specific treatment protocols for anxiety-related behavior disorders such as separation anxiety, many forms of aggression, compulsive disorder, etc.

Prevention of Stress and Anxiety

Sound genetic makeup, optimal raising conditions, sufficient socialization and exposure, canine-appropriate management, feeding and exercise, a complex and consistent environment, predictable social interactions, competent training methods and restraint on discipline, the avoidance of traumatic experiences and good health status, all contribute to an emotionally balanced dog.

Genetic basis for emotionality: Researchers identified four personality traits in dogs, i.e., aggressiveness, playfulness, curiosity/fearlessness and chase-proneness, the latter three traits forming the super-trait shyness/boldness. Heritabilities of chase-proneness and aggressiveness have been shown to be moderate, but those for playfulness and curiosity/fearlessness are high. Therefore, selection of breeding animals for temperament should be successful given reliable and valid tests to measure it.

Complexity of Early Environment: An animal's central nervous system only retains its genetically predetermined functions if exposed to environmental stimulation, especially early in life. A restricted early environment will result in an animal with abnormal sensory perception that is emotionally unstable. In addition to emotionality, the complexity of the early environment also greatly influences learning ability. A restricted early environment may result in reduced trainability. It is therefore important to provide an interesting, stimulating early environment. In addition it is also important that the early environment be predictable and consistent. If not, the animal will learn that its behavior has no impact on what is happening around it, and it will be in a state of learned helplessness. Such animals are exceedingly hard to train later on.

Effect of Neonatal Stress: Some degree of stress (e.g. handling, cold temperature) in the neonatal period of dogs may accelerate growth, reduce emotionality, and increase resistance to some diseases. Handling sessions from the first days of a puppy's life are therefore recommended (about 3 minutes/day are sufficient). In addition, puppies may be removed from the nest (best while someone else walks the mother) and placed on a cool vinyl floor for a brief time (30 seconds) before being put back into the warm nest. If done in the first few days after birth, this is expected to result in reduced behavioral and physiological reaction to chronic stress, an increased physiological reaction to acute stress, and reduced emotionality of the adult dog. Chronic stress is caused by unavoidable and long-lasting aversive conditions. Since they are unavoidable, the stress reaction does not result in coping, and just drains the animal's resources. Such chronic stress causes stomach ulcers and other impairment of health. A strong reaction to acute stress, however, is desirable. If a grand piano falls from the sky directly towards you, it may save your life to mobilize all your resources to get away from there. So both a reduced reaction to chronic stress and an increased reaction to acute stress are beneficial.

Socialization and exposure: The socialization period of dogs begins at about 3 weeks and extends to about 12 or 14 weeks of age. Socialization to dogs and to people has to occur during this time (it needs to be continued thereafter). If this opportunity is missed, the puppy will most likely always be fearful of dogs and/or humans. During the socialization period, the puppy should also be exposed to all situations that it is likely to encounter during its life. The best prevention of behavior problems is to take the puppy to puppy classes during that time. During the socialization period, the puppy can already learn some commands. It should learn a biting inhibition, and should start to learn to fit into a social group.

Managing for Success: Problem prevention includes managing the puppy for success, i.e., arranging the environment so that the puppy cannot do the wrong thing, and automatically chooses to do the right thing (e.g., house training, chewing). If appropriate behaviors are successful from the puppy's point of view from the beginning, it will repeat these and not try other behaviors (and if we have set up the environment correctly, if it ever tries other behaviors, these are not successful). This includes puppy proofing the house and appropriate confinement and supervision.

Exercise: Exercise off the property will satisfy the dog's innate motivation to explore new things, help with exposure and desensitization to stimuli, and facilitate socialization. Exercise off the property also decreases arousal and reactivity, reduces anxiety and reduces the risk of owner-directed aggression. Vigorous exercise also reduces anxiety through its effect on stress hormones and serotonin

Environmental enrichment: interactive toys and games, food dispensing toys, rotating the toys so they maintain novelty and appropriate play serve to enrich the environment and provide mental stimulation.

Obedience training: Obedience training has an enriching effect as well. Furthermore, humane obedience training (lure training, clicker training) provides for predictable, consistent and stress-free interaction, and an opportunity for the dog to act upon the environment with predictable outcome. If we are consistent in training, the dog has a lot of control over the situation (i.e., over the rewards). In clicker training, they literally can make us click. Furthermore, command-control over the dog can help diffuse critical situations by telling the dog what to do, i.e., providing the dog with an appropriate way to cope with a stressful situation.

In addition to usual commands, a puppy should learn a bite inhibition, food bowl safety, the "off[1] (or leave-it and drop-it) command, to walk on a leash, to be alone for some time, and to accept a crate. A puppy should also learn appropriate play.

Consistent Rules: I don't believe we have to dominate our dogs (I don't think our relationship with dogs is one of dominance and submissiveness, but that is open to debate). However, we have to control the ontingencies on the dog's behavior. That means, we have to control consistently, which behaviors pay off for the dog (are rewarded) and which do not. The establishment and strict enforcement of rules are xtremely important. If rules are not consistent, the dog can never figure them out, and cannot function within them to achieve success. This situation would be similar to you visiting with friends who play a card game that you don't know. They ask you to participate and explain you the rules. You go along with it and after some time think you have the winning hand, put your cards down and claim that you have won. Now of course, your friends add another rule, etc. After two or three times of this, you will become frustrated, angry (as a conflict behavior!) and distressed. This is how our dogs must feel if we have no rules or constantly change them. They may either compensate for this by developing survival behaviors that yield short-term predictable consequences (such as aggression, escape or inhibition), or develop learned helplessness (i.e., they learn that their behavior has no effect on what happens around them). Enforcing strict rules therefore has nothing to do with dominance, but a lot with giving the dog a chance to operate successfully in its environment and achieve predictable outcomes. Particularly a highly trainable dog, i.e., a dog that is keen on operating on his environment, is in a state of compromised welfare if a consistent rule structure is not maintained.

Managing the older dog

All the above also applies especially to older dogs that may suffer from declining cognitive function. Environmental enrichment, mental stimulation and teaching new behaviors (appropriate for the dog's age, health and physical ability) such as scent discrimination or searching for a hidden treat or toy, may help prevent cognitive decline. There are now classes offered for senior dogs. It is important to maintain older dogs' interest in participating in daily activities, social interactions, play and suitable exercise.

