

A circular photograph of a woman with long brown hair, wearing a light-colored sweater and blue jeans, sitting and holding a ginger and white cat. She is smiling and looking down at the cat. The background is slightly blurred, showing a bookshelf. A teal circular graphic is overlaid on the top right of the image.

Advanced
Diploma in
ANIMAL CARE
Level 3

Animal Care

MODULE 1: Dog Behaviors

There is an expression, "There are no bad dogs, only bad owners". This is a neat way of saying that it is the owner's lack of understanding about their dog's natural behaviour and how to respond, which leads to many of the problems we associate with problem dogs.

Thus, any responsible owner needs to "think dog" in order to have a well-behaved and socially acceptable pet.

1.1 Socialization

Dogs are social animals. It only takes a trip to the park to see two dogs meeting in that enthusiastic tail up, play-bow, and mad dance way of theirs, to know they love company.

In fact, that's what makes dogs such good pets - they love company. And the even better thing is that they're prepared to accept us as friends on an equal footing with their canine pals.



However, this can lead to problems. Humans can be a bit slow on the uptake when it comes to canine communication, which can get us into a right pickle when it comes to giving and receiving messages from our dogs. To complicate things further, how dogs react to us also depends on their experiences in early life during their socialization period and a lack of early social experience can make them wary, fearful, or even aggressive.

What is a socialization period?

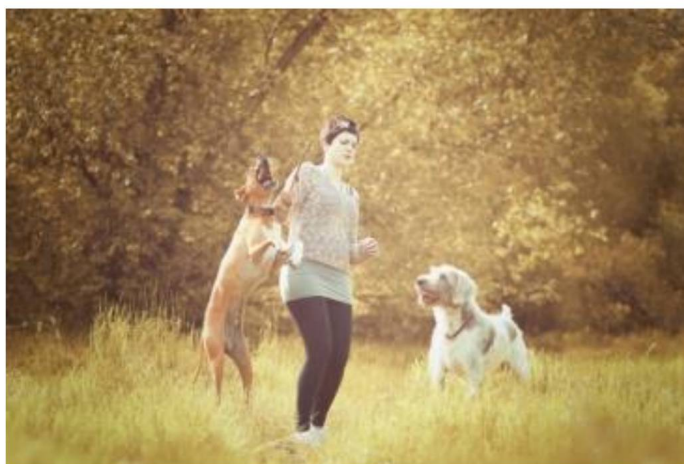
Confident and well-adjusted dogs don't happen by chance. They have to learn to be that way (although, fair enough, their genetic makeup and breed can go a long way to correcting the shortcomings of poor socialization).

From birth, puppies start to learn. Their first lesson is that if they follow the smell of milk they get a satisfying milky meal. Their second lesson is that Mom is warm and snuggly, and the source of that never-ending milk bar. What these early experiences build towards is to teach the puppy the difference between safe and dangerous, which are important distinctions to learn if they are to make it to adulthood.

When you think about it, a puppy has a steep learning curve; going from complete dependency on Mom, to potentially finding their own food, by four to five months of age. Thus, they need to learn quickly.

To facilitate this Mother Nature equipped their developing brains with the plastic ability to encounter new experiences and put them into boxes labelled "safe and nice" or "dangerous and unpleasant". Learning this difference could potentially save their life. But more than that, the young dog doesn't go on learning at this fast rate. At around 16 - 18 weeks of age that window of opportunity slams shut. After this age the young adult has the attitude that if they haven't met it before, then it's probably not safe and best treated with caution.

Why is socialization important?



A dog who didn't meet a wide variety of people in their young life is likely to regard people with suspicion (at best) and at worst fear or even aggression.

The upshot is that it is vital in these early weeks to expose a puppy to a wide variety of sights and sounds, so that he grows into a confident adult. Of course, a

dog from a puppy mill, or that missed out on socialization, for whatever reason, is not a lost cause - but requires an infinite amount of time and patience to build confidence at a time when the dog learns less easily.

Especially if the dog is to be part of a family with young children, then for everyone's sake (including the dog's), it is best to acquire a well-socialized puppy that is mentally equipped to deal with the hurly-burly of family life.

So what do you look for in a well-socialized puppy, and how do you go about socializing yours?

Social exposure

A puppy needs to experience a wide spectrum of sights, sounds and smells. These include:

- People
- Engines, motors, and machines
- Different places
- Different weather
- Other animals

But isn't he too young to go out?

Socializing a puppy is a matter of balancing risks. There is the risk of him picking up an infectious disease because they are not yet fully vaccinated, versus the long-term impact on his confidence of being overly sheltered in young life. One way round this is to take your puppy out and about, but without putting them on the ground. Carrying them under your arm allows them to hear and see trucks rattling past on the highway, or the noise of the schoolyard at home time, but without the risk of picking up a virus.

In addition, speak to your veterinary clinic about attending a **puppy party**. These are a great way to get your puppy mixing with others, to play and learn good manners with other dogs. All the attendees have been checked recently by a veterinarian and certified as healthy, and the risk of infection is further reduced by the puppies all having started their vaccine protocols. If owners act responsibly and don't bring their puppy along if they cough or have a tummy upset, then the risk of infection is very low indeed and far outweighed by the advantages.

Here are some ideas about the who, what, why, and where, of socializing your puppy.

Get your puppy out there and meet new...

People

The puppy must meet all types of people, across the age spectrum from children to the elderly.

Also introduce the puppy to people with different physical appearances, such as clean-shaven v's bearded men.

It is especially important for a puppy to be confident around children, since kids are least likely to know how to behave around a dog. A child's erratic movements and habit of pulling ears or tails, means she is also more at risk of getting a nip from a nervous adult dog.

If you don't have children or grandchildren to meet your puppy, then enrolling in a puppy class (often run by your local vet clinic) is a great idea. Often children accompany the new family pet to the class, so you are achieving a double bonus - socializing with other children and other dogs.

Engines, motors, and machines

Vacuum cleaners, hairdryers, leaf-blowers, cars, and trash trucks all seem scary to the uninitiated. The safe way to introduce a puppy is from a distance, so the sound is less of a challenge. Reward his calm behavior and move a bit closer.

Other animals

Apart from other dogs, a puppy needs to encounter all manner of animals from cats up to cows and beyond.

Personal space

Now is the time to get the puppy used to having his paws felt, lips lifted and ears played with.

If you handle every part of your puppy from a young age, then he won't be stressed at the vet's during a physical exam. The same goes for grooming. Start now.

A Change of Location

Going on trips is an excellent way to socialize a puppy, especially if it involves a short car journey (getting them used to the car). Great places to visit, with the added bonus of meeting people, are supermarkets (stand outside with the puppy, where they'll get lots of fuss and attention), the pet shop, vet clinic, the train station, a town center or mall and outside the school gates.



Go equipped with some puppy treats and when strangers approach, encourage them to give the puppy a treat to reward their confident behavior.

Hopefully you did your homework and got a puppy from a rescue shelter or a breeder where they were well-socialized.

But remember, the job of making a confident, well-adjusted adult dog doesn't stop when you bring them home. Expose your puppy to as many sights, sounds and experiences as possible, before that vital window of opportunity starts to close between 16-18 weeks of age.

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MODULE 2: Dog's Learning

2.1 Dogs and learning

How dogs learn matters to us, because knowing how their minds' work is the key that opens the door to training. There are two aspects to learning: one is how their mind processes information, and the other is how they apply that information. The latter is about how the dog wants to use what they've learned to fit into their pack or family. All of which raises an interesting digression about pack theory and modern thinking about the structure of dog society.

The great debate

Pack animal or family member?

For decades the accepted wisdom was that dogs are pack animals, with their society organized around an alpha male, pack leader dominating subordinate pack members. Within the pack, dogs that challenge the pack leader are swiftly corrected by a show of aggression from the alpha dog.



Pack theory says it is the human who is the alpha leader and should dominate the dog at all times. A dog that disobeys your command, for instance growling when you go near their food bowl, is challenging your leadership. Traditionally, this was dealt with by upping the ante by punishing the dog and exerting your authority by punishing the dog and removing the food bowl (to show you can).

However, recent research has shown this theory is flawed.

The original research observing a wolf pack was done in the artificial environment of a zoo. A rag-tag collection of wolves, with no family connection to each other, were forced into an unnaturally small territory. The result was they fought and the strongest got the prime spot. Stressed by living with strangers in cramped conditions, they threatened each other for supremacy.

Hardly a surprise. Indeed, the classic "submissive" behavior, which is so much talked about, was a desperate attempt to deflect aggression, rather than ingrained social behavior.

Contrast this with what behavioral scientists found when they observed wolf packs in the wild. The wolves co-operated with each other. Mature offspring stuck around for a while and helped their mother look after the latest litter of cubs. The animals hunted together and shared their catch. They worked as a group, some assigned cub-sitting duties, whilst others guarded the pack or went hunting. Yes, there were some conflicts, but these were more squabbles amongst siblings, rather than a fight for ultimate authority.

How do dogs fit into our family?

It is increasingly the accepted view that dogs are best thought of as children - i.e. not as child substitutes (that's a whole different topic!), but as the equivalent mental age to a child, with the same needs for encouragement, security and routine.

Again, this is relevant to learning because the same qualities of patient guidance and understanding are needed when training your dog (rather than domination), which a child requires. Hopefully you would never consider beating your child for putting a foot wrong and the same should be true of your dog.

It matters because this misunderstanding of the importance of dominance v's submission is responsible for many dogs leading miserable lives. Their owners have mistakenly exerted their authority in a form of bullying that has the potential to break the dog's spirit. Yes, the dog behaves, but because they are fearful of the owner and keen to avoid further punishment.

However, when we tackle training from a different angle - with the knowledge that dogs like to co-operate and aren't constantly challenging our authority - it opens the door to training by using how dogs actually learn, which makes for a happier dog that is better behaved in all circumstances (not just when the bullying owner is around).

To take things to the next level, let's look at how dogs learn.

How dogs learn

Dogs learn by trial, error and association.

A dog's worldview is really very simple. Their instincts are to survive. Thus, their learning is directed towards repeating pleasant and beneficial experiences and avoiding actions that are unpleasant or bring no reward.



The theory of reward and extinction

This theory means that when a dog tries something new and it doesn't bring a positive reward, they tend to forget about it. Whereas, if they perform an action and get a positive reward they repeat that behavior in the future.

To make this clearer, let's take a dog's perspective on a game of consequences.

Action	Result	Outcome
Puppy pounces on a bumble bee	The puppy gets stung	Puppy experiences pain and avoids bees in future
Puppy pounces on a ball	Ball rolls off down the hill	This is a great game and puppy will pounce on balls in the future.
Puppy pounces on a rock	Nothing happens	Neither good or bad outcome so puppy discounts rocks as worthy of interest in the future

What counts as a reward?

Now here's the rub, because for many dogs, attention is a fantastic reward. And it doesn't matter if that attention is being shouted at for barking - because by barking the dog learned that they get their owner's undivided attention - which is gold in canine terms.

The take home message is: be very careful before reacting to your dog's "bad" behavior. The chances are if you scold the dog, you are accidentally rewarding the behavior rather than punishing it. And as you now know, a dog is likely to repeat rewarded behavior.

Putting learning theory into practice

The practical upshot of this is that the best way to train dogs is by rewarding the behavior you desire. Not only will the dog want to repeat rewarded behavior, but it also plumbs into the dog's desire to please you and co-operate in the family unit.

An example of behavior rewarded:

- You call your dog, "Here".
- The dog comes.
- You reward him with a treat or a fuss.
- The dog thinks, "This is great. All I have to do to get a treat is to run over, which I was going to do anyway."
- The dog is keen to come next time you call.

An example of behavior that undergoes extinction

- Your dog barks to get your attention
- You blank the dog and ignore him completely
- He barks louder
- You continue to ignore him
- The dog thinks, "Blow this. I'm expending all this energy and it's getting me nowhere."
- The dog settles down and gives up the idea of barking to get your attention.

2.2 Juniors and seniors



It is fascinating to look at how age affects a dog's behavior.

Weeks 0 - 2

Puppies are born deaf and blind, and their most developed sense is smell. It is by following the scent of their mother's saliva on her fur that helps them to find the nipple and that first life-sustaining meal of milk.

This first two weeks of life is called the neonatal period and since their muscles are weak they have a strong instinct to stay put in the nest with their mother and the rest of the litter. It is here that a vital amount of learning about survival is done.

Week 3 onwards

As mentioned in Module 5.1 socialization is a key step in a puppy's life. Between three and eleven weeks of age is when the puppy is most receptive to learning. It is at this age that the puppy forms the impressions that shape the rest of his life. From now onwards it is critical they meet other people and dogs if they are to grow into confident adults.

The ability to attach to people grows strongly during this time, if people take the trouble to play and handle the puppies. Similarly, the puppy's attachment to their siblings is strongest during this period when they are feeding and playing together. Interacting in rough and tumble together also helps them to understand what acceptable behavior is and what hurts.

Week 5 onwards

With their increasing confidence in their ability to run, jump and play, the puppies become inquisitive and this is a great time of exploration. They are likely to leave the nest for longer periods of time to explore the world around them.

Week 6 onwards

The mother is spending more time away from the puppies which encourages them to investigate her food and become weaned off her milk.

However, even a puppy that no longer needs the mother for milk should stay with her until at least eight weeks of age. This helps the puppy to learn, through play, and understand that biting and scratching hurts.

Their personality is developing, and you may get the first signs of which puppy is more bossy and which is more willing to please.

Week 8 onwards

From now onwards social skills are being refined. The puppy is largely independent of the mother and they start to look outwards to people and other dogs. While still receptive to new experiences, the puppy may now start to be more cautious about exploring novel situations. Already, the process of socialization is slowing down.

Week 12 onwards

At around 12 weeks of age the puppy's ability to learn begins to dwindle and is no longer so sharp.

He continues to learn until 18 weeks, after which it rapidly declines.

Week 18 onwards

The socialization window closes as the puppy's residual ability to learn quickly draws to a close. Instead, hormones begin to develop as the puppy starts to mature sexually.

This is expressed in a number of ways such as mounting behavior, territory marking or perhaps possessiveness over high value toys or even food.

Elderly dogs



As their lifespan is so much shorter than ours is, we are likely to see a dog through its full life cycle. From the tiny Chihuahua to the enormous Great Dane, dogs range in physical size and also lifespan. Smaller dogs live longer than giant dogs, so, whilst a toy dog may reach their teens, a good innings for a giant dog is around seven or eight years.

With old age come changes in their behavior. As their senses dull and joints stiffen, so they become less active. Naturally, older dogs sleep more and play less. Their need for exercise diminishes and their senses become less efficient.

This can alter their personality, sometimes even for the better. Dogs that were once over-exuberant or standoffish may start to be more home loving and want cuddles and affection. However, the other possibility is that stiff sore joints can make the pet grumpier - in which case a check up with a veterinarian is strongly advised.

To help an elderly dog cope with deafness or failing vision, it is important to stick to a routine. They are creatures of habit and knowing when to expect supper and where the bowl is put, helps them to cope. So, bear in mind that sudden changes in routine can be stressful and destabilizing for an elderly dog.

However, playing with your older pet, indeed gentle training sessions can also be beneficial. Learning a new trick is mentally stimulating and many dogs enjoy the challenge, plus it helps them bond with you're the owner. So, whilst it may be more difficult to teach an old dog a new trick than younger dog, don't stop trying!

2.3 digging, chewing, and more!

Dogs exhibit a whole range of natural behaviors that range from the cute, to the downright annoying if they get out of hand. Dogs act out of instinct, but how we react may unwittingly reward the dog, causing them to repeat the action - but in a more exaggerated manner - which over time can develop into problem behavior such as barking excessively or digging holes in the yard.

Licking

Dogs lick to groom themselves. Coat care is important to keep down parasites and provide protection against the weather.

Licking is one of the first things they experience as a newborn, when the mother licks the puppy clean of afterbirth, which also stimulates them to breathe.

The mother also licks the neonates to encourage them to empty their bladder and bowel - an important way of keeping the nest clean so that predators are less likely to find it.

Dogs licking each other is also an important way to bond together. Going back to that wolf pack in the wild, pack members groomed one another, seemingly to enforce kinship rather than exert authority.

Licking is also a sign of affection, as many owners can attest to, when greeted by an enthusiastic dog that hasn't seen them for a while. Dogs gather information by licking. Undoubtedly the taste of salt and sebum secreted through our skin's hair follicles is another big draw to licking bare human skin as many patient dog owners experience a good licking all over legs, arms, and any exposed skin.

Licking also releases natural feel-good hormones called endorphins, which give the dog a pleasurable, comforting sensation. This is why some dogs get hooked on licking - they are giving themselves a natural "high" from the endorphins.

Digging

Digging is very natural dog behavior, and some dogs have a stronger instinct to dig than others do. There are many reasons a dog likes to dig, and these include:

- To bury food or toys
- To escape a confined space
- To make a den
- For exercise
- Out of boredom
- Learned behavior



The latter happens when an owner shouts at a dog for digging a hole in the flower border. The dog realizes they get attention when they dig...so guess what...they do it some more.

If your dog is a habitual digger resist the temptation to tell him off - it will only backfire and encourage the habit. Instead offer him a special area, where he's allowed to dig, and give him lots of praise when he uses it. Try protecting no-dig areas, with chicken wire on the ground, and if he digs out of boredom, factor playtimes and exercise into your daily routine. If you're out at work and the dog's left in the yard, then think about employing a dog walker to visit and relieve his boredom.

Jumping and sniffing

These are related behavior, because the sniffing often leads to jumping. Dogs' sense of smell is legendary. By sniffing they get a scent signature about the person or dog they are meeting. They tend to first touch noses and sniff, then investigate the anal gland area under the tail - a particular ripe location for smells! This is normal, natural and unstoppable in the dog world.

When it comes to looking for information from humans, dogs are going to follow the same rules, which unfortunately means sniffing your face then your crotch. Of course, jumping at someone's face is unacceptable and we don't want a dog to do it, so we tend to tell the dog off...and you guessed it...accidentally encourage them.

To stop this habit, command the dog to sit at the first sign of sniffing behavior. Once the dog is sitting then reward his action with praise or treat. Tell children to turn away and withdraw attention, rather than react by pushing the dog down.

Chewing

Chewing is natural and necessary behavior, especially at around four months when the puppy starts to teethe. This is a case of "if you can't beat 'em, join 'em" and simply offer the puppy safe, alternatives for him to chew on (rather than your shoes). Remember, a puppy craves to chew, so if you have antique furniture in the lounge room, it might be wise to make this a no-go area.

You can even use chewing behavior to your advantage by giving the puppy a stuffed Kong when you go out, which will occupy them whilst you leave and reduce the risk of them becoming anxious.

Eating grass

Many dogs eat grass when given the opportunity. Since dogs are carnivore's scientists aren't really sure why they do this, but one logical theory is that it's to add natural roughage to their diet. Some dogs do tend to chew grass to make themselves sick, so it's possible they feel the need to cleanse their system from time to time by eating grass.

Rolling in faces or carcasses

This is certainly an extremely antisocial habit which has most dog owners rolling their eyes with exasperation. It's thought that dogs roll in unmentionables because they want to wear the scent of a predator and disguise their own. Or to disguise their own scent so they can stalk prey without being recognized. It's also a way to take scent messages back to the family or pack about a predator or prey.

It could also be a rebellion against the human tendency to want dogs to smell nice. There is a growing trend in perfumed products for dogs, but to dogs these have an overpowering smell of chemicals. So many dogs will roll in faces as a quick fix for getting a more natural smell.

To stop this instinct, try the following:

- Avoid using perfumed products on your dog
- Watch vigilantly and for telltale signs of intention sniffing, and then summon the dog with a strong recall. Make sure to heap praise on the dog when they come.
- Distract them with an exciting game.
- Use a rape alarm, or a similar device that makes a sudden noise, to distract the dog
- Interrupt the behavior by spraying the dog's snout with water.

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MODULE 3: Body Languages

Whereas people rely on the spoken word and facial expressions to get their message across, dogs use all of their senses - including that of smell!

For an insight into the complex world of canine communication read on...

3.1 Body language

3.2 Stances

3.3 Body language reference table

3.4 Smells and sniffing

3.5 Urine and faces

3.6 Vocal language

3.1 Body language

Dogs have an **elaborate set of signals** they use to communicate with, of which, by far, the most comprehensive is body language. Small details and gestures that you may barely notice can have big significance in dog language.



Facial gestures, general body posture, position of the feet, how the tail is held, angle of the head, facial expression and even the lie of the fur all send out messages if we care to read them. As well as being alert to the dog's body language, it helps to interpret them by putting them into context - in other words reading the situation the dog is in and what's happening around him.

Overall posture

Dogs use their body posture as a signal to others as to whether they are friendly or fearful, playful or likely to attack. The body's silhouette is a great way to do this because other dogs can see the shape and read the intended message while still at a safe distance. Dogs are adept at reading these signals, whilst we humans can be slow on the uptake - which can lead to unnecessary stress between dog and owner.

Body postures are broadly divided into two groups: distance-reducing (submissive or play) and distance-increasing (aggression or fear) behaviors. These are fairly self-explanatory: distance-reducing signals that the dog is no threat and it's OK to approach, whilst distance-increasing is a warning that the dog is outside their comfort zone and would prefer you to keep a safe distance away. To ignore the latter signal can lead to the dog being forced to defend itself by becoming aggressive.

Distance-reducing behaviors

- Submissive dogs adopt this posture, as do dogs who want to play
- Avoiding eye contact
- Head and neck lowered and extended forward or to the side
- Lowered ears (this can also be a sign of aggression, hence interpret it in the overall situation)
- A submissive grin
- Tail wagging - usually held low, or the happy wind-milling tail
- Lying down or exposing the tummy
- Crouching, head down, eyes averted
- Front end lowered, back end raised (play bow!)
- Raising a forepaw to solicit a game
- Ears erect and pricked

Distance-increasing behaviors

- Increasing the dog's size by raising the hackles and standing tall and erect
- Direct eye contact, staring with wide eyes
- Lips drawn back in a snarl
- Head, neck, and ears held high - head lowered if dog is about to attack (to protect the throat)
- Standing tall proceeding to a crouched body position is a signal the dog is about to attack.
- Tail held stiff and vertical over the back

Of course, canine body language is not straight forward, and each body part sends out its own messages.

Let's take a look at each in turn:

The tail

Tails are perhaps one of the most expressive parts of a dog's body (just one reason it's wrong to dock tails). As a general rule, the lower the tail is held, the less confident the dog is feeling. A dog that feels threatened will tuck their tail between their legs (to keep it out of harm's way). Of course, there is a wide variation in tail carriage between individual breeds, for example a pug's tail sits upright and curls in a circle, whilst a Greyhound's is held gracefully low when relaxed.

Here are a few general interpretations:

- An upright, wagging tail denotes interest
- A tail wagged in a relaxed, side-to-side manner, especially if it involves a movement of the rump indicates excitement, a desire to play or both.
- A slower, more exaggerated version of this wagging, more like swishing, can indicate an intention for aggression or preparation for it.

Special alert: Don't support tail docking!

Tail docking or the cutting off of puppies' tails at an early age is now illegal in many countries and only allowed under licence to veterinary practitioners for the health of the dog. Despite claims that dogs barely notice docking, it has been shown to cause considerable pain to dogs and tail sensitivity in the stump can remain through adult life. What's even more damaging is that removing the tail deprives dog of the ability to send out important communication signals.

In a 2008 study, scientist placed a robotic dog among a group of dogs in an exercise area. For some of the time the robot wagged his tail, for the reminder it had a stump for a tail. When the robot had a wagging tail, others approached playfully; When he just had a stump, the dogs remained at a distance and were more wary, hesitating because they couldn't read his intentions. Not having a tail clearly puts a dog at a disadvantage when it comes to social interactions with other dogs.

The good news is that the fashion for tail docking is dwindling, as people become more aware of the serious consequences.

The ears

From the drop ears of a spaniel to the prick ears of a terrier, there is a huge variety in ear shapes and positions. However, ears are still an important means of communication, and in those hard-to-read breeds, see if you can spot movements in the muscles at the base of the ear.



- Ears pricked forward suggest alertness and interest
- Ears pulled back indicate anxiety
- If the ears are pulled back and flattened, this indicates fear and will probably be followed with an attempt to escape the situation

Eyes and eyebrows

Dogs are surprisingly sophisticated when it comes to their range of facial expressions. Indeed, scientists think that over the centuries people have favoured dogs with expressive faces and bred from them, because it makes them more appealing.

If you think your dog has a variety of expressions from happy to wary, then you are probably correct. Dogs do use their eyes, eyebrows and facial muscles to display a range of expressions just as we do.

A word of caution:

- A direct stare is a challenge, and a sign of intended aggression
- Looking away and avoiding eye contact is a sign of wariness or submission

Mouth

We all recognize the dog with tense lips peeled back to show the teeth as a snarling dog that represents danger. However, on a happier note some dogs have learnt to mimic the human smile and gently draw back their lips in an effort to be more like their master.

The cute tilting of the head when a dog hears a sound can be used by some dogs to get our attention. This and "smiling" are examples of how domestication has influenced the evolution of dog's body language.

Difficult to read

However, some signals can be confusing because they are similar, or indeed because long fur stops you reading the dog's facial expression. In the shaggy Old English sheepdog, a raised lip can go unnoticed, whilst a dog with hair over his eyes may actually cause him to be more snappy because he can't see so well and is more likely to be taken by surprise. Another example of being difficult to read is dogs with lots of facial folds, such as Basset hounds and Bloodhounds, where the sheer weight of extra skin limits their range of facial expressions.

3.2 Stances

As you get to know your dog you'll recognize the variety of body positions and gestures that signify different dispositions. Again, this is a matter of observing body language and interpreting it in context.

Here are some stances and what they mean.

Play bow

This delightful gesture is a clear sign that the dog is up for play. The front legs rest on the ground and the bottom and tail are high in the air. The slightest encouragement results in the tail wagging, and the ears shooting up and forward. The dog wears an eager, relaxed expression and the dog may well jump forward in a non-threatening way to elicit a game of chase.



Playing

If the play bow didn't work the dog might try some other dodges to get a game going - these include bumping, nosing, barking, nipping and pawing. Playing often takes the form of chasing, wrestling and tumbling. Some dogs can't help themselves and get so excited that the game is accompanied by high-pitched barking.

Fearful stance



This is an important stance to recognize because if the dog's message is ignored and the dog pushed too far, it can result in aggression.

A fearful dog may initially freeze. The body posture is low, the eyes round and wide, the mouth closed, and the fur on the back and high quarters stand on end, his hackles raised. The ears reach forward initially then rotate backwards and down.

He might edge backwards as if to escape, but if trapped he may avert his head sideways. He may bark in alarm or lie down with a lowered head that is turned away. A fearful dog that is cornered may be forced into defending himself with a show of aggression.

Defensive

When a dog is close to a threat she pins her ears back, the lips pull back in a snarl, and she stares directly at the threat in challenge. The dog's eyes may be so wide the whites of her eyes show. If another dog (or person) meets this challenge with a direct stare, then it's likely to end in a fight. If you find yourself in this position, avoid making direct eye contact, which will help to diffuse the situation.

