

Is a Tarsus Orthosis the right solution for you and your pet?

Injury to the tarsus (hock or ankle) can be complex because the joint itself is complex. The tarsus is composed of 4 joints arranged in 4 levels: 7 tarsal bones, 2 crural bones (tibia and fibula), and 4 (rarely 5) metatarsal bones below. There are multiple ligaments holding this structure together, and the Achilles Complex plays a key role in limb function.

Injuries can occur at any of the joints (tarsocrural, talocalcaneal, talocalcaneocentral, calcaneoquartal, cetrodistal, and tarsometatarsal); additionally, any of these associated bones can be displaced (luxated) or fractured. Injuries to the Achilles complex and associated joint ligaments are also common.

Clinical signs of tarsal injury include lameness, swelling, plantigrade or “dropped hock” stance, and mal-alignment. Mal-alignment can include hyperextension of any of the tarsal joints, and/or increased angling of the paw toward the midline (varus) or away from the midline (valgus).

Minor injuries will resolve with rest and a temporary splint. Check our OrthoPets UPETS splints: upets.vet. More severe injuries require surgery and/or an orthosis. Common surgical approaches include repair of Achilles complex or large ligament injuries when possible, screw fixation of fractures of the larger bones, partial or complete fusing of the tarsus so that it no longer bends (articulates).

Orthosis options include devices with and without paw segments and devices that bend and those that don't. The design of the device depends on the type and severity of injury. An orthosis is considered an excellent option when surgery requires temporary support, or is not appropriate, not necessary, or not possible.

Some tarsal injuries amenable to a custom tarsal orthosis:

- Achilles complex injuries – please speak with a Specialist for more information regarding device designs and protocols for a successful outcome with using a custom orthosis to treat Achilles complex injuries.
- Tarsal/intertarsal fractures
- Tarsal hyperextension
- Tarsal medial and lateral collateral ligament injuries
- Intertarsal instabilities
- Tarsal IMPA
- Tarsal arthrodesis
- A wide variety of paw/digital injuries and instabilities

Because an orthosis is not the correct therapy for all patients, before choosing an orthosis the following points are important to keep in mind:

- 1. Device design is paramount to success.** Careful consideration is taken when choosing a device design. Important clinical variables surround use of a paw segment and whether articulation by way of hinges is possible. Please speak with a Specialist for more information.
- 2. The device MUST be put on and removed daily.** Because an orthosis stabilizes the joint from the outside, rather than the inside like surgical correction, is important to follow the exact wearing schedule provided by your veterinarian. Wearing schedules vary with type and severity of injury.
- 3. Adjustments are expected and are a normal part of the custom orthosis process.** The device is custom-made for the pet and every effort is made to accurately fit the device. If adjustments are required, it will be necessary to ship the device to OrthoPets with a turnaround time of 4 business days excluding shipping time. Please monitor the pet's leg regularly and contact OrthoPets promptly if you have concerns.
- 4. Follow-up is critical to success.** An orthosis is considered a “durable medical device.” This means that proper use is necessary to meet therapeutic goals and to ensure its safe application over the lifetime of the pet or the duration of injury healing. Regular rechecks with a veterinarian are recommended.
- 5. Rehabilitation.** Most pets adapt quickly to wearing an orthosis, and behavioral techniques can facilitate this. The pet will also need to learn basic skills while wearing the device, including but not limited to: transitions (sitting, lying down, and getting up), stairs, getting into vehicles safely, and navigating different types of surfaces (ground, carpet, hardwood floor, etc.). Finally, orthopedic injury leads to compensatory abnormal movement and associated muscle strain and weakness. The best way to ensure the highest level of success with an orthosis 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).