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Qualifications:

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1984	PhD (Animal Behavior) Guelph, Canada
1993	Certified Applied Animal Behaviorist (Animal Behavior Society)
1995	Diplomate, American College of Veterinary Behaviorists (ACVB)
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Professional Experience:

1982-1984	Research Associate, Federal Veterinary Office, Bern, Switzerland
1985-1997	Assistant Professor for Ethology, University of Guelph, Guelph, Ontario, Canada
1995-1997	Adjunct Faculty, animal behavior, Atlantic Veterinary College.
1997-	Associate Professor with tenure for Animal Behavior and Director of Animal Behavior Clinic, Purdue University, W. Lafayette, Indiana.

Research Interests:

Conflict behavior and compulsive disorder in various species
Canine aggression to household members
Psittacine behavior
Learning in dogs and training methods
Behavior Development

Maintaining Behavior Health

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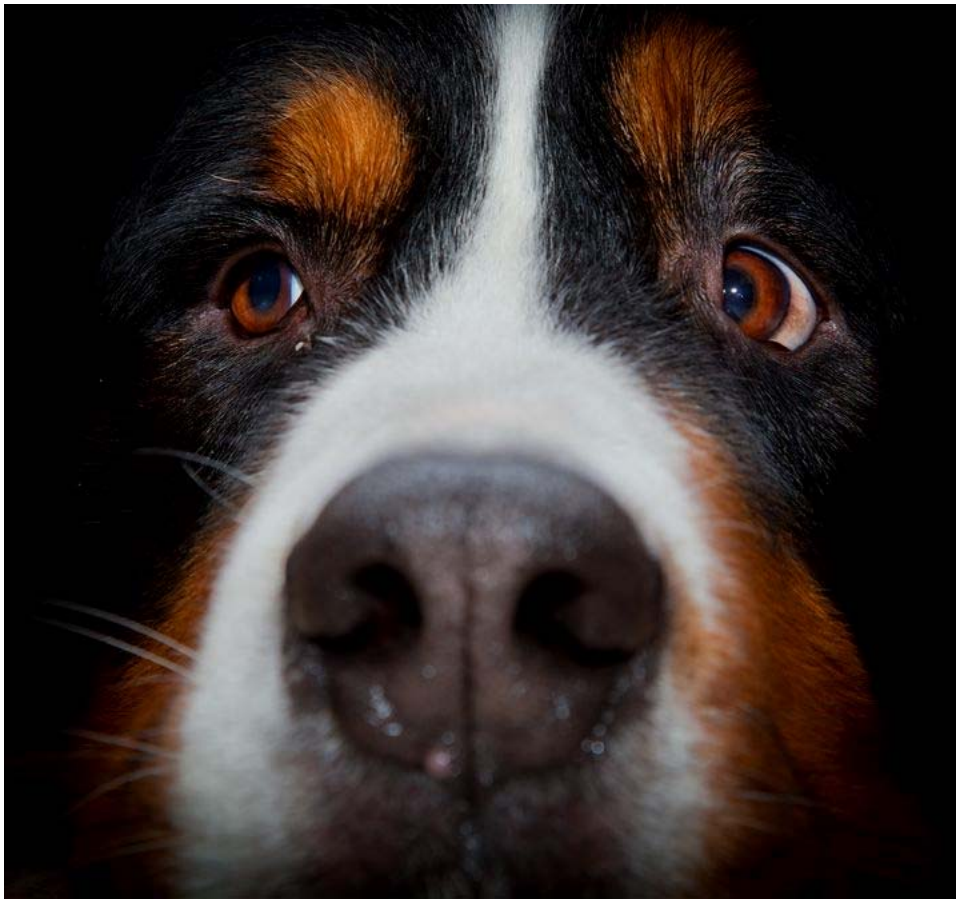
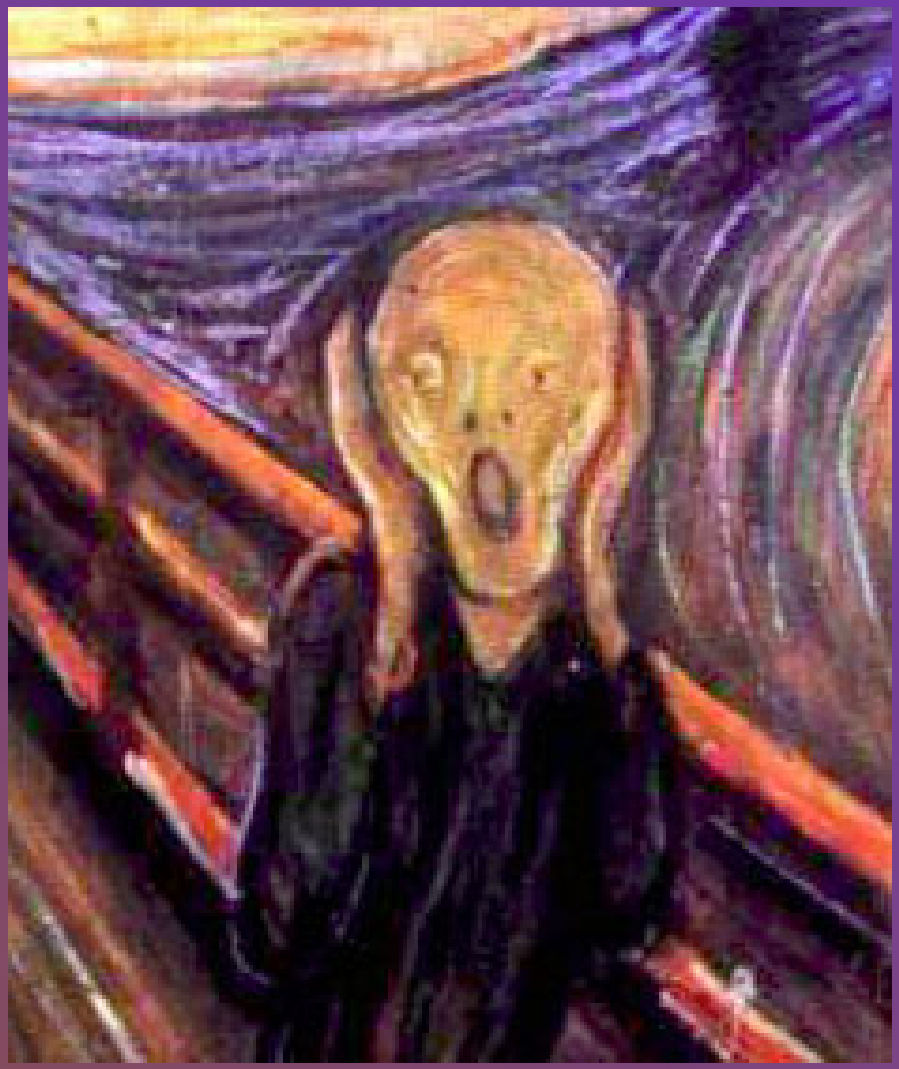
Stress and Anxiety