Ready to attack

A dog preparing to attack makes themselves appear as large as possible, and initially stand tall. As the threat comes closer, this changes with the dog leaning forward and raising the tail. With the fur standing on end, the dog next pulls the lips back into a snarl and may growl. Don't take a wagging tail as a sign of friendship - in this situation it is more a sign of agitation and a warning. If in doubt as to the meaning, take a step back so as to diffuse the situation, and wait to see if the dog relaxes.



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Submissive

Submissive dogs tend to lie on their back displaying their belly. This is an open advertisement to other dogs that they are making themselves vulnerable and are no threat. It is good to recognize this behavior, because some dogs are excessively submissive and timid. If your dog falls into this category, then **avoid making direct eye contact** (a threat sign) and watch the dog from the corner of your eye. Also, try making deliberate long slow blinks, which is a signal that you are relaxed and not thinking of attacking (remember the direct stare with wide eyelids?)

Standing sideways, instead of facing front, also helps decrease any perceived threat, and try to avoid bending over the dog, but instead crouch to one side and extend a hand.

3.3 Body language reference table

Relaxed and friendly: Ears are perked up, eyes wide open, alert looking. Mouth is often open. Body posture relaxed, hind quarters may be wiggling. Tail wagging, a little raised.

Alert: Dog is listening intently with ears perked up and rotating to tune in. Eyes wide. Mouth is closed or a little open. Body shows normal standing posture, standing tall. Tail is up, possible slight wagging. Possible whining or short barks.

Happy and playful: Ears are perked up and can lean forwards. Eyes wide open; owners will notice playfulness in the look. Mouth is relaxed and a little open, but not baring teeth. Body is relaxed. Tail is wagging excitedly, and the dog can be circling, jumping, doing play bow or running back and forwards. Some excited barking or play growling, non-threatening.

Anxious: Ears veering backwards, eyes narrowing. Mouth closed. Body looks stiff and tense and is slightly lowered. Tail is also lowered. No sound or possibly a soft bark or whine.

Fearful: Ears are pinned back, eyes are narrowed, and head turned to the side showing whites of eyes. Lips are drawn back, showing teeth. Body is tense and crouched low. Tail is between legs. Whining, growling or soft yelping.

Aggressive: Ears can be forward or back. Eyes are staring. Mouth is open, lips drawn back, teeth showing, snarling, growling or assertive barking. Body is tense and erect, hair standing up on neck, dominant posture. Tail is straight out from body.

Submissive: Ears are down, flat on head, eyes are narrowed or may be wide open showing whites. Lips are pulled back and may be licking a person or animal. Body posture is low, or lying on back, belly-up position. May leak urine or release scent from anal glands. Tail is between legs. May whimper, whine or yelp in fear.

Predatory: Ears are alert and forward and tuning into sounds. Eyes are wide open, focused and staring. Mouth is closed. Body is tense, rigid. Body probably low to the ground in preparation for pouncing. Tail is straight and low. Quiet.

Guarding: Ears are perked up and forward. Eyes are wide open and alert. Mouth is slightly open, and teeth bared. May be snapping and will snarl, growl or bark loudly and assertively. Body is tense and erect, hair standing up. Tail is stiff and held out from body.

3.4 Smells and sniffing

While body language allows dogs to pick up signals from a distance, when they come into closer contact, sniffing provides a whole new language full of information. Rapid sniffing arranges for the molecules of an odor to remain in the nasal passages for enough time to decode the information it contains.



The rapidly inhaled air traps the odor molecules so they can be analysed. Some dogs can sniff up to 6 times a second.

The canine sense of smell is far superior to ours, with dogs having around 75 times the surface area of their nose devoted to smell than humans. Studies show that a newborn puppy can recognize certain scents within hours of birth and uses these to find his mother and her milk. This skill continues to develop as the puppy matures and this superior sense of smell is put to use by people training dogs to detect drugs, bodies or even disease.

Dogs make excellent trackers and, if you were wondering, the ideal time to pick up a scent is when the ground is slightly warmer than the air - such as in the early evening.

Meet and greet

Dogs use sniffing as a meet and greet exercise. They gather lots of information by sniffing, mainly from the head and rear areas.

Males tend to want to sniff the rear area first; most females like to start at the head, mainly the nose and ears.

Dogs are usually more intent on doing the sniffing than on being sniffed and can **often end up circling**. Most information is thought to come from the male and female glands and the anal glands. It's thought the information tells other dogs about gender, age, reproductive state, disposition and possibly social status.

Each dog's anal sac secretion is subtly different - the doggy equivalent of a fingerprint - it's a different blend of oils and lipids, which combine together to act as that dog's signature.

You'd think it would be simpler to just look at each other - but no - dogs place great store on each individual's smell.

Unfortunately, a dogs' natural instinct to read his environment by leaving and receiving scent messages is often the cause of much distress for their owners.

Dogs use a combination of **urine, faces and rubbing** (the scent glands on the face) to leave comforting (to them!) messages that this is their patch and they have visited it recently. Dogs tend to return to a familiar landmark or object and repeat the marking. This is because a visiting dog not only reads the message that this patch is already taken, but also receives the subtext that the proprietor dog visits frequently. This makes it less likely that a visitor dog will try to take over. In turn, the marker-dog finds this frequent reminder of his presence reassuring and comforting. This is one reason why stressed dogs tend to develop "bad habits" when all they are seeking to do is to make themselves feel safe.

Hormones also play a role in scent marking. When a bitch is in heat, her urine contains potent chemicals, which can attract a mate from miles away. Nature wants the bitch to have puppies to perpetuate the species, so she is likely to spot urine around her territory - the canine equivalent of an ad campaign that she is available.

3.5 Urine and faces

When a dog goes to urinate in his own yard, he will probably do it all in one spot, or two. The same dog, when out and about in his local area for a walk, will preserve his supply to squirt in small amounts along the way. Mostly, this is done wherever he detects other dogs have urinated before him. Males have a much stronger inclination to do this than females.

The reasons are not fully understood. We know that urine contains lot of personal information, but what dogs use it for is still not quite clear. It's believed that it may be to do with territory marking and an attempt to warn other dogs whose territory it is. It could also be a male's way of advertising himself to local females.

Faces similarly provide personal information about each dog as the anal sacs release odor-rich substances, including pheromones, on defecation. The anal sacs express a small amount of scented material at the beginning and the end of each bowel movement. Again, dogs show a keen interest in checking out faces left by other animals and will often urinate on them.

Interestingly, whereas cats use faces to mark territory in a **ritual called maddening**, dogs rarely do this.

It seems their odor is more about making a statement about who they are, than specifically marking the edges of a boundary (they use urine for this).

However, some particularly enterprising dogs have been known to back against a tree to defecate and smear faces onto the bark.

This seemingly bizarre behavior is about presenting their scent signature on a level with the noses of other dogs.

Another difference between cats and dogs is the reason behind **scraping the ground**. Whereas a cat scrapes to hide their waste, a dog scrapes the earth to leave a visual clue as to his recent presence and is probably depositing scent from the glands on his paws as a marker of his presence.

3.6 Vocal language

Dogs' hearing is approximately four times more sensitive than humans. They can hear much higher frequencies, that we can't, and they can distinguish between very similar sounds. This could be, for example, to allow them to detect small prey. It's worth remembering how sensitive this sense is for them and to consider how it might affect them when they're surrounded by loud or shrill noise.



As dogs have such sensitively tuned hearing, their sounds are a good way of communicating with others in their social world and different vocalizations must have significant meaning, a lot of which we may never understand. In the wild, wolves howl but rarely bark so habitual barking seems to be a result of domestication and the relationship with humans.

Indeed, excessive barking accounts for a quarter of all referrals to dog behaviorists. Those breeds with a reputation for being barkers include the Beagle, Cocker spaniel, Collies, Dachshunds, Dalmatians, Miniature Schnauzers, Shelties and Yorkshire terriers. Undoubtedly part of the problem is social pressure in a town or city, to stop the dog barking and disturbing the neighbors.

Unfortunately, most owners chastise their barking dog to try and get them to stop, but this only serves to reward the dog with attention and reinforces that barking is a great thing to do.

It can be difficult to stop incessant barking. If there's no apparent reason, it could be due to boredom. Try to make sure your dog has enough exercise and stimulation, especially before you go out, as a dog whose needs are fully satisfied is less likely to act out of boredom. If you have a puppy that is just discovering his bark, resist the temptation to tell him off when the barking is not appropriate. Where possible ignore the behavior so that he gets no reward and is less likely to bark for attention in the future.

One thing we can be sure of about barking is that it happens as a response to a change that your dog detects. Often, it's in response to a sound we can't hear.

In these instances, dogs will often look to their owners to measure their response, as if to say, "So what are we going to do about that?" with perked up ears. It seems they are looking for direction as to how to respond and a reassuring voice allows them to come off alert mode. Sometimes it's in response to a more alarming sound and incessant barking will ensue. This type seems to be predominantly to do with protecting territory.

Feeding just after exercise and before you leave will probably mean that your dog will sleep better and be less likely to hear noises in the night that they might bark at.

Table of sound vs message

- **Grunting:** Puppies grunt in each other's company and adult dogs can too. It's often a way of claiming space.
- **Yelping:** Usually indicates a frightened, distressed or injured dog.
- **High pitched barking:** Indicates fear or anxiety, or excitement during play.
- **Whining:** Dogs whine when they're feeling fearful or in pain. It can also be a sign of submission or to get attention from owners. Excited whining can happen at meeting a loved one they haven't seen for a while.
- **Howling:** Dogs in domestication don't often howl. It can happen when their sensitive ears are subjected to high pitched sounds like in some music. Some sensitive dogs howl when left alone.
- **Growling:** Though some growling can be playful, most growling indicates guarding of food, possession or territory and can also signal aggression. Putting it together with other body language and situation will help distinguish.
- **High pitched, intermittent, barks or yelps:** Playful expressions of excitement.
- **Sound Message**
- **Low pitched barks close together:** Signs of aggression.

A woman with long brown hair, wearing a cream-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and gently petting a ginger and white cat that is sitting on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a green plant. A large teal circle is overlaid on the right side of the image, containing the text.

Diploma in
ANIMAL CARE
Level 3

MODULE 4: A dog's eye view

Many of the behaviours our dog's show, which we perceive to be irrational or problematic, arise from either natural instinct or a lack of socialization. To better understand our dogs means looking deeper into the motivation behind these problems.

4.1 Fear

4.2 Anxiety

4.3 Aggression

4.4 Scent Marking

4.5 Elimination

4.6 Issues at feeding time

4.1 Fear

Fear is a powerful emotion and can lead to particularly distressing or worrying behaviour in our pets. Indeed, fear can be the motivation behind a variety of antisocial problems such as destructiveness or indeed aggression. So, let's take a detailed look at fear: what causes it and how we can help our canine companions.



A primitive emotion

Fear is a primitive emotion that is part of a dog's survival mechanism. The physiological expression of fear in dogs follows a remarkably similar pattern to that in humans, given that our brains are so different. Fear is registered in the amygdalae, which leads the hypothalamus to transmit signals to and from the brain and to hormone-producing glands, such as the adrenals. They then produce the flight or fight hormone adrenaline. Immediately we can see how fear can be linked to aggression.

Physiological response to fear

The initial reaction to fear in a dog is usually to become suddenly alert and then freeze. Meanwhile the amygdalae, which records past frightening events, rapidly send signals to the cortex, the thinking part of the brain, to decide on a response. The dog's body is tense, he shakes, eyes wide and teeth bared. The heart rate and breathing speed up in preparation for action - be that **fight or flight**.

Fear of the Unknown

There are two types of situations that can scare a dog - something that frightened him in the past and something he has no experience of (hence the importance of socialization). His reaction to a frightening event depends on what worked before. Some dogs will stay frozen, whilst others run away. If he has been frightened by something in the past, tried to run away and didn't have an escape route, this learning will come into play and he may resort to aggression.

This is because previously he learned this was the only option open to him in what he sees as a threatening situation. You know a cardboard box is harmless, but he hasn't learned that yet. Fear is a powerful trigger for learning. When a dog is suddenly frightened by something unfamiliar, even a cardboard box, he transfers this fear to similar objects. He can even show a fearful response when he revisits the spot where it happened, though the box is no longer there. This might explain how a dog may seem to have irrational fears. They are perfectly rational to him. Many animal behaviourists who study aggressive dogs believe most cases are motivated by fear rather than anger or need to dominate.

Common Reasons for Fear:

New Places, People or Things It is understandable for a puppy experiencing a situation for the first time to be cautious, but, with the right encouragement he learns to have confidence. If the situation is first met in adulthood, it's more likely to result in fear.

Other Dogs Many timid dogs are scared of other dogs and either avoid contact or take any social interaction very slowly and cautiously. Again, this could be due to poor socialization or a bad experience with a frightening dog.

Hustle and Bustle Some dogs have a more nervous personality than others do and environments like walking on a busy city street with lots of people, traffic sounds and quickly appearing obstacles of all kinds are overwhelming.

Sudden, Loud or Unfamiliar Noises Fireworks and thunder are typical examples and are common fear triggers for many dogs, causing them to try to run away or hide

Dealing with fear

Many owners who lovingly adopt dogs from rescue homes spend some time dealing with fearful reactions in these dogs without any insight into what's behind it. You have our full support and humble admiration! For any owner with a fearful dog, we hope this section will help. Once a dog has learned fear, it can be difficult to change his learning.



As the response to the fear in the past was probably to run away and leave the frightening situation, this becomes his default behaviour. Start by identifying the fear triggers. The most effective method of trying to get the dog to relearn a new response is by gradual exposure to the source of the fear at a safe distance. This might have to be a very safe distance for dogs that are especially nervous.

Allow enough proximity to trigger the alert response, but not the fear response. For example, if the fear is of strange people or dogs, walk where there are others, but you can keep at a safe distance. Move a little past your dog's comfort zone and at the alert response give a treat and some calm, reassuring praise. If he moves into fear the best thing to do is to leave the situation quickly and don't give a treat - you don't want to reinforce the reaction.

Another method is to stay in one spot so your dog can realize that the source of fear is not actually a threat. Tell her to sit and give a treat. Doing this often enough may help him to relearn that in the presence of the source of her fear nothing bad actually happens and something nice does.

Noise is a stimulus that's often not in your control, like a thunderstorm or fireworks. These can be very scary for dogs and treatment doesn't always work to desensitize dogs, but it is worth gradually introducing a recording of a similar noise, starting at a very low level.

Do it at a time that's safe, happy and even fun, like when he's playing with children or enjoying a tasty treat. It's really important to keep it at a level that at the most only alerts him and doesn't cause fear - you don't want him to now associate fear with happy things. If this is accepted calmly, very gradually increase the noise over a long period.

4.2 Anxiety

Anxiety can often be confused with fear as some of the responses are similar.

Anxiety is all about the anticipation of fear when the animal perceives cues that an event which they previously disliked is about to happen again. This might be the anxiety dog experiences when they recognize their master is getting ready to go out, or anxiety about car travel, or even visiting the veterinary clinic.

Separation Anxiety

This is the most common type of anxiety pet owners see. Some breeds are more prone to feeling it than others. At the usual signals that you are about to go out, the pet shows signs of anxiety, like curling up in his bed, looking miserable or worried. He will probably be watching all your moves. In his mind, he is anticipating feeling the fear that you're gone and may never return.

Even if dogs can understand the concept of **leaving and returning**, their concept of time is not fully understood so it's difficult to know how they deal with periods of time without knowing there is a guaranteed outcome - such as the owner returns.

Some dogs just aren't emotionally equipped to spend time alone. This often happens when a youngster is always in the company of others and doesn't learn about being by themselves. They form a deep attachment to their owner and need them to stay nearby. Of course this is not always possible. The dogs that react badly can show this through a variety of behaviours:

- Scraping and biting around the exit door in an effort to escape and follow the owner.
- Using begging gestures like pawing.
- Whining, howling or excessive barking.
- Pacing.
- Urination and/or defecation.
- Biting itself.

Many things can contribute to a dog's anxiety around separation, such as breed traits, socialization experiences in puppy hood, mistreatment or long periods alone in the past and a nervous disposition or wariness about the environment.

Addressing Home Alone Anxiety

Behavioral experts recommend reducing separation anxiety by **systematic desensitization**. This is a type of counter conditioning which was developed by Joseph Wolpe in 1958 to treat anxiety, fear and phobias in humans. The idea is to gradually introduce distance between you and the pet at the same time as keeping him feeling relaxed.

Desensitizing your dog

For this to work, the dog needs to respond to commands like 'sit', 'stay' and 'down'. Start by getting your dog to lie in his bed and stay while you are close by. Reward his cooperative behaviour with little treats. You gradually start to move away enough for the dog to notice you're doing so - perhaps just to the far side of a room - but not to feel anxious.

It's very important you don't trigger the anxiety response while you're doing this. You're trying to get your dog used to a slightly new situation while remaining comfortable. This way he learns a new response to you not being at his side. **Don't aim for too much too quickly**. If you've made progress, leave the next lesson until another day

As well as moving further away, gradually increase the length of time he stays in his bed. Try to get to a point where your dog is comfortable to lie in his bed while you move to another room. Reward his staying with something he loves. This reinforces the relaxed behaviour and makes it something he'll want to do again.

If you notice an anxious response at any stage, pull back and try a smaller step. Gradually, move towards going outside for a very short time and return when you're pretty sure the dog is still comfortable. This could just be a few minutes to begin with. The more confident your dog gets with relying on his own resources and not responding with anxiety, the more you can extend your separation. Always reinforce when your dog is on his own and relaxed with praise, treats or a toy.



You can also try a similar approach to desensitizing him to the actions that tell him you're preparing to leave, like putting on a jacket or picking up keys.

- Have a special, exciting toy that you'll use.
- On a few occasions over a day, put on your jacket when you're not leaving.
- Immediately give the toy, or a treat that particularly keeps his interest like a rawhide bone or a puzzle treat.

You want to **change his association** with the action of putting on a coat from one that causes anxiety to one that's pleasant and keeps him relaxed and calm. Do the same with the sound of keys being picked up. These practice runs will take the stress out of actions that previously caused worry.

And finally

- When you know you're going out for a while, plan a good walk or run beforehand so your dog is well exercised and will already be physically relaxed and hopefully have had some social interaction with other dogs, satisfying another need.
- Don't announce your departure or do any goodbye signals like a long hug or an apologetic voice. This could be like telling him to be anxious.
- Leave a garment of yours near him so he has your scent for reassurance. Some owners leave the TV on which could be a good way of relieving the feeling of being alone.

On Your Return

If your dog does act out his anxiety, frustration or boredom while you're out with destructive behaviour or by leaving a mess, NEVER punish the dog as this can lead to an escalation of bad behaviour. Your dog will link any anger or punishment purely to your returning, not to his actions. This will make him anxious about what will happen the next time he's alone and you return, making him even more likely to chew, scratch the door, bark incessantly, urinate or defecate. **Dogs are not mental time-travellers.** Even if you take him to the scene of the crime, as he thinks present moment only, he won't link it to your response. He doesn't know he's done wrong if he has his tail between his legs, body low and ears pinned back - he's purely reacting to your displeasure. Though at times it may be a challenge, in the long term you'll encourage better behaviour and form a mutually loving and respectful relationship if you use only a positive and reward-based approach. No shouting or physical punishment!

4.3 Aggression

This is one of the reasons it's important to remember that our dogs are animals, and they can resort to primitive behaviour that is potentially dangerous. We need to be aware of this and respond in an appropriate manner when faced with an aggressive dog, in order to stay safe.

IMPORTANT NOTE! This course will give you an understanding of aggression and some tips to help avoid minor outbreaks of aggression in your pet. It does not, however, seek to offer an adequate approach or training for dogs that are either dangerously aggressive or show the potential to be so. This needs trained, professional instruction and we recommend that you contact someone who is both trained and experienced in dealing with aggression in dogs as appropriate.

Bear in mind that a powerful dog can be difficult to manage and if it becomes aggressive, could pose a danger that you may not be able to deal with.

When getting a dog, make sure your choice of breed fits your lifestyle and experience with dogs, rather than your taste.

Responding to an aggressive dog

Many aggressive dogs have earned the label "dominant", which as we learned earlier in this course is not necessarily helpful or accurate. However, what remains true is that an aggressive dog is a potentially dangerous dog. **Never take any risks**, especially where children are involved. If you suspect your dog is a danger to other dogs or people, then ensure that he wears a muzzle at all times and seek the advice of a reputable dog trainer who holds a recognized qualification in animal behaviour.

One of the reasons you must seek professional help is that the motivation for aggression varies, and therefore the method of correction also varies. If you guess wrong, it is highly likely that you might make the problem worse rather than better.

An example of this is the dog that barks ferociously at bearded men. His motivation is actually that as a puppy a bearded man beat him and he is terrified of them. However, the owner mistakenly believes the dog is asserting himself and so gets a friend with a beard to take a firm hand with the dog. Now the dog finds himself being smacked by the very thing he fears most, which reinforces his phobia and makes him even more aggressive.

Misinterpretation of Aggression

Some behaviour can be misinterpreted as aggression:

Fear, Anxiety and Insecurity

A dog's first response to a fearful or anxious situation will be to run away or hide. It's usually only when these choices are not options and he is cornered that he responds with aggression. It's a defensive action rather than a desire for confrontation. If a dog is in a continuous state of anxiety, he may slip into the habitual response of reacting aggressively to everything as he never feels like he gets away from the anxiety.

Frustration

Larger dogs in particular need lots of exercises and outdoor time. Any high-energy dog that doesn't get enough can get frustrated to the point of aggression. Again, this is not for aggression's sake. If you can't be the one to allow plenty of physical activity, arrange for someone else to do so as often as possible and leave toys, chewable things and treats to provide mental stimulation when he's alone.

Under Socialization

Dogs that are left to themselves usually work things out between them, without aggression, by giving signals we're not so good at reading. Often, it's when we interfere with our own fears, interpretations and actions (like picking dogs up) that we interrupt this natural order. A lot of dogs' aggression to other dogs is learned from humans. Try to let go of preconceptions and fears and let dogs socialize unhindered.

Injury or Illness

A dog who snaps at a familiar person uncharacteristically may be doing so in response to pain or fear of pain. Check if there's a physical reason, particularly in ageing dogs.

A dog who gets plenty of exercise and socialization and who has an owner who's calm, assertive and in control, is much less likely to be aggressive than one who's bored, frustrated or under-exercised.



Types of Aggression

Restriction/Frustration Aggression

Some dogs associate being restricted with the need for aggression, like being held on a leash or being picked up when other dogs are free to roam. The restriction leads to frustration at not being free to behave according to its normal instincts and may in turn lead to aggression.

Protective Aggression

This is in response to a perceived threat to a member of the dog's family group. The dog needs to be trained to trust that the pack leader is strong and in control and this behaviour isn't required. Mothers who are suckling their pups can be aggressive towards intruders and this is natural, but if it becomes a problem it can be reduced with a careful approach.

Territorial Aggression

This is the easiest to understand and is a primal instinct.

A dog can be protective of the home, car or yard.

It's a useful security measure, but if he's over-alert, leave treats outside for visitors to offer him as they enter and therefore teach him to see familiar people as friends, not enemies.

Resource / Possessive Aggression

Even though the food is a guaranteed resource for domesticated dogs, they can still behave aggressively if they think they are in competition for it. This is another reason to feed a dog only after other household members are already eating or are finished. They can also aggressively guard a food bowl so don't leave it around outside of feeding time.

Get a puppy used to the idea of that you can come and take away their food at any time so this becomes normal and they accept that you're in control. It reduces the feeling of possession around food.

Sexual Aggression

As dogs in domestication don't have the same freedom for sexual expression that they would have in the wild, male dogs can become aggressive when in competition with other males for a mating opportunity. Neutering eliminates this in most cases. Females can also aggressively compete for male attention, though this is less common.

Predatory Aggression

A reminder of the animal in your dog, the instinct to prey can still be present in domesticated dogs. Unlike the other forms of aggression above, there are usually no warning gestures and it's difficult to break the focus once it kicks in. It's mostly triggered by the scent of a wild animal.

Signs of possible aggression

- Low swishing of tail
- Rigid body, freezing
- Growling
- Snarling
- Snapping
- Barring of teeth
- Charging

Barking combined with any of above actions

Owners of dogs always need to act responsibly with dogs and look for training advice if a dog shows any tendency for aggression.

4.4 Scent Marking

The scent is a major method of communication for a wide variety of animals. In fact, humans are one of the only mammal species that don't rely on scent to communicate with and relate to other members of the species.

When dogs and wolves lived in the wild, they relied heavily on using the odours from urine and faeces to communicate with other members of the species. In the interests of self-preservation, they preferred to avoid meeting other dogs and wolves as aggressive encounters were risky to both parties. They largely stayed clear of each other's packs and groups.

The reasons they communicated would mostly have centred on establishing and maintaining territorial boundaries. They used scent marking as their method of remote and long distance communication.

As urine and faces contain vast amounts of coded information for each other, dogs could leave a scent mark, which would last for days, designed to leave messages to be picked up by others. It meant there was no need for a face to face meeting to thrash things out.

Why do domesticated dogs still scent mark?

Domesticated dogs are now much more social and they no longer need to scent mark as much as they think they do. But, as it was such a necessary survival tool in their genetic history, it is obviously still a deeply ingrained instinct.

All owners, particularly of male dogs, will observe their dog's obsession with raising his hind leg and depositing small amounts of urine at various locations. Females do this too, though less intently. Wild dogs studied in India found that bitches scent marked around their lairs, proving that it's to do with putting a boundary on her family group. The males also did this, as well as more widely in their area.

Pet dogs must still feel the need to claim territory in the area they live in. However, their job is an eternal one. As they generally live in close proximity to lots of other dogs and are only on the walkabout trail for a limited time, each time they come back their previously left scents has been over ridden by other dogs and so they have to start all over again.

Scientists think dogs can tell how old, how large, how anxious, how hungry or how confident another dog is through the information in the scent, though it's not entirely proven. What's obvious is that, from a male's intent reaction, he can tell the reproductive status of a female from her scent mark. In his mind, he has good reason to leave his mark.

When peeing causes you a problem

It makes sense that neutering either eliminates or vastly reduces the desire to mark territory. As much of the important information contained in the scent of urine is to do with sexual status, reducing the hormones responsible for reproduction reduces or eliminates the drive to respond to sexual clues from other dogs and leave their own advertisements.

Non-neutered males still maintain a strong urge to urinate, especially when they go to new places. If this is out in nature, that's fine. If it's in your new in-laws gorgeous home, it's not. It doesn't mean your dog has a problem - it is a normal, natural instinct, it's just not socially acceptable to people. A good tactic in dealing with it is to watch your dog every second when he arrives at a new place. It's vital to catch this behaviour the first time he visits as if he manages to scent mark once, he'll try again. **Follow at his heels** and watch when he sniffs and looks like he's about to lift a hind leg.

