

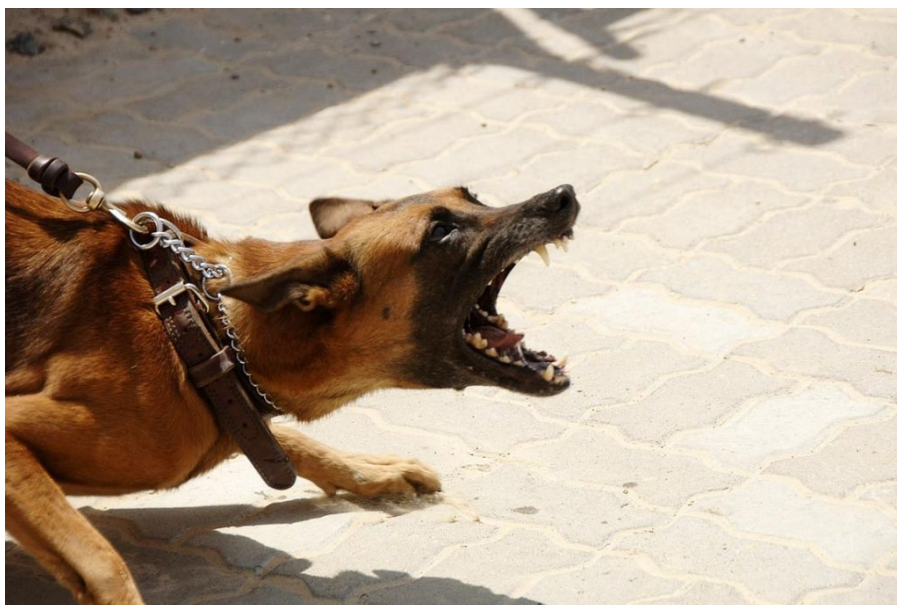
## Do dogs bite without warning – or should we see it coming?

Author : Sarah Heath

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**When owners report their dog has bitten someone, they commonly state it was unprovoked and unpredictable. Veterinary practice staff may recall such incidents as coming “out of the blue”, but is this the case?**



Do dog bites really "come out of the blue?"

To better understand why dogs bite, we need to understand the incident from a canine perspective. When we do so, the bite is, often, not only expected, but may even appear to be a logical behavioural response.

This does not mean the response is acceptable, but offers greater potential to advise to how to avoid future incidents.

### Canine aggression

Canine behavioural responses possibly categorised as “aggressive” can be normal and necessary for survival, so may be appropriate in certain circumstances where the dog’s essential resources are being threatened.

However, for domestic dogs, the circumstances where biting is considered acceptable are few and far between. The topic of canine aggression, meanwhile, raises important issues in today's society.

Public perception of dogs has been badly damaged by the media's attention to dog bite incidents, with a great deal of misunderstanding concerning the issue. The use of the term "aggression" to describe an extensive range of behaviours – from the curled lip to the serious bite – only adds to the confusion.

A lack of understanding regarding the motivation for "aggression", meanwhile, leads to miscommunication between man and his traditional best friend, meaning many myths are born and perpetuated. Then there's the incorrect human interpretation of canine action, which often leads to confrontational measures to deal with biting – and tension between the species.

## Looking for guarantees

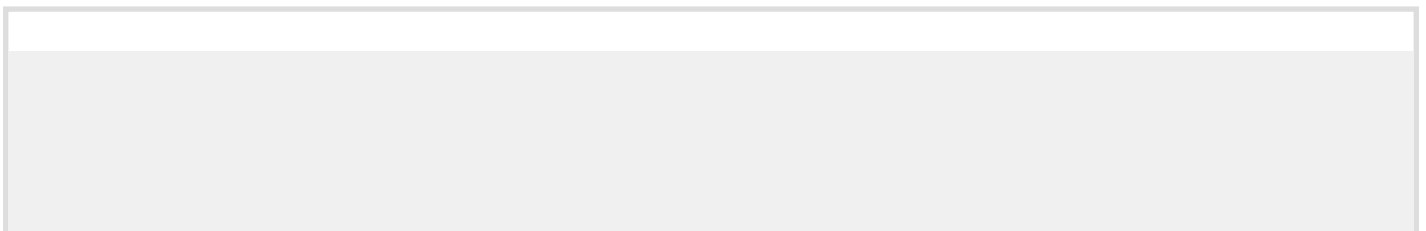
In light of the serious potential consequences of a dog bite, it makes sense to focus efforts on preventing these incidents and understanding where and when they are most likely to occur.

