

## Video 1 – Senses and body language

### A. Cat senses

#### Smell

Smell is the predominant sense for cats and is approximately 1000 times stronger than humans. They also have a vomeronasal organ and demonstrate the flehmen response in response to a particularly interesting smell, which is not really seen as readily in dogs. The animal curls the upper lip, inhales with the nostrils closed and holds this position for several seconds. This closes the normal airways briefly so air goes through the vomeronasal organ, allowing the input from the pheromones to go to the amygdala and produce an emotional response.

The strong odour sense partly contributes to some behavioural litter tray issues – discussed more in video 2.

Pheromones are important in cats and are released from many glands around the body.

Using cheek and temporal glands to mark (leave their scent) is the main reason cats headbutt and rub against objects and people.

Cats greet each other slightly differently than the way dogs do - often rub heads as greeting and sometimes lick each other, but they use pheromones to assess each other similarly to dogs. The difference is probably mainly due to cats secreting pheromones from around the body.

#### Vision

As with dogs, cats have a high concentration of rod receptors and a low concentration of cone receptors. Vision in low light is more important than for dogs because they commonly hunt at dawn and dusk (crepuscular). To aid this, they also have a tapetum behind the retina, which reflects light so allowing it to pass through the eye again. This structure makes cats' eyes appear to glow in the dark and can make bright lights uncomfortable for cats.

They have poorer colour perception than dogs and poor closeup vision which may affect training.

Their excellent sense of movement can mean that covering their head with a towel in a clinic situation to block their vision can be calming.

#### Hearing

A cat's hearing range (in Hz) is 45 to 64,000, compared to 64 to 23,000 in humans - they can hear sounds people can't on both ends of the spectrum, but particularly on the higher end. Pinnae can swivel independently up to 180 degrees to help detect sound.

They can hear sounds at a greater distance than humans.

They may hear some household sounds louder than humans, which may contribute to fear of some household objects.

## B. Cat body language

Cats primarily communicate with each other and with humans through body language.

### Marking behaviour

Cats mark through urination, rubbing against people or objects and through scratching. Marking can be both a stressed or relaxed behaviour.

### Sexual-type behaviours

In males this manifests as roaming and urine marking.

In females, vocalizing (calling), rolling, raising hind end in air are common sexual behaviours.. They may become affectionate or aggressive. The behaviour change can be very significant and owners occasionally think the cat is unwell.

Female on heat: <https://www.youtube.com/watch?v=5aqzs-wlKm4>

**Anxiety** may be demonstrated through displacement behaviours as in dogs. Common displacement behaviours include grooming, lip licking, yawning, pupil dilation and piloerection (fur on end).

If these behaviours persist, they may become compulsive e.g. overgrooming.

**Appeasement** behaviour is less commonly noted in cats than dogs. It can be seen in an immature male cat rolling over near a mature male.

**Fearful** behaviour indicates a cat should not be handled unless it is completely necessary and, in the case that it must be handled, extreme care must be taken and fear minimisation techniques used.

The ladder of aggression can also be applied to cats, although the signs may be slightly different, Cats often don't give much warning (move up the ladder very quickly) and bites can be very serious.

Long term stress can have behaviour (withdrawal, compulsive behaviours like overgrooming) and health consequences (urinary tract disease, respiratory disease 'cat 'flu') for cats.

## Video 2 – Preventing development of behavioural problems – kittens

Kittens go through developmental stages in the same way dogs do but it all happens rather faster.

Selection of an appropriate cat is much less of an issue than dogs because they vary a lot less in size and husbandry requirements than dogs.

**Socialisation** is really important in kittens as it is in puppies. The critical socialisation period for kittens is 3 weeks until up to approximately 7 weeks of age (i.e. finishes earlier than for dogs). The earlier finish means that the best socialisation period may be over before the kitten moves to a new home. However, slightly older kittens will still be responsive so it is important to maximise positive experiences early in life. Many vet clinics offer Kitten Kindy which is a cat version similar to Puppy Preschool, although generally has a shorter program. Information should cover common problems (e.g. litter training, scratching), handling, relaxation, basic behaviour, playing appropriately with the kitten and restraint for common procedures. More details are available in the case study and in Kersti Seksel's article 'Preventing Behaviour Problems in Puppies and Kittens'. A checklist of people, situations and objects to socialise kittens to is on the lecture slides.

You do **NOT** need to learn the items on the list.

### **Territory**

- Owners may not understand the importance of territory to cats and that resources need to be within what the cat regards as its territory.

### **Litter management**

Urinary problems are very common in cats so litter management is an extremely important topic.