Use whatever signal you have for communicating 'no' or distract him very definitely with a pet distracter. Bring him immediately outside to let him do it there. If you prevent it happening the first time, dogs seem to get the message that it's a place not to mark in.

This is particularly likely to happen if there's another dog in the house or if there's still the scent of another dog. Even with a house trained a dog, it can also happen in your own home if a strange dog comes to visit - understandable when you take into account what boundary is marking was designed to do. Again, watch vigilantly and intervene at the first sign of sniffing or leg lifting.

There are times when a dog can start marking inside when he's been previously house trained. This could be due to anxiety, and the best way to stop it is to **identify what's causing the anxiety** and deal with that. It could be due to a change in the social structure of the household, as the arrival of a new pet, a new baby, the departure of a member of the family or a significant change in routine.

It's normal for puppies to dribble urine when greeting animals or people whom they feel are higher up in the hierarchy of her social group. And for a puppy, almost all others are higher up - plus they haven't yet developed good bladder control. As they grow up they often grow out of this, but some dogs can still be prone to it even when they're fully-grown. This can be due to a more nervous or under-confident disposition; the kind of dog who feels he has to lower himself in status in the presence of those he feels are above him. Urinating in the dog world is a sign of submission.

If this is happening because of anxiety or nervousness, it's really important that you do everything you can to build her confidence and sense of security. Even though cleaning up repeatedly after accidents may be very frustrating, if you let him know you're upset or angry, this will just add to the problem. He'll then also be reacting to your upset mood and won't know why it's happening, which makes him even more anxious. When it happens, find a

way of releasing your reaction in a way that he doesn't experience and offer him patience and love to help resolve the problem. Don't contort yourself into awkward positions when grooming - you may not feel the strain until the next day when it's too late to undo the damage.

Urination due to excitement

This is similar to submissive urination and happens when a dog gets over excited, usually when greeting a loved one or new person who comes into his environment.

Again, it would be typical of a puppy with poor bladder control, but can also happen in dogs that have very excitable natures. Probably due to very successful socialization with humans during puppy hood, some dogs immediately want to excitedly greet every new person they meet.

One way of trying to cure this tendency is to reduce the excitement level at greeting time. Use the distraction of a toy or treat to diffuse the situation, eliminate the habit of jumping up to greet and, if necessary, develop the habit of ignoring the dog when you first arrive home, delaying your greeting until things have calmed for the dog.

4.5 Elimination

The dog human bond is undoubtedly based on love. Dogs attachment to people is often more intense than to individuals from their own species. Dogs can't turn off these strong feelings and attachments and as many as one in five hate being separated from their loved ones. They really miss them. The more emotionally highly tuned ones deal less well with things like sudden noises when on their own.

Inappropriate elimination due to distress

One symptom that separation distress can lead to is elimination indoors or in inappropriate places. Distressing as this may be for you, to correct this, the last thing you must do is react with any punishment, 'showing' the dog what he's done or speaking to him in anger. This will definitely add more distress and make the situation worse. Since we humans are

responsible for 'programming' dogs to give us unconditional love, we have a responsibility to deal with the consequences so dogs don't suffer for it.

If you think it's due to separation distress, try the tips we suggested in "Addressing home alone anxiety". When you put on a coat or pick up keys, switch your dog's association from the negative aspects of a period of separation to the positive.

Instead of your pet thinking 'this means leaving' and 'this means I'm on my own' to 'this means returning/ affection' or 'this means I get a treat'.

Pick up keys and then go straight to your dog and give lots of loving attention, a treat or both. Next time, pick up keys, go to the door, and give happy attention. Next, pick up keys, go through the door, come straight back inside, give praise and attention. Repeat this many times over a number of days, staying outside for a few seconds, then a minute, then longer and longer. If you sense him going back to associating keys with distress, slow down the training and go back to the previous step. Eventually he'll learn that things like keys and putting on a coat lead to a positive outcome instead of a negative one.

If you have a breed that's particularly prone to distress on separation like a Labrador or Collie, try to keep your separation as short as you can manage and broken up instead of in long bouts. In the long run, if you're gone for a significant amount of time, it will pay to get someone else to provide company or exercise and prevent a problem developing.

Elimination can be encouraged to be habitual. Many dogs that are taken for a walk at a particular time of the day get into the ritual of eliminating their walk. This works especially well if it's a morning walk. The bowels move best during exercise, further supporting this as a routine. Once your dog has had exercise, fresh air and a toilet trip, he's much more likely to rest happily when you then leave.

Incomplete Training

House training a puppy to only eliminate outside does take time and patience and some learn faster than others. At about 5 weeks old, pups start to leave the sleeping area to eliminate. They naturally have the instinct not to soil their immediate living space. Once they decide on a particular spot, they tend to repeatedly eliminate in the same place. This is called **location preference**. What your dog needs at a young age, then, is to be persuaded

to choose a spot that suits their lives with you - outside of your home. This does coincide with their psychology and many get the idea without too much bother.

Once a dog has eliminated in a spot indoors, this will start to become a habit. If it happens, make sure to do all you can to get rid of any odour and try to restrict access to this area.

In the early stages of house training it will mean being around and watching closely most of the day to bring the dog outside very often, particularly shortly after eating. Incomplete house training is a reason some adult dogs still eliminate inside.

If this is an ongoing issue for you, it would be worth putting time aside to devote to the project of correcting it. You'll need to be on the spot and vigilant. After some close watching, you'll probably pick up some body language that signals when your dog needs to do a toilet run; like circling, pawing, barking, sniffing, panting, pacing or staring at you. Act on it immediately and go to the outside area you want him to use. Choose a word or phrase you'll always use as he's going so that when you repeat it at other times, he'll associate it with this action and know what you mean.

4.6 Issues at feeding time

The two main causes of conflict between dogs in our everyday lives are when they are in competition for food or between males for a bitch in heat.

The need for food is a basic, primal driver. It's important to get the feeding ritual right to avoid any problems in your household.

Never leave a food bowl available to your dog indefinitely. This can encourage guarding and possessiveness. Even though he doesn't have to hunt for food and his supply is guaranteed, he may still have a primal instinct to protect anything that's lying around.



Let him know you are the one in charge of food and decide when he eats. Don't feed in response to requests from him.

Always wait until he sees that everyone else in the household has eaten first so he doesn't think he has preference over everyone.

Never feed when he is over excited, anxious, or aggressive as this is like rewarding and therefore reinforcing this behaviour. Wait until he is calm and submissive. Then he'll know that if he wants food, this is the state he needs to be in order to get it.

Train your dog to read your body language for commands like 'sit' and 'stay' and use these to let him know when he can start eating.

If he doesn't finish a meal, remove the bowl. If you're trying to encourage a reluctant puppy to eat, don't be tempted to leave it out. It's best to offer it for limited periods and then take it away.

If you're aware your dog has a great sense of competition around food, make sure to remove any bones or treats if new people and/or another dog are coming to visit in case he gets possessive.

If you're having issues with food that are not resolving, call in a professional trainer and avoid feeding time leading to a threatening situation.

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a black container. The image is framed by a large teal circle on the right side.

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MODULE 5: How cats' behaviour develops as they grow

Cats make affectionate, loyal and restful companions, but despite this some people perceive cats as being aloof and stand-offish. In part, this is because cats are solitary rather than pack animals and learn differently to dogs. This module explains normal cat behaviour and puts you inside a cat's mind to better understand why your pet acts as she does.

5.1 How cats' behaviour develops as they grow

5.2 How cats learn

5.3 Feeding time rules

5.4 Sleeping and biological rhythms

5.5 Sexual behaviour

5.6 Maternal instincts

5.7 Aggression

5.1 HOW CATS' BEHAVIOR CHANGES AS THEY GROW

Kittens are born, deaf, blind, dependent on their mother and have a steep learning curve ahead if they are to survive into adulthood. At around 3 weeks old they start tottering around and swatting at each other, but that endearing play behaviour has a purpose - to turn them into serial killers.

In the wild, a feral kitten has no benevolent owner to feed her and she either learns to hunt for herself - or starves. All that pouncing, swatting and batting builds muscles and teaches skills that will keep her alive in later life.



Of course, these same urges are hardwired into our pet cats and even a kitten born into the lap of luxury, shows a typical pattern of evolving behaviour in the weeks and months ahead.

A growing kitten's behaviour is divided into recognizable phases:

Neonatal Birth to two weeks

Transitional phase 2 - 3 weeks

Socialization phase 3 -14 weeks

Juvenile phase 14 weeks to 6 months

Adult 6 months onwards

The Neonatal Period

The newborn kitten is entirely dependent on her mother. She is born blind and deaf and moves around by squirming on her belly. Her most highly developed sense is that of smell, which she uses to identify her mother and find a nipple for milky meals. The neonatal kitten does nothing but eat and sleep. Indeed, she only empties her bladder and bowel when stimulated to do so by her mother licking her rear end. This is a means of keeping the nest clean, making it less obvious to predators.

The kitten's eyes and ears start to open at 10 - 14 days, which heralds the start of her journey to independence.

The Transition Phase

Between two and three weeks of age the kitten starts to find her paws. She tests those new senses of sight and hearing, by wobbling after equally shaky litter mates. At 14 days her front legs can raise her front end from the floor and by 17 days her back legs are sufficiently strong to support her in a standing position, but walking is awkward and clumsy.

The Socialization Phase

Between three and fourteen weeks, the kitten is most receptive to new experiences. In the wild, this allows our feral kitten to explore the world around her and learn what's safe and what isn't.



The sights, sounds and smells she encounters now, she will accept as normal.

This is the magical time when a feral kitten, if handled regularly, can be taught to like the human company and makes a great pet. Likewise, kittens born at a breeder or in the domestic home should be exposed to everything from vacuum cleaners to dogs, with lots of cuddles from men, women and children (a tough job - but someone's got to do it)!

Our young kitten is most **open to learning until nine weeks of age**, after which the socialization window of opportunity slowly shuts and closes completely at fourteen weeks.

After that the pattern of life is set. (Although, it is not impossible for a feral cat to become domesticated, it depends on the individual's personality and tons of patience from the would-be owner).

The Juvenile Phase

This could also be described as the play phase, because this is when our feline youngsters are at their most mischievous. They love nothing better than to chase one another in a glorious game of rough and tumble. But this is play with a purpose because it teaches social etiquette, builds muscles and paw-to-eye co-ordination. It's the feline equivalent of circuit training, getting the kitten ready to hunt in earnest. Indeed, it's during this time that the kitten learns such valuable skills as the fish scoop, mouse pounce, and bird swat.

The juvenile phase ends around six months when the kitten is sexually mature, and the business of survival in the adult world begins.

Adult Behavior

Life is one big competition. From the moment a kitten is born, she faces competition for space at Mom's milk bar, as she grows, she competes for food, her mother's attention, and the best sleeping spots. When she starts to play, she learns the rules in the competition for social acceptance in the group.

As an adult this competition intensifies. The territory is at stake. Food is at stake. Producing the next generation is at stake.

Adult cats have a complex set of rules that govern what is and isn't acceptable in their society. This depends on factors such as how many cats live in the neighbourhood (or house), how much food is available, and whether they are neutered or not.

When we become cat-staff, the decisions we make, such as how many pets we keep, whether they are allowed outside, and the availability of food, water and hiding spots, all have a major impact on the way our furry friends interact with each other and with us.



As you read on, this guide helps you learn about the needs of an adult cat and how this influences their behaviour. In turn, this helps you to provide a cat-friendly home with plenty of resources (including food, sleeping places, and toilets) which makes for contented cats and happy cat-staff.

CAT FACTS

- Female kittens mature faster than male kittens
- Early weaned kittens become better hunters than their later weaned litter mates
- All kittens are born with blue eyes
- Regular handling of a kitten triggers her eyes to change to their adult colour earlier
- At just 6 weeks of age a kitten can land on her feet after a fall from a high ledge

5.2 HOW CATS LEARN

Cats learn differently to dogs, and because of this some people find their behaviour arrogant or aloof. This is not the case. It's just that the cat is following feline rules, rather than a canine code of conduct.

Early Behaviors	
Instinctive behavior	Some behaviours are instinctive, which means the kitten has an innate ability to perform an action without being taught. Examples of such behaviours include suckling and grooming. Over the animal's lifetime some of these become less important and are "forgotten", such as suckling, but can break through in adult life in actions such as sucking on a blanket.
Learned behavior	One of the most important learned behaviours is to be friendly with people. A kitten deprived of human contact will revert to being feral, hence the importance of early handling. The point of learning, especially at such a young age, is to teach a kitten what is safe and what isn't.

How Cats Learn: Punishment

Punishment is not an effective way of teaching cats. For example:

The cat scratches your best Sheraton table > you squirt the cat with a water spray > the cat stops scratching *while you are there!*

What happens is the cat links the unpleasant experience (getting wet) with your presence, rather than the bad behaviour of scratching the furniture. After all, she's sharpened her claws on that table leg heaps of times before and nothing bad happened. Hence, she learns not to scratch furniture when you are around.

It is very difficult to teach a cat using punishment. At best, you will teach the cat to become secretive about her bad habits, and at worst she fears you and runs from your presence.



How Cats Learn: Action and Reward

A cat learns by cause and *immediate* effect. An action that is rewarded with a pleasant experience is one she will wish to repeat. However, and it's a big but, an action rewarded less than half a second later, is a reward given too late. In the cat's mind the link between a behaviour and a reward is only made if the two things happen simultaneously. So that treat must be given at the precise moment that she jumps off the worktop, and not a second later.

How Cats Learn: Observation

A kitten watching her mother press a button to release food, quickly learns to push the same button. Interestingly, the kitten who watches her mother, learns the trick faster than if she is watching an unrelated cat. The implication is that a cat learns more quickly from someone she trusts, than from any old stranger. This copying behaviour can be so strong that one kitten that was raised alongside a dog, taught himself to cock her leg when urinating!

How Cats Learn: Trial and error

By nature, cats are curious, inquisitive creatures. They love to explore and an important part of learning about their surroundings is by trial and error. However, researchers found that unlike dogs, a cat does not see the owner's presence as sufficient reward (1), and is more likely to be motivated by a "must have" treat.

CAT FACTS

- Knowing how a cat learns matters because it enables you to train your cat effectively
- Cats continue to learn (albeit slowly) into adult life
- Cats are astute observers and learn just by watching
- Cats transfer information learnt in one situation, to another different scenario
- Cats learn best if they associate an action with a reward
- Reward has to happen at exactly the same moment the desired action is performed

5.3 FEEDING TIME RULES

A newborn kitten is helpless, and yet knows how to suckle. Indeed, at just 3 days old she has a favourite nipple from which she prefers to feed. Food and feeding is a major motivation for a cat that much of her behaviour is tied up with finding food and eating. This link is so strong that a bored cat is likely to over eat, and a cat who has to hunt for food (even if this means hiding kibble around the flat) is more likely to be lean.



The Newborn Kitten

The newborn kittens spend about 8 hours a day feeding. This amount of nursing means that she grows at a phenomenal rate.

- After 1 week she doubles her birth-weight
- At 2 weeks she triples her birth-weight
- At 3 weeks she quadruples her birth-weight

Weaning is the process where the kitten decreases her reliance on milk and starts eating solid food. This is a gradual process as the mother spends less time with her kittens and they start to explore and investigate her food. Commonly, weaning starts from four weeks of age, but may occur later if the queen (mother cat) has plenty of milk and a small litter.

CAT FACTS

- A feral cat needs to eat 10 adult mice a day to supply her nutritional requirements
- A feral cat spends just 1 % of her day eating
- Cats eat for volume rather than calories

Adult Appetites

Distasteful as it might be to modern sensibilities, cats are hunters designed to eat mice.

Her prey is caught by stalking, and she makes individual (rather than group) kills. This means her digestive system is designed to cope with several small meals a day.

Indeed, when given a choice, a cat's preferred eating pattern is to graze, or browse on 9 - 16 meals spaced evenly through a day.

Cats living as nature intended, expect to spend considerable amounts of time hunting, followed by brief spurts of energy, and then a meal. The chances are this is somewhat at odds with their more domesticated cousins who share our homes.

Mimicking Natural Behavior

Wet vs Dry Food

Dry kibble is better suited to a cat's preferred dining habits. This is because dry food can be left in a bowl all day and it retains its palatability. This allows the cat to snack on an ever-present biscuit buffet and satisfies her instinctive need to eat little and often.

However, try the same thing with canned food and the cat is likely to turn her nose up. Once the wet food is exposed to the air it starts to dry out and loses its taste appeal. Thus the cat with wet food put down twice a day learns to eat her food whilst it is fresh, which is in conflict with her instincts. The long-term result is that the cat's ability to stop eating when she is full, is overridden and she's more likely to overeat and gain excess weight.

Active Feeding

One problem with dry food being left in a bowl all day, is that the cat doesn't have to work for her meal. A bored cat can easily wander over for a snack, and if she does this too often, she'll gain weight. She is the victim of only fulfilling part of her programming i.e. she is doing the snacking, but without the stalking and hunting.

The answer is simple. Make her hunt for her supper. This isn't as crazy as it sounds. Divide her daily calorie allowance into 10 portions. Put each mini-meal in a separate small, plastic pot (clean yoghurt pots are ideal) and hide them around the home. This means the coach-potato kitty has to put in some paw-work to seek out each meal. Not only does this make it more difficult to snack indiscriminately, but it provides vital mental stimulation.

5.4 SLEEPING AND BIOLOGICAL RHYTHMS

CAT FACTS

- An adult farm cat sleeps an average of 9 -hours a day
- An adult house cat sleeps an average of 13 - hours a day
- It is 300 times more difficult to wake a cat from deep (REM) sleep than a light doze.

The amount of time a cat spends asleep follows a predictable pattern, which is: the more time a cat is active, the less time she spends asleep.

The opposite is also true: The more time a cat spends asleep, the less time she spends being active. Thus, an active cat does not appear to need extra sleep, as you might suppose after burning calories, but a cat without mental stimulation is more likely to resort to nap.

Sleep Patterns

Cats experience sleep cycles just like we do. However, unlike people- who sleep for 8 hours straight - cats experience episodes of sleep than wakefulness. Each of these cycles lasts for around 100 minutes, with the cat being fully awake for just under half an hour in each cycle.

The sleep itself varies in depth. The majority of the sleep is what is termed drowsiness or light sleep, whilst in each 70-minute snooze the cat spends two periods lasting six to seven minutes each, in a deep sleep. Interestingly, this is the same deep rapid eye movement (REM) sleep that humans experience, which is when we dream - and indicates cats are likely to dream!

Nocturnal Behavior

Cats have poor colour vision. We know this because the color-sensitive cells in the retina (the membrane at the back of the eye which registers images) is sacrificed in favour of cells that see in dim light. This is an adaptation the cat has made over the millennia to enable her to see better at night. The reason she wants to see well in the dark is that it gives her an advantage when hunting prey.

What is interesting is studies on domestic cats show their body rhythms are not set, and a house cat can easily adapt to being more active during the day and snoozing at night.

This depends on her being stimulated with play during daylight hours, and so if you are at work during the day, it's likely your furry friend cat naps and wants to play when you get home (and *you* want to sleep).

5.5 SEXUAL BEHAVIOR

Q: How many cats does it initially take to produce 65,534 kittens in five years?

- a) One hundred breeding pairs
- b) Ten breeding pairs
- c) One breeding pair



The startling answer is that it only takes **one queen** (entire female cat) and **one Tom** (entire male) initially, to start breeding and produce that huge number of kittens. Of course, this is under ideal conditions where each kitten survives and successfully reproduces. This rarely happens with pressure for food, and space, and the addition of disease, parasites and accidents, but even so it's an impressive total.

This is a strong argument in favour of neutering, but perhaps maybe not the main reason we get our house cats neutered. The main reason for de-sexing our cats is because it makes them better pets who are more home loving, less likely to fight, or to show antisocial behaviour such as spraying.

We rarely see the full range of feline sexual behaviour, because of neutering. So what is normal reproductive behaviour in the cat and what does it look like?

Female Sexual Behavior

A young female cat becomes sexually mature anywhere between six months to 12 months of age. Underweight cats, such as feral cats competing for limited food, come into heat later than well-fed individuals. Delaying estrus (heat) until the cat is in good condition, is a clever trick used by mother nature to help ensure the pregnancy is successful and the mother has the resources to provide milk for her young.

Another influencing factor on the timing of estrus is the day-light length. Feral cats exposed to natural lighting, have a breeding season that is timed to produce litters in the spring and early autumn. Again, this increases the chances of the mother being able to find plentiful food to feed herself and produce milk for her young. However, pet cats that live indoors and are exposed to artificial light, breed year-round.

The female's reproductive cycle follows an exhausting three-week pattern, with her 'calling' or being in heat, for one of those three weeks. Anyone who has ever experienced a female cat in heat will know that PMT pales into insignificance beside it. The female cat rolls over and over as if in extreme pain, she may yowl, cry or even scream for attention - in fact many first-time owners of an entire female end up phoning the vet because they think the cat is dying. She may flatten her front end and stick her bottom in the air, and commando crawl across the floor. All in all the female advertises (in a very unsubtle way) when she is available for mating - and spends a third of her life (until she gets pregnant) making sure that no one gets any peace.

Her behaviour settles down during pregnancy, but a better means of stopping this roller coaster ride is to get her neutered.

Male sexual behaviour

Different male cats have different personalities. Some are aggressive and highly territorial, whereas others want a quiet life. Just because a cat is entire doesn't mean he'll automatically start a fight, but it does mean other male cats see him as a threat and may pick on him. This matter because feline immunodeficiency virus (FIV) is spread through bite wounds, so getting your male cat neutered removes a major risk factor for this serious condition.

Flehmen

Also known as 'lip curl' or 'gape', this is typical behaviour shown by males when he scents a female in heat. What he is doing is inhaling scent molecules into a special gland in his nose that is a cross between a scent and taste detector. The impressively named 'vomeronasal' organ is especially sensitive and can detect scent molecules from a mile or two away. To do this the cat raises his head, draws back his upper lip, and wrinkles his nose as he inhales deeply.

Spraying

Male cats are very territorial and lay claim to their patch by seeing off intruders and urine marking the boundaries. Tomcat urine is especially pungent, and each cat's urine has a subtly different scent signature. The male sprays short squirts of his urine against significant landmarks in his territory.

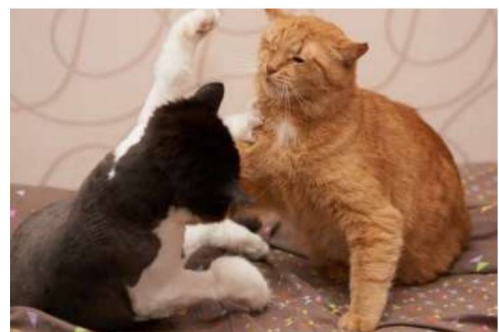
Males feel the need to urine mark because:

- It tells other males this is his patch and to keep away
- It attracts female cats in heat
- It helps the male cat feel more secure in his territory

Fighting

A tom cat fights because he has a lot at stake. His territory is everything. It is where he finds food and the females within are fair game to mate. Cats have a sophisticated way of communicating and, strange as it may seem, actually go to a lot of lengths to avoid getting into a fight. This is because a feral cat that is injured is less able to hunt and feed himself. Thus, a

lot of the noisy wailing and screaming associated with cats' fights, is actually a way of verbal sparring to try and avoid coming to blows. However, an intruder that does not respect the warning signs will be subject to attack.



Courtship and Mating

The tom cat's instinct is to breed and perpetuate the species. Male courtship is an unobtrusive event. Males 'caterwaul' (a mix of screaming and crying) to attract the attention of females in heat, and warn off challenging males who visit his territory. This first stage of courting is accompanied by an increase in spraying activity. When he finds a female in heat, the male plays a game of 'walking statues' where he walks in a large circle around her, but freezes when she looks in his direction. This is a way of testing out if she is hostile to the idea of mating or not. His next move is to let out a unique cry that signals his intention to mate. If the female has not hissed or sworn at him, he then runs at her, grabs her scruff and mounts her to mate. Biting the female's scruff triggers the same reflex that subdues a kitten when picked up by her mother. This decreases the chances of the female lashing out and injuring the male. The physical act of mating takes less than a minute, after which the female is likely to swipe out so he makes a swift exit!

CAT FACTS

- Cats are efficient at breeding because the act of mating induces the female to release her eggs
- It is possible for kittens in the same litter to have several fathers

5.6 MATERNAL INSTINCTS

If you have been lucky enough to witness a mother cat nursing a litter of kittens, you know what a delightful sight it is. The mother lies on her side, licking the nursing kittens and purring, whilst her offspring knead at her mammary glands to encourage milk to let down and make slurping noises as they feed.



The majority of female cats have a strong maternal instinct, and even if they have not learned how to raise kittens by watching their peers, many get along just fine. When the kittens are born, the female is so strongly bonded to her young that in the first couple of weeks she refuses to leave them for more than an hour at a time.

This is just as well because the newborn cannot generate heat and are dependent on her body for warmth. They also depend on her for milk and to be stimulated to go to the toilet.

Before each milky meal, the female wakes her kittens by licking them. The direction of her licks helps orientate the blind kittens to find her mammary glands. Another role of licking is to stimulate the kittens to empty their bladder and bowel, which the female cleans away. This is an instinctive way of keeping the nest clean and reducing the risk of predators finding the helpless kittens.

It is interesting that the hormones associated with nursing, inhibit the mother's 'fight or flight' reflex. So if the nest is threatened, she is likely to stay and fight. Even gentle pet cats can undergo a change in personality and become aggressive when they have kittens to care for.

Another marker of the strength of maternal instinct, is that female cats will readily share nursing duties with other litter. Indeed, a female cat whose kittens are weaned, may offer herself as a surrogate mother to others. In survival terms, this sharing of maternal duties has been shown to produce bigger stronger kittens that mature earlier than those raised by a single female.

During the first four weeks the mother will relocate her nest, in order to put predators off the scent and to decrease the exposure to parasites that may have colonized the first nest. She does this by picking the kittens up by the scruff of the neck. This is almost like hypnosis and the kittens enter a catatonic state where they hang limp and don't fight back.

When the kittens reach four weeks they are up on their feet and looking for trouble. At this stage the mother starts to withdraw, and spends less time with her young. This forces them to start looking for their own food, starts the weaning process, and encourages independence.

5.7 AGGRESSION

There are few, if any, cats that are downright spiteful and aggressive for the sake of it. As mentioned early, cats go to great lengths to avoid entering into conflict because of the risk of being injured themselves. Those cats that appear to be aggressive are usually so because of poor socialization (feral cats, or a lone orphan kitten), or they are fearful or in pain.

Most cats give warning signals before attacking. If you see these signs, respect them and back off. Never confront an agitated cat - you will come off the worse!

Signs of Aggression

- Growling and hissing
- Flattened ears
- Large, round, black dilated pupils
- Arched back and crouched posture
- Hairs standing on end
- Upside down 'U' shape to the tail
- Lashing, swishing tail
- Lips drew back to reveal the canine (fangs) teeth

A cat outside his comfort zone may be forced into aggression. There are many different factors that may trigger aggression.