- **Signs**
- Consequences
- Causes
- Treatment
- Prevention



Physiological Signs of Stress and Anxiety

- Pupillary Dilatation
- Dilation of blood vessels in the retina
- Decreased pain sensitivity
- Decreased appetite and thirst
- Panting
- Increased perspiration on pads

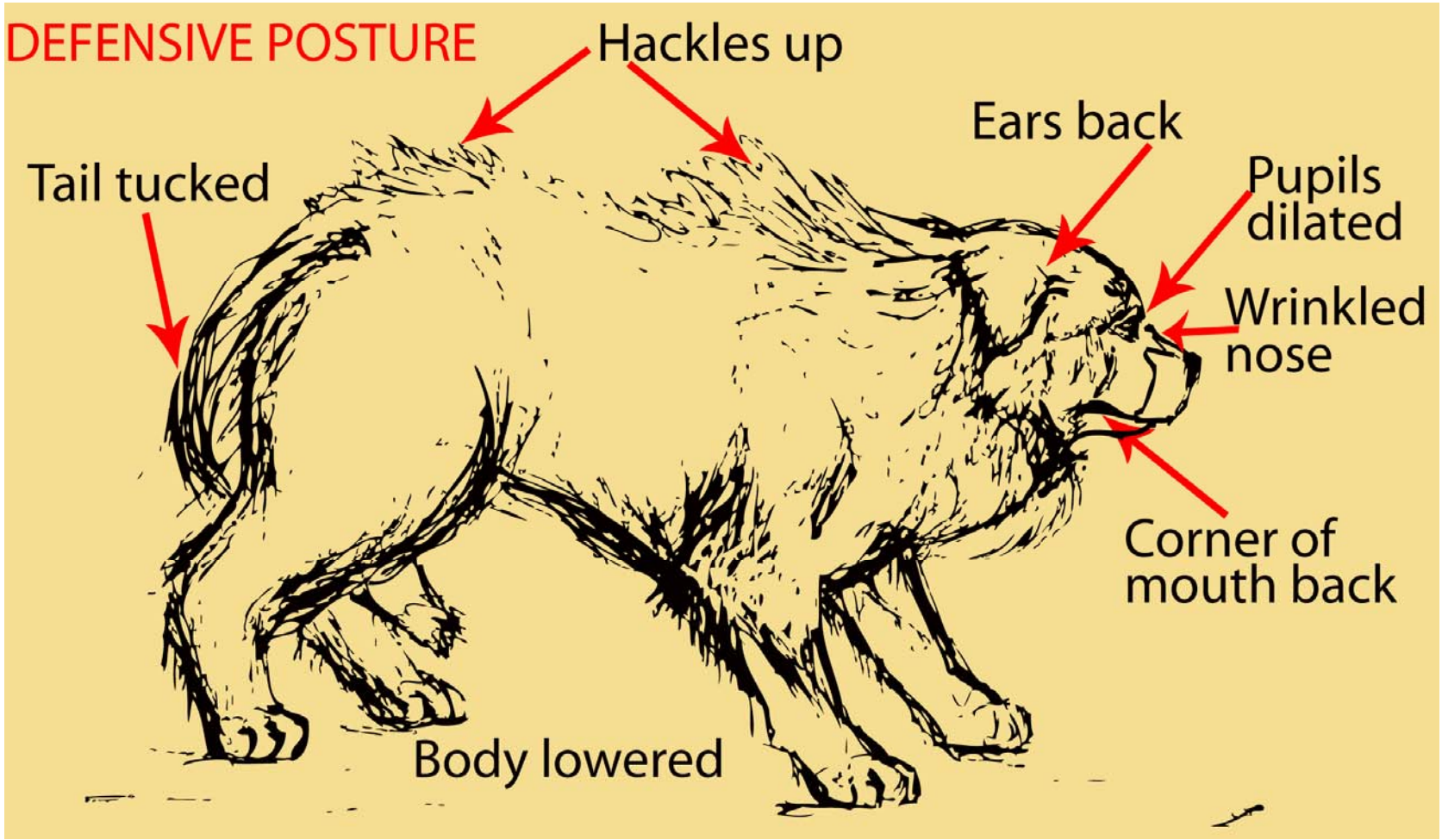


Physiological Signs of Stress and Anxiety

- Increased sympathetic arousal
- Increased heart rate
- Frequent urination and defecation, diarrhea
- Stronger startle and withdrawal reflexes

Behavioral Signs of Stress

- Body language



Behavioral Signs of Stress and Anxiety

- Escape behavior
- Hyper(re)activity
- Destructiveness
- Self-directed behaviors
- “Sexual” mounting
- Vocalization
- Survival behaviors (aggression!)
- Inability to learn, focus
- Not taking treats
- Conflict behavior
- Behavior problems

Behavioral Signs of Stress and Anxiety: Conflict Behaviors

- Yawning
- Licking lips, nose
- Scanning, shifting eyes
- Squinting
- Staring upwards
- Licking, scratching self
- Freezing
- Wet-dog shaking
- Behaviors that are ambiguous

Stress and Anxiety

- Signs
- **Consequences**
- Causes
- Treatment
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Health Consequences of Stress

- Atrophy of lymphatic glands and immunosuppression
- Changes in red and white bood cell values
- Gastric ulcers
- Inability to cope (less inhibition by higher brain centers)
- Increased cortisol secretion
- More frequent and irregular urination, loss of house training
- Decreased appetite

Stress and Anxiety

- Signs
- Consequences
- **Causes**
- Treatment
- Prevention

Genetic Selection in Dogs Behavioral Effects

- Dogs are neotenized
  - They remain behaviorally immature relative to wolves
- Degree of neoteny differs between breeds
- More highly neotenized breeds may be more suitable as family pets:
  - Less developed predatory behavior
  - Less strict hierarchy, less social competition
  - More playful, seek contact

