

Less Stress, More Joy: 5-Sense Solutions for Fear Free Animal Care

Fear Free Lead Animal Trainer

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Vision



Field of Vision:

180°



220 - 290°



200°



350°

Binocular Vision:

120°

30 - 60°

85 - 130°

65°

Visual Acuity:

20/20

20/75

20/100 - 20/200

20/33

Low-Light Vision:

low

moderate

excellent

moderate

Color Vision:

- Cats have 90% fewer color receptors than humans
- Dogs see the blue and yellow portions of the color spectrum best
- Vision is similar to red/green color blindness
- Dogs and cats see into the ultraviolet UVB spectrum (manmade, bright white may fluoresce)



Visual Accommodations:

- Use lighter colors in overnight enclosures to facilitate navigation in low light
- Avoid bright white
- Utilize more blue, violet, yellow
- Attend to blind spots - directly behind, under the nose, moving towards the animal's face or overhead
- Use non-reflective surfaces for flooring and enclosures (e.g. low gloss interior cage)
- Enclosures - use horizontal cage bars for a more unobstructed view
- Separation of species throughout the hospital
- Avoid photo-realistic images of dogs/cats

Lighting Accommodations:

- Use natural sunlight whenever possible (windows, high light shelves, clerestory lighting, skylights, light tubes (e.g. Solatubes))
- Soften direct sunlight with a translucent glazing system, louver (slanted strips), or sunshade
- Opt for dimmable lighting or use 30 foot-candles or less
- Select high color rendering index (CRI) bulbs of 90 CRI or greater
- Use color temperature of 5000K for LED and fluorescent lighting (more natural colors and close to natural daylight)
- Opt for LED over fluorescent lights



Sense of Smell

Olfactory Receptors:



5 million (450 varieties)



220 million (900 varieties)



150-200 million (500 varieties)

Pheromones:

- Chemical messaging picked up by the vomeronasal organ
- Important for social communication within their species
- Neurologically connected to the limbic system (emotional center of the brain)
- Communicates emotional status (including fear, stress, excitement)
- Impacts emotions of receiving animals even hours after original sender is gone



Smell Accommodations:

- Use effective cleaning product like Rescue to disinfect and remove negative scents and pheromones
- Avoid bleach
- Calming scents may be used in diluted amounts:
 - Chamomile
 - Lavender
 - Vanilla
 - Coconut
 - Valerian
 - Ginger



Hearing

Hearing Ranges:



20 - 20,000 Hz



20 - 50,000 Hz



25 - 79,000 Hz

Sound Sensitivity:

- Excess noise increases stress and contributes to hearing damage
- Sensitivity threshold for dogs can be 20 dB less than for humans
- Loud noises increase pain sensitivity. Inversely, underlying pain increases sensitivity to sounds



Hearing Accommodations:

- Turn off electronics when not in use
- Keep all mechanical or noisy equipment far away from animal areas, especially quiet areas and cat zones
- Non-audible alerts are preferable (texts, light-up message boards, vibrating pagers)
- Rubberized floors, noise-absorbing panels, sound-absorbing walls, and ceilings to muffle alarming sounds
- Opt for fully enclosed rooms when possible
- Use calming sounds and white noise as needed, keeping in mind an animal's need for quiet:
 - Reggae
 - Species specific music
 - Soft rock
 - Calming classical music
 - Audiobooks



Touch / Tactile

- Extremities (e.g. paws, face) densely packed with touch receptors
- Vibrissae (whiskers) are especially sensitive



Touch Accommodations:

- Touch Gradient- Start touch in a less sensitive area and glide to a more sensitive area to help the animal to acclimate
- Take special care around sensitive areas, like whiskers, face, tail and paws
- Provide cleanable, nonslip surfaces throughout the facility
- Keep cat zones warmer than dog zones and other areas of the facility



Taste

- Dog taste is similar to humans
- Dogs have only 1/6 the tastebuds humans do
- Palatability is also based upon smell, temperature and texture



Taste Accommodations:

- Warm food to increase smells and palatability
- Create a Treat Ladder for each animal