Male vs Male	Aggression between males is related to their testosterone levels. Entire males have high testosterone and are more likely to defend their territory
Pain	Pain triggered defensive aggression. Litter mates learn to be gentle by the experience of the reaction of their fellows when bitten. Orphan kittens appear more aggressive because they never had this feedback.
Fear	Fearful cats first try to run, if they cannot escape they resort to aggression. This is why some cats are aggressive at the vet clinic.
Maternal	A nursing queen's instinct is to stand and fight if her litter is threatened. Even gentle cats may become aggressive when they have kittens.
Learned	Some cats learn that aggression stops an unpleasant sensation, e.g. he lashes out at a child who pulls his tail and learns the kid let's go. The cat then pre-emptively lashes out when the child approaches.
Play	The early play is directed at catching prey and killing it. Some cats get carried away and forget to sheath their claws when playing with the owner.
Redirected	A frustrated cat may lash out at the nearest target. Thus a cat seeing a stray through the window, may lash out at the owner who goes to lift him off the window ledge.
Petting	This is the cat that lashes out as you stroke her. It is thought the cat is trying to limit the time spent being fussed. If this is your cat, never stroke for longer than one minute.

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a black container. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 6: Abnormal Cat's Behavior

By understanding what is normal cat behaviour, you can learn to spot what is abnormal. This module explains the factors that influence and cause antisocial behaviour, and how ill health may mimic a behavioural issue.

What you'll learn in this module:

6.1 Peculiarities of certain breeds

6.2 When play is not play

6.3 Antisocial urination

6.4 Differentiating instinct from conditioning

6.5 Differentiating between behavioural and health issues

6.1 Peculiarities of certain breeds

Cat breeds are the result of selective breeding of individuals, based on their appearance, over many generations. Thus, the Persian cat was created hundreds of years ago, by mating together male and female cats that had unusually long and luxurious fur. Those early Persian cats had a longer, more pronounced nose than the

modern animal's flat face. But more recent breeders decided the flatter face was cute and bred from individuals with this characteristic to create the appearance we recognize today.

To create a new breed means using a small gene pool of animals that have the particular characteristic you want to enhance. This means over many generations not only physical characteristics but behavioural quirks or traits are also magnified.



Thus, pedigree breeds tend to have distinctive personalities. Indeed, taking the example of our Persian cat, she has a reputation for being placid, amiable, and preferring a nap on a comfortable lap rather than going out-and-about hunting and getting into fights.

In contrast, the Siamese cat sits at the opposite end of the activity scale to the Persian. This demonstrative, affectionate, lively cat loves nothing better than to be your shadow and follow in your footsteps wherever you go, whilst chatting constantly in a high-pitched yowl to alert you to her presence.

CAT FACT

- Only 7% of pet cats are pedigrees, in contrast with 51 % of pet dogs

Here are more examples of behaviours that are linked to certain pedigree breeds:

BREED	CHARACTER TRAITS
American Shorthair	Energetic and robust
Bombay	Craves human companionship, dislikes solitude
Burmese	Intelligent, loyal, affectionate
Egyptian Mau	Trainable like a dog
Maine Coone	Companionable and given to "chirping"
Norwegian Forest Cat	Loves playing with water
Persian	Placid and low energy
Ragdoll	Loves cuddles and very placid
Russian Blue	Quiet and shy
Siamese	Exuberant and vocal
Tonkinese	Ultra-affectionate and clingy

Another example of cat behaviour being influenced by physical characteristics is coat colour.

Have you heard the expression: Naughtie-tortie?

Well, this saying is used a lot by veterinary staff that routinely handle cats as part of their daily work. It refers to their observation that a cat with a tortoiseshell coat colour (which is tabby plus ginger) is half-expected to be unco-operative and misbehave. Other links between character and coat include the blotched tabby, those tabby cats (with big patches rather than fine mackerel stripes) are home-loving and white patches on a coloured coat have a calming effect.

And this is where things get really interesting, because it's likely that there's more to these sayings than an urban myth. If we go back to our Persian cat, it is recognized that animals with different coat colours do indeed have different personality traits. This makes sense when you think about it, because coat colour is the result of selective breeding. For example, to create blue Persians, parent cats are chosen that have blue hair. These individuals, especially early in a breed's development, are rare, and further selecting for that colour involves the breeding of near relatives who share the same genes - hence amplifying any personality quirks.

Coat colour and personality

Persian cats

Black: Suspicious of strangers

Red: Polite

Tortoiseshell: Good mother

White: Calm

British Shorthair

Black: Good-natured

Blue: Particularly affectionate

Tortoiseshell: Quick-witted

White: Street wise

All of this is useful information when deciding on a cat that suits your lifestyle. If you want a quiet life and a lap cat to cosset and cuddle, then a Persian could be for you. However, if instead you take on a Siamese or Tonkinese, you may find their clingy, mischievous manners, coupled with a tendency to talk rather loudly, a bit too in-your-face for your liking. This is a matter of their genetics and not bad behaviour as such, but if it's not what you were expecting you could be forgiven for thinking you have a problem pet.

6.2 When play is not play

Kittens: adorable fluffy bundles of fun, bouncing and pouncing after some scrunched up paper.

What could be cuter than a kitten playing?

We associate kittens with play, indeed the peak play period is between 9 to 14 weeks of age. But this doesn't mean an adult cat loses the urge to play. In fact, cats love playing, especially indoor cats that don't have the freedom to roam outside.

The mere act of going outside and sniffing the air, provides a cat with hours of amusement as she decodes who is around, who has visited and which particular leaf she'd like to swat.



Play allows a cat to fulfil a natural instinct to hunt, pounce and swat. From our point of view, it also diverts pent up energy and channels it away from destructive behaviour, such as climbing curtains or terrorizing your other cat. If the cat doesn't have the opportunity to play, then her attention is likely to be occupied inappropriately such as spraying around the house or digging the soil out from around the potted houseplants.

All too often the actions of a 'bad' kitty are either the result of frustration, through lack of opportunity to exhibit natural behaviour, or it is misdirected play where we come off the worse. Remember, that 6 a.m. ambush attack on the ankles is a lot more painful for us than for another cat, because we don't have a layer of fur to protect our skin.

And there we have the nub of the problem: when a cat disrupts our life or causes us pain, she becomes labelled as a problem cat. In actuality, she is more misunderstood than malicious, and this section will help you understand why.

Types of play behaviour

Type of Play	Examples	Unexpected Outcomes
Locomotor	Running jumping, climbing	Climbing the curtains Knocking over ornaments
Social	Wrestling, rolling, biting	Ambushed ankles Scratched and bitten hands
Object	Toying with an object	Swatting at your shoelaces Jumping at your dressing gown cord

The conflict between play and acceptable behaviour

Do you see a pattern emerging? There is a conflict between a cat's need to burn energy and practice her hunting skills, and our tolerance of what appears to us to be wantonly destructive or willful behaviour.

The cat that adopts a predatory stance, front end down, bottom up and wiggling, is about to hone her bouncing skills. In her eyes there is no difference between a mouse and the shoelace trailing from your shoe. Unfortunately, the unintended consequence could be that she grabs the lace as you walk past and causes you to trip up.

What is the answer?

Rather than chastise her thoughtlessness, the solution is to provide an outlet for her play behaviour. And it does not just chase and pounce that can be redirected, but aggression towards other cats.

Take the scenario where you own two indoor cats. The spot is shy and submissive, whilst Tigger is bold and a bit of a bully. Spot's life is a misery because every time she leaves her hidey hole to go to the tray, Tigger pounces on her. Each ambush ends in fisticuffs with Spot on her back and dreadful hissing and spitting. Things have got so bad that Spot is reluctant to brave the trip to the tray and has started soiling in the bedroom. Now you have not one, but two problem cats.

The answer is simple. Play.

Movement mimics prey leaving its lair and is a strong trigger for chase and pounce behaviour. For an energetic cat deprived of stimulation seeing another cat cross an open space is an invitation to play. Unfortunately, for poor Spot this means Tigger charging towards her, intent on bowling her over. This is more than the nervous Spot can stand and she ends up being the victim of rough-housing in a way that is deeply distressing to her.

The answer is to divert Tigger's energy into play. This satisfies his need to hunt and burns off calories, which means Spot is no longer such an exciting target to chase.

How to play

Cats have short attention spans. This comes from their evolutionary origins of needing short periods of intense concentration necessary to spot and catch a mouse. Thus, play with your cat in a way that mimics nature and several, short play sessions spaced throughout the day are ideal. Aim for at least three, five to ten-minute sessions each day, more if possible.



Cats love to chase, so toys such as a wing on a string, balls, motorized mice or laser pointers are ideal. (A word of caution about laser pointers. Always end the game with the laser landing on a toy, such as a ball, so the cat makes a "kill" at the end of each session. Some cats can become frustrated if the light disappears with no physical reward and this can lead to a type of neurologically driven cystitis.)

A special case: Play aggression

Some cats get carried away and become unacceptably rough during a game. A cat that is otherwise good-natured may attack a moving hand or foot, with painful consequences for you. Learn to recognize the signs of high arousal that precede a bite or scratch. These are:

- Dilated pupils
- Unsheathed claws
- Erect fur on the tail or back
- Grasping object with the front legs and kicking with the back (the "death grip")
- Growling or vocalization

When you see these signs, STOP and stay still (if necessary hold your hands out of harm's way). The lack of movement should induce the cat to eventually calm down. If a kitten has got into the habit of chasing a child's feet, provide the child with a wing on a string to distract the cat and provide an alternative target.

If things are well and truly out of hand and the child has become fearful, consider using a water spray to deter the cat. However, be aware that the cat will likely avoid the person who does the spraying and so only use this method if this is acceptable. (If the child does the spraying it can be a useful way of getting the cat to leave him alone.)

6.3 Antisocial urination

We invite cats to share our home and hearth, but that relationship can rapidly turn sour if a pet develops a habit we find unacceptable. The number one reason for a cat being referred to see an animal behaviourist is for inappropriate urination in the house - which is a fancy way of saying the cat pees where he shouldn't.

Three Reasons for Antisocial Urination:

A Bladder disease

B Territory marking

C Stress

In the final section of this module we look at ill health and how bad behaviour can be caused by, or a symptom of, sickness. Let us take a brief look specifically at bladder problems in the context of unwelcome weeing.

A. Bladder Disease

Bladder discomfort gives the cat a sense of urgency that he needs to empty his bladder. This shows itself as increased trips to the tray, straining to pass water and/or blood in the urine. That urgent need to urinate can catch a cat short, in which case he may squat in the nearest spot rather than visit the tray. Another important sign to be taken note of is if the cat spends an unusual amount of time licking the genital area under his or her tail - which can be a sign of urinary discomfort.

Unfortunately, bladder problems are all too common in the cat and if left untreated can be serious, even life-threatening. Cystitis is common in both males and females and can be as a result of infection or even stress. A major concern is bladder stones, which again are common, and boys are especially vulnerable to blockages in the urethra (the tube through which urine passes) which can quickly become an emergency situation. If your cat suddenly develops unusual urinary habits, then always seek prompt veterinary advice.

Contact the vet if you notice:

- Increased trips to the litter tray
- Squatting repeatedly (in or out of the tray)
- Spending longer than usual urinating

- Crying or vocalizing whilst passing water
- Blood in the urine
- Excessive licking of the genital area

The take-home message is: if your cat unexpectedly develops bad urinary habits, don't assume it's behavioural. Get him checked for bladder problems by your vet

B. Territory Marking

You open the door, and the lingering smell of cat pee catches at the back of your throat. No one wants to come home to a welcome like this so the chances are you are not best pleased with your furry friend's behaviour. But far from being naughty, it's likely something has triggered this behaviour.

Is the cat neutered?

Entire male cats have high levels of testosterone which makes them very territorial. Likewise, a non-neutered female sprays to advertise for a mate. In either case, surgical neutering is essential in order to get on top of the problem. And a sage word of warning - if the problem becomes well established it may tip over into being 'learnt' behaviour (in other words a habit), which may not cease after neutering.

A key trigger is another cat encroaching on the resident cat's patch. The worst-case scenario is the stray that comes in through the cat flap, right into the heart of your cat's territory, but sometimes just seeing a feline intruder from the window can be sufficient stimulus to make a cat urine mark.

The wrong approach is to punish the cat for exhibiting natural behaviour. To get him to stop requires you to think like a cat, which means removing the stimulus to urination and making him feel secure again.

Trigger Factor	Required Action
Non-neutered cat	Get the cat neutered
Feline intruder threatens the territory	Lock the cat flap or get a microchip activated flap Do not feed stray cats Block the view from the window through which the indoor cat watches the intruder in the yard
The smell of urine attracts the cat back to the scene of the crime	3 step deodorisations (check fabric for color fastness) Step 1: Clean with diluted biological washing powder (and pat dry) Step 2: Clean with a solution of bicarbonate of soda (and pat dry) Step 3: Spray with surgical spirit (if the surface's finish allows)
The cat has decided on his own toilet area	Make the area unappealing - Get rid of any lingering urine smell - Put his food bowls there - Lay over the area with tin foil (cats don't like splash-back!)

C. Stress

Weird fact: Cats find the scent of their own urine reassuring. A stressed cat may pee on your bed to comfort herself. This blend of her urine with your scent makes an irresistible combination to an anxious cat. Key to stopping this antisocial habit is to make her feel more secure.

Decrease stress by:

- Hidey holes and high perches. Providing plenty of places to hide instantly reduces a cat's stress levels
- Make sure each cat in the house has her own litter tray, food and water bowl. This reduces competition vital resources and psychological pressure on each cat.
- Pheromone therapy: The synthetic feline pheromone found in Feliway, is the same hormone that a nursing cat gives off that makes her kittens feel safe. Using a Feliway diffuser in the house can markedly decrease your cat's stress
- Calm atmosphere: Avoid loud music, screaming children (!), barking dogs and other disruptions that disturb a cat's chi.
- Speak to your vet: It may not be necessary to resort to pharmaceuticals to bolster her mood, there are food supplements that are good for the nerves and can help settle an anxious cat without the need for medication.

6.4 Differentiating instinct from conditioning

So far we have talked about allowing a cat to express her normal behaviour and the importance of socialization in the kitten. These are examples of two ways in which behaviour can be shaped, namely by instinct or conditioning. In other words, we have touched on 'nature' versus 'nurture'.

A cat's instincts are programmed into her. It is an instinct that allows a new mother to nurse kittens even though she has not been taught to do so or watched another female cat feeding her newborns. This is referred to as the 'nature' part of her behaviour.

The opposite side of the coin is when the kittens are socialized, if they receive plenty of human contact at a young age, this shapes their future relationship with people in a positive way and is described as 'nurture'.



Instinct or 'Nature'	Conditioning or 'Nurture'
Behavior influenced by genetics	Behavior influenced by experience or the environment
Examples include: Grooming Caring for newborn kittens Hunting Territory marking	Examples include: Friendliness to people Gentleness during play Confidence in novel situations Acceptance of noise (vacuum cleaners, hairdryers)

Nature vs Nurture

Working out to what extent an individual cat's behaviour is a result of instinct or conditioning is more difficult than you might think. This is because it's impossible to separate out the different factors a cat encounters during her life that might influence her behaviour.

For instance, we know that handling kittens between three to nine weeks of age is crucial for them to grow into friendly cats that appreciate the human company. If this vital window is missed, the kitten is likely to scratch, bite or be fearful of people. This is an example of the importance of conditioning.

However, cat-behavioural scientists have shown that the character of the father cat plays an important role in how approachable the kittens are. When you think about it, this is a remarkable statement. Few, if any kittens, get to meet their father - indeed within the same litter different kittens may have different fathers - so how does the father influence his offspring's behaviour? The answer is the father's genes. Friendly tom cats pass their 'happy' gene onto their kittens who are then more likely to be sociable and to enjoy human company.

Cat-behavioral scientists query why in a litter of kittens, some might be friendlier than others. Is this because of their father's genetics, or is it because one kitten was cuter than others in the litter and received extra human attention?

You see the problem? How much of an outgoing cat's behaviour is because he received lots of cuddles as a kitten and how much is because his father was laid back? The answer is, it's impossible to know!

An interesting observation

The very act of being a pet, changes a cat's natural behaviour.

By their nature, cats are solitary creatures that hunt alone and defend individual territories. Cats are not a pack animal like dogs. When forced to live in a group situation, such as several cats in one house, they reach a sophisticated sharing arrangement. Cats excel at sharing their territory both in space (each has a favourite snoozing spot) and in time (Spot gets to sleep on the sofa during the day and Tigger at night).

The main point is that a feral cat does not seek the company of other cats. However, a pet cat does seek the company of her owner. Indeed, how much time the cat spends with her owner depends on how that person responds to her pet. Bearing in mind that cats are solitary animals, take a look at the following statistics:

Time spent in the owner's company

- 27% Average time in the general vicinity of the owner
- 17% Time spent in close company with the owner
- +6% Extra time with owner if owner does not have children
- +8% Extra time with owner if the pet is solely an indoor cat
- This tells us that the cat's behaviour is changed by the amount of contact and attention lavished on her by an owner. In other words, this is one case where nurture wins out over nature!

6.5 Differentiating between behaviour and health issues

This is one of the most important sections in this course.

It is an easy mistake to make, to confuse health and behavioural issues, but this can carry some potentially disastrous consequences.

Let's start with an example. Ask yourself is this a behavioural or a health problem?

A cat that is normally Impeccably house-trained, starts to mess outside the tray. This behaviour started with dust up in the yard with a visiting stray. Not only does the cat start peeing in the house, but he spends ages at the window, watching for the return of the intruder.



Answer: On the face of it, this would appear to be behavioural. The cat is normally a clean animal and the urinary incidents started happening after a strange cat intruded on his territory, which is a stressful situation for any cat. This is likely to trigger instinctive behaviour to territory mark, which means spraying and urine marking around the home to enforce his ownership of the property.

However, let's take things a stage further. The owner happens to catch the cat in the act of soiling the house and here's what she sees:

The cat squats, squishes his tail and yowls. He shifts on his paws, as if uncomfortable and spends ages in the squatting position. Then he gets up, walks a few steps and squats down again. He repeats the charade over again. After that he starts obsessively licking his genital area.

Sounds a bit worrying, doesn't it?

This isn't normal spraying behaviour, which is to stand, tail in the air, bottom facing the wall and spray out short blasts of urine. Added to that the cat seems uncomfortable and may be having difficulty passing urine. This is more likely to be a cat with bladder discomfort...or

worse still, a blockage in the urethra (the tube through which urine passes). This is potentially a serious problem, which, if left untreated, could even be fatal.

The action required for these two problems is very different. Whereas the behavioural issue is a nuisance and needs addressing, in this case the health problem requires urgent veterinary attention to prevent a catastrophic emergency. So, if in doubt as to whether a problem is behavioural or health-related, SPEAK TO YOUR VET.

Behavior vs health? Guidelines:

As a general rule, if a cat's behaviour changes, it is safest to assume it is a health problem until proven otherwise. If a pet develops a behavioural issue, always get her checked by a veterinarian to confirm your suspicion and rule out disease or ill health.

An adult cat has well established behavioural patterns and it takes a lot to change these. A cat that was previously sweet-tempered and starts to lash out may just be having a bad day (don't we all!), but it might be that she is in pain or has a hormonal issue.

An example of hormonal issues is an overactive thyroid gland. The medical term for this is 'hyperthyroidism' and this occurs when the thyroid glands produce too much thyroxine. The latter is a stimulant and too much of it whizzing around the cat's body is a lot like having drunk too much coffee and being on a caffeine high.

Thyroxine affects individual cats differently, some become kittenish, some clingy and demanding, and others turn short-tempered. Whatever the behavioural effect, the thyroxine also has a knock-on action on blood pressure, the heart and other organ functions, which, if left untreated, in the long term can cause organ failure. Thus, a change of character could be an important clue that your cat has a health problem which needs veterinary attention.

Here are some more examples of how ill health can mimic a behavioural issue:

Health Condition	Behavioral Change	Cause
Over active thyroid gland	Extremely playful Extra clingy Aggressive and short-tempered	Excess amounts of thyroid hormone in the body, over-stimulating the brain and other organs
Arthritis	Recently intolerant of petting Grumpy Aggressive	Pain in the joints makes the physical contact of fussing uncomfortable
Meningitis/ Brain tumour	Odd behaviour and change of habits Vacant and forgetful	Inflammation of the brain
Urinary accidents	Breakdown in litter training Seems to start urine marking in the home	Bladder discomfort causing an increased need to empty the bladder
Heart disease	Lack of interest in play Recently became lazy	The heart is struggling to supply enough blood to muscles to maintain day to day activity levels

A woman with long brown hair, wearing a cream-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a green plant. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 7: Reading Cat's Body Language

Cats communicate with each other mainly by using scent, sound and sight. Where people are concerned, not only do cats speak a foreign language, but also, we are oblivious to a key part of their language (scent messages).

This module teaches you about the subtle language of feline communication in order to get a better understanding of your cat.

What you'll learn in this module:

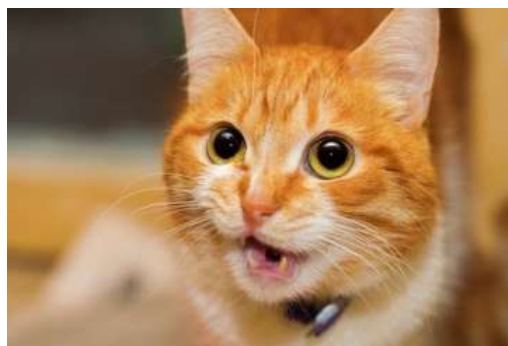
7.1 Reading body language

7.2 Sense of smell

7.3 Sense of hearing

7.1: Reading body language

Imagine someone gives you a fragment from a torn-up photograph. The person then asks you to describe what's happening in the picture. Puzzled, you pick it up. It's just a scrap of paper showing part of a red object that is slightly shiny and more or less smooth. From that fragment you can guess the object is a fruit, but it could be anything from chilli to a red



pepper, a tomato or even an apple. Taken out of context you have no idea if the fruit is growing on the vine or tree, in a supermarket display, or on a plate. You need to see more, look at the whole picture, to know what's happening.

Cat communication is a lot like looking at that fragment of a photograph.

You can't read her message, based on one feature alone. If you look at just one clue, say her tail, you can't fully interpret what the cat is saying. For example, a lashing tail is generally taken as meaning the cat is angry and about to attack. But consider the cat with a swishing tail, narrow pupils and forward pricked whiskers - she's not cross, but excited - as the fridge door opens and dinner is about to be served.

To understand cat communication, you need to weigh up all the clues and interpret them all together.

Cats Communicate Using:

- Sight
- Scent
- Sound
- Subtlety

Another feature of cat communication we tend to underestimate is how subtle their language is. In cat terms, simply sitting still can speak volumes, especially when two cats are sitting either side of the boundary between two territories. This is known as non-verbal communication and is a complex blend of instinctive and learned behaviours.

Just by staying still (not running away, not attacking) these two cats that appear to be playing sleeping lions are making a statement of intent - *This territory is mine and if don't invade, I will respect that decision and in return not encroach on your patch.* Make no mistake; this silent confrontation is a communiqué and one that both sides understand. And it is a language sophisticated in its understatement and the ability to reach a compromise without resorting to violence.

And that's the nub of cat communication. Cats display a wide range of signals and cues - if we only knew what to look for and what they mean.

Cat communication is geared towards avoiding physical conflict. Instead, the cat has an escalating tier-system of the vocal and physical display to tell the would-be-combatant whether they pose no threat or are prepared to stand and fight. In this way the majority of disputes are settled without coming to blows. It is when two parties are equally matched, the territory is threatened, or a fearful cat is prevented from running away, that the fur flies.

Another factor to consider is how backward we are at speaking (or rather "sniffing") cat language. As you will read in 3.2 of this module, scent messages are a large and vital part of feline communication. When a cat rubs against a gatepost or your legs, sprays urine, decides not to bury her faces, or pads along on sweaty paws, she is **'saying it with scent'**.

Of course, we humans are literally hopeless at understanding what's being said, which must make us seem very odd from the cat's point of view. Not being able to understand scent signals is a bit like having an email account, but not being able to read - the messages are there, but you don't have a clue what they say.

So, where to start? In our quest to understand cat language, let's take an overview of what that body language means. We'll begin by looking at the general rules of body language and at the end of this section draw it all together with an example.

Anatomy	Action	Meaning
Eyes	- Dilated pupils - Narrow pupils	- The cat is fearful or highly aggressive - The cat is excited or relaxed
Tail	- Lashing from side to side - Held in a downward position - Held up in an upside down 'U' - Held up and not fluffed up - Held up and the hairs erect	- Arousal (usually aggression) - The cat is relaxed - The cat is fearful - Greeting or curiosity - Aggression
Ears	- Rotated forward - Flattened against the head - Moving in different directions	- Relaxed or actively listening - Fearful or aggressive - Alertness
Whiskers	- Fanned forwards - Held sideways - Flattened / bristling backwards	- Attentive, ready to act / play - Relaxed, calm - Feeling threatened
Body posture	- Hunched with head low - Arched back - Rolling on back displaying belly	- Aggressive or submissive - Fearful or greeting posture - Defensive attack posture

Putting body language in context

Let's look at the example of a cat with an arched back. Based on that description is it possible to know the cat's mood?

Here are two different scenarios.

- *A cat with an arched back holds her tail in an upside-down 'U', with her fur standing on end. Her pupils are wide and black, and she hisses as you approach.*
- *A cat with an arched back. Her fur is smooth, and her tail is held straight up like a flagpole. As she pads towards you she is purring.*

In both examples the cat has an arched back, but the first cat has the typical "Halloween" pose, which is a classic sign of fear. She is sending out 'distancing signals' designed to intimidate you because she is frightened and wants you to go away.

The second cat is ultra-friendly and is showing 'distance reducing' signals because she has seen you and can't think of anything more rewarding than a fuss and a chin rub.



From one extreme to the other, the cat is showing body language that may be seen as either fearful or friendly.

Now let's continue our discovery of cat language with that most overlooked of senses, scent.

Dorsal tail gland

Both male and female cats have a scent gland near the base of their tail. This produces oily secretions in response to signals from sex hormones, such as testosterone. This is the cat equivalent of a musky after-shave which makes them appealing to the opposite sex.

Urine

Each cat has a different scent bouquet in her urine. Especially potent is the urine of non-neutered animals which also contain hormones which are immensely attractive to the opposite sex.

Depositing urine around in the environment is a potent way of a cat advertising her presence. The cat's use of scent is so sophisticated that they even use the freshness of the urine to make judgment calls. They operate a traffic-light system where fresh urine means, red - danger, keep away, and old urine is amber - proceed with caution.

Faces

You guessed it! Every cat's faces have a unique smell. More than that, a dominant cat deliberately chooses not to bury her faces, as a means of staking a claim. In the same household, subordinate cats will bury faces, so as not to challenge that rite.