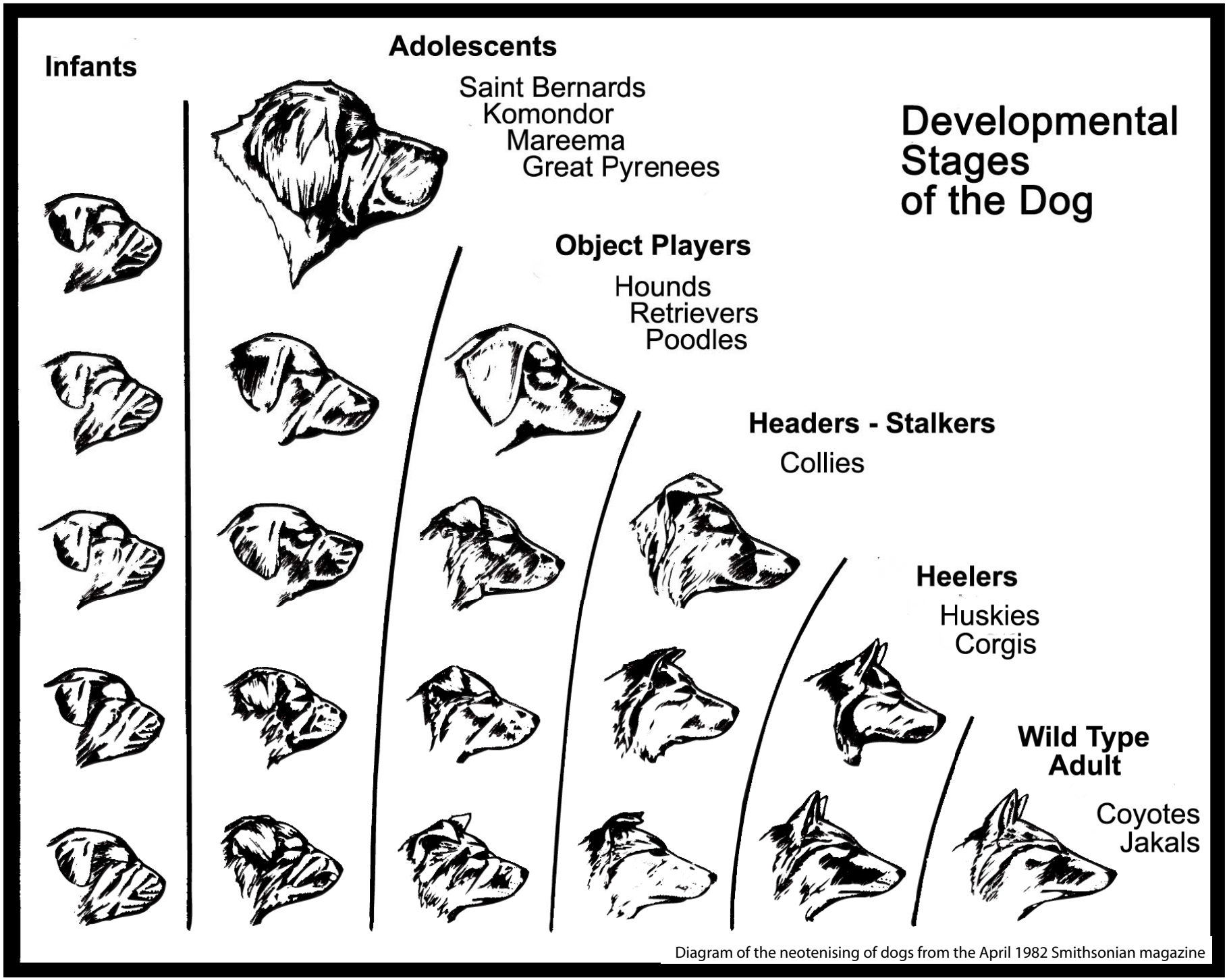


Diagram of the neotenising of dogs from the April 1982 Smithsonian magazine

Differences Between Breeds

Goodwin et al, 1997

Adult wolf

Adult Husky

15 adult wolf behaviors

Wolf pup

Adult CKCS

2 adult wolf behaviors

Genetic Selection in Dogs

- Breeding for show makes dogs less sociable, more fearful, less playful, less outgoing, less aggressive
- Breeds that are sociable and playful are successful as pet-dogs

Genetic Selection in Dogs

- Popular breeds are no less fearful or aggressive than others
- Selection for working trials: more playful and aggressive

Causes of Stress and Anxiety: Genetic Predisposition

- Global fear
- Increased sensitivity for developing global fear in the fear period
- Specific fears (loud noises, thunderstorms)
- Shyness/boldness

Causes of Stress and Anxiety: Early Experience

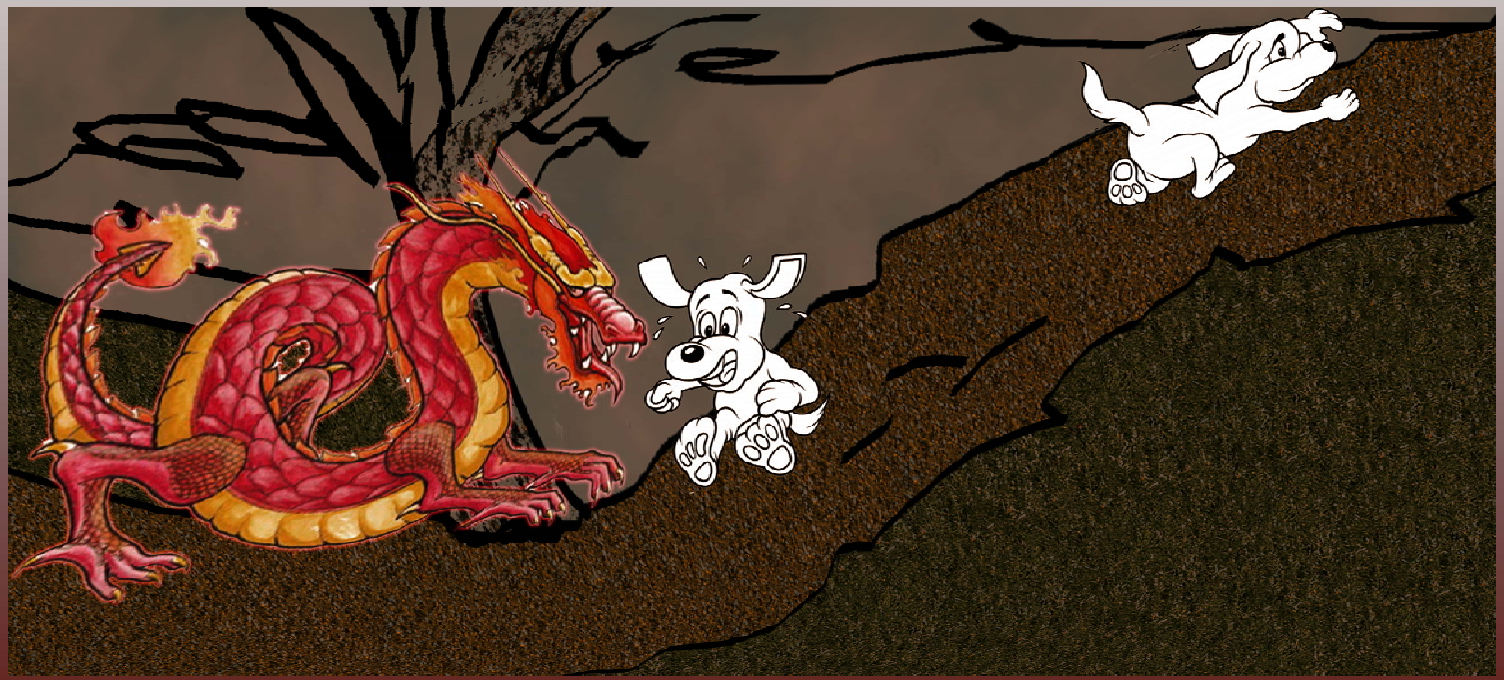
- Restricted early environment affects sensory perception, learning ability and emotionality

