

Amputations in Small Animal Surgery

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Amputate: to trim, prune or cut off.

Surgical amputation: to remove part or all of an anatomic structure in a way that causes the least tissue damage and minimizes patient morbidity and mortality. Amputation is generally considered a 'last ditch' treatment when there is no way to restore the affected anatomy to reasonable function.

Indications and examples:

1. Elective (declawing cats or removal of the hind dew claws in hunting dogs).
2. Therapeutic (removal of a severely traumatized or denervated limb, tail or ear).
3. Palliative (local pain control of a limb affected by a non-resectable cancer).

General principles:

1. During pre-operative planning, consider postoperative function of the remaining tissue and lifestyle of the patient. Limb amputations below the elbow or stifle will be prone to trauma if the animal attempts weight bearing on the stump.
2. Economic constraints must be considered but never second-guess owners and recommend amputating something that can be repaired.
3. No one likes the idea of amputation and many owners will anthropomorphize their pet into euthanasia rather than remove a limb. Dogs and cats are three legged animals with a spare; the majority will do extremely well postoperatively.
4. A large area around the proposed surgical site should be aseptically prepared.
5. Minimize trauma to the patient by using anatomic surgical technique and appropriate analgesics.

Forelimb amputations:

1. Can be done mid-humerus or at the shoulder joint but I prefer sub-scapular or forequarter amputations. This technique gives good exposure of the major blood vessels and nerves, does not require cutting bone, reduces the weight on the remaining limb and doesn't leave a prominent scapular spine.
2. Single digits can be amputated without causing much lameness but removing multiple digits from a paw will usually result in a gait abnormality.
3. Carpal or digital pads should be used to protect the remaining distal end when leaving a 'stump'.

Hind limb amputations:

1. Can be done mid-femur, by coxofemoral disarticulation, or hemi-pelvectomy depending on the level of the lesion.
2. Mid-femoral amputations are the most common and may be more cosmetic in male dogs.