CAT FACT

- The technical term for a cat rubbing her head against your legs is 'bunting'.
- The dorsal tail gland is most obvious in entire tomcats used for breeding. The hair falls out over the gland and the bald patch is known as 'stud tail'.

7.3: Sense of Hearing

By nature, cats are nocturnal hunters, and their sense of hearing is crucial for this. A cat is likely to hear her prey before she sees it. A cat hears quiet, high-pitched noises (such as a mouse rustling in the undergrowth) and she also has the auditory equivalent of bifocal vision.

Dozens of muscles, which make them highly moveable, control a cat's prick ears. The curved surface of the ear acts like a satellite dish, and the muscles move it around to get the best reception. Having two ears, means the cat can cross reference where the sound came from in order to pin it down.



Significant Frequencies

- Humans up to 20,000 cycles per second (cps)
- Dogs up to 40,000 cps
- Cats at least 65,000 (possibly 100,000) cps
- Kitten a 6-day old kitten is aware of sounds between 200-6,000 cps
- Rodents use frequencies between 17,000 to 800,000 cps to communicate

Kittens and hearing

Kittens are born deaf and blind. In that wonderfully efficient way of Mother Nature, she realizes a newborn kitten's survival does not depend on sight or hearing (the sense of smell is most important). The senses of sight and hearing develop over the next few days and weeks as the kitten's muscles grow stronger and she starts to move around and the threats around her take on new significance.

Thus, the external ear canals, closed at birth, start to open between days 6 to 14. At this age she only registers a fraction of the frequencies that an adult cat hears. However, her needs for hearing are different from an adult cat. She does not need to pinpoint prey - she's far too wobbly on her paws for that. All a neonatal kitten require to know is if she is safe or not, so being able to sense her mother's purrs, or be aware of a low rumbling growl, are all she needs at this stage.

CAT FACT

- If a cat becomes deaf, she compensates by becoming extra-sensitive to vibrations felt through her paws
- A cat can pinpoint (by sound alone) two sounds that are only 3 inches apart from a distance of 1 yard

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a black container. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 8: Distinctive cat sounds

8.1: Distinctive cat sounds

People take speech for granted: conversation, television, radio, cell phones all rely heavily on verbal communication. We use the spoken word as a vital part of our day-to-day life. But what about cats - surely verbal language isn't as important to them?



It might surprise you to learn that felines do have a complex range of sounds that make up cat language.

However, to our ears feline noises may merely seem cute, quirky or random. This is partially because cats have more sensitive hearing than we have and hear a wider range of frequencies. Thus, the nuanced sound of two high-pitched tones goes over our head - but not a cat's.

A game of cat and mouse

A mother cat is training her kittens to hunt for their supper. Her offspring are around 10 weeks old and at that rowdy stage where she's glad to leave them for an hour or two to go. In her absence the kittens have amused themselves playing tag and pouncing on one another. The hunting trip goes well, and she comes back with her kill. She drops her prey to the ground, and to get her offspring's attention makes a gentle, high-pitched gurgling sound. The kittens interrupt what they are doing and come bouncing over to investigate.

Nothing too extraordinary about this so far?

Let's take a similar scenario which is the same except for one small detail. The mother returns to the den, drops the prey, but the sound she makes is slightly higher-pitched than in the previous scene. This time, the kittens freeze and then slink low to the ground, approaching using extreme caution as if anticipating danger.

What do you think is going on?

The difference is the cry elicited a different response from her kittens. The mother cat was teaching her kittens an important lesson. The first cry was that for 'mouse', whilst the second was for 'rat'. The importance of this distinction rests in the potential danger to the cat. Whereas a mouse can inflict no real damage other than a painful nip, a rat is a real threat to even a fully-grown cat.

Even among feral cats who feed themselves by hunting, the majority go after mice and leave rats' alone. Catching a rat is a bigger risk and so the cat obeys the natural instinct to avoid unnecessary harm, it is an exceptional cat that becomes a habitual ratter. The point of this story is that **cats have two distinct (to them) sounds** that give each other accurate information about the nature of the hazard in front of them. These different sounds amount to language.

The grammar of cat language

As non-native speakers of 'cat', behavioural scientists can only really guess at the nuances of cat speech.

Dividing the sounds into categories (as scientists like to do), they have proposed two ways of looking at cat language.

The first theory is based on sounds made by the cat, which can be divided into three categories.

Category	Sound	Context
Vowel sounds	Meow	The mouth moves, and the action can be interpreted as talking
Murmurs	Purring	Soft, greeting sounds
High-intensity sounds	Snarl, hiss, spit	Communicating with other cats (higher frequency, audible and understandable to them)

An alternative theory proposes dividing the sounds according to where they are made.

Where the sound is made	Examples
The voice box	Meow, growl, gurgle
Non-voice box generated	Purring, hissing, spitting

Fascinating as these ideas are, they are a feeble attempt by people to make sense of something that defies categorization!

A dictionary of cat language

What we humans need is a dictionary of cat language, which we can use to interpret their speech. However, this is sadly not forthcoming, and so behavioural scientists attempt to interpret cat language by dividing it into - you guessed it - categories. Read on and see if you agree with their suggestions.

Murmur patterns (cat's mouth is closed)

Acknowledgement: a trill sound implies a friendly approach from the cat

Call: a throaty sound, to gain attention e.g. a female cat in heat

Purr: rumbling, throaty contentment, also to self-comfort a distressed cat

Vowel patterns (cat's mouth opens and gradually closes)

Anger wail: waxing and waning displeasure and anger

Demand voice: inflexion indicates different moods

Mating: two-syllable call to indicate readiness to mate

Siamese: excessive, loud, normal Siamese communication!

Strained patterns (cat's mouth held open)

Growl: slow exhalation warning to back off

Hiss: forced exhalation warning of danger to others

Snarl: abrupt exhalation, prepared to attack if necessary

CAT FACT

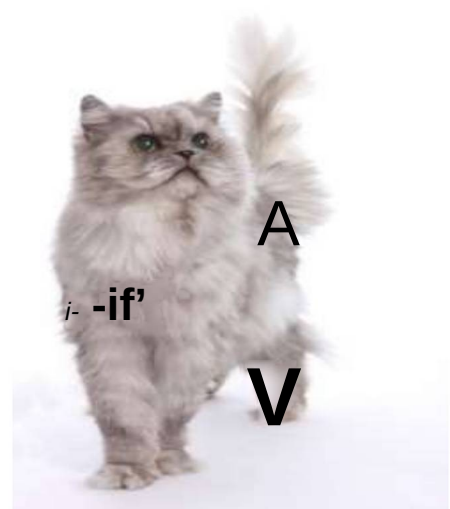
- Domestic cats purr whilst big cats roar
- The anatomy of the throat differs between domestic cats and big cats. Thus, those that purr cannot roar and vice versa
- Every animal has a natural wariness of hissing snakes. It's thought a cat's 'hiss' has evolved to trigger a similar wariness in those hearing it.
- It is useful to train your cat to respond verbally when called. If the cat is frightened and hiding, it can help you to find her.

8.2: What's she trying to tell me?

You can almost feel sorry for a cat as she attempts to communicate with her owner.

Trying to cross the communication barrier is not easy in either direction: cat to human, or human to cat.

From the feline point of view humans are largely deaf (we don't hear the high frequencies), have no appreciation for the subtlety of scent and are poor at body language signals (we lack those lovely ears and whiskers). In a way, it's a wonder cats bother to give us the time of day, except of course for all the cuddles, comfy sleeping spots, and affection lavished upon them perhaps not so surprising then after all.



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To help bridge this knowledge gap, it's perhaps most useful to divide cat behaviour and language into *distancing* and *distance-reducing*.

What is distancing and distance-reducing behaviour?

In its simplest terms, a cat that is frightened, distressed, or threatened would prefer the threat to keep a safe distance away. When a cat feels vulnerable, her best defence is to keep the threat at paw's length, in other words to keep out of harm's way. Thus, the cat makes noises and deploys body language intended to intimidate and make the threat go away. This is classic distancing behaviour. The opposite is a happy, contented cat who perceives there is a reward to be had for close contact. This is the cat who enjoys a chin rub, or who seeks to encourage her owner to give her a snack. The purrs and sleepy blinks are classic distance-reducing behaviour, which says that the cat is disarmed and would love you to come closer. So how do you recognize the difference?

Distancing behavior

Ignore these signs at your peril! The cat is unhappy, and the signals are a warning that she will take action if you continue to close the gap.

Sounds

The growl, hiss and anger wail. These sounds are made with the mouth held open and are waxing and waning in intensity. They literally do sound threatening, as is the intention.

Body Posture

This is less straightforward because the cat can exhibit two types of body posture. One is the outright offensive; with the cat is one step away from attacking. As we discussed earlier, there are few downright aggressive cats, most of their aggression is based on fear. When cornered, the cat will first display distancing signals in an attempt to make the threat go away.

Unfortunately, where people (especially children) are concerned, we ignore or misinterpret these signs and do not back away (which is the required action). Instead we push the point

and try to placate the cat by approaching with soft words -with the result that the cat feels even more cornered and lashes out.

This body language can be summed up in the classic Halloween cat silhouette: the cat is hunched; fur on end, tail held in an upside-down 'll' and she makes direct eye contact.

The complication comes in the form of the submissive cat. This animal shows a more depressed type of body language with the intention of giving the message, *"I submit, I've no intention of attacking so please just go away."*

A cat displaying this message squats on all-fours in a hunched position, with her ears back, and avoiding direct eye contact. This is her signal that she is not willing to attack, but likewise prefers the threat to keep away.

Distance-reducing behavior

What do we most associate with a happy cat?

Purring!

Sounds

Purring is a strong signal of contentment and is the feline equivalent of a smile.

In fact, a purr is a self-fulfilling prophecy because the act of purring causes the body to release natural morphine-like chemicals called endorphins. These endorphins give the cat a feeling of well-being.

However, have you ever noticed how a sick or injured cat may still purr

You would assume a cat in pain isn't happy, so purring seems rather odd behaviour. Scientists believe that in this circumstance, the cat chooses to purr as a way of triggering endorphin release. Indeed, this natural morphine could well have pain-relieving properties and so the action of purring decreases her distress in concrete, physical way.

Body posture

In layman's terms a cat that wants to be approached tends to display playful body language. This takes the form of the 'bottom-wiggle crouch' or the cat with a flag-pole tail that comes strolling towards you. This cat will indulge in the intimate behaviour of rubbing her chin and cheek scent glands on your legs, ankle and hand - a way of spreading the contentment.

CAT FACTS

- A cat, even a happy one, won't initiate verbal contact with an owner that is more than 8 feet away.
- The flag-pole tail of an inquisitive cat is a remnant of the reflex invoked by a newborn kitten when a mother licks her bottom to stimulate the kitten to the toilet.

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored couch. She is smiling and petting a ginger and white cat. The background is slightly blurred, showing a bookshelf. A large teal circle is overlaid on the right side of the image, containing the text.

Advanced
Diploma in
ANIMAL CARE
Level 3

MODULE 9: Cat's Health Care

One of the many reasons cats are such popular pets is because of their laid-back attitude to life.

However, their behaviour is not always placid, and when other aspects come to the fore - such as aggression or being overly vocal - it may become labelled as antisocial.

This module helps you to understand the reasons behind many common behaviours, as well as what it takes to be a responsible cat owner.

9.1 Understanding aggression and how to deal with it

9.2 Scratching

9.3 House training

9.4 Excessive vocalization

9.5 Discipline

9.6 Preventative health care

9.7 Responsible ownership

9.8 Effects of ageing

9.1: Understanding aggression, and how to deal with it

Our cat companions come equipped a fearsome set of weaponry, namely teeth and claws. Nature intended the cat to use this armoury to self-protect and to fight for territory. However, when a cat's weapons are used in the home setting, such displays are labelled as aggression.



What we usually fail to understand is that the behaviour was triggered for a reason and may be considered 'normal' even if it is unwanted in a domestic setting.

The list of types of aggression is a long one:

- Inter-male aggression competition for females
- Territorial competition for resources
- Competitive one cat wants preferential treatment to the others
- Predatory the thrill of the chase
- Play misplaced hunting practice
- Fear attack is the best form of defence
- Learned a cat hisses and learned the toddler keeps his distance
- Petting low tolerance of physical contact
- Maternal protecting her kittens
- Pain the cat is vulnerable and seeks to defend herself
- Disease some health conditions over stimulate, leading to short temper

When a cat chooses to share our home (we never truly 'own' a cat) aggressive behaviour is unacceptable. However, your own reaction to the aggression is key to correcting the problem.

Do NOT shout or scold the cat. This raises the cat's anxiety levels and makes her more highly aroused, which could make her more likely to strike out. In addition, she is likely to associate the reprimand with you, rather than the aggressive behaviour, and avoid your company in future.

It would take a whole book to fully discuss cat aggression but let us touch on the three most common areas of tension in a cat household.

Type of aggression	Trigger factors
Territorial	New cat introduced to the house Cat returns from a stay at the vet clinic and smells different to before
Play	Cat ambushes another in the house Cat stalks his master's ankles
Fear	Cat hisses at children Lashes out at the vet

Territorial aggression: the problem

To better understand territorial aggression let's take a typical scenario.

You own one cat and he is the apple of your eye. If one cat gives that much pleasure, how much nicer would own two cats be? Knowing there is lots of love to go around; you visited the rescue centre and chose another companion. However, when the new addition comes home - the fur flies - literally.

The resident cat wants none of it and hisses, growls, and lashes out at the new-comer, to the point where she cowers behind the sofa and refuses to come out.

In this example, the resident cat perceives that his territory has been invaded. You expect him to share resources such as food and the litter tray, which he views as high-value items. His response is to say, no, and use aggression to see the intruder off.

In the wild, his tactics would work. But in a domestic situation, the tension cannot be diffused, and a state of war is declared.

Territorial aggression: The answer

The key is gradual exposure (to let the resident cat get used to the newcomer) and provide plentiful resources.

- **Scent introduction:** Transfer their smells backwards and forwards by a 'scent handshake'. Do this by swapping their bedding over, plus stroke one cat and then the other.
- **Feeding:** Keep the new cat in a separate room, feed both cats on opposite sides of the same door so they get a sound and scent introduction
- **Gradual exposure:** Put the newbie in a cat carrier and leave it on the ground when the resident animal can investigate at his own pace.
- **Provide separate facilities:** When you open the door and allow the new cat out, make sure she has her own food and water bowls, and litter tray. It is the height of bad manners for a cat to use another's bowl (unless invited) and is bound to end in bad feeling. By removing this conflict, you are helping harmony.

Play aggression: The problem

Sounds counter-intuitive, doesn't it, play aggression. Again, to understand this behaviour let's look at a scenario:

You own two cats from the same litter. They used to get along just fine, but recently the younger cat's life has become a misery. Every time he tries to cross the lounge room, his brother is there, waiting on the sofa back to ambush him. He launches himself at full pelt and pins his brother to the carpet - that's if he can catch him, because he flees, and it ends in a game of chase around the house.

So, what's happening here?

Earlier you learned about the importance of play for a kitten learning to hunt. This is a deep-seated instinct in any cat, and one most commonly triggered by movement. Play aggression is basically played behaviour that gets out of hand and is most often a release for pent-up energy or an outlet for boredom.

Another cat crossing the room is a red flag to the bored house cat and his instincts go into overdrive. So much better if his quarry runs, because this trigger a glorious game of tag (which ends in hissing and spitting).

Play aggression: The answer

Fight fire with fire. Or in this case, play with play!

This cat needs more mental and physical stimulation. Tucker him out with regular games, especially those such as a wing-on-a-string, which plumb right into those hunting instincts. Build at least three, ten-minute play sessions into each day. And for those times when you're out at work, leave out toys that roll and squeak as an open invitation to play.

Fear aggression: The problem



Many cats are regarded as aggressive, when in fact they are terrified and fearful. For example:

Your previously placid cat has become a danger to your toddler. You can't leave the two in the same room together because you are convinced the cat will attack the child. You are mystified. It seems the cat plain hates the kid, as she hisses, growls, and fluffs up, when the child enters the room. You are so worried that you think re-housing the cat is necessary.

Sadly, the poor cat is perceived as aggressive, whereas she is actually frightened. The child thinks the cat is a cuddly toy. When the child wobbles over towards the cat, he corners the cat. The toddler does not have the skill to read the cat's 'distancing' body language telling him to keep away, and ignores it. The cat would far rather run away, but the child is blocking her escape route. As the child gets closer and the threat grows bigger, the cat has no choice but to increase the intensity of her signals and hiss and spit.

Unfortunately, this scenario is repeated, to the point that the cat now has to only see the child and she associates it with feeling trapped, and hisses.

Fear aggression: The answer

Never confront an aggressive cat. Instead, step aside and offer an escape route. Offer the cat alternatives such as high perches (such a platform on a tall cat scratch post). This allows the cat to act out a natural instinct to go up, to get out of trouble. Try and teach mutual respect and trust between child and cat, such as having the youngest feed the cat (under supervision).

9.2: Scratching

Pity the poor cat owner who has to put up with shredded sofas and clawed carpets. Unfortunately for us, scratching and clawing are part of a cat's natural repertoire of behaviour - with disastrous results for our soft furnishings. The long and short of scratching is that it's about more than sharpening claws and it is a natural part of cat communication.

When a cat scratches furniture she deposits odours from her scent glands and sweats from her paws onto the surface. With our woefully pathetic sense of smell this seems an odd thing to do, but for a cat it's like having nice little messages posted around the home that she's safe here because this is her patch. In addition, making physical marks on objects, such as deep grooves in wooden furniture, act as a visual message that advertises her occupancy of the territory.

Interestingly, a recent study looking at the frequency of scratching when regular scratching areas were squirted with synthetic cats pheromones, nicely backs up the 'scent message' theory. The researcher found scratching fell by a staggering 98% after 28 days, when



scratching areas were regularly spritzed with Feliway.

Protecting your Property

The nature of clawing dictates that once a cat uses an object as a scratch post, she returns again...and again...and again, which works against - and for - us, when it comes to retraining. To stop a cat scratching your prize antiques, first you must provide an alternative place to scratch.

The Ideal Scratching Post

- **Height:** The post should be tall enough for the cat to stand on her back legs and reach upwards with her fore-paws to get a really good downward 'rake'.
- **Favorite fabric:** Find the fabric the cat prefers under her paws - it might be sisal (orientate the rope longitudinally), carpet or even wood.
- **Location:** Cats like to scratch immediately after waking, so anchor a scratch post near her bed.
- **Entrance and exits:** Nothing says 'home' to a cat like her scent near the door. Put scratch posts near entrances and exits.
- **Spread the scent:** Encourage the posts to use by making scratching motions with the cat's paws on it - this helps put lovely scent markers down.

Discouraging Property Destruction

Now kitty has a safe place to scratch, start to break the old habit

- **NO:** When she starts to scratch, say a firm 'No', and take her to the scratch post.
- **Under cover:** the furniture with plastic or attach a scratch post to it.
- **Remote punishment** Booby trap the object with a remote punishment such as a motion-triggered compressed air spray.
- **Feiway.** Spray with synthetic feline pheromones so she doesn't feel the need to scratch.

9.3: House training

Cats are by nature very clean animals and many young kittens will almost litter train themselves once they are physically able to climb into the cat litter box. In this section we look at how to go about litter training a cat and consider common litter box problems.

Basic litter box training

Cats like to have a dedicated toilet area and we tap into this by providing a litter tray. If you take on an adult cat that is not litter trained, then you'll need to train him to use a tray. You are most likely to succeed if you provide a large tray with deep, clean litter. Site the tray in a private corner where she is not likely to be disturbed about her 'business'.



Consider confining the cat to a large puppy crate that contains her bed, food and water bowls, and a litter tray. Rather than foul his living area, the cat should use the tray. Once she has deposited urine and faeces in the tray, these act as a scent marker to draw her back, and you can start letting her out of the crate. Keep her in one room initially, so he is never far from the tray and can return to it easily. Once assured she is using it regularly, allow him the range of the house.

Litter Box Problems

Litter box problems take two forms:

- The cat who toilets outside the box in order to mark his territory
- The cat who avoids using the litter tray
- Litter tray aversion is a common problem and which we will now look at further.

Litter tray aversion

This table outlines the most common reasons for a cat to avoid using the litter box

Example	Example
Several days urine or faces is present in the tray-based cat litter and doesn't like the	Several days urine or faces is present in the tray
The cat dislikes the smell of wood- feel of the substrate under her paws	The cat dislikes the smell of wood-based cat litter and doesn't like the feel of the substrate under her paws
Several cats use one tray, which is intimidating to some cats	Several cats use one tray, which is intimidating to some cats
A litter tray in a public place leaves the cat feeling vulnerable as she goes to the toilet	A litter tray in a public place leaves the cat feeling vulnerable as she goes to the toilet
The cat was frightened whilst using the tray, when the tumble dryer went into spin cycle beside her	The cat was frightened whilst using the tray, when the tumble dryer went into spin cycle beside her

latrine area. It is therefore essential to get her back on track quickly. Take a few minutes to sit down and think like your cat. Try and identify the factors triggering her behaviour because the chances are if you correct that problem, she will be grateful to use the box once again.

Here are some suggestions for correcting the problem.

Dirty litter box

Some cats are so fastidious that they prefer to use a separate box for urine and faces. This gives you some idea of how important cleanliness is. Scoop the tray twice a day and keep the litter clean. Completely empty the tray twice a week and clean it using a pet-friendly disinfectant.

Dislike of the substrate

There are many reasons a cat may dislike her kitty litter. It might be rough under the paw, it might smell unpleasant (scented litter may smell pleasant to us, but can literally make a cat's eyes water), or it might not be what she's familiar with and she feels inhibited about toileting there.

If you changed kitty litter shortly before the problem started, try going back to the old litter. Also, try different types of litter - many cats have a definite preference!

Sharing facilities

Urine and feces are potent statements about an individual's possession of an area. In a multi-cat household, sharing a tray goes against every cat's instinct. They are being asked to ignore the scent signals that 'this place belongs to me' and share.

The golden formula for litter tray harmony in a multi-cat household is:

- One tray for each cat, plus one spare tray.

Thus, for 3 cats, have 4 trays,

For 5 cats, have 6 trays.

You get the idea...

Feeling exposed and vulnerable

A cat is vulnerable when she squats down to the toilet. If she feels exposed whilst using the toilet, she's likely to look for an alternative spot (after all, we wouldn't want to use a toilet without a door, in a public place).

The answer can be as simple as using a tray with a hood or resetting the tray into a quiet corner with some cover around it.

Unpleasant associations

This problem is perhaps the most difficult to identify because the cause has been and gone but left the cat with unpleasant associations.

The cat experiences an unpleasant event whilst using the tray, which she then associates with the box. If the issue was transitory, such as a dog barking at the crucial moment, or another cat attacking her on the tray, then there may be no evidence as to what triggered the behaviour.

A classic to watch out for is the cat tray in the utility room. The tumble dryer going into the spin cycle is certainly enough to spook some cats on the tray.

Take a look around and trouble-shoot for possible disturbances. Try and relocate the tray to a quiet, secluded spot where the cat feels secure and the chances of disturbance are minimal. When you move the tray, show the cat where it is, so that she doesn't have to go searching.

9.4: Excessive vocalization

When it comes to feline behaviour there are few things more guaranteed to get under your skin than a cat meowing loudly at 3 am. Few people can sleep through the excessive vocal demands of a determined cat, even when the cat is banished from the bedroom.

The types of excessive vocalization are summarized here.

Type of excessive vocalization	Cause or example
Siamese	Genetic
Estrus	Hormones cause the female to call for a mate
Change of routine	An outdoor cat confined indoors
Learned behavior	The cat teaches the owner to respond to his vocal demands
Ill health and old-age	Deaf cats cry more loudly Cats with over active thyroid glands

Siamese cats

Of course, some cats are naturally vocal, and it goes with the territory, of which the prime example is the Siamese cat. Earlier you learned about the behavioural traits associated with some pedigree cats, and having a loud voice and knowing how to use it is classic Siamese behaviour.

A female in estrus

Another circumstance in which excessive vocalization is completely normal is the female cat in estrus. As the saying goes, if you can't stand the heat get out of the kitchen. If the persistent wailing of a hormonal female cat is intolerable, the simple answer is to get her neutered.

A change of routine

When a cat undergoes a major change of routine, the response can be to nag vocally. An example is an outdoor cat, which, for whatever reason, has to stay indoors. He may wander around the house protesting loudly. Rest assured, given enough time he will settle down. But to speed up the process it helps to distract him and provide mental stimulation. This might include giving access to a window ledge for him to watch the birds outside, or play vigorously with him several times a day.

Learned behavior

This is an interesting topic because it's where the cat teaches the owner to supply his demands in response to vocal nagging.

For instance, a cat wails loudly for food and the owner feeds the cat. The cat soon learns the association between pestering the owner and the fridge door opening. As far as the cat is concerned this is a win-win situation. He cries and is rewarded with the owner's undivided attention (i.e. getting up and doing something for the cat) plus a yummy snack. What's not to like? In fact, the cat is highly likely to cry, even when he's not hungry, just to get that lovely level of adoration. In return, the owner fearing their pet is hungry, acts upon the request - even if their cat is rapidly becoming too large to fit through the cat flap.

Once established, this is a difficult problem to beat, because the cat is quite happy to cry at 3 a.m. and doesn't have to get up and go to work the next day!

The solution is:

- Do your best not to respond to the crying in the first instance.
- Once the pattern of behaviour is established, do not respond as the cat expects. Instead of feeding him, leave the room.
- Play, play, and yet more play - to tucker the clever chap out.

III health and old age

Certain medical conditions may manifest themselves in behavioural changes. A cat with over active thyroid glands has a high level of the stimulant, thyroxine, whizzing around his system. A bit like having drunk too much caffeine, this can manifest itself in agitated behaviour. In cats this often takes the form of being excessively vocal. If your cat is hungry, but losing weight, and suddenly chatty, get her checked by a vet.

Deafness also causes some cats to turn up the volume. Presumably because they can't hear themselves and don't get the feedback that they are overly loud.

In an older cat, being excessively vocal can be a symptom of 'cognitive dysfunction', the latter being the scientific term for senility. These cats get confused easily and seem unaware that they are wandering around wailing, whilst seeking reassurance from her owner.

9.5: Discipline

There is no magic answer when it comes to dealing with a cat's bad behaviour. The straightforward approach of punishing a naughty kitty is likely to back fire, because the cat makes the 'wrong' association (in your eyes) and steers clear of an owner who (in the cat's eyes) behaves irrationally when she comes home from work.



A better approach is to look for the reason behind the inappropriate action and try to address that while offering the cat an alternative outlet for the behaviour. For instance, the cat that sprays in the house started doing so when he saw a stray in the backyard. Rather than punishing the cat, get him neutered (to reduce his territorial urges) and **block the view from the window** so that he can't see the cat - also, deodorize the area and make sure that he has a litter tray.

