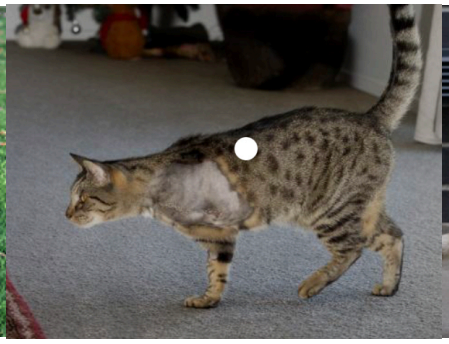
# LIMB AMPUTATION


**OVERVIEW**
The most common location for removing a damaged or diseased limb in dogs & cats is up high where the limb meets the body. This is so that any remaining portion of the leg does NOT become a problem for the pet. Any portion of a limb that remains may become traumatized during daily activities or interfere with movement.

Partial limb amputations & prosthetic (artificial limb) use in pets is a new treatment option for some patients. As with other procedures this is NOT a good option for all pets & all owners. Stump management & prosthetic use requires diligent daily care & attention. Some dogs may need several prosthetics over their lifetime. A specialist referral is require for prosthetic consultation if you would like this option. Further consultation with your veterinarian may result in a referral to a veterinary surgeon to fully explore your options.

**SIGNS & SYMPTOMS**
Amputation may be recommended because of cancer, severe trauma or a birth defect which has resulted in a useless leg. A painful leg, one that is NOT being used, a limb with a wound or fracture that cannot be fixed due to any of innumerable reasons, may need a leg amputation.

**DIAGNOSTICS**
Your primary care veterinarian &/or a veterinary surgeon may recommend additional diagnostics before a limb amputation. It will depend on the reason for the amputation & the age & overall health condition of your pet.

- Blood work—complete blood count, chemistry & urinalysis. Used to evaluate the overall health of your pet.
- X-rays—of the limb to be removed, the one on the other side to make sure it can support the extra weight, chest or abdominal films to make sure there are no signs of cancer.

**TREATMENT**

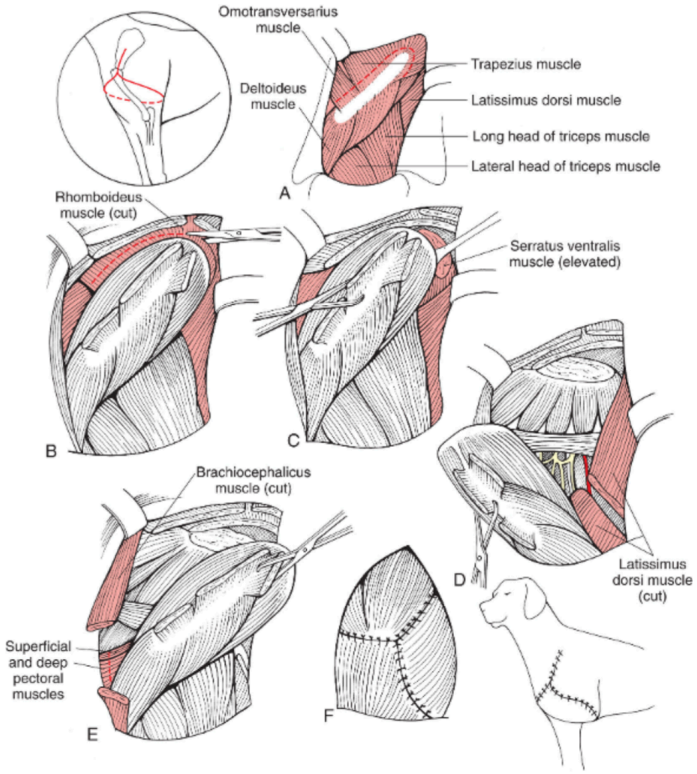
For the front leg, the most successful & cosmetic amputation is by "scapulothoracic disarticulation"—the entire limb is removed from the toes to the scapula (shoulder blade). Since the normal anatomy of the front leg only has muscles that attach the front leg to the chest wall, it is straightforward to remove the limb by cutting these muscles & sewing the area closed. This complete removal creates a smooth, well-padded amputation site on the side of the chest that will not get pressure sores or interfere with movement in anyway.

For the rear leg, there are 2 main techniques that are commonly used. The first is a "high femur" amputation that results in a short, well-padded stump at the level of the rump/thigh. The muscles of the mid-thigh are cut & the femur (thighbone) is cut close to the hip. When the tissues are sewn together, this provides good padding for the pelvis when the pet is lying down & offers a cosmetic appearance by maintaining symmetry of the rump area.