Causes of Stress and Anxiety: Early Experience

- Early removal from the litter (before 8 weeks?) may increase emotionality and anxiety
- Disease in first 4 months increases emotionality, aggression
- Lack of handling, exposure and socialization in early life will result in fear and increased emotionality
- Psychological trauma in the fear period will result in fear and anxiety

Traumatic Experience

- Fear and anxiety of the situation (classical conditioning)
- Conditioning of fear response through negative reinforcement (removal of pain or threat; operant conditioning)



Environment and Stress

- Frustration
- Motivational conflict
- Lack of predictability and controllability of the environment
- Fear, pain

Frustration

- A dog is motivated to perform a behavior but is thwarted from performing it
- Frustration may induce anxiety (separation anxiety!) and conflict behavior (aggression!)

Motivational Conflict

- Two opposing motivations in balance
- Inconsistent interaction and inappropriate use of punishment often results in an approach withdrawal conflict
- Results in conflict behaviors

Lack of Predictability and Controllability of the Environment

- Selection for working ability increases motivation to operate on the environment with predictable outcome (“control”)

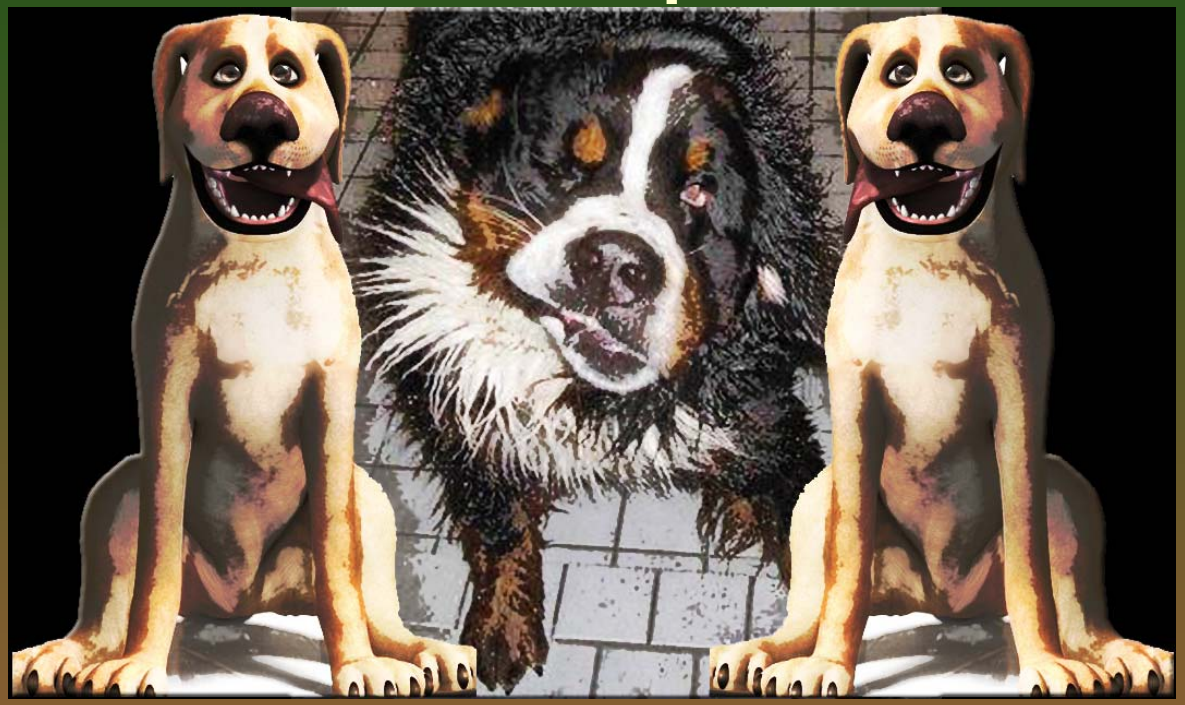
Lack of Predictability and Controllability of the Environment

- Highly trainable dogs may be more sensitive to inability to predict or control what is happening

Development of “Survival Behaviors”

- Escape and avoidance behavior
- Aggression
- Compulsive behavior as pathological consequence of frustration, conflict and stress

Learned Helplessness



- If the environment is inconsistent, the dog can not operate on the environment with predictable outcome and learns that he cannot avoid aversive stimuli or bring about rewards.
- Dogs in that state are very difficult to train. They appear “stupid”

Learned Helplessness

- Changing rules and inconsistent interaction
- Owner-applied inconsistent “punishment”
- Rewards that are given non-contingent on behavior