However, there are times when a cat could be a danger to himself. For example, if he insists on chewing a houseplant that is potentially toxic to cats. He needs to 'unlearn' this behaviour for his own good. The backbone of your strategy is:

- Remote punishment when he approaches the plant
- Provide a safe alternative for him to chew
- Reward him when he chooses correctly

So what is 'remote punishment' and why does it work?

Remote punishment

A remote punishment is one that appears to the cat as an 'act of God'. The punishment happens without the involvement of you, the owner, and happens only when the cat approaches the out-of-bounds object. In this way, the cat starts to build a new association between that object and an unpleasant experience.

Examples of remote punishment are motion-activated compressed air sprays and taste aversion (covering an object in a foul-smelling/tasting substance, such as hot chilli sauce). For our houseplant example, try placing upside-down mousetraps on the floor beside the plant pot, with a sheet of paper over the top. When the cat approaches and disturbs the paper, the mousetraps trigger (the cat is protected by the paper), causing him to rethink whether the plant is worth the hassle.

Extinction

Another form of 'discipline', the object of which is getting the cat to cease an annoying habit, is to ignore the behaviour. Take the cat that mews at 4am to be fed. The owner is getting up rewards the meowing and so the cat learns this is a great way to get what she wants. If you put in earplugs and ignore her cries, the noise gets worse before it gets better as she escalates the crying to get your attention, but eventually it will stop.

This is called 'extinction' of bad behaviour because the cat sees no advantage by continuing it.

9.6: Preventative health care

Cat ownership comes with the responsibility of keeping that animal fit and well. As the name suggests, preventative healthcare is about keeping your cat healthy by preventing disease. The key ways of doing this are:

- Vaccination
- De-worming
- External parasite control

Vaccination

The principle behind vaccination is giving your pet a 'safe' version of the virus that causes disease, in order to prime the cat's immune system and protect her against 'wild' disease. Depending on your location, different countries have different core vaccinations.



Core vaccinations are those considered essential no matter what the cat's lifestyle. In the US, key vaccinations include rabies, feline calici virus, feline herpes virus and panleukopenia (feline distemper) virus. Whereas in the UK, a rabies vaccine is only given to pets travelling abroad. Again, depending on your location, other vaccines may be advised, such as protection against feline leukaemia virus, chlamydia or Bartonella.

Vaccinations need repeating over the duration of the pet's life, but it varies depending on the type of vaccine given and so this is best discussed with your veterinarian.

De-worming

There are different groups of worms, which cats are susceptible to depending on their lifestyle. The worms that most commonly infect cats are roundworms, tapeworms and hookworms. Unfortunately, cats can harbour large numbers of worms without giving you any clues (with the exception of tapeworms) they are infected. Even indoor cats need regular de-worming, because of worm eggs obtained from their mother, which hatches out over the cat's lifetime.

The frequency of de-worming depends on the cat's risk factors, such as contact with fleas or hunting, but a good average is once every three months, more frequently for cats that hunt.

External parasite control

External parasites, such as fleas and ticks, cause irritation to the cat and can carry disease. Whereas fleas used to be seasonal, peaking in the summer, now that many homes are heated, flea infestations are a year-round problem.

There are many highly effective products that kill fleas and several against ticks. Products containing fipronil are effective against both and are a good option for the active, outdoor cat. Speak to your veterinarian about which is the best product for your cat.

9.7: Responsible ownership

Over and above preventative health care, you must act in a responsible way as a cat owner.

Required action	Effect
Neutering	Shelters are full to overflowing with unwanted cats and kittens. Uncontrolled breeding is irresponsible and cat owners should get their pets neutered.
Identical chip	In the event of your pet straying, a microchip means that you can be reunited.
Pet insurance	Be it pet insurance or by opening a savings account, you need to make provision to cover vet's bills should your pet be taken ill.
Holiday cover	You need to make provision for your cat's care when you go on vacation.
Your cat's basic needs	You must meet your cat's basic needs, such as food, warmth, and shelter.

9.8: The effects of ageing

It is sad, but inevitable, fact that pet's age and grow old. Indeed, cats are born with a finite number of brain cells and over the animal's lifetime these die off and by the end of a cat's life the brain weighs 25% less.

As your cat ages, she starts to relinquish some of her independence in favour of sleeping more. Her muscles grow weaker and she is physically less capable than when in her prime. Her hearing deteriorates and vision is less sharp, all of which means that she may feel less secure. Indeed, many older cats live with low-grade pain, whether it's from arthritis or dental disease, and this can make them grumpier and less sociable.

Your older cat is highly likely to suffer from arthritis and this can have some unexpected consequences, such as making her coat dull and knotted. This is because she's not so flexible as in her youth and it's more difficult for her to groom. If you can give her a helping hand with daily grooming, this contributes greatly to her overall well-being.

Many older cats start to develop health issues, such as overactive thyroid glands and diabetes, so always be alert for any behavioural changes in your cat and seek veterinary attention, especially if you see physical signs, such as increased thirst or weight loss.

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a black container. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 10: Different Breeds of Rabbits & Guinea Pigs

Small mammals such as rabbits and guinea pigs are popular pets, especially for children. However, just like any living creature they need to be cared for correctly and have all their emotional and physical needs met. This module teaches you how to take great care of your small furry friend, so they can be with you for a good, long time.

10.1 Different breeds

10.2 Common problems and diseases

10.3 Providing an adequate living environment

10.4 Exercise

10.1 Different breeds

If you thought one rabbit breed was much like another, then think again! There is actually a wide variety of different rabbit and guinea pig breeds. Although it is fair to say guinea pigs are largely all the same size, their coats vary tremendously from the practically hairless Skinny pig, to the short silky coat of a Satin and the long fine hair of a Silkie. This has obvious implications for how much coat care the pig needs.

The breed differences are much more obvious with rabbits, because of their widely differing sizes. For instance, at the bottom end of the scale the mini-lop weighs in at just 3 lbs (around 1.5kg), whilst at the top end sits the Flemish Giant which tips the scales at up to 22 lb (nearly 10kg!) - which makes it bigger than a small dog.

With this in mind, when considering which breed of rabbit to get, take a look at the space you have available. The rabbit hutch needs to be big enough for the adult rabbit to take at least two hops across and three hops along, and be high enough for them to stand upright to their full height. This means the minimum floor space for a small rabbit is two foot by three foot - and for a Flemish giant - something the size of a baseball pitch should do it.

Another factor to consider is how much time you can realistically devote to grooming the pet. Long-haired breeds need a daily comb through to stop them getting knotted and matted. In addition, the long-hair can trap faecal pellets stuck in the fur around their anus, which means trimming away hair and bathing the pet. If this is a child's pet, or you can't commit to daily grooming, then choose a short-haired breed, which needs less attention.

And finally, guinea pigs live around 5 - 6 years, whilst some rabbits reach 10 - 12 years of age. Be certain before taking on the pet that they will fit into your lifestyle five years down the line, when the children have lost interest.

Here is a summary of the most significant rabbit breeds:

Breed	Physical Characteristics	Comments	
Mini lop Dwarf lop	Drop ears, weighs around 3 lbs (1.5kg) Slightly larger at 5 lbs (2.3kg)	Smallest breeds and very popular	
Dutch	Upright ears, typical symmetrical mask and markings. Around 5 -6 lb (2.3- 2.7kg) weight	Previously the most popular breed, but now overtaken by lops	
head	Upright ears surrounded by a mane. Usually weighs less than 4 lbs (1.8kg)	Rising in popularity	
Flemish Giant	At around 22lbs (10kg) these are unmistakable gentle giants	Can be larger than a cat or small dog	

10.2 Common Problems and Diseases

Becoming the owner of a new rabbit or guinea pig means making sure they have a safe, comfortable place to live, they have the correct food to eat, and their health needs are taken care of. Rabbit medicine especially has come on in leaps and bounds in the past decade. With this increased knowledge have come improvements in preventative health care, which help to keep your pet fit and well for longer, and also in treating ill health. Let's look first at preventative healthcare.

Preventative Care

Vaccinations:

Depending on where you live, you may need to consider vaccinating your rabbit. If you live in an area where there is a risk of myxomatosis or viral hemorrhagic diarrhoea then vaccination is essential (Please note, some countries such as Australia or parts of the US are not greatly affected by these diseases, however the UK is).

Without vaccination, even a house rabbit that never ventures outside can catch these infections. This is because small blood-sucking insects, such as mosquitoes, can transmit myxomatosis and the VHD virus is hardy and can be walked indoors on shoes. Recently, a combined vaccine has become available, which provides 12 months protection. This is given from 5 weeks of age and requires a once yearly booster to keep up the protection.

Desexing:

Desexed rabbits make better pets because they are less territorial and aggressive, and more placid. Of course, neutering is especially important (for obvious reasons) if you own a male and a female rabbit! Surgery is possible from 12 weeks of age - which is also around the time a young rabbit can become pregnant.

Another huge advantage of desexing a female rabbit is that it protects her from womb cancer. Rabbit specialists report around 75% of entire female rabbits will develop uterine cancer, which is the biggest single cause of death in does.

With improvements in anesthetic agents and surgical techniques, desexing rabbits is very safe. However, neutering of guinea pigs is a bit more problematic and not usually undertaken unless essential.

External Parasites

Both rabbits and guinea pigs commonly pick up parasites which live in their coats or suck blood. Direct contact with other infected animals is not necessary to pick up these bugs because they can be transported in straw or hay.

There are some excellent spot-on products which are licensed as safe for your rabbit and effective against a variety of bugs such as fleas, lice and cheyletiella (more manageably known as 'walking dandruff'). However, the trick to success is identifying which particular bug is the unwanted guest (they need different treatments), so check in with your veterinarian if your pet is scratching.

Encephalitozoon Cuniculi

E. cuniculi is a parasite recently recognized as the cause of problems such as head tilt, cataracts and kidney failure in adult rabbits. The parasite is widespread in rabbits and experts now suggest a once yearly course of fenbendazole (a common dewormer) to protect your pet. Again, your veterinarian can advise you further.

The Sick Rabbit or Guinea Pig

As you get to know your rabbit or guinea pig, you will become familiar with their normal behavior. The clues that a small mammal is unwell can be very subtle and often may be something as simple as not eating or being quieter than normal. If this happens, monitor the pet closely and if it continues, seek veterinary attention.

If your rabbit or guinea pig stops eating, even for 24 hours (actually some rabbit experts get twitched after just 8 hours of not eating), always contact your veterinarian.



This is because if the pet's gut is not constantly supplied with food, it rapidly 'goes to sleep', and it can be difficult to 'wake it up' again. Early treatment with a drug that stimulates the gut back to life can potentially be life-saving.

As a general rule, the following are considered **emergencies or requiring urgent treatment**:

- Any animal that is unconscious or doesn't react when stroked or petted
- Blood loss (such as after a fight with another cage mate)
- Difficulty breathing
- Not eating for 24 hours or more
- Not passing urine
- Liquid diarrhea

These **require veterinary attention** but are less urgent:

- Lumps and bumps (when the pet is still eating and pooping)
- Soft pellets
- Scratching and itching (skin not broken)

Common Conditions

Loss of appetite

Not eating can happen for a number of reasons, such as dental pain (overlong teeth) chest infections (heavy breathing) stomach pain, or stress. Unfortunately, an added complication is that if your rabbit or guinea pig does not eat for 24 hours their gut may shut down, with serious consequences.



Respiratory Infections

Small mammals easily get chest infections. The signs include rapid, shallow breathing, a hunched posture and possibly a discharge from the nose or mouth. Make sure to keep the hutch clean, because ammonia fumes from urine irritate the lungs. If you notice these signs seek veterinary advice.

Diarrhea

If your pet is otherwise bright and eating, but has liquid stools, take him off fresh foods (which have a laxative action) and offer him hay. If he does not bind up within 24 hours, or he seems poorly, seek veterinary advice.

Abscesses

Small mammals are prone to abscesses, which is a collection of pus beneath the skin. These can appear quite suddenly as a skin lump, especially if the animal was recently in a fight. Whilst abscesses need treatment, they are not usually an emergency because the pus is walled off inside a capsule.

Scratching

A variety of mites and lice can make rabbits and guinea pigs very itchy indeed. If your pet scratches excessively, the first thing is to part his hair and check to see if the surface of the skin is broken or not. If the skin is sore or damaged, then he needs to see a vet.

Be vigilant for:

Be alert for the following warning signs that all is not well.

Sign	Change	Possible cause
Food doesn't need topping up so often	Decreased appetite	Tooth ache, breathing difficulties, abdominal pain, bullying by another animal
Drinker constantly needs refilling	Increased thirst	Infection, ill health, pain (or a leaky drinker)
Abnormal pellets	Decreased production Soft pellets Diarrhea	Not eating as much Monitor carefully Stress, change of diet, or ill health
Not coming out to greet you/ hiding away	Reclusive as not feeling well	Breathing difficulties or pain
Not moving around as much	Breathing difficulties Limping	Chest infection Infection, arthritis or injury
Scratching	Reddened, inflamed skin	Suspected parasite infection

10.3 Providing an adequate living environment

An adequate living environment is another way of saying that the pet has its needs, such as space to move around, resting areas, hidey holes, good food, fresh water and exercise.

First, decide if the pet is to be a house rabbit (or guinea pig!) or live outside in a hutch. Either way, they need a sturdy and secure place to spend the night, protected from predators (including the family cat!) and feel safe.

Because rabbits vary so much in size, you need to take special care that the hutch is big enough. A rule of thumb is that the rabbit should be able to sit up to his full height and the cage measures at least two hops wide by three hops long. For house pets, also make sure that there is enough room in the hutch for the pet's litter tray. (When a house rabbit is litter trained, it will confuse him not to have access at all times).

A house rabbit gets exercise hopping around the home, but if he lives outdoors as well as a hutch he needs access to a covered run. The area of this should be at least four times the footprint of the hutch, the larger the better! Site the hutch out of direct sun in the summer and out of prevailing wind and rain in winter. Indeed, if you have access to a shed or garage, it's a good idea to move the hutch under shelter during severe weather.

Special considerations

- Water bowls may get knocked over, so where possible use sipper bottles attached to the cage
- Offer one food bowl per pet, plus one spare. If the animals live together, spread the bowls around so one pet can't dominate the food.
- Provide plenty of shelters and hidey-holes. These are pets that like darkness and seclusion and feel stressed if they don't have places to hide.
- In extremely hot weather, put a baking tray filled with water in the run. This allows the pets to paddle and helps them to cool off.

10.4 Exercise

- The ideal arrangement is for the rabbit or guinea pig to have a hutch with a run attached, so they can hop out for exercise whenever they feel like it. If this is not possible, then take the pet in the run first thing in the morning and return him to the safety of the hutch at night.
- Be careful about leaving rabbits and guinea pigs unattended whilst loose in the house. Since they like to chew and burrow, leaving them unsupervised could lead to some unexpected consequences, such as losing the pet beneath floorboards or chewing through a door.
- Don't forget that pets also like to have mental stimulation. This can be simply stuffing an upside-down flower pot with hay or packing hay at the center of a cardboard tube and then lightly pack the ends with screwed up paper. This provides the pet with a challenge to get to the hay and keeps their minds busy.
- With patience it's possible to clicker train small mammals, to do things like 'Come', or to sit up on their hind legs (rabbits- not guinea pigs for this one!). Again, this is a great way to bond, provides exercise and mental stimulation.

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a black container. The image is framed by a large teal circle on the right side.

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MODULE 11: Rabbit or Guinea Pig Needs

11.1 Usual care needed

Your pet rabbit or guinea pig needs regular:

- Food and water
- Cleaning out
- Grooming
- Exercise

Food and Water

Rabbits and guinea pigs are herbivores. Their ideal diet is fresh, growing grass; however, it is unlikely you have access to this all year round. The second-best diet is good quality hay. This is because it is the closest to fresh grass in terms of fiber content and nutritional composition. Both species do very well on an all-hay diet, and the good news is they are unlikely to develop dental problems or become overweight.



Other foods are available, and their advantages and disadvantages are outlined in this table:

Food type	Advantages	Disadvantages
Fresh grass	Ideal diet. Contains correct balance of fiber and nutrients for healthy teeth and good bowel function	Access to fresh grass may not be practical
Hay	A close second to grass	Many hays are poor quality. Look for good quality hay which has a green tinge to it.
Extruded dry food	The pet cannot selectively leave the less tasty parts and ,as a result, eats a balanced diet.	High calorie and doesn't exercise the teeth. Can lead to dental issues and obesity
Muesli type dry food	Cheap!	The pet selectively eats the tasty bits, but leaves the less tasty, more nutritious parts. High calorie. Dental and weight problems are common.

Cleaning Out

A good habit is to do a 'spot clean' of the hutch and litter tray every day. This means scooping out soiled areas and replacing them with fresh bedding. Once a week, thoroughly clean and disinfect the whole hutch. However, if you see large, moist pellets, do not remove them. These are the rabbit's cecotrophs and represent valuable partially digested food. The rabbit should come back later and eat them, hence getting maximum nutrition from their diet.

Grooming

A long-haired pet needs a comb through every day, in order to get rid of tangles or bedding that is caught in the fur. Pay special attention to their rear end and even consider carefully trimming away long hair so the pellets don't get stuck and attract flies.

Check your pet's toe nails once a week. If they start to curl or become too long, ask your veterinarian to show you how to clip them.

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MODULE 12: Different Breeds of Hamsters, Gerbils, Mice & Exotic Rats

What you'll learn in this module

- 12.1 Different breeds
- 12.2 Understanding behavior
- 12.3 Common problems and diseases
- 12.4 Providing an adequate living environment
- 12.5 Usual care needed

12.1: Specific breeds

Although gerbils, hamsters, mice and rats all belong to the same family, rodents, they have subtly different needs. This is because each species evolved in areas with different climates, so whereas gerbils come from desert areas and can tolerate a wide range of temperatures, mice are relatively intolerant of high temperatures and may quickly become ill. To help you understand a little of what each creature needs, let's take a look at each species in turn.

Gerbils

The Mongolian gerbil is the breed most commonly kept as a pet. These have a dark skin and lighter colored fur. As well as the regular 'mousy' color, specialist breeding for the pet market has produced a variety of coat colors including black, piebald, clove and cinnamon.

The gerbils' ancestors originated in desert areas and so their bodies are adapted to cope with the high daytime temperatures and freezing conditions at night. Gerbils have an amazing way of coping with these temperature swings - by grooming!



Special glands on the face, called Harderian glands, produce a secretion which the gerbil spreads over the coat by grooming. This secretion helps insulate the gerbil from heat loss and keeps them snug at night.

Another upshot of their previous desert existence is that gerbil kidneys are designed to conserve water. In practical terms this means that they don't drink much water and neither do they urinate much. A few drops of urine a day is quite normal, which also means that their cages stay cleaner for longer!

Hamsters

The most common hamsters kept as pets are the Golden, Syrian and Russian hamster. Of these, the Russian has a reputation for being a bit nippy and the Golden as being more laid back, however it is the Syrian hamster that is the most often kept as a pet.



The hamster started out as a burrow dwelling animal and its preferred habitat is a cool humid tunnel. Thus, hamsters do not like hot weather or not having a place to hide from view.

To a large extent, how friendly a hamster is depending on how much the owner handles him. Some are exceedingly tame and are delightful to hold and fuss. However, those who are not regularly handled will bite when alarmed or stressed.

Mice and Exotic Rats

Mice and rats have a long and mixed history of contact with mankind. Over the centuries, it is mice and rats that led to the domestication of cats (to prey on the rodents who ate precious grain and food supplies). But even going back 3,000 years, records exist of the Chinese keeping mice as pets.

Mice tend to be more active than rats, and the latter are highly intelligent and love to be trained or set challenges. The popularity of mice as pets, and that they are quick breeders, has led to around 50 color varieties, with four main coat types - which are satin, astrex, long-hair and rex.

12.2: Understanding Behavior

Every pet owner should understand their pet's normal behavior so that they can provide all of their needs. It also helps you to recognize when your pet is ill or stops you worrying unnecessarily. (When you know hamsters are nocturnal, then you aren't going to worry if hammy is reclusive and sleepy during the day).

Gerbils

Gerbils are sociable creatures who love to live in groups and thrive in the company of other gerbils. It is delightful to watch gerbils as they play and goes some way to help you understand how much they hate being alone. That said, it is possible to keep a lone gerbil, as long as he is given plenty of attention from the owner.

To keep the peace, gerbils have a complex social hierarchy. This means there is always a 'boss' gerbil, who keeps those below him in place. It tends to be the law of the jungle with the larger gerbils lording it over smaller specimens. You may even be able to tell which the subordinate gerbils are, by looking at their tails. This is because those gerbils higher up the pecking order (or perhaps it should be chewing order!) will 'barber' or chew fur from the tails of those beneath them.

A social group that has been together for some time should be used to one another and well settled. The only reason they should get angsty is if a new gerbil has recently been introduced (which hopefully didn't happen immediately before you started pet-sitting the group!)

Gerbils are very clean creatures and, because they produce very little urine, should not smell under normal circumstances. However, if a gerbil feels threatened, he will give off an unpleasant odour as a warning sign to make the threat keep its distance.

Another sign that the colony feels uneasy or worried is foot stomping. Much like rabbits, gerbils also thump their back feet against the ground as a warning to others, if they perceive that danger is near.

Hamsters

It is a little surprising that not much is known about normal hamster behavior in the wild. This makes some sense, because they are burrow dwellers and therefore difficult to observe. However, we do know that hamsters are extremely territorial, and likely to bite in order to defend their patch.

An important fact to remember about hamsters is they are nocturnal - active mainly at night. Do not panic if your hamster is sleepy during the day. The chances are he is not ill, but merely following the demands of his body clock to sleep during daylight hours.

Rats and mice

These are highly intelligent creatures that are capable of solving simple puzzles (although we're not talking Sudoku here!). Many people liken rats to miniature dogs, because of their ability to learn and perform tricks.

Rats and mice are active during both day and night. Their pattern is to be awake for periods of time interspersed with naps and longer sleep. If well-handled most rats and mice are friendly, but even so, remember that they may be wary of strangers and may bite when fearful.

12.3: Common problems and diseases

In general, because these pets are physically so small and potentially vulnerable to predators, they tend to hide away if they are feeling unwell and it can be difficult to spot a problem. Again, being familiar with what is normal for your pet, is invaluable when it comes to deciding if there is a problem that requires veterinary attention.

Problems tend to fall into two groups: Those caused by stress (such as a change of temperature or diet) and diseases. Of these, stress-related illness is much more likely to occur if the pet is not in his regular routine, such as when you go on vacation. The good news is that stress-related problems can usually be fixed by correcting the temperature and staying as close to the normal daily schedule as possible.

There is a big overlap in the symptoms of many common problems, so rather than discuss individual diseases, we shall concentrate on those signs of ill health that you need to be alert for and then contact your veterinarian for advice.

Now let's look at these individual species and their specific problems.

Gerbils

Matted fur: The desert is a dry, arid place. A common sign that the cage is too humid is matted fur - perhaps the water bowl got knocked over or the dripper leaks. Removing the source of humidity should have the gerbils coat back to normal fairly swiftly.



Sore noses: Gerbils produce a lot of secretions from the area around their noses. It is not uncommon for young gerbils to get an infection in the skin of their nose because of all these oils. This is not usually life-threatening, but it's a good idea to speak to a vet for advice. Another reason for sore noses is bumping their face against the cage bars - so take a look to see if you can see any sharp metal edges that need smoothing off.

Fighting: Fighting does not usually take place in a stable social group. If there are no recent new additions to the group, and yet they start to fight, the most likely explanation is one of the more senior gerbils is unwell and not able to keep the other gerbils in check. The gerbil being picked on is likely to be the creature with a health issue, so keep a specific eye on him and contact a vet as necessary.

Hamsters

To avoid you making an embarrassing mistake, let's first mention a couple of entirely normal features of hamster anatomy.

Normal: Firstly, male hamsters have enormous testicles in comparison to their body size. If the hamster seems healthy but you suddenly notice two large lumps sticking out between his back legs - don't worry - these aren't tumors, but his testicles!

Secondly, it is normal for hamsters to have dark circular bald patches, one on either flank. Again, these are not skin cancer, but the hamster's scent glands.

Wet tail: One problem that hamsters are prone to is wet tail. As the name suggests you may notice dampness around the hamster's rear end. This is a hamster form of diarrhea, and can be life-threatening, so contact your vet right away.

Mice and rats

Healthy mice and rats are active and curious, so be suspicious if they are unusually quiet and subdued. Mice, especially, do not cope well with heat and may drool saliva heavily if overheated. Indeed, temperatures over 37 degrees Celsius can prove fatal to mice.

At times of stress mice and rats produce a red discharge from glands behind the eye. If you notice a red, almost blood-like, stickiness around the eyes, don't panic, the animal is not bleeding. What you need to do is make sure the environment is the correct temperature, the cage is clean, and that plenty of food and water is available, then leave the mice in peace to calm down.

12.4: Providing an adequate living environment

Many pet owners underestimate how important the correct living conditions are for the health and well-being of their pet. For example, gerbils like to keep cool by bathing in sand. If you don't provide a sand box, in hot weather the gerbil could suffer from heat stroke.

To help you understand your small pet, here is a summary of their basic needs.

Species	Requirement	Comment	
Gerbils	Bedding at least 1-inch (3 cm) deep Provide a sand box Exercise wheel	Gerbils like to burrow Gerbils keep cool by sand bathing Exercising in a wheel provides an outlet for excess energy	
Hamsters	Tunnels House Cardboard rolls to gnaw on	Hamsters like to burrow and hide So he can sleep in privacy Hamsters need to chew to stop their teeth overgrowing	
Mice and rats	Covered areas Wood chip or sawdust bedding Cardboard tubes	Mice and rats dislike bright light To absorb urine and keep it away from the pets To gnaw and hide in	

12.5: Usual Care Needed

Small mammals make delightful and entertaining pets, but just like any living creature, they need certain basic care to keep them healthy.

- An appropriate diet
- Fresh water
- Cleaning out
- Mental stimulation

An appropriate diet

As the old saying goes, 'You are what you eat', and this is especially true for our pets, when we are totally responsible for their diet.

Hamsters, gerbils, mice and rats all belong to the rodent family and there are a number of excellent ready-made diets available that are suitable for rodents. However, for maximum good health it helps if you are aware of their diet in the wild and the treats that you can and can't give.

Hamsters: Hamsters have a couple of interesting eating habits that make them a little different from our other small furry friends. Firstly, they love to store food in their cheek pouches. This can make life interesting if the food is not fresh. So whilst it's a good idea to offer some fresh fruit and leafy vegetables, make sure it is removed daily so Hammy doesn't stuff his cheeks with old apple. The second interesting thing is that hamsters are coprophagic which means they need to re-eat their faecal pellets (in the same way rabbits do) to get maximum nutrition from their food. These pellets still contain vital nutrients, which the hamster absorbs on the second pass through the gut - so don't be alarmed if you see him eating poo!

Gerbils: In the wild the gerbil's diet varies on the season and which seeds, roots and leaves are available to nibble on. Commercial rodent pellets don't contain as much moisture as the gerbil's diet in the wild and so it's a good idea to supplement the kibble with leafy vegetables and fruit. Gerbils love seeds! But be careful, they know no self-control when it comes to eating seeds and will soon become overweight - which is most definitely not healthy.