Prevention makes sense as, once a bite has happened, all of those involved – the person bitten, the owner or keeper of the dog, veterinary staff, police or the dog – will be adversely affected either through the injuries sustained, the legal processes invoked or the potential for the dog to be seized, incarcerated and maybe even euthanised.

The perception of a dog bite incident, and the assessment of potential successes on the prevention of future incidents, can vary considerably. Since aggression is a potentially normal form of behaviour, it can be argued it is impossible to cure; many owners, members of society, police officers and judges seek guarantees dogs will never show aggression, no matter how acutely they are provoked.

Unfortunately, the only way to get such guarantees is to euthanise the animal, but such an approach disregards the potential to understand the emotional motivation for the behaviour, as well as the role of context. For example, humans are potentially violent and aggressive creatures, and we cannot guarantee people will never show aggression, no matter how acutely they are provoked.

## Prevention







**Top:** To predict behavioural responses, it is important to watch for subtle signals of negative emotional arousal – ears pulled back, staring eyes, tension around the muzzle and increased respiratory rate.

**Bottom:** Increased muscular tension is evident, and staring has intensified. The dog is starting to snarl and curl its lip.

Traditionally, the approach to human aggression has been a reactive one, with punitive measures implemented after the incident has occurred.

The concept of prevention has improved through better education and better mental health care, but there is still a long way to go.

In the veterinary context, we are only just starting to embrace the importance of mental health in our patients and the potential to influence it positively through appropriate rearing, experiences and education.

Humans should be able to see the bite coming in the majority of incidents, but this will never be

achieved without appropriate education of all of those involved with dogs, including:

- breeders
- owners
- trainers and dog day care owners
- dog walkers, sitters and home boarders
- veterinary staff
- police
- local authorities and the courts

## **Why do dogs bite?**

On the face of it, this question may seem impossible to answer and it is true a variety of reasons can exist.

In the past, the reasons have primarily been categorised according to context – when asked why a dog has bitten, people will respond with comments such as “because I tried to move him”, or “because I tried to take something off him”.

While these are contextual descriptions of when and where the incident occurred, they do not answer the question of why they happened.

The answer lies in the emotional state of the dog and its perception of the situation it found itself in.

In the absence of this understanding, erroneous conclusions about the motivation for the bite are based on human perceptions of the context.

For example, a dog biting as someone tries to take away an item is often interpreted as an act of defiance or an assertion of status.

Such an anthropomorphic approach disregards the dog’s perception of the incident, which is determined by its emotional state at the time.

The act of biting – other than in the context of predation, motivated by the emotional system of seeking – is commonly a defensive action motivated by the emotional system of fear/anxiety, which, in turn, is activated by a perception of, or the potential for, threat.

It may also occur as a result of frustration; the emotional system activated by a failure to meet expectations, obtain resources or retain control.

In this context, control retention is a biological need to ensure survival, rather than a self-promotion mechanism, as is frequently the case with humans.

## See it coming



The ears pulled back at the point of attachment to the head, eyes staring and bodyweight distributed away from the perceived threat indicate a negative emotional state and an intention to use an avoidance strategy. The dog is on a lead in an indoor location, so the option to avoid is limited.

Once we understand the act of biting is emotionally motivated, it is possible to predict contexts that may trigger those emotional states.