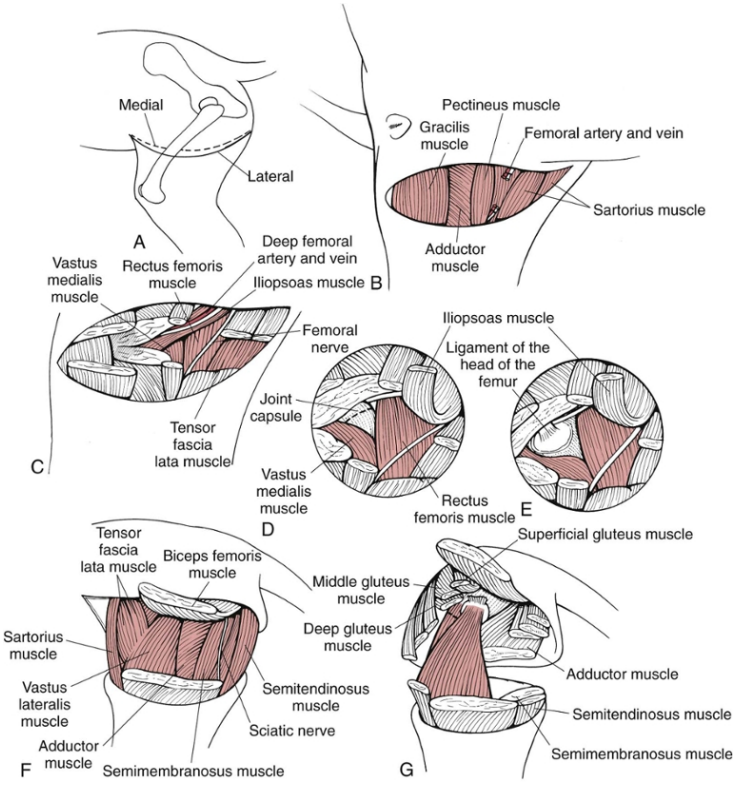
The second technique is often used when the disease of the rear leg is in the thigh area; the leg is removed at the hip joint, only the pelvis & the surrounding muscles remain. This amputation technique is successful as well, with slightly less padding over the amputation site & a less symmetrical appearance.

A third, less commonly, used procedure for hindlimb amputation (typically used for tumors in the upper part of the thigh, hip or pelvis) is a limb amputation with hemipelvectomy, in which part of the pelvis is removed as well. This procedure does change the symmetry of the rump more than other procedures but is well-tolerated.

# Thoracic (Front) Limb Amputation




# Pelvic (Rear) Limb Amputation



# Limb Amputation

**Post-Surgery Discharge**

**AFTERCARE & OUTCOME**

Your pet has had his/her front (thoracic) or rear (pelvic) leg surgically removed. This is a major surgery & you should expect your pet to need 2-3 weeks to fully adjust to being on 3 legs. Most pets do adjust relatively quickly & do well. During the healing time, your pet may experience sudden twinges of pain. This will subside over these first few weeks. After the recovery & adjustment period, dogs generally do very well with their new 3-legged status & normal daily activities, although their agility & endurance may be somewhat reduced.

We gave an epidural (wear off at the end of the night) to your pet prior to surgery & nocita (3-day long lasting bupivacaine) which will help numb the surgical site. Use the oral pain medications (sedation, NSAID (anti-inflammatory) & pain Rxs) liberally to support your pet during this time & do NOT expect or ask him/her to be active. Some patients may also receive antibiotics after surgery at home. Your pet may come home with a Primapore adhesive bandage at the discretion of your veterinary surgeon. An Elizabethan Collar is used in the first 10–14 days to prevent licking or chewing of the incision.

**ACTIVITY RESTRICTIONS x 3-4 weeks**

Exercise restrictions following surgery are recommended to protect pets from injury while they gain strength & coordination after amputation:

- Your pet should be kept in a comfortable, safe indoor location for 24–48 hours until he/she is very steady on his/her feet. Do NOT allow free access to stairs or slippery floors.
- Sling support (7-10 days) can be helpful to assist your pet to rise & balance, especially on slippery or uneven surfaces. Consider rugs/yoga mats on slippery hardwood floors to help.
- For front leg amputees, a sling is placed under the chest.
- For back leg amputees, a sling is placed under the belly
- Avoid any rigorous activity for 3-4 weeks. Short, leashed walks are fine.