Mice and Exotic Rats: Mice and rats are highly trainable and it's rewarding to teach them tricks. A food reward is usually motivation enough to make them want to learn, but be a little cautious what you offer them. Human foods, especially biscuits, cheese and chocolate, are OK in moderation, but rapidly lead to obesity in the pet mouse or rat, which shortens their lifespan. Try offering treats of fruit, vegetables, seeds or nuts, which are tasty and nutritious.

Cleaning Out

Keeping the cage clean isn't just about it is looking and smelling nice (although of course that's very important), but about keeping your pet well. The ammonia in urine irritates the lungs of rodents and weakens their immune system, making the pet more likely to get chest infections.

Get into the habit of scooping out local areas of soiled bedding, once a day. Then, each week, totally clean out the cage and replace all bedding. Indeed, many small rodents will use a hamster toilet, which is like a small version of a cat litter tray. Put it in the opposite corner of the cage to the food and water, and many small pets soon cotton on that this is a great place to toilet so as to keep their waste away from food.

Mental Stimulation

How would you like being locked in the house all day, every day, for the rest of your life? Well, that's what happens if a small mammal spends their entire life locked in a cage. Of course, the cage is clean, comfortable and provides for their basic needs, but your pet needs more than that - he needs mental stimulation.

Whilst gerbils, mice and rats are social creatures and like to live in groups, hamsters are better kept as solitary pets.

However, whether your pet is part of a group or on their own, be sure to provide toys and enrich their environment (such as a wheel for your hamster to run on). This means providing tubes (toilet rolls are great) and deep bedding for them to tunnel and dig through.

Make sure you spend time each day interacting with your pets. Talk to them and train them to come to the bars for a treat. Get them used to being handled and take your pet out of the cage for fuss, and perhaps to scamper around (under close supervision - you don't want the hamster disappearing and chewing through electrical wiring)

Training is an excellent way to bond with the pet and exercise their brain, especially with rats and mice, who just love solving puzzles and learning new tricks. Clicker training is a great way to achieve this. The principle is to mark the desired behavior with a click-clack and then give a reward. The pet soon learns that earning a click-clack gets a treat and they start working hard to do what you want.

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a black container. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 13: General tips on caring for birds

From canaries to parrots, and birds of prey, birds come in a diverse range of sizes, shapes and temperaments. Those new to bird-keeping may be surprised at just how different avian species are and the different care they require. This module aims to give an overview of the bird families, and the basics of keeping them happy and healthy.

13.1 General tips on caring for birds

13.2 Small birds

13.3 Larger birds & birds of prey

13.4 Poultry

13.5 The parrot family

13.6: Recognizing common diseases and preventing spread

13.1 General tips on caring for birds

To properly care for a bird takes a surprising amount of work. If you thought owning a pet bird was simply a matter of keeping it in a cage, feeding them regularly and occasionally cleaning them out - then think again. If you are weighing up whether a bird is the right pet for you, then consider the following:



- Birds are living creatures with a need for mental stimulation and the chance to express their normal behavior.
- They are relatively intolerant of stress, changes in temperature, and handling (unless you invest the time in training and taming them). If yours is a chaotic, noisy household then a bird may not be for you.
- Just like any living creature they can become sick, in which case you need to be prepared to seek veterinary help.

- Birds can carry diseases, such as salmonella and chlamydia, so you must be scrupulous about hygiene when dealing with their food and water bowls, cleaning out the cage or handling them.
- Remember, if you look after your bird well they could live to a big age. The average lifespan for a budgerigar is 5 - 8 years, whilst an African grey parrot can live 50 - 80 years (so best be sure there's a younger member of the family who's as keen on birds as you are).
- Source only captive bred birds. Those illegally caught and then sold into the pet trade are raping the environment of native species, plus these wild birds rarely make good pets.
- You cannot smoke around birds. Their delicate respiratory systems cannot tolerate any form of air pollution from cigarette smoke to air fresheners.
- Mess alert! Birds are great at spreading seed husks everywhere and most birds aren't house-trained - so be prepared for a mess.

Bird basics

If, to date, your experience of pets has been of the furry (not feathered) variety, then here are some of the ways that bird-keeping differs and you need to adjust your mindset.

- **Birds don't do stress:** Stress kills - and it doesn't take much. Many veterinarians can tell horror stories about the budgerigar that came in for a nail clip and dropped dead in their hand. At one end of the scale is the bird exposed to shouting or loud TV, this can cause stress-related behavioral problems such as feather plucking. At the other end is the bird who is tormented by the household cat and dies from shock.
- **Birds are creatures of habit:** Many birds become set in their ways and don't like change. This can extend to fine details such as the color of their food bowl. For example, if they are accustomed to eating from a green bowl and a red one is substituted, some will refuse to eat.
- **Birds carry disease:** Birds can "carry" disease, which means they are perfectly healthy, but may pass infection on to people. The classic bird borne diseases are salmonella and Campylobacter, both of which are deeply unpleasant to people. You must always wash your hands when handling anything related to a bird, and especially before eating.

- **Birds don't like sudden movements:** It panics them. Be prepared to move slowly around birds and speak softly around them.
- **Birds have a high metabolic rate:** Birds have a higher body temperature (around 40 degrees Celsius is normal) than mammals. To supply the energy to keep them warm means birds need to eat constantly, so never allow their food to run out. Also, the ambient temperature of the room needs to be above 26 degrees Celsius.
- **Birds bite and scratch:** Be aware that birds (even small ones) can inflict painful bites and scratches. Be prepared to spend time taming your pet bird.

Become familiar with the norm

The bird's high metabolic rate means that they live life in the fast lane: if things go wrong, they go wrong quickly. When taking on a pet bird, do everything you can to become familiar with what's normal for that bird. By doing so you are best placed to spot the signs of ill health in the early stages.

For instance, when purchasing or rescuing a bird, ask to see the cage where they are kept. This allows you to see their droppings, and how the bird roosts. Watch how the bird breathes and gauge how sociable (or otherwise) the bird is - before he goes through the stress of travelling to a new home.

Be vigilant and check:

- What do the bird's droppings look like?
- Where and how does he rest: On a perch in the open, or hidden away?
- What is he breathing like: Can you see his chest moving and is his beak open or shut?
- How alert is the bird: Does he approach you or cower away?

All of which gives you valuable reference points should something change and the bird become sick.

13.2 Small birds

Arguably the ideal starter, for the novice bird-keeper, are small birds. With their cheery voices, friendly personalities and gorgeous bright colors, these make great pets and are easier to care for than parrots or other species.

Examples of small cage birds include budgerigars, canaries and finches. In the US the term budgie is used to mean a different bird than in the UK. The UK budgie is a small cheery chap about the size of a canary that comes in many vibrant colors, whilst the US budgie is actually a small parakeet.

Bird	Lifespan
Canary	10-15 years
Finches	5 - 10 years on average (some much longer)
Budgerigar (UK)	5 - 8 years
Parakeet	15 -18 years

Basic equipment

Small birds are either kept in a cage or an aviary. If you have one or two birds, then a cage is sufficient, but ideally train your bird to fly free and return to the cage afterwards, so they can fully exercise their wings.

When purchasing a cage, buy the largest you can afford. The length is more important than the height (to allow the bird to glide), which means an old-fashioned parrot cage is not suitable for our smaller feathered friends.

The essentials of the cage include:

- **Bars:** Ideally horizontal (these allow climbing behavior) and not further apart than half an inch (1 cm)
- **Food and water bowl mounts:** so, the bird can't knock them over
- **Poo tray:** to catch the inevitable natural output plus seed husks and feathers
- **A cage "diaper"** around the tray to catch the stray seed husks
- **Perches** - a variety of sizes of orchard wood are ideal
- **Toys!**
- **A cover** to put over the cage at night (wash weekly)

Feeding your Small Caged Bird

- Because of their high metabolic rate be sure to feed birds twice a day and preferably have food available at all times.
- Their natural diet includes seeds, including wheat grass seeds. In captivity they can also have carrot, broccoli, corn, spinach, fruit (although no cores or pips) and a cuttle fish to wear down their beaks.
- Sunflower seeds are very high in oil and can cause obesity; therefore they should only be given as an occasional treat.
- These species are not meat-eaters; also steer clear of certain human foods.
- This list is not exhaustive (if in doubt check before feeding), but foods NOT suitable include avocado, rhubarb, onions, mushrooms, lilies, laurel, snowdrops, yew, ivy, cowslip, and ivy. The latter are all toxic to your small bird and feeding them could result in death.

13.3 Larger birds & birds of prey

Examples of these birds include species such as owls, falcons, harriers, hawks, kites and ospreys.

These birds are not suitable for care by the inexperienced, so be honest with yourself about whether you have the necessary knowledge, facilities and time to care for one properly. Even for the experienced keeper, it

takes time to get to know these highly intelligent birds and have them accept your company.

Another factor to consider is that owning a bird of prey or raptor, is not for the squeamish! The majority are carnivores, and many eat whole prey such as mice. (They need to do this to get a fully balanced diet.) So, if your pet passion is for small furies, you may be upset to see mice fed to another species.



First-hand experience

Get some experience with birds of prey before getting your own bird.

There is no substitute for being around expert handlers and watching how they interact with the birds. Consider doing some work experience at a falconry center or rescue facility for such birds. Enroll on a good quality keepers course and spend time around the birds.

The legal aspect

Owning a bird of prey, or raptor, is not as straight forward as buying one and taking them home. You need to make inquiries about state law and the permits or licenses necessary to keep a raptor.

Once you have done this, only consider buying a bird that is captive-bred and has the necessary paperwork to prove this. It is both cruel and immoral to house a bird taken from the wild.

Housing the bird

You can't keep a raptor in a cage in your front room, but need to provide a weather and vermin-proof outdoor aviary. The absolute minimum size (in all directions) for this aviary is twice the full wingspan of the species. Even this is restrictive, and you need to commit to regular flight sessions with the bird (in the same way you undertake to walk a dog twice a day) to keep his flying muscles in good trim

Make sure the aviary has excellent ventilation, but the bird can also shelter from all types of weather. This is especially important when the bird is moulting and unable to fly. In addition, raptors are messy eaters and poopers, and you must be able to keep the aviary clean.

Feeding the bird

These birds are carnivores and need to eat fresh meat. However, just feeding meat muscle is not a balanced diet because it is entirely protein and lacks the correct vitamin and minerals for optimal health.

Whilst you can use the diced meat for training purposes, the majority of the diet should comprise of whole chicks or mice, appropriate to the species.

Specialist equipment

When training up a bird of prey, it is important to provide them with the exercise they need. However, it does require special equipment, such as traces, a hood, a lure, and a good quality leather gauntlet.

You may also need to invest in a purpose-made travelling box for those times when you need to transport the bird to a hunting ground...or to the veterinarian.

13.4 Poultry

If the idea of keeping chickens and having fresh eggs every morning, appeals to you then you aren't alone. Backyard poultry is an increasingly popular hobby. You will however need an outdoor space, which you can fence off, and also provide a secure hen house for the birds to roost in at night.



Most chickens are charming characters, and their needs are simple and include shelter from bad weather, food, clean water and a place to roost at night. However, chickens are untidy creatures and frequently foul (excuse the pun!) their bowls and kick grit into the water troughs. Poultry is also vulnerable to picking up the infection. It is therefore advisable to wear different footwear when visiting your chickens to avoid accidentally importing infection on your street shoes.

What type of poultry do you want?

This may seem a strange question but have a think about whether you want birds that are bigger layers, fancy birds (kept for their fancy plumage), or rescues (such as ex-battery farm chickens).

One of the pitfalls of poultry keeping is that each time you introduce new birds, you run the risk of introducing infection. At the very least you need to quarantine new arrivals for a couple of weeks, to make sure they are healthy and don't bring in an infection that makes the whole flock sick. Bear this in mind when buying your first birds; since it's worth buying as many as you want in one go from one place, to minimize the need for isolating them.

Housing poultry

The basics are a secure outdoor foraging area (to keep predators out, rather than the birds in) and a secure shelter or coop for them to roost in overnight.

The coop: should be sturdy and weatherproof, with good ventilation in the roof. You also need to be able to collect the eggs from inside, and clean the coop, without too much trouble.

There are many different designs available, but it's largely a case of 'you get what you pay for'. So, do your homework, look at reviews of the product and buy the best quality that you can.

The run: Predators can be very ingenious when it comes to getting at your birds. Where possible try and bury wire fences at least 20cm into the ground to stop foxes, and the like, digging beneath them. If you have a special problem with predators then you might even want to consider an electric fence.

Feeding chickens

Traditionally chickens were fed household scraps and foraged for the rest of their food. However, in a backyard run it's unlikely the birds will get a balanced diet, and so you need to offer a specific chicken feed.

Choose a good quality food and put it in a plastic hopper so the birds don't waste food by soiling it with their faces.

Similar advice goes for water drinkers, because the birds are indiscriminate about where they poop, a water bowl quickly becomes fouled. Some keepers also recommend adding a dash of apple cider vinegar to the water - to discourage bacterial growth and keep green algae at bay - although really there is no substitute for regular and thorough cleaning.

13.5 The parrot family

Parrots are beautiful creatures and also highly intelligent. They are highly trainable and can even be taught to speak, which adds to their appeal. However, their intelligence also makes them demanding pets because if they don't receive enough mental stimulation in their day-to-day life, they are prone to boredom. This boredom can be directed at the environment (damaged furniture) or themselves (feather plucking).

If you are considering getting a parrot, be honest with yourself about whether you can provide the companionship and entertainment such an intellectually demanding species needs. On the plus side, the pay off is a bird that will recognize you and hopefully accept you as a friend.

Housing your parrot

If kept indoors the cage should be as large as possible, but even this doesn't allow for adequate exercise. To this end train your parrot and allow them out every day to stretch their wings and fly.

The perches should be made from fruit tree wood and a comfortable diameter for perching. Cover the floor of the cage with peats, sand, or shavings and change it daily. Give the bird plenty of opportunity to climb such as providing wooden ladders and cotton ropes.

If kept outdoors, the aviary needs to be weatherproof, with a draft-free hide section to protect the bird from extreme weather.

Feeding your parrot

Variety is key to a healthy diet. Birds from the parrot family enjoy a mix of foods from the seeds, fruits and vegetable family. Larger parrots can also be given nuts. Be sure to wash all foodstuffs and avoid putting the food bowl directly beneath the perch, for fear of soiling!

N.B. Do NOT give avocado, it is toxic to the parrot family.

- **Seeds:** Millet, wheat, safflower, canary seed, hemp, maize, oats, niger, groats, linseed (N.B. Sunflower seeds only in moderation as their high oil content can lead to obesity)
- **Fruits:** apples, pears, bananas, oranges, grapes, cherries (no pip)
- **Vegetables:** celery, beetroot, beans, carrots, spinach

And of course, don't forget fresh water.

13.6: Recognizing common diseases and preventing spread

Birds have limited ways of showing they are ill, so any keeper needs to be vigilant for any change in the bird's normal habits. Because birds have a high body temperature, bacteria, viruses and moulds thrive when transmitted from one bird to another. Thus, scrupulous hygiene is essential when caring for birds - for their sake as well as yours.

If your bird shows signs of ill health contact an avian veterinarian immediately. Birds can deteriorate frighteningly quickly so it's better to be safe than sorry and have a wasted trip, rather than regret not visiting.

The table outlined on the following page gives an overview of signs of ill health in the bird.

Sign	Possible cause	Comments
Plumage fluffed up	The bird is trying to keep warm, which can be a sign of ill health and respiratory infection	A healthy bird's feathers lie flat and sleek against the body
Mouth breathing	Respiratory infection	The exception is geese in flight (!) who breathe with open beaks
Tail bobbing in small birds	Respiratory infection	If a small bird has breathing difficulties, his physically small size means his tail bobs up and down in rhythm with his breathing
Blue tinge to beak or legs	Circulatory problems or a respiratory infection	Be familiar with the bird's normal skin color
Change of voice	Throat infection	Just like when we have a sore throat, a bird's voice may change
Squeaking	Thyroid problems	Pressure from the thyroid gland on the windpipe causes squeaking noises as the bird breathes
Twisted head or neck	Balance problem and inner ear infections	A serious sign that requires attention by a veterinarian
Loss of appetite	Ill health	The bird requires veterinary attention
Runny droppings	A digestive upset	Recent changes in diet may upset his tummy

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MODULE 14: Recognizing common diseases and preventing spread

14.1: Recognizing common diseases and preventing spread

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A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a black container. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 15: How to care for fish

Keeping fish is a satisfying hobby and watching fish swimming in a tank is said to reduce stress. In this module we cover the basics of caring for fish, the difference between tropical, cold water, and marine fish, plus troubleshoot some of the common health problems.

15.1 Howto care for fish

15.2 Tropical fish

15.3 Coldwater fish

15.4Marine fish

15.1 How to care for fish

First, let's take an overview offish keeping. As a keeper you are responsible for the tank of water that is the fishes' life support system - get this wrong and quickly you finned-friends become distressed and die.

Fish fall into one of three groups: tropical fish, cold water fish, and marine fish. Later in this module we look at the specific needs each group. In this section we now take an overview of the maintenance and care of fish, which is largely the same for each group unless otherwise stated. In addition, if you are a novice but think fish-keeping is for you, there are also a section on "cycling" a brand-new fish tank so that it's a healthy place for your fish to live.

Feeding

Most of the fish kept in domestic aquariums are fed on flakes or tiny live insects such as water daphnia. How often the fish are fed depends on the type of fish involved.



How often to feed

Coldwater fish can be fed once a day but tropical fish (with their higher metabolic rate) need twice daily feeding. Marine fish lie somewhere between the two, depending on the target water temperature of their tank.

When to feed

Morning is the best time to give food to once daily feeders. This is because the plants in the tank produce oxygen during the day, which helps with the fishes' digestion.

How much to feed

It is better to slightly underfeed, than overfeed. This is because uneaten food sinks to the bottom of the tank where it encourages bacterial growth. The physical amount fed depends on the number and size of the fish in the tank. A good general rule of thumb is all food should be eaten within two hours of it being put in the tank.

Cycling a fish tank

A common mistake the novice fish-keeper makes is to set up the tank and then the next day stock it with fish. You've paid attention to every detail including the water temperature, filters, and oxygen levels, and yet as the days go by you find more and more dead fish in the water. The fish were all healthy when you bought them and yet a couple of weeks down the line they are all dead.

The problem here is that the tank was not "cycled". This is the process that allows helpful bacteria to establish themselves in the tank's filter, which will eventually breakdown the toxins in the fishes' excreta so that our finned-friends don't poison themselves with their own bodily functions.

Cycling and the nitrogen cycle

It's worth repeating that water is the fishes' life support system - not only does it provide oxygen, but it takes away their waste products. Fish faeces contain high levels of nitrogen, and each time the fish poop they add more nitrogen. Unfortunately, high ammonia (made up largely of nitrogen) is toxic, so they are effectively slowly poisoning themselves.

In an established tank, bacteria colonize the filters which are capable of breaking down ammonia and making it harmless. These bacteria complete the "nitrogen cycle" and make the water safe for the fish. (This is a great example of nature finding a harmonious way for different organisms to live together.)

Obviously, a new tank with clean, fresh water and filters straight out of the packaging, whilst it looks appealing to us, is actually deadly where fish are concerned. The tank needs a chance to establish that colony of helpful bacteria.

Maintaining water quality

The fish eat and defecate in that same water that they depend on to live. Leftover food provides a great growth medium for bacteria, whilst fish faeces contain ammonia, which is toxic to the fish. Although tanks are equipped with filter systems (more of this later) to help purify the water and make cleaning less frequent, there is no escaping that the tank needs to be cleaned on average once a week.

Cleaning the water

To completely empty the tank and store the fish in a bucket is highly likely to send the fish into a state of shock and not recommended. Not only that, but it can take a tank week (especially for marine tanks) to stabilize after a completely clean and changing pH and level of nitrates and phosphates can be enough to kill the fish.

Instead, a 'rolling' process where approximately 25 % of the tank is emptied, and replaced, once a week is the best option. However, this isn't just a matter of removing a bucket of water and replacing it with another bucket of tap water. The fresh water needs to be 'aged' to make it safe for the fish.

- **Ageing:** Tap water contains high levels of chlorine, which is toxic to fish. However, the chlorine evaporates off when water is left standing for a day or so. This is simple to do but does require forward planning. The principle is to fill the desired container and let the water stand for at least 24 hours, before adding it to the aquarium.

An alternative to letting the water stand is to use chemical 'dechlorinators' to get rid of these unwanted chemicals. This has the advantage of being quicker.

- **pH and chemicals:** pH is a measure of how acid or alkaline the water is. Fish require a neutral pH - around pH7.0. However, the pH of tap water varies widely from this, and may require the addition of chemicals to balance it. This is done by using a home testing kit to measure the pH of the water, and then adding chemicals to balance it.

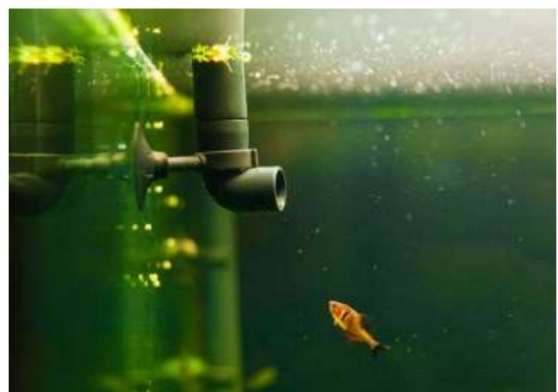
Other factors to consider are the presence of other chemicals in the water. For example, some regions add fluoride to the mains water supply, which is toxic to fish. In high fluoride areas (check with your local authorities) you need to remove the fluoride from the water.

- **Temperature:** Just as we don't like getting into a cold bath, neither do fish appreciate having water at the wrong temperature added to the tank. This isn't too much of a problem for cold water fish, as the bucket of aged water is already at room temperature but is important for tropical or marine fish. It is crucial to use a thermometer and heat the new water to a temperature that matches the one in the tank.

At the same time as changing the water, it is important to address other hygiene issues in the tank such as vacuuming the gravel. This means using a special aquarium vacuum which sucks up gravel and holds in it a tube in the water, to remove food debris and contaminating particles.

Cleaning filters

To help keep the water clean and reduce the levels of toxins such as ammonia, the aquarium is fitted with a filter. Over time, the filter clogs and needs changing. How often depends on the type of filter. There are three types:



- Mechanical filters: These trap debris such as old food and detritus
- Chemical filters: These commonly contain activated carbon to absorb pollutants.
- Biological filters: These contain bacteria that breakdown harmful substances such as ammonia

There are many different models of the filter, so again, do not be shy about asking your client which type of filter(s) he uses and how often the filtration unit needs replacing.

Water temperature

Whilst cold water fish speaks for itself, tropic and marine fish do best in a temperature range specific to their species. Aquarium comes equipped with a thermometer and part of your job as a keeper is to regularly check the water temperature and make sure the heater is working correctly.

How do you cycle a fish tank?

The following steps give an idea of what's involved to make your tank a fish-friendly environment.

#1 Set up the tank - with everything (water, plants, filters) and get it to the optimum temperature

#2 Add a small number of hardy fish to the tank. These fish will provide the "starter" bacteria, whilst themselves being fairly resistant to a hostile toxic environment. Examples of good starter fish are:

- Most guppies
- Most minnows
- X-ray tetras
- White clouds
- Tiger or cherry barbs
- Zebra danios
- Pupfish

#3 Feed the fish sparingly. This is because the more they eat the more they poop (and poison the water) and because waste food will rot and produce nasties of its own

#4 Frequent water changes. Every few days replace 10 - 25% of the water with fresh "aged" water. This means letting this replacement water stand for at least 24 hours to let the chlorine evaporate off.

#5 Test the water for toxins. You can buy home test kits which test the water for ammonia and nitrite. Follow the directions and monitor the changes levels in the tank. As the bacteria establish themselves and start to clean away waste, the levels should start to fall.

#6 Add the fish. After 6 - 8 weeks the ammonia and nitrite levels should fall to almost zero, at which time it's safe to slow start introducing new fish into the tank. Don't try to stock the tank in one go as this will overwhelm the bacteria. Instead, wait for 1 - 2 weeks after each introduction, before adding newcomers.

An alternative method of cycling is the "fish less cycle" which involves adding plant matter to the water and waiting for it to decay down and encourage beneficial bacterial growth. Some people prefer this method as it is more humane, in that you are not exposing fish to toxins. However, it can be tricky to get right and requires considerable patience waiting for the right bacteria to colonize the tank.

15.2: Tropical fish

Tropical fish are popular to keep because of their bright, attractive colours and unusual fancy fins.

Commonly kept tropical fish include:

- Zebra fish
- Siamese fighting fish
- Tiger Barbs
- Neon Tetras



It is important to know these fish live in fresh water maintained at tropical temperatures. In turn, the fact that they live in the fish equivalent of a hot bath, means their metabolic rate is faster than cold-water fish. In turn this means they burn calories quickly and need to eat more frequently. Indeed, how often they need to be fed depends on the temperature of the water.

Water Temperature	Frequency of feeding
67 - 70 degrees Fahrenheit (19-21 Celsius)	Once a day is acceptable
70 - 73 degrees Fahrenheit (21 - 22.5 C)	Twice a day if possible
73 - 80 degrees Fahrenheit (22.5 - 27 C)	Twice a day required

Tropical fish enjoy eating live daphnia (water fleas) but when feeding only put as many daphnias into the tank only as many as the fish eat in two hours. The live creatures, daphnia, compete for oxygen in the water and too many presents at once can rob the fish of vital oxygen and suffocate them. Tropical fish can survive for days without food but putting too much in can kill.

Another issue to take care of is keeping the water at the right temperature. Check the temperature of the aquarium each time you feed the fish, and if it is outside the desired range adjust the heater accordingly. A typical average temperature for a tank of tropical fish is 72 - 77 degrees Fahrenheit (22.3 - 25 degrees Celsius.)

Keeping Tropical Fish

Never put fish straight into a brand-new tank, but cycle the water (as in described in 15.1) In addition to the tank set up you also need:

- A syphon for water changes
- A net for catching fish
- An algae magnet (the warm water encourages algal growth)
- Water testing kits

Heaters and thermostats

Of course, the temperature of the water is critical to the fishes' survival: Too cold and the fish will be sluggish and die, too hot and they suffer heat stress. Many modern systems are a combination of thermostat and heater, which is great because this helps stop the major fluctuations in water temperature that can happen when depending on human observation to change the settings.

Options for heaters include:

- Substrate heater: these are buried under the gravel (a bit like underfloor heating for fish!), which the plants love
- Submersible heater: the whole heater unit is submerged in water
- In-filter heater: the heater is hidden in the filter until
- Immiscible heaters: part out of the water, with the heating element under the water.