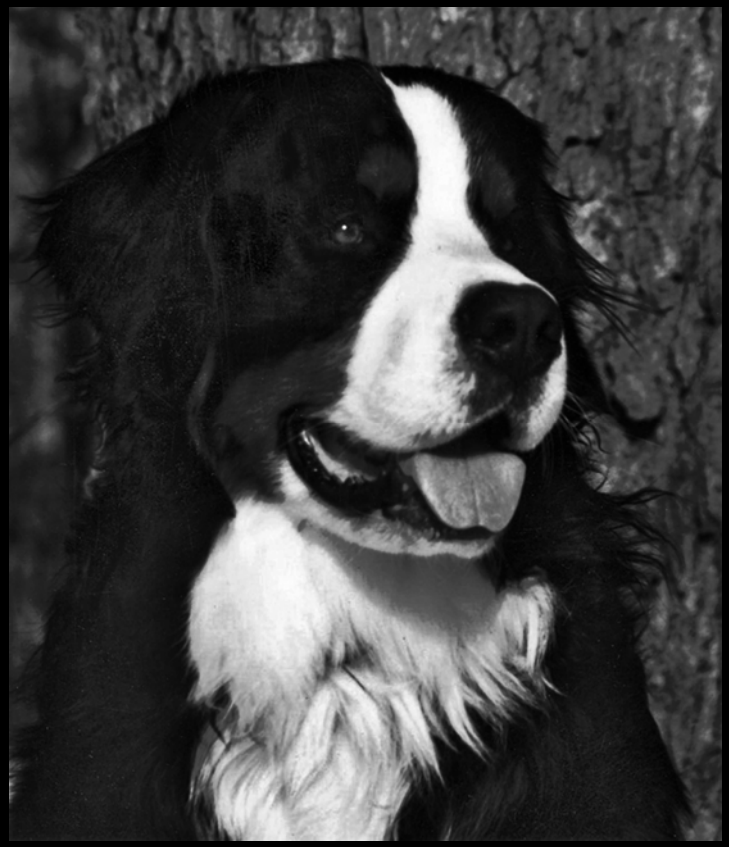
Stress and Anxiety

- Signs
- Consequences
- Causes
- **Treatment**
- Prevention

Treatment of Stress and Anxiety: Consistent Environment

- Absolute Rules
- Predictable and consistent interactions (command-response-reward format)
- Obedience training

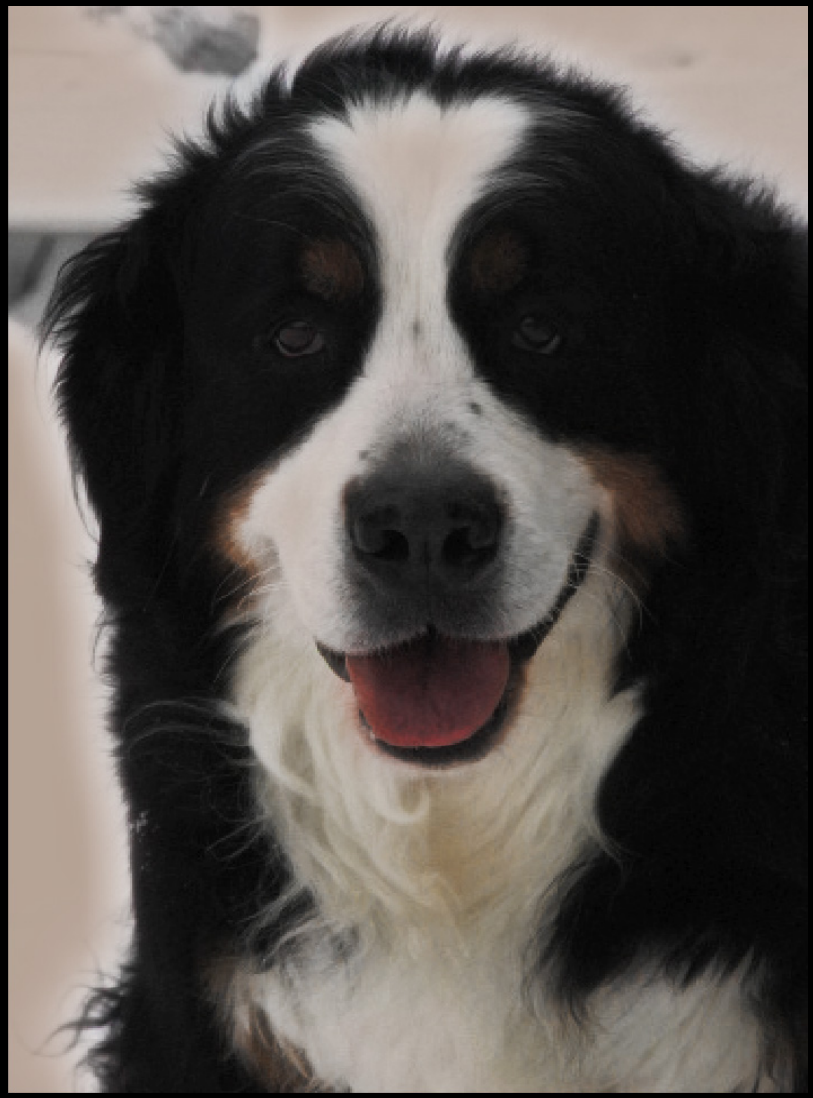
Treatment of Stress and Anxiety: Consistent Environment



- No punishment
- Punishment is difficult to use:
  - Contingency
  - Consistency
  - Timing
  - Intensity

Alternatives to Punishment

- Management
- Reduce motivation
- Counter-condition, response substitution, systematic desensitization
- Provide an alternative strategy, reward appropriate behavior



