

## **What to consider regarding a prosthetic for your companion:**

### **Why consider a prosthetic?**

Veterinarians have recommended total amputation whenever catastrophic injuries or tumors affect the limbs of our companion animals. This has been recommended with the best interest of the animal and the most up to date science in mind. Overall dogs and cats can negotiate life missing a limb adequately. This may be because there is no social stigma associated with limb loss and most are motivated to continue a relatively active lifestyle. However, specialists in movement and chronic pain have recognized some unfortunate short and long term consequences. These include breakdown of remaining limbs such as carpus or tarsus collapse; chronic neck and back pain; weight gain; and myofascial (muscle) pain syndromes. Such issues can shorten the lives of animals missing one or more limbs.

In recent years the technology used to fabricate prosthetic limbs for humans has been applied to animals. Originally this was a novelty, but has now progressed to a solid science called Veterinary Orthotics and Prosthetics (V-OP). Animals can adapt to and thrive with prosthetic limbs. By restoring normal 4-leg mobility chronic pain syndromes and premature euthanasia can be avoided in many cases.

### **What patients are amenable to a prosthetic limb?**

The level of injury to the limb is key. The state of technology today allows us to provide a prosthetic limb for the thoracic (front) or pelvic (hind) limb so long as 40 to 50% of the antebrachium (radius/ulna) or crus (tibia/fibula) are present respectively. If less than this amount of limb remains it is not possible to provide a prosthetic limb; however it is possible to support the remaining limbs with an orthosis (protective brace). Please discuss this option with an OrthoPets case manager if your companion is not a candidate for a prosthesis.

### **Are you and your companion animal candidates for a prosthetic limb?**

Most dogs, many cats, and a number of other species adapt very well and quickly to the use of a prosthetic limb. Use of a prosthetic limb does not typically require an extraordinarily tolerant animal except in the case of some cats. The ability to sit quietly while the limb is checked and the prosthetic is applied is usually a simple matter of training. Orienting to the prosthetic limb, learning to walk properly in the limb as well as learning to negotiate the environment are all accelerated with the help of a certified veterinary rehabilitation professional.

Although use of a prosthetic limb is a relatively easy healthcare issue, commitment to lifelong care of the residual limb and the prosthetic limb is imperative. Like any animal with a chronic health issue, the disabled animal requires daily attention and maintenance. The residual limb must be checked daily for skin irritation or breakdown. Activity while wearing the prosthetic limb must be monitored to limit excessive activity. The prosthetic limb must be kept clean and in good working order at all times. Your animal needs regular health care including at least twice annual check ups with your prosthetist. Fortunately, the time commitment and costs are not overwhelming when you consider the chronic health issues and costs associated with full limb amputation.

You do not need to live within driving distance of a certified V-OP professional. Through the use of technology and the internet even patients in remote areas can get a “leg up” with a prosthetic limb. Through the OrthoPets virtual clinic we can provide prosthetic limbs by using telemedicine. Email, video, and virtual appointments allow us to participate in the assessment, fitting, and monitoring of your animal.

### **How to chose a veterinary prosthetist**

At this time there are no certification programs for V-OP. When choosing a prosthetist the following issues should be addressed:

1. Is the prosthetist certified? The certifying organizations for human prosthetists are the American Board of Certification- OP (ABC) and the Board of Certification and Accreditation (BOCA). These are voluntary certifications and as such not all prosthetists are adequately trained and certified.
2. What is the prosthetist’s veterinary caseload? Does the prosthetist work with animals exclusively or work with animals as a side business? Working with animal patients is not the same as human patients because of the different biomechanics of the quadruped (4-leg animal). Therefore, a prosthetist should have a great deal of veterinary patient experience before providing a device for your companion animal.
3. Does the prosthetist have a close working relationship with a veterinarian who can provide consultation and guidance with regard animal health, mobility (4-legs), behavior, wound management, and rehabilitation?

The team at OrthoPets has cared for veterinary patients exclusively for the past 8 years. Our team is led by a certified orthotist/prosthetist, Martin W. Kaufmann, and a double board certified veterinarian, Patrice M. Mich. By combining their knowledge, skill, and creativity, they have helped 1000’s of animals take the next step in an orthosis or a prosthetic limb giving their human families hope.

### **What role does rehabilitation play?**

Human beings receiving a prosthetic limb undergo professional rehabilitation. This level of care is important to animals with prosthetic limbs as well. Most dogs quickly adapt to a prosthetic limb. Behavioral techniques can facilitate this. Even so, like human patients the veterinary prosthetic patient will need to learn basic skills. These include: learning to recognize the ground through the prosthetic, learning to step up and clear obstacles, transitions (sitting, lying down, and getting up), stairs, getting into vehicles safely, managing on different types of surfaces (ground, carpet, hardwood floor, etc.). Depending upon the level of amputation rehabilitation may be more complex. Typically higher levels of amputation (above the tarsus or carpus) present a more challenging rehabilitation process. Additionally, limb loss leads to compensatory abnormal movement and associated muscle strain and weakness. The best way to ensure the highest level of success with a prosthetic limb is to follow a rehabilitation schedule. Each patient’s condition and abilities are unique and as such an individualized rehabilitation program is needed. OrthoPets strongly advises working with a certified canine rehabilitation professional (CCRT or CCRP). Please consult your family doctors or surgeon for referral to a veterinary rehabilitation professional in your area.

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