Lighting

If you have plants in the tank then they need a light source, in order to photosynthesize and stay healthy. A beautiful carpet of plants looks stunning, but some plants are fussier about their living conditions than others are. It is best to speak to your local aquarium specialist as to which plants do best in which light.

Fluorescent strip lighting is advised for the beginner, but it is imperative to use specialist aquarium tubes which are water-safe and give off the correct spectrum for most plants.

There are also some lovely options available these days including LED moonlight and red lights, for night time use, which look stunning.

Be careful how long you have the lights on for each day: not long enough and the plants will be sickly looking, but too long and it encourages algae to grow.

Plants

Plants are nature's filters: they absorb carbon dioxide and give off beneficial oxygen. Many plants also harbour micro-organisms that fish like to eat, and also help establish beneficial bacteria. However, not all plants are suitable for aquarium use. In the tropical aquarium, the following are suitable starter plants:

- Java moss
- Java fern
- Crypto corals
- Vallisneria
- Cabomba
- Amazon sword

15.3: Coldwater fish

Coldwater fish are the easiest to care for because you don't need to worry too about the water temperature in the tank (compared to tropical fish!)

Examples include:

- Minnows
- Shark heads
- Goldfish
- Koi Carp
- Texas cichlid
- Glofish



The long-suffering goldfish

The chances are when most people think of keeping a coldwater fish they think of the traditional goldfish kept in a globe bowl with a sprinkling of coloured gravel and a strand of pondweed. This is however a negligent way to keep fish because the water is not aerated, the small is much too small, and the water unfiltered so it's high in nitrogenous toxins.

These poor misunderstood fish live in a permanent state of stress and usually survive just a few months.

It may even surprise you to learn that a healthy goldfish can live 25-years, which makes the lives of these poor bowl-kept fish seem even more pathetic and ill-treated.

Instead, coldwater fish (including goldfish) should be kept in a tank of adequate size complete with filtration, and the water changed regularly and replaced with conditioned water (not straight tap water). Indeed, coldwater fish do have a number of special considerations, which are summarized in the table.

Action	Comment
Water temperature 50 - 78 Fahrenheit (10 - 25.5 Celsius)	Check the tank thermometer daily
Tightly replace the aquarium lid after feeding	This reduces water loss due to evaporation, and stops the fish jumping out.
Switch the aquarium light on for 12 hours a day	12 hours on, 12 hours off is ideal
Replace 25 % of the aquarium water once a week	Used pre-aged water (allowed to stand for at least 24 hours). Check the water is at the same temperature as that in the aquarium
pH neutral	Cold water fish require a neutral pH 7.0. Use a test kit to check water pH and use a pH balancing kit to make corrections.

Setting up a Cold-Water tank

Having realized you need a tank (not a bowl) buy the biggest one you can - healthy coldwater fish can grow surprisingly quickly and they need plenty of space to swim. Once the tank is set up it becomes very heavy so think carefully about where you at to site the tank.

Siting the tank

Avoid places with drafts such as a hallway or beside a door that is constantly opening and closing. Likewise, the filter needs to run 24-hours a day and this can make some background noise, so avoid putting the tank in a bedroom or other place where it may cause a disturbance. Do not put the tank under or beside a window, because the UV light is likely to encourage algae to grow.

Tank furniture

It is a good idea to put a decorative background along the back of the tank - not only does it look nice for you, but it helps the fish to feel secure if they are not being looked at from 360 degrees. Another piece of aquarium furniture is the gravel - be aware that brightly coloured gravel is unnatural looking to the fish and can be a source of stress. It's better to select ordinary aquarium gravel, but make sure you wash it well before putting it in the tank as it is usually very dusty (which can clog the filter).

Cold water plants

Consider plants such as *Cabomba caroliniana* and *Elodea densa*, which do well in cool water and provide fresh greenery for the fish to nibble on.

Experts advise setting up the tank and letting it run (minus the fish) for at least a week before introducing your first occupant. Test the water pH and for nitrogenous waste, making sure the pH is neutral and nitrogen levels low, before subjecting the fish to that environment - otherwise, if the tank is not ready, the fish may die. Again, follow the rules for cycling the tank by feeding sparingly and waiting for the water to stabilize before introducing more fish.

1.4 Marine fish

Marine fish are the hardest to look after and have a reputation for being the preserve of the expert fish keeper. This is because you have to control both the temperature and the salinity (saltiness) of the water. If you are new to fish-keeping, then it is better to start with cold water or tropical fish tank.

Examples of marine fish species include:

- Angel fish
- Box fish
- Lionfish
- Tangs
- Parrotfish
- Anemones
- Seahorses

Managing salinity (saltiness)

Marine fish live in saltwater but managing the salinity (saltiness) of the water is more difficult than it sounds. This is because normal day-to-day evaporation leads to the loss of water vapour, but not salt. This tends to concentrate the water over time. To counteract this, you must add water to the tank. How much water to add depends on the size of the aquarium, the number of fish, and the water temperature, and it can be a difficult balance to achieve.

Some people try to counteract this by adding seawater - whilst this sounds great in theory, each time the top up adds salt, so as the water part evaporates off the tank can become increasingly salty. Thus, the advice is to top up with aged fresh water and monitor the saltiness, and if it falls too low, add more salt.

But rather than guess the salinity, it is essential to measure it. To do this you use a device called a hydrometer - you lower the bulb into the water at the centre of the tank and then take a reading. The ideal range is 1.012 - 1.024. Below 1.012 and more salt needs to be added, above 1.024 and more water is needed.

A woman with long brown hair, wearing a cream-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a green plant. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 16: Recognizing disease and what to do

16.1: Recognizing disease and what to do

This section is not meant as a substitute for professional veterinary care. Its purpose is to give you an overview of common conditions, which are treatable, and which are likely to be fatal. This helps you to monitor the tank and be alert for possible fatalities.

Unfortunately, sick fish are likely to be secretive and hide. If a fish dies in hiding and is not spotted, it will pollute the aquarium, and so dead fish must be removed as soon as possible.



The signs that a fish may be sick include the following:

- Ulcers or strange coloured plaques around the mouth
- Bulging eyes
- Scales in poor condition (they should be flat and shiny)
- Mucus or slime coating the body
- Spots, sore, or bleeding
- Bloated abdomen (unless pregnant)
- Flared gills
- Irregular breathing
- Fins clamped against the body
- Unsteady swimming

A table of common fish health problems

Condition	Comments	Treatment / outcome
Blackspot	Caused by a worm coiled within the spots	Bathing the fish in a special solution
Constipation	Decreased appetite with an increased belly size	Coat food with medicinal paraffin or feed live daphnia
Eye fungus	White scum over the eye	Isolate the fish and coat the area with 1% silver nitrate
Dropsy	Bloated abdomen	No known cure
Fish louse	Parasite on the fishes body	Remove with tweezers
Ich	White spots on the body or fins- caused by a parasite	Increasing the tank temperature encourages the parasites to drop off
Pop eye	Fluid behind the eye	Similar to 'dropsy' - no known cure
Loss of colour	Dietary deficiency	Improve the diet
Swim bladder disease	Unable to swim and rest on the bottom of the tank	Fish seldom recover

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting on a light-colored sofa. She is smiling and petting a ginger and white cat on her lap. The cat is looking towards the left. In the background, there is a white shelf with some books and a black container. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 17: Reptiles

In the past decade or so, improved knowledge about what reptiles need in order to remain healthy has led to the increased popularity of reptile-keeping. Indeed, a study in 2013 concluded that there are 11.3 million pet reptiles in the US, and 8 million in the UK. Reptiles make absorbing pets but do require considerable commitment (including financial) to care for them properly.

This module takes an overview of reptile care, to help you decide whether reptile keeping is for you or not.

17.1 Howto care for reptiles

17.2 Challenges of keeping reptiles as pets

17.3 Turtles, terrapins & tortoises

17.4 Snakes & lizards

17.1: Howto care for reptiles

With an estimated 7,000 species of reptile, each with its own physiology, habitat and diet, the subject of caring for reptiles is a huge one. Fortunately, most of those species commonly kept as pets have many features in common, and so this module aims to help the novice reptile-keeper gain an overview of what it takes to keep a reptile fit and healthy.



About the vivarium

Reptiles live in a vivarium. This is a heat-conserving box with three sides made from an insulator material with a glass front. Whilst lizards can be kept in an aquarium (all the sides are made of glass) the construction lends itself to heat loss and is not as cost-effective. Turtles and terrapins are housed in aquaria (glass boxes) containing water.

Temperature

The first, and the most important difference between reptiles and mammals, is that reptiles are cold-blooded. This means they rely on their environment to provide the heat that powers their bodies and makes their digestive systems work.

[More of this in Module 17.2]

Each vivarium should be equipped with a maximum and minimum thermometer, which enables you to track the day-night temperature to ensure that it stays within the required range.

Type of reptile	Ideal temperature range	Basking spot temperature
Active during the day	80 - 95 Fahrenheit (27-35 Celsius)	120-130 Fahrenheit (49- - 54 Celsius)
Active at night	70 - 80 Fahrenheit (21 - 27 Celsius)	90 95 Fahrenheit (32 - 35 Celsius)

Please note. Each species has its specific ideal temperatures, so the table above is only a guide.

Thermostat

Heat is provided by a heat lamp (preferred option), a heat-pad or hot rocks, which are thermostatically controlled to stay at the correct temperature. Many reptile keepers prefer to avoid heat pads/ hot rocks, because reptiles cannot recognize when the skin on their belly overheats and are prone to staying too long in one spot and get burnt.

If you opt for a heat lamp, then you adjust the temperature within the vivarium by resetting the thermostat.

Day length

Reptiles are happiest, and therefore healthiest, when their environment mimics that of the wild. This means tailoring the day length over the seasons to that which they would normally experience. Most heat lamps provide light as well as heat, which means switching the lamp and UV bulb off at night and on in the morning.

□ Tropical reptiles require: 13 hours of light in the summer

11 hours of light in the winter

- Temperate reptiles require: 14 hours of light in the summer

12 hours of light in the winter

Heaters

If the temperature is likely to fall too low at night, an additional heat source may be required. This may take the form of a heater beneath the vivarium, a heat mat or hot rocks. As already mentioned the latter can cause burns and so a less direct method of heating is preferred or else good insulation, to cut down on heat loss from the day.

UV lamp

Reptiles in the wild are exposed to sunlight which is a natural source of ultraviolet (UV) light. Reptiles require UV rays in order to synthesize Vitamin D, which in turn helps with calcium metabolism and healthy bones. Reptiles deprived of UV light develop soft bones, a condition known as MBD (metabolic bone disease).

The vivarium must provide a source of UV light - either as a combined heat bulb that emits UVB, or a separate UVB fluorescent tube. It is the nature of these bulbs that they 'blow' from time to time. It is wise to keep a spare bulb handy, so that your pet is never without UV for long. Also, the quality of the UV degrades with time and even a functioning bulb should be replaced every six months.

Substrate

The substrate is the term for the flooring used in the vivarium. Popular choices include reptile 'carpet', aspen shavings and special sand that is safe if eaten. Regular sawdust irritates the skin and respiratory systems of reptiles, while ordinary sand can form a blockage in the gut if eaten. Another choice is "reptile carpet", but this is not disposable and to maintain hygiene you must wash it regularly once a week.

Cleaning out and hygiene

Many reptiles carry salmonella and, whilst they are not ill themselves, they can act as a reservoir of infection for people. Always wash your hands thoroughly after handling or dealing with any reptile. Also, whilst handling the reptile try to avoid touching your hair or clothes in case you deposit salmonella on the surface and later infect yourself.

Cleaning the vivarium

Reptile excreta are a combination of urine and feces. Their droppings have a brown pellet like component, with a white, toothpaste-like part created by urates. This must be cleaned out every day and the easiest way to do this is with a scoop and then put the feces in a sealed plastic bag.

Because the high temperature in a vivarium is perfect for bacterial growth, the food and water bowls should be cleaned daily. Keep these separate from any human washing up and dry them on paper towels to avoid accidental contamination of linen tea-towels.

The vivarium itself needs cleaning once a week. Use a pet-safe disinfectant or bleach, diluted 30 ml per litre of water (half a cup per gallon). Wipe down with paper towels and make sure the vivarium is fully dry before putting the reptile back in.

Feeding: an overview

Each species has its own special requirements. Always do your research and speak to experts about what to feed your species, how to feed it (some lizards only eat if tweezer fed, others only eat if they hunt their prey), and how often.

Below is an overview of what most species eat.

Species	Classification	Examples of food eaten
Lizard (those most likely to be kept as pets)	Insectivores	Insects such as wax worms, Morio worms, larvae, locusts, cockroaches, crickets. Some species (Bearded dragons) also eat vegetation
Snakes	Carnivores	From insects such as slugs and earthworms to mice, rats and rabbits
Turtles and terrapins	Omnivores	A mix of small insects and vegetation
Tortoises	Vegetarian	Green leafy vegetables (dandelions, endive, watercress) tomato, strawberry.

17.2: The challenges of keeping reptiles as pets

The challenge for the reptile keeper (or those looking after reptiles) is providing the correct environment for the pet to thrive. The key part of which is getting the temperature right. This is more complicated than putting in a heater and hoping for the best, because reptiles need a temperature gradient within the vivarium plus a basking (hot) spot.



Temperature gradient

Reptiles cannot regulate their body temperature in the same way mammals can by panting or sweating. If reptiles are too hot they move to a cooler spot; if too cold, they seek out heat. This needs replication within the vivarium.

This is done by mounting the heat source at one end of the tank, so the opposite end is cooler. Basking spots are provided by placing a rock or branch closer to the heat lamp, so the reptile can get as close as possible without burning himself.

Get this wrong and the reptile will not thrive. If the temperature is too cool, the reptile cannot function properly, and his immune system is weaker which leaves him open to infection. However, the downside of a vivarium maintained at the correct temperature is that it encourages bacterial growth - hence the need for scrupulous hygiene.

Humidity

Although reptiles have efficient kidneys designed to conserve water, the reptile must have access to water. If they do not take in enough fluid from their food, they may need to drink, and also moisture (in the form of humidity) is important to aid shedding.

However, in a poorly ventilated vivarium there is a risk of excessive humidity in the tank, which is undesirable because it can lead to fungal infections. To get around this, some snake keepers put a box of damp moss in the viv, with a hole cut in the top to allow the pet access.

Feeding

Most reptiles are creatures of habit and are used to feeding in a particular way. For example, some lizards love to hunt and chase small locusts for dinner; whilst others are trained to eat from tweezers (making it less likely the lizard eats substrate). If you offer the wrong option, the reptile will not eat.

17.3 Turtles, terrapins and tortoises

The obvious starting point is to know what is meant by a turtle, terrapin and tortoise. (Bearing in mind the groupings swap around depending on country -classifications are different in Australia to America). To avoid confusion, in this module we use the following classification:

Type	Location	Diet
Tortoise	Terrestrial (land-dwelling) chelonian (shelled animal)	Flerbivores (plant eating)
Turtle	Marine (salt water dwelling) chelonian	Mainly herbivores with some being omnivores
Terrapin	Freshwater chelonian	Omnivores

Feeding

A healthy herbivore diet means offering the following:

- Uncooked green leafy vegetables: e.g. mustard greens, collard greens, dandelions, endive or watercress
- Offer in moderation: cabbage, cauliflower, broccoli, kale, pak choi
- Fruit: such as tomato and strawberries. Many fruits represent poor calorie intake and so should be limited.

(In moderation means not giving/offering these foods every day. Those mentioned above had calcium-binding properties and fed in large quantities can deplete the chelonians calcium levels.)

Foods to avoid, but commonly given, include bananas and grapes (these interfere with protein metabolism) and avocados should never be fed to reptiles.

Dust all food with a calcium-rich powder, to ensure adequate calcium intake for strong bones and to avoid metabolic bone disease (MBD) .

Temperature

The cold-blooded chelonians, just like all reptiles, need an external heat source. A guide to suggested temperature ranges is:

Type	Ideal temperature	Minimum at night
Tortoise (terrestrial)	79- 100 Fahrenheit (26 - 38 Celsius)	60 Fahrenheit (15 Celsius)
Terrapin and turtle (aquatic)	77 - 95 Fahrenheit (25 - 35 Celsius)	60 Fahrenheit (15 Celsius)

For aquatic species, the water should be monitored using a submersible thermometer, rather than checking air temperature alone.

Feeding aquatic species

Putting food into the water causes considerable contamination, which means the tank needs cleaning anywhere from one to three times a week. Therefore it is a good idea to remove terrapins into a separate container for feeding, which keeps the main aquarium cleaner.

Late spring and summer

Chelonians enjoy being outdoors, and sunlight provides the perfect source of UV for them. However, if you put chelonians outdoors, never underestimate their ability to escape. Many species can climb over barriers up to 12 inches (30 cms) high, so ensure all fencing is adequate to keep them in!

Make sure tortoises have access to water in a bowl or tray, but the water should be no deeper than the tortoise's chin. Also, provide a wooden shelter for the tortoise to escape the direct sunlight.

Another factor to consider is predation by cats, dogs, foxes or racoons. These animals can cause considerable damage to the chelonian, so do not leave you're chelonian unattended or make sure there is a cover over the run.

Hibernation

Make sure the tortoise is healthy

Many species of chelonian hibernate through the winter months. However, only fit healthy tortoises should be allowed to hibernate, or they may have insufficient body reserves to wake in the spring.

Think of this as a car battery with an insufficient charge to start the vehicle. In this case the "battery" is the tortoise's energy reserves in terms of sugar and calories.



When he tries to wake (turning the engine over) there just isn't enough juice to make this happen. The result is a tortoise that is sluggish, weak and refuses to eat. This leads to a steady downhill spiral that can eventually lead to the tortoise passing away. To avoid this, make sure your tortoise is healthy with the following checks:

- Make sure the tortoise is eating well, up until it's time to prepare him for hibernation
- Have a vet check out the tortoise's weight against his shell length ([This is the Jackson-Cooper ratio, and is the tortoise equivalent of a BMI [body mass index] - it predicts whether the animal is a good weight for his size)
- Check the tortoise is active and energetic
- Check his nostrils, mouth and eyes are free from discharges.

If all of the above points are fine, then your pet is safe to hibernate, if not - keep the tortoise awake over the winter.

Overwintering an awake tortoise

Rather than let the tortoise slow down and hibernate, keep him awake by mimicking summer conditions. Do not allow the temperature to fall where the tortoise is kept, which means providing a heat lamp. Also, make sure a light source stays on for at least 10 hours a day.

If the tortoise was unwell (highly likely because he is not fit enough to hibernate) providing a UV source can help strengthen his immune system, provide vital Vitamin D and therefore help his appetite.

Preparations for hibernation

If your tortoise is healthy, then stop feeding him one month prior to hibernation. This ensures his gut is empty and there is no material fermenting in his tummy whilst he sleeps.

You need to provide a safe and secure place for the tortoise to hibernate (a "hibernaculum") that is insulated from extreme temperature fluctuations and he cannot be preyed on by vermin. The best choice is two plywood boxes, one inside the other, with the gap insulated with straw or bubble wrap. Line the inner box with plenty of straw to insulate the tortoise. In addition, make sure there is a maximum-minimum thermometer inside the hibernaculum. Once your tortoise is in hibernation the perfect temperature is around 41 Fahrenheit (5 Celsius).

Temperatures below freezing can result in frostbite damage to the tortoise's eyes and limbs, whilst above 50 Fahrenheit (10 Celsius) the tortoise may wake and burn precious energy stores. If you notice this has happened, consider waking the tortoise out of hibernation by warming him and if he doesn't eat within 24 hours, seek veterinary attention.

Waking your tortoise

It is best to take control and wake your tortoise after a maximum of 5 months, even if he is still asleep. This prevents him draining his reserves whilst asleep, and not having enough energy to wake safely. To do this, bring the box into a warm room and slowly expose the tortoise to raised temperatures.

Once he is awake, give him daily warm baths. This encourages him to excrete waste products that have accumulated in his system over the winter months, and to drink and rehydrate himself. Offer fresh food right away and most healthy tortoises will eat within 48 hours of waking.

17.4: Snakes and Lizards

Snakes

If you have not kept a snake before, but the idea appeals to you, then do your homework first and make sure you can supply all the animal's needs. Bear in mind that snakes can live a long time, for example the Corn snake lives up to 20 years -so maybe consider if such a long-term commitment is for you. Snakes such as the Garter, Milk or Corn snakes are the ideal starter snake as they are friendly, if handled regularly, and are more straightforward to care for.

The snake set-up

Captive snakes do best in a vivarium. Whilst they do not have a specific need for UV lighting (unlike lizards) they do need a heat source. Take care, however, when using heat lamps that the snake cannot contact the hot bulb and burn himself. Because snakes are cold-blooded they need heat to move around and control their body temperature by selecting the warm or cooler end of the vivarium along a temperature gradient.



- *Temperature:* The ideal temperature gradient is from 30C (86F) at the warm end to 24C (75F) at the cool end, with a night-time drop of 5C (41F). If you get this wrong the snake won't feed, will gradually weaken and become ill.

- *Humidity:* Different snakes need different humidities. It is important to do your research and find the ideal amount of moisture in the air for your species. If it is too dry or too moist it can lead to skin problems and infections. Snakes do however, favour moisture when shedding. One way around this, if your snake is a Corn snake that prefers a dry atmosphere, is to offer a box with damp moss inside. The snake can then enter the box and rub on the moss should they want to. You measure humidity in the vivarium with a hydrometer.
- *Size:* The vivarium size matters because many snakes will feel stressed in an enclosure which is too big for them. As a rule of thumb, the ideal size is about half the body length of an adult snake of that species.
- *Water:* Provide a water bowl. Whilst the snake may not drink regularly, he may bathe in the bowl - hence it's important to make sure it is cleaned out regularly.
- *Security:* Make sure the vivarium has a tightly fitting lid. Snakes are consummate escape artists and will wriggle out of the smallest gap.

Feeding

Snakes are carnivores. Their diet depends on the species and ranges from small insects up to mice, rats and rabbits. Mammals are not fed live but supplied frozen. Allow the frozen mouse to come up to room temperature (do NOT microwave to defrost) before feeding. It is a good idea to feed your snake in a separate feeding box rather than the vivarium, so that when you open the vivarium door he doesn't associate you with food and strikeout. Likewise, it is a good idea to tweezer-feed the defrosted mice, so that a hungry snake doesn't strike out at your hand.

How often the snake eats depends on his age and how active he is. A young active snake needs feeding once or twice a week, whereas a laid-back adult is fed just once every seven to ten days. Most snakes lose interest in food when they are shedding, so decrease the frequency of feeding accordingly.

Cleaning the vivarium

Snakes tend to defecate one or two days after eating. What they produce is usually dry and can easily be scooped out of the vivarium and a spot-clean done. Do a complete clean every two to three weeks, including the hides and any vivarium furniture, but make sure that everything is dry before putting the snake back inside.

Lizards

Those commonly kept as pets are skinks, chameleons, Iguanidae, water dragons, geckos and bearded dragons. Most are insectivores, although some species (Bearded dragons and green iguanas) can adapt to a vegetarian diet as adults. Each species has specific requirements in terms of a temperature gradient, feeding, hides and care - so do your research before taking on your pet.

Popular pets

Leopard geckos are arguably the easiest reptiles to keep, but don't be fooled into thinking these little fellows have short lifespans because they can live up to 20 years. They have a reputation for being docile and don't object to being handled when treated gently. Leopard geckos originated from hot arid areas of India and hid away from heat during the day to be active at night. Again, this means they are not as dependent on UV as other reptile species, but even so experts recommend a UV light source during the day to better mimic conditions in the wild.

Bearded dragons are another excellent starter reptile, with a lifespan of about ten years.

They are easygoing fellows and full of character.

They most definitely do require a good UV source, but the payoff is that they are active during the day.

UV requirement

Unlike snakes, most lizards need a reliable source of UV light. This is because they use the UV to manufacture Vitamin D, which is crucial to a healthy appetite and strong bones. Without UV the lizard will suffer from a condition called MBD (metabolic bone disease). Signs of this include weakness, poor mobility and the lizard not being able to raise his body and stand in the proper way because his legs are too weak to take his weight. Taken to its ultimate end, a lizard with severe MBD has bones that are the consistency of rubber and little can be done to help this unfortunate animal.

Again, it bears mentioning that even if you provide a UV source, it needs to be within six to eight inches of the reptile, otherwise the rays drop off too much to be useful. In addition, the emissions decay off as the fluorescent bulb ages and it must be replaced at least every six months.

Calcium dusting

Most foods are calcium deficient in lizards, so dust locusts, crickets or any other food with calcium-rich powder, prior to feeding to the lizard. This makes sure the lizard has enough calcium in their diet, so that it can be taken up by the body and used to grow and maintain healthy bones.

Obesity

As with any animal it is possible to overfeed your pet reptile, which can lead to obesity. In the wild, most reptiles do not eat every day and so their metabolism is geared towards regular "starve" days. In the artificial world of a vivarium it is easy to forget this and overfeed a pet, leading to excessive fat reserves, which may then impair liver function.

A woman with long brown hair, wearing a light-colored sweater and blue jeans, is sitting and holding a ginger and white cat. She is smiling and looking down at the cat. The background is a blurred indoor setting with a white shelf. A large teal circle is overlaid on the right side of the image, containing the text.

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MODULE 18: Diseases on Reptiles

18.1: Recognizing disease and what to do

Many of the health problems in reptiles are the result of incorrect husbandry. Getting and keeping the environment correct is of huge importance for keeping reptiles healthy.

Health problems are difficult to diagnose and can be tricky to treat. The following is by no means an exhaustive list but gives an overview of some of the common conditions, their cause and the action required.

When your reptile is sick, seek the help of a veterinarian experienced with reptile species.

Problem	Possible cause	Appearance	Action
Burns	Direct contact with hot rocks or the heat lamp	Dead tissue sometimes with underlying muscles exposed	Make the source of the burn safe. Seek veterinary attention
Skin infections (especially aquatic reptiles)	Incorrect water pH Water contaminated with faces Incorrect water temperature	Slimy appearance to scales, discharge, or sloughed areas of skin	Correct the aquatic environment Seek veterinary attention
Tail shedding (especially skinks and geckos)	Natural response to a threat or danger	Tail separates from the body	Monitor for signs of infection
Trauma	Being dropped	Paralysis (if spine was broken) or lameness	Seek veterinary attention
Red mites and ticks	Environment contaminated	Red dots or blue-grey bubbles attached to the scales	Permethrin - under veterinary instruction
Mouth Rot	Poor nutrition	Cheese-like exudate in the mouth	Vitamin injections, antibiotics and a change of diet

Chronic regurgitation	Parasitic infection	Food brought back after eating	Deworming treatments
Appetite loss	Wrong temperature Wrong method of feeding Infections Egg laying Coming up to a shed	Weight loss and lethargy	Correct environmental factors and, if still not eating, seek veterinary help
Foreign body	Eating substrate	Lack of appetite, regurgitation, lethargy, weight loss	Veterinary attention
Abscesses	Previous penetrating injury or wound	Hard, raised swelling	Veterinary attention