Treatment of Stress and Anxiety: Exercise

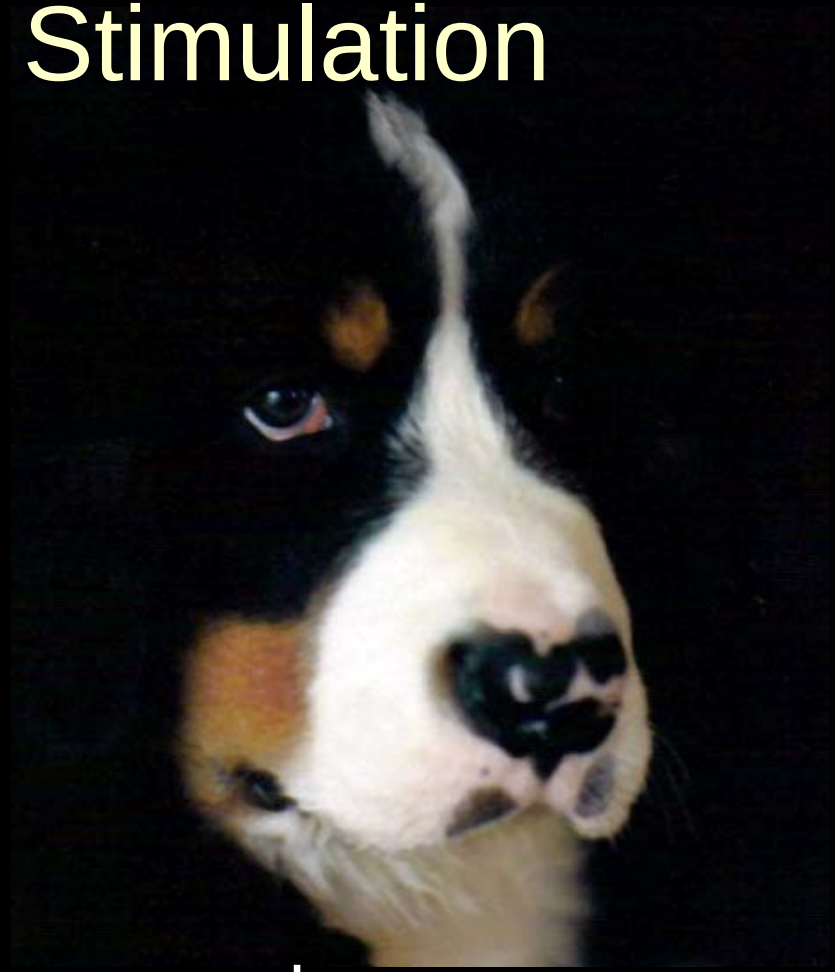
- Modulatory effect on stress hormones
- Increases serotonin
- Boosts immune system
- Decreases anxiety and reactivity
- Exercise ***off property*** allows for investigative behavior

Treatment of Stress and Anxiety: Outlet for Normal Behavior

- Investigating
- Chewing
- Playing
- Social contact
- Chasing, predatory behavior



Treatment of Stress and Anxiety: Environmental Stimulation



- Twice-a-day feeding
- Walks off the property
- Rotating toys
- Interactive toys
- Social contact
- Interactive games
- Obedience training
- Allow for stable hierarchy among dogs
- Dog Appeasement Pheromone

Treatment of Stress and Anxiety: Pharmacological Treatment

- Use of drugs is needed for global fear or generalized anxiety, or excessive stress or fear responses
- Anxiolytic drug is given to reduce the anxiety to a level at which the dog can learn
- Behavior modification techniques (counter-conditioning and response substitution) are used simultaneously

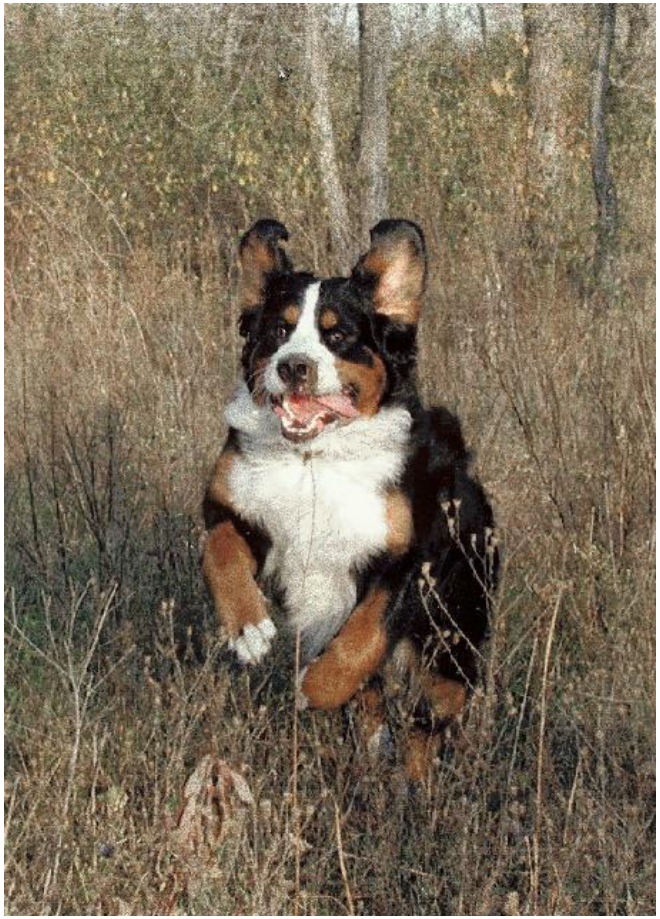
Treatment of Specific Anxiety-Related Disorders

- Most cases of aggression
- Global and specific fear
- Generalized anxiety disorder
- Separation anxiety
- Compulsive disorder

- Specific treatment protocols

Stress and Anxiety

- Signs
- Consequences
- Causes
- Treatment
- **Prevention**



Prevention of Stress and Anxiety: Genetic Selection

15 variables

Factor analysis

4 personality traits

playfulness

curiosity/fearlessness

chase proneness

aggressiveness

Broad personality traits

Shyness / boldness

Aggressiveness

Prevention of Stress and Anxiety: Providing a Complex Early Environment

- Effect on sensory abilities:
  - Kittens reared in darkness and put into cylinder with only horizontal or vertical stripes: respond only to vertical or horizontal objects: deficit in visual cortex.

Prevention of Stress and Anxiety: Providing a Complex Early Environment

- Effect on learning ability:
  - Rats selected for maze brightness/dull ness are equally bright or dull if reared in an enriched or restricted environment, respectively

"We've developed a rat that is immune to everything, including insults."

SEE: Effects of enriched and restricted early environments on the learning ability of bright and dull rats
Cooper, R. M.; Zubek, John P.
Canadian Journal of Psychology/Revue Canadienne de Psychologie, Volume 12, issue 3 (September 1958), p. 159-164.
ISSN: 0008-4255 DOI: 10.1037/h0083747
American Psychological Association / University of Toronto Press

Prevention of Stress and Anxiety: Early Stress

Neonatal stress may have beneficial effects on the development of *altricial* animals

- Kittens open eyes sooner, leave nest sooner
- Siamese kittens develop color points sooner
- Decreased emotionality
- Increased resistance to some diseases

- Less age-related memory impairment?