-Your pet may be groggy for the next few days. He or she may whine or appear more anxious than usual; this may indicate pain/discomfort or side-effects of the medications. Please call your vet for assistance with medication adjustments or additional pain medication may be needed or return for exam for further evaluation.

-Monitor appetite & attitude. If both do NOT steadily improve over the next 2-3 days, please call your primary care veterinarian or return for progress evaluation & problem-solving.

-You can expect your pet to have a bowel movement within 5 days. He/she may need assistance with posturing to defecate; supporting the rear leg or holding him/her under the belly may be beneficial. Some animals take longer for their first bowel movement depending on when they last ate prior to surgery & when they started eating after surgery. It may be abnormal in color & consistency for 2-3 days. If you have any concerns, please speak with your primary vet.

-Please confirm that your pet has urinated within 24 hours of returning home. If he/she does NOT, or you notice any problems related to urination, please speak with your primary care veterinarian.

**INCISION CARE**

-If applicable, please look at the incision on your pet's hip twice daily. It should be dry, slightly red along the margins & slightly swollen/thick on the edges. Over several days, it should lose redness & swelling.

**COMPLICATIONS**

Gapping (the edges should be exactly touching) --discharge (other than small amount of crusting) --swelling (other than slightly raised skin near edges). Some bruising is normal & will resolve in 5-7 days.

-Do NOT allow your pet to lick or chew the incision. Pets tend to want to lick early in the healing period & this can compromise the incision & predispose to infection.
If necessary, please use an E-collar if you must leave your pet unattended.

- Incisional bruising is common but should improve after several days.
- Seroma or fluid under the skin, may develop near the bottom of the incision for a front leg amputation in the first 2 weeks.
- Infection
- Neuroma formation: Very rarely, nerves that have been cut for amputation will form little masses of nerve tissue that can be painful. This may require additional surgery or pain Rx
- Hernia formation or Hemorrhage (occasionally with hemipelvectomy)

Clients often worry about phantom pain. Pain at an amputation site is NOT common.

The functional prognosis for dogs treated surgically with amputation is considered good.
The majority of dogs return to a high level of activity & endurance for their age.
Following the 4-week recovery period, there are no recommended limitations to their lifestyle.

Rear limb amputees tend to return to near normal mobility; forelimb amputees need to adjust their gait more significantly. For the older pet, learning to move after an amputation may take more time.

Ideally, keep your pet on the thin side of normal his/her whole life. Any minor orthopedic condition can progress with arthritis over time with excessive, wear & tear; carrying less body weight will reduce the energy they must use & will relieve some of this stress on the joints of the remaining 3 limbs.

**PHYSICAL REHABILITATION EXERCISES**

-Week 1 (Day 1, 2 & 3)
Apply ice packs (wrapped in thin cloth) to incision area 2x daily for 10-15 minutes.
Baggies of frozen peas work well for this or make an ice pack by freezing 2 parts isopropyl alcohol to 1 part water in a ziplock bag. Continue 3 days to help with pain & inflammation.

-Week 1 (Day 4, 5 & 6)
Apply hot packs (wrapped in thin cloths) to the incision area 2x daily for 10-15 minutes.

-Week 2 to 4
Gradual leashed controlled walk with support 2-3x daily for 10-15 minutes.
Please provide support when needed. Practice walking, siting & standing on non-slip surface.

**DIET**

-Ideally, keep your pet on the thin side of normal his/her whole life. Any minor orthopedic condition can progress with arthritis over time with excessive, wear & tear; carrying less body weight will relieve some of this stress on the joints of the remaining 3 limbs.

**Good parameters to monitor BODY CONDITION are:**

1) You should be able to feel the ribs & pelvic bones, but NOT see them;
2) Your pet should have an “hour glass” figure when viewed from above looking down;
3) your pet should have a tucked up belly when viewed from the side.

**PROGRESS EXAMS**

-Please return to your primary care veterinarian in ~10-14 days for a progress exam.
Skin healing will be evaluated, sutures (if present) will be removed & any questions you have will be addressed.

**LONG TERM LIFESTYLE**
-The functional prognosis for dogs treated surgically with amputation is considered good
Following the 4 week recovery period, there are no recommended limitations to their lifestyle.

If you have any questions, please feel free to ask your primary veterinarian &/or veterinary surgeon.

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