



## **Holy Swollen Toes Batman! What happens when the bandage comes off and the orthosis goes on**

Many orthosis and prosthesis patients are in a bandage with or without a rigid splint for days to weeks prior to fitting in their new device. These bandages serve a very important structural support purpose. They also compress soft tissue and restrict fluid (blood and lymph) flow. This can cause a problem when bandages are removed. The laws of physics (hydrostatic pressure if you really want to dig into the nitty gritty) dictate changes in flow when pressure is relieved. You can think of this like opening a dam. The top of the bandage was the dam (or tourniquet) and when it is removed fluid pools below the dam. This is especially true in animals' limbs due to gravity. It's all quite normal.

If nothing is placed on the limb after bandage removal this excessive fluid pooling is not particularly noticeable or uncomfortable and will resolve in a few days. However, if an orthosis or prosthesis is placed on the limb the straps compress the fluid distended tissue and significant swelling can occur (also like a tourniquet). The paw can even double in size. Along with this swelling comes some irritation and sometimes itchiness. Animals will often lick the swollen digits or leg causing skin breakdown (abrasion), leakage of the offending fluid (serum) from the skin, and in worst cases skin infection if licking is not prevented. This is a particularly concerning problem for orthosis patients who must wear the device 24/7. How do we get them through the first 24-48 hours wearing the device and still prevent these aggravating complications? The key is to be prepared; it's a good idea to make the transition on a weekend for closer supervision.

### **What to do:**

- 1) Know this may happen and prepare
- 2) Plan to take many breaks from the device throughout the first 24-48 hours (every 1-2 hours) even through the night
  - a. No weight bearing allowed if prevented by your therapeutic plan!
  - b. Massage the limb from the digits up
  - c. If your dog will lie on his/her back for belly rubs this is great for fluid drainage
- 3) Use an e-collar and a sock to keep your patient from licking
  - a. Close supervision is best because some dogs can lick around an e-collar
- 4) Loosen straps a bit, but be careful not to loosen so much as to lose corrective control of the device
  - a. Walking Paws Rehab can guide you in this regard.
- 5) Limit exercise to multiple short (5-10 minute) leashed walks. Walking a little helps move fluid, walking a lot causes excessive swelling.
- 6) If skin breakdown is occurring (red, oozing, hot), contact your veterinarian immediately.