Prevention of Stress and Anxiety: Early Stress

Animals that experienced early stress

- React more strongly endocrinologically to acute stressors
- React less strongly endocrinologically to chronic stressors
  - less deleterious effects such as immune suppression

Prevention of Stress and Anxiety: Early Stress

- Handle puppies from birth
- In the first few days after birth, remove puppies from nest and place on cool vinyl floor for brief period, then return them to the whelping box

Prevention of Stress and Anxiety: Taking Advantage of Developmental Stages

• Fetal Period	to birth
• Neonatal Period	0-10 days
• Transitional Period	11-21 days
• ***Socialization Period***	***3-12 (14) weeks***
• ***Fear Period***	***8-10 (12) weeks***
• Juvenile Period	3 months - Puberty
• Adolescent Period	Puberty to social maturity
• Second Fear Period	3 wks btw 4-11 m

Socialization Period (3-14 Weeks)

- "Primary" socialization to other dogs (3-5 weeks)
  - Play with litter mates
  - Development of bite inhibition
  - Begin establishing a social hierarchy

Socialization Period (3-14 Weeks)

- “Secondary” socialization to other species (humans, other pets; 6-14 weeks)

Socialization Period

(3-14 Weeks)

- Desensitization to objects/situations
- Effect of environmental complexity
- Puppy Parks

Socialization Period

- Learning ability improved. Learn from bad experiences
- May develop global fear if not exposed to stimuli, socialized and desensitized

Fear Period
(2-3 weeks between 5 and 12 weeks)

- Puppies show stronger fear reactions and retain their fear of an object/person
- Puppies can be ruined by a single traumatic experience (global or specific fear, hyperexcitability, separation anxiety)
- Puppies vary (genetically) as to how susceptible they are
- Be careful if you have to ship a puppy

Prevention of Stress and Anxiety: Managing for Success

- Management for success and puppy proofing
  - Arrange the environment so that the puppy cannot do the wrong thing, and automatically chooses to do the right thing (e.g., house training, chewing)
- In training take route of least resistance

Prevention of Stress and Anxiety: Managing for Success

- Exercise
  - Walks off property (innate motivation to explore)
  - Decreases arousal and anxiety
  - Reduces reactivity
  - Socializes
- Social contact
  - Provides pleasurable feelings
  - Pair housing

Prevention of Stress and Anxiety: Environmental Enrichment

- Restricted feeding
- Interactive toys and games
  - Interesting toys
  - Rotating toys
  - Food-dispensing toys
  - Hide and seek
- Appropriate amount of stimulation
- Appropriate play

Prevention of Stress and Anxiety: Obedience Training

- Ignoring unwanted behavior
- Rewarding desired behavior
- Consistent rules

Prevention of Stress and Anxiety: Training

- Lure training (guiding puppy with treats)
- Clicker training
- Basic commands
  - Sit, down
  - Come
  - “Off”
- Leash Walking

Prevention of Stress and Anxiety: Training

- Teach a relaxed down-stay (“settle”)
- Teach to go to bed or crate on command
- Crate training, alone training

Prevention of Stress and Anxiety: Counter-conditioning, Desensitization

- Get dog used to frightening things:
  - Counter-conditioning
  - Systematic desensitization
  - Response substitution
- Reaction when dog is frightened
  - Give treat (you can't reinforce fear with food

Prevention of Stress and Anxiety: Counter-conditioning, Desensitization

- Exposure and desensitization
  - Objects
  - Unusual footing
  - Stairs
  - Sounds (tapes, traffic)
- Make every experience enjoyable
- Avoid frightening the puppy (fear period!)

Prevention of Stress and Anxiety: Counter-conditioning, Desensitization

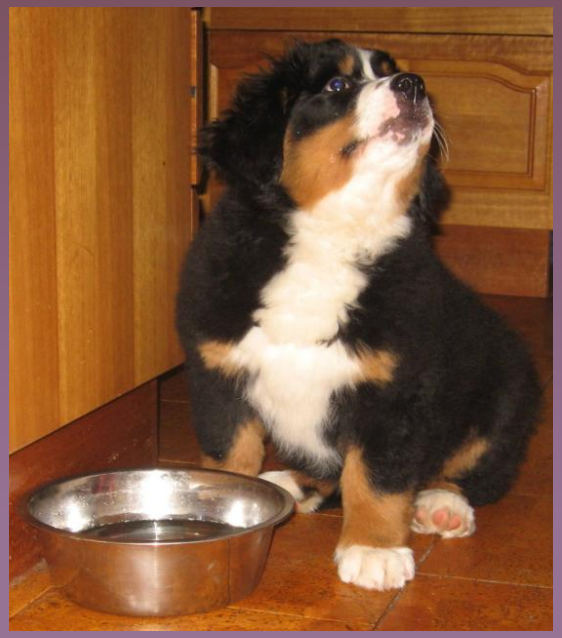
- Training to accept restraint, grooming, handling feet, ears, toe nail clipping
  - Systematic desensitization
  - Counter-conditioning

Prevention of Stress and Anxiety:

- Food bowl safety
  - Measure out puppy's ration in a different bowl (not food bowl)
  - Sit down with puppy and empty food bowl
  - Add the ration to the food bowl by hand while puppy eats
  - Toss a treat into puppy's food bowl whenever you pass

Prevention of Stress and Anxiety:

- Grabbing collar
  - "gotcha": grab collar, hold for a moment, give treat and release
- Pilling
  - Open puppy's mouth and put peanut butter/ treat in the back of its mouth



Prevention of Stress and Anxiety: Puppy Class

"taking a puppy to puppy class is the single best thing an owner can do to their dog in its entire life"

- Socialization
- Exposure and desensitization
- Training
- Problem prevention

Advantages of Puppy Classes

- Structured way of achieving goals
- Socialization to different people/races and ***children*** easily possible
- Owner information
- Hands-on help
- Feedback to owner

Prevention of Stress and Anxiety: Managing the Older Dog

- Simple, clear, predictable environment.
- Maintain older dogs' interest in participating in daily activities, social interactions, play and suitable exercise

Prevention of Stress and Anxiety: Managing the Older Dog

- Environmental enrichment, mental stimulation and teaching new behaviors (appropriate for the dog's age, health and physical ability)
- Classes for senior dogs.
- Appropriate nutrition, supplements, drugs
- Regular geriatric check-ups