

Health and welfare information about your cat from Vetlexicon Felis.



Cat communication

Despite their popularity as companion animals and their long association with people, cats are often misunderstood. Domestic cats evolved from a small, solitary and territorial predator (the African wildcat) that rarely met other cats and therefore did not need to develop a complex visual communication system, such as dogs and humans. This difference in social behavior can sometimes be confusing for owners. However, cats do communicate their feelings and intentions with each other and with us, using a variety of different ways, including visual, tactile and vocal signals.

Visual signaling

Cats communicate visually via behaviour, body postures, facial expressions, and piloerection (bristling of the fur). Although often very subtle, facial expressions are very important in conveying information; we should therefore be paying particular attention to changes in the position, or movement, of the eyes, ears, whiskers and mouth.

Ears

Erect and forward facing ears usually indicate a relaxed or alert cat. Flattened ears are most commonly associated with fear while rotated ears often signal frustration, both of which can result in aggression if the antagonist does not retreat.

Eyes

Dilated pupils (under normal light conditions) are usually a sign of increased arousal, which could be related to a range of feelings including excitement, fear, anxiety and frustration. Looking at the pupils in conjunction with other parts of the body will help decipher what the cat is feeling.

To avoid conflict with each other, cats will initially avoid looking at each other directly. However, if they do come into conflict, staring can be common. Therefore, looking directly at a cat may be interpreted by the cat as threatening. Broken eye contact with a slow blink rate (ie can visibly see blinks) and winking, sometimes with half-closed eyes is seen in non-threatening situations and may indicate contentment in the cat.

Whiskers

When a cat is in a high state of emotional arousal its whiskers spread out and point forwards, whereas when a cat is relaxed the whiskers are less spread out and point directly outwards from the face. A frightened or nervous cat on the other hand may flatten its whiskers back against the side of its face.

Mouth

Frightened facial expressions may also be accompanied by lip-licking and exaggerated or very visible swallowing.

Tail positions and movements

Tail positions and movements can also help to communicate different moods or intentions. The 'tail up' position, where the tail is held vertically, sometimes with the tip of the tail curled to one side, is generally recognized as signaling friendly intent when a cat approaches another cat, animal or human. Forward, upright ears and relaxed whisker position normally accompany this friendly gesture, which also often precedes allorubbing, where the cat rubs its body against another. A relaxed cat will otherwise have its tail extended or loosely wrapped around the body.

A defensive cat may thump or thrash its tail, while adopting a crouching position or even lying on its side. In more extreme cases, the tail may be held up, accompanied by piloerection to make the tail and therefore the cat appear bigger. This piloerection can often continue along the spine as well and is commonly associated with an arched back, which may also indicate that the cat is feeling defensive.

Cats often use staring and physically blocking access to control the movement of other cats. This type of passive aggression is easily missed by owners.

Rolling is a behavior that can sometimes be difficult to interpret how the cat is feeling as it occurs in several situations. Cats can roll on their backs and expose their abdomens in defensive situations. Touching a cat in this situation could result in an aggressive response. At other times, rolling is used to elicit tactile contact and is therefore a friendly behavior.

Tactile communication

Cats also use touch to communicate with other cats and other species, including people. Friendly tactile communication includes allorubbing, allogrooming and sleeping/resting in physical contact.

Allorubbing is when a cat rubs its, face, body or tail against another cat or person. Nose touching can also occur during friendly greetings. Allogrooming is when a cat grooms another cat or person. Both of these behaviors will also involve chemical/olfactory communication as they promote the exchange of scents and chemical signals (pheromones) between individuals. Cats also only sleep in physical contact with individuals with whom they share affiliative relationships.

Vocal communication

Cats also display a wide range of vocalisations which are used during situations of conflict between two individuals, sexual interactions, mother-kitten interactions, and cat-human interactions. Vocalizations can be divided into three general categories: those that are

produced with the mouth closed (murmur sounds); those that are produced by the mouth opening and closing (vowel sounds); and those that are produced with the mouth held open in a fixed position with apparent facial tension.

Murmuring sounds are those vocalisations produced with a closed mouth, including the purr, trill and chirrup and are therefore generally associated with greeting, attention, and acknowledgement. Purring is the most widely recognised of these. Kittens purr while nursing but this behavior is also retained into adulthood, and is thought to be reinforced by owner attention. Therefore, it usually indicates contentment, particularly as it is often associated with other affiliative behaviours such as rolling, allorubbing and allogrooming. However, a second type of purr has been discovered which is thought to be used to solicit attention and care-soliciting behavior. This purr is differentiated from the relaxed purr by a higher frequency component to it which scientists call the cry embedded within the purr. Some cats also purr when in pain although more study is required to discover if and how this purr differs in presentation to the contented and the solicitation purr types.

Trilling and chirruping are also usually used in amicable social interactions, particularly between mother and kitten, but also between bonded adult cats and in greetings towards humans.

'Miaowing' sounds are those that are produced by the mouth opening and closing. Cats can produce a wide range of miaowing sounds, that are used to communicate various information. Cats miaow in cat-human interactions much more often than they do in cat-cat interactions, suggesting that it has been reinforced as an attention-seeking behavior. Miaows are often performed in greeting or to gain access to a resource such as food or to be let outdoors. If the motivation is frustration, then the miaow can be longer (both in bouts and in duration of a single miaow) and more frequent. However, there is much individual variation in miaowing sounds and it is likely that cats learn to tailor their miaows to specific contexts within their individual relationships with their owners. Other vocalizations in this category of vowel sounds include the aggressive howl and sexual female and male calls.

'Strained-intensity' sounds are those produced with the mouth held open and are characterized as growls, yowls, snarls, hisses, spits, and pain shrieks. These vocalizations are all made in association with offensive and defensive aggression. Yowls can be related to the breeding season and be associated with growling, which may be used to intimidate the other animal into believing the cat is larger than it actually is - growls are a low-pitched call, which are generally produced by larger animals. The hiss and spit are primarily used in

defensive aggression.

Understanding cat communication

In order to understand a cat's feelings and intentions it is important to read all of the cat's communication (visual displays, vocalisations and physical contact) together, as they work together to convey specific information. Context and familiarity with individual cats are highly likely to facilitate this understanding as there is some degree of individual variation in communication style.