Some prediction can be based on knowledge of dogs as a species and understanding the contexts that can induce fear/anxiety or frustration.

However, more accurate prediction necessitates an individual approach, since factors such as genetics, early rearing and early life experiences have a very significant role to play in emotional responses.

Efforts in recent years have emphasised the genetic basis of behaviour in terms of breed; we are all familiar with the breed-specific legislation introduced in the UK and many other countries.

This approach is naïve at best and the evidence is clear it does not work. While breed-related

genetic factors undoubtedly influence the emotional motivations of an individual, they are one factor among many.

The reality is successful dog bite prevention must be based on an understanding of the relative importance of all those factors in the individual animal, as it is impossible to be effective in preventing incidents of dog bites without having some understanding of the background of the dog concerned and the situations it will experience.

Such knowledge of the backgrounds and contexts associated with dog bite incidents offers the chance to educate breeders, owners, trainers and veterinary staff about how to rear, own and educate dogs appropriately, with the aim of reducing the risk of repulsion behavioural responses to a minimum.

As biting may be a natural response to a context where the dog is justified to be fearful, anxious or frustrated, it is impossible to guarantee a dog will not bite.

It is, therefore, the responsibility of the humans who care for dogs to ensure the living environment – social or physical – does not justify these emotions.

## Preventing individual incidents



Next, with avoidance being unsuccessful, the dog selects an appeasement strategy by using the tactile sensory channel and leaning into his owner's leg. The level of emotional arousal is increasing while the displacement behaviour of yawning indicates the dog is reaching its emotional

coping threshold.

The key to seeing bites coming in individual incidents lies in an appreciation of the canine perception of the context and ability to accurately determine the emotional state of the animal.

The view veterinary work must be more challenging than medical work because our patients “cannot tell us what is wrong” is common.

This misconception is based on human reliance on verbal communication and the fact our patients do not talk to us in human verbal language.

While this is true, the perception animals do not “tell us what is wrong” is inaccurate – the responsibility lies with humans to learn to accurately interpret the communication of other species, rather than arrogantly assume animals not using verbal language, as we understand it, are incapable of expressing themselves.

Reading body language is the key to dog bite prevention. In most cases, dogs have been desperately signalling their emotional discomfort a long time before the bite occurs.

If this signalling has been overlooked or misinterpreted, the risk of a change in the dog’s behavioural response to one of repulsion is increased.

Without an understanding of what the dog has been “saying”, the bite may seem to come “without warning” and be “unprovoked”.

The reality is the dog has been “warning” by using the only communication available to it. Where these signals are misinterpreted, people may inadvertently increase the probability of a bite by using interactions triggering fear/anxiety or frustration.

## **Profession’s role**





The dog is finding its strategies of avoidance and appeasement are not resolving its anxiety. Therefore, it uses the behavioural response of repulsion. In this case, barking is adequate, because of sufficient distance. However, if this occurs in a more confined context, or the visitor insists on “trying to make friends” with the dog and approaches, the behaviour may escalate.

When we consider the role of the veterinary profession in dog bites, we often concentrate on the challenge of dealing with “aggressive” dogs in the practice, or advising clients experiencing issues with their pets’ behaviour at home or in the wider community.

Veterinary practices certainly have an important role and can advise owners, either directly or through referral, and help in the aim of decreasing negative emotional arousal by dispensing nutraceuticals and pheromones. They may even be involved in prescribing medication in selected cases.

However, to improve the potential for successful dog bite prevention, on a case-by-case basis and on a more global scale, education about canine emotional systems, and the communication signals used to identify them, is crucial.

The scope of such education is enormous; not only dog owners and professionals, but society at large, need to understand.

Such a huge challenge can only be approached in stages and our profession has a responsibility to start this process of education.

Improving understanding of canine mental health in the veterinary community – including veterinary surgeons, veterinary nurses and all practice staff – is a priority.

Only once we have addressed these issues in our profession can we be successfully involved in educating others.