- Right size – should be 1.5 times the cat's size. Most prefer uncovered so they don't feel cornered
- One box per kitten/cat in the house + one
- Readily accessible and spread out – two trays next to each other may be viewed as one
- Must have some privacy and be away from noise
- Cleaned at least daily. Do not use strong disinfectants (in a clinic will definitely need to disinfect but in a single cat home is less necessary)
- Start with range of litter types to see what works
- Place kitten in box when they eat, drink or wake up – most likely times

### **Feeding**

Cats are generally solitary eaters, even in multi-cat households, so must provide separate bowl for each cat. They prefer a quiet area and not being fed against a wall so they can check for danger.

Normally eat a lot of small meals each day – grazers.

### **Scratching**

Scratching is really important in cats as it allows stretching, sharpening of claws and marking, but owners often complain about damage to furniture.

The best solution is to provide a scratching option that pleases the cat. This is usually old, smelly scratching posts that owners don't like so they may have to reach a compromise with their cat if this is an issue. The best places for scratching posts are near entry and exit points and near sleeping areas.

Foil can deter cats from scratching furniture.

#### **1. Stimulation – next video**

#### **Video 3 –Behavioural husbandry**

Behavioural husbandry includes actions that owners can take to maximise the chances of their animal having good psychological wellbeing and behaviour i.e. essentially an adult version of prevention/minimisation of problem.

## **1) Adequate physical exercise**

Many owners have little awareness of cat exercise requirements. As with dogs, this requirement varies with age and health. Cats who are outdoor or indoor/outdoor generally don't require a lot of owner input to exercise.

### **Exercise and housing**

Indoor cats need to have appropriate spaces to enable exercise. Vertical spaces are fantastic as climbing is a very important exercise for cats. Outdoor enclosures are also excellent if that is an option for the owner to build.

Cats need to be able to engage in predatory behaviour, so exercising using laser pointers or fishing line toys can cover two requirements at once.

Cats tend to exercise very intensely for short periods, most commonly in the morning and evening but there is definitely variation among cats.

## **2) Adequate resources**

Cats do NOT like sharing resources and often have quite specific preferences. Obviously individual cats vary but there are some general preferences which owners should be made aware of.

### **Water**

Cats prefer large, shallow ceramic bowls or running water. They like their water away from their food as live prey can contaminate water source. This means owners should be discouraged from using the double bowls which are commonly sold.

### **Resting/sleeping places**

Cats prefer their sleeping/resting places up high and with multiple exit routes. Since they spend average of 2.8 hours resting and 7.8 hours sleeping during the day, these places are well used!

### **3) Social requirements/ Positive experiences (social)**

Cats are often thought of as solitary animals but actually their societal groups vary widely in size, with some living in large colonies. They need some chances to socialise with other cats or humans. Most prefer to socialise with animals/people they know. Solo indoor cats will generally enjoy some interaction with their owners and need to be given that opportunity. They often want company periodically, not to interact all the time.

## **4) Positive experiences (non-social)**

This includes most types of enrichment e.g. foraging toys (e.g. Kong), bones, chew toys, access to a new area to explore where possible.

## **Video 4 –Managing undesired behaviour**

### **Range of undesirable behaviours**

- Normal (especially for young animals) but annoying e.g. scratching furniture, climbing curtains
- Non-pathologic behaviours which significantly impact the owners e.g. e.g. vocalising, refusal to use litter box. Require strategies such as environmental modification and conditioning but can usually be managed successfully.

- Pathologic behaviours or unacceptable to owner. Require strategies such as environmental modification and conditioning, often with addition of medication. The most common behaviors in this category are elimination (undesirable toileting and/or marking) and aggression.

Reasons for development of problems are similar to dogs – most commonly learnt through negative experiences.

For more complicated cases, underlying medical causes must be ruled out.

Operant and classical conditioning are used in cats for the same categories of problems as in dogs i.e. operant conditioning for simpler problems and classical conditioning for more complex ones. Cats can be harder to respond to motivate with rewards as they tend to be less responsive to food and less domesticated than dogs so less likely to respond to commands.

### **Environmental modification**

Some common cat behavioural issues can be resolved fairly simply by adding appropriate resources e.g. scratching posts or modifying current ones e.g. different location or cleaning process for litter. If the stressor is another animal within the house or visible stressor outside, physical restraints like baby gates may work.

### **Medication**

Medications can be useful in reducing fear and anxiety, which improves welfare and increases the chances of desensitisation and counter-conditioning being successful. Specific medication for behavioural problems is beyond the scope of this course.

### **Seeking extra help**

Veterinary behaviourists

Similar role to that with dogs.

### **Rehoming or euthanasia**

Rehoming is attempted in many cases as evidenced by shelter statistics.

Can be successful where a specific environment in the previous home was a negative stimulus. New owners will need to be aware of previous issues.

If the animal has poor welfare or is a risk to humans or other animals, euthanasia may be needed and be the best outcome for the circumstances.