

Humane Society Veterinary Medical Association Devocalization Fact Sheet

Views of humane treatment of animals in both the veterinary profession and our society as a whole are evolving. Many practicing clinicians are refusing to perform non-therapeutic surgeries such as devocalization, declawing, ear cropping and tail docking of dogs and cats because these procedures provide no medical benefit to the animals and are done purely for the convenience or cosmetic preferences of the caregiver. At this point, devocalization procedures are not widely included in veterinary medical school curricula.

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What is partial devocalization? What is total devocalization?

The veterinary medical term for the devocalization procedure is ventriculocordectomy. When the surgery is performed for the non-therapeutic purpose of pet owner convenience, the goal is to muffle or eliminate dog barking or cat meowing.

Ventriculocordectomy refers to the surgical removal of the vocal cords. They are composed of ligament and muscle, covered with mucosal tissue.

Partial devocalization refers to removal of only a portion of the vocal cords.

Total devocalization refers to removal of a major portion of the vocal cords.

How are these procedures performed?

Vocal cord removal is not a minor surgery by any means. It is an invasive procedure with the inherent risks of anesthesia, infection, blood loss and other serious complications. Furthermore, it does not appear to have a high efficacy rate since many patients have the procedure performed more than once, either to try to obtain more definitive vocal results or to correct unintentional consequences of their previous surgeries. Their altered voices have been described with varying sounds ranging from lower, harsher, more muffled to raspy, wheezy, screechy and high-pitched.

Vocal cord removal is performed using one of two alternative surgical approaches:

(1) an oral approach or (2) a laryngotomy approach.

In the oral approach the patient is positioned on his/her stomach and the surgery is performed with instruments inserted through the oral cavity and into the vocal cord region. This approach is less invasive and thus usually less costly, however it is often less successful in terms of achieving its vocal goals and it causes a higher incidence of 'webbing' (vocal cord tissue regrowth) and thus, a higher risk of future respiratory

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problems. For this reason the devocalization procedure is sometimes ‘staged.’ That is, it may be done in multiple separate procedures a few weeks apart, in an attempt to avoid webbing and its consequent partial obstruction of the passageway between the vocal cords.

In the laryngotomy approach the patient is positioned on his/her back and the surgery is performed through an incision directly into the larynx, bypassing the oral cavity entirely. This provides greater access to the vocal cords than that gained with an oral approach. Thus, it involves an *additional* surgical procedure, a laryngotomy, with all its attendant risks, potential complications and requirements for healing. This approach is more invasive and thus generally more costly. It is often performed as a corrective procedure if an earlier oral approach has failed to achieve the desired results or caused unintended consequences.

Because of the area of focus of these surgeries, anesthesia cannot be delivered to the patient in the typical manner via an endotracheal tube placed intra-orally. Anesthesia must be delivered either using injectable anesthetic agents only, or by first performing yet *another* surgical procedure—a temporary tracheotomy. An endotracheal tube is then inserted through the tracheostomy opening, and manipulated from one side of the larynx to the other as the surgery progresses.

What are the surgical risks?

The risks of anesthesia accompany all surgeries. Because the focus of surgical trauma is, in these procedures, the area through which the animal normally receives all air, fluids and food, the recovery of devocalization patients requires particularly close monitoring for hemorrhage, coughing, gagging or aspiration.

Infection is another potential risk in all surgeries. However, devocalization procedures run a higher risk of infection because the larynx and trachea, with their normal resident bacterial populations, cannot be made completely sterile during surgery.

If the blood supply to the larynx and/or trachea is compromised, necrosis or death of the tissues of these structures can occur, and may result in permanent abnormal narrowing of the passages.

Complications may include the development of scarred vocal cord tissue regrowth referred to as ‘webbing.’ This regrowth can occur as early as a few weeks after surgery. The patient may then regain the ability to utilize the vocal cords to make noise, leading to the possible pursuit of additional corrective surgeries.

Webbing can also interfere with mucus movement, making it difficult for an animal to fully clear his/her throat of mucus, causing chronic coughing or gagging. An irritated tracheal lining can also produce increased mucus, and can sometimes linger as a chronic tracheitis. Nerve damage can cause spasms, weakness and/or paralysis

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of the larynx, leading to a predisposition to aspiration pneumonia. These conditions make future surgeries or other needs for airway access or clearance more difficult for patients. Webbing can also cause increased breathing effort, resulting in exercise intolerance.

Post-operative monitoring and restriction of normal activity is particularly critical after devocalization surgery. This high level of care may be difficult for pet owners to provide without the benefits of extended hospitalization.

Delicate sutured tissue may tear if too much tension or neck movement occurs. The constant normal motion associated with breathing and head movement can inhibit proper healing of the larynx. Swelling and edema can lead to respiratory obstruction and tracheal and/or laryngeal collapse. Excitement, stress and pain can cause the patient to breathe more heavily, and may lead to respiratory distress. Additional care must be taken until the temporary tube tracheostomy, if performed, has healed. Exercise and play with other animals must be restricted for 4 weeks. And finally, a most ironic point: one surgery text suggests that pet owners discourage vocalization for 6-8 weeks after surgery.

Is there pain in the short-term? Is there pain in the long-term?

There is no doubt that devocalization surgery results in post-operative pain and discomfort. Its degree and duration will vary with individual patients, procedures and outcomes. Patient pain can be reduced with the appropriate use of analgesic medications during the recovery period. However, this requires attentive monitoring and vigilant follow-up care, all at considerable cost to the pet owner. Depending on the extent of the surgery and whether there are any complications, pain and discomfort may continue during and can recur after recovery. Serial devocalization procedures performed on the same patient compound the risk of complications.

What are the long-term physical, psychological and behavioral risks to the pet?

Physical

- * Compromised health with possible increased risk of aspiration pneumonia, breathing difficulties, exercise intolerance, chronic coughing or gagging, etc.
- * Increased risk of compromised airway access during future surgeries
- * Increased risk of threats to physical safety because of the inability to ward off threats by vocalizing and alert others to threats or dangers
- * Increased level of stress, contributing to a possible decline in overall health

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Psychological/Behavioral

* Decreased ability to communicate intentions to other animals and people, leading to possible misinterpretation and harm by others or danger to self and/or others

* Increased level of frustration, leading to possible redirected behaviors such as destructive behavior toward property or aggression toward animals or people

Do devocalized pets act out?

Barking and meowing are normal canine and feline behaviors. Dogs and cats vocalize for many reasons. Dr. Nicholas Dodman, Director of the Tufts Cummings School of Veterinary Medicine Behavior Clinic writes, “Dogs bark; that’s what they do. There is always a reason why they bark that should be understood and addressed. A surgical solution is not the answer and furthermore, it’s inhumane.” It is indeed inhumane to deprive an animal of the ability to perform routine behavior on a permanent basis.

Once deprived of these essential behaviors, we can assume devocalized pets experience an increased level of frustration. This ongoing stress may lead to other inappropriate attention-seeking and/or destructive behaviors.

By allowing devocalization, we may disincentivize responsible pet ownership. It is not difficult to postulate that a pet owner who is unwilling to spend the time to address their pet’s vocalization with training and instead seeks out devocalization, may eventually surrender this same pet to a shelter—or worse yet, abandon the animal or seek convenience euthanasia—if devocalization is either ineffective or engenders other inappropriate behaviors. When devocalized animals enter the shelter system, society is burdened with the cost of caring for or euthanizing animals already mutilated by irresponsible caregivers. Furthermore, it may be less likely that devocalized animals will be considered adoptable by the public.

What is the downside to the pet owner?

Dogs and cats communicate their mental states to other animals and to humans through their body language and vocalizations. Fluctuations in the tone, intensity and frequency of their voices communicate a wide range of messages. Devocalization makes it much more difficult for them to communicate clearly.

Pet owners and others may not be adequately warned of an animal’s potential fear or aggression or alerted to impending environmental dangers without the benefit of distinctive audible vocal cues. In these cases devocalization is certainly counterproductive. Furthermore, by pursuing devocalization, people may unwittingly compromise their pets’ future health and incur steeper veterinary medical costs in the long run.

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No pet is perfect. Responsible pet owners solve vocalization issues through humane behavior modification and training. Devocalization may be perceived as a quick fix, but it is not a real solution. Thus, devocalization may enable irresponsible pet ownership. Training pets is not difficult, but it does require time, energy, consistency and a commitment to long-term care and understanding. For those people unwilling or unable to devote time and resources to behavior modification and training, re-homing their pet remains a viable and humane alternative.

Those irresponsible individuals who breed animals illegally, fight them or hoard them may also do so more easily ‘under the radar’ by devocalizing them. We should not enable hoarding, dog fighting and puppy mills, either.

What are alternatives to devocalization?

Unnecessary or excessive vocalization should be interpreted as a symptom and not as a diagnosis. There are numerous possible physical and/or behavioral causes for problem barking or meowing.

Before selecting a pet, potential owners should thoroughly research the typical breed characteristics of the animal being considered. A careful examination of one’s own lifestyle and home environment is also essential. Furthermore, the individual personality and history of the pet should be considered. Without intervention, excessive vocalization tends to escalate over time. The historical duration of the behavior will likely be a factor in the length of time required to reduce and eventually extinguish it.

A thorough veterinary exam with routine diagnostic lab work should be performed in order to eliminate the possibility of predisposing physiological conditions. For example, endocrine disorders or aging changes to the brain may underlie unwarranted vocalization. In these cases, appropriate medical care may provide resolution to the problem. Spaying and neutering are essential to reducing hormone-intensified excitement and aggression which can underlie vocalization behavior. If a pet with problem vocalization has not been spayed or neutered already, that surgery should be performed.

Environmental factors such as loud vehicle or heavy equipment sounds, gunshots, or explosive noises may be triggers. Indoor housing, crate training and soothing white-noise recordings or ambient radio chatter may help in these situations.

Sheer boredom can lead to unnecessary vocalization. Long-term tethering or confinement can contribute to vocalization. Enrichment of a pet’s daily routine with varied housing, regular walks (even by dog-walkers), dog park outings, pet play groups, individual exercise or play sessions, and doggie daycare may all be helpful. Play behavior itself can result in nuisance barking, and pack behavior can also

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escalate barking (some dogs just get others going, so to speak). For these reasons training a pet to play quietly may be necessary.

Experiencing changes in social arrangements and hierarchies, among other pets and people in the household, can be a source of great stress to a companion animal. Stress, phobias, and separation anxiety can trigger vocalization. Perceived threats from other animals or people can trigger fear-based or territorial aggression-based vocalization.

Unusual objects (bicycles, baby carriages, hot air balloons, hat-wearing people) can also be barking triggers. Desensitization and counter conditioning are techniques that can be employed in resolving these situations. Training or retraining in basic obedience is also recommended. Shock collars have been used for many years by some trainers, but they can have very negative effects on a pet's temperament. Citronella collars were developed as more benign alternatives, however they still rely on an aversive approach.

Humane behavior modification, coupled with psychotropic pharmaceutical intervention (if necessary), can help successfully resolve recalcitrant vocalization. These are powerful and sophisticated medical modalities. It is recommended that a pet owner consult a board-certified veterinarian behaviorist who will be best equipped to oversee the application of these resources.

Some References/Resources:

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