

My family is in the midst of dealing with the human medical insurance system on a topic that quite literally requires someone to click a box on a form. Instead of one person taking five minutes to review the data and click the box, it has taken/is taking/will take 5 PEOPLE 5 DAYS to achieve the same goal. Just think about the cost savings (never mind the time and adrenaline and gastric acid savings) of “**Do it once, do it right!**”

It is in that vein that I offer up these *Tips and Tricks* on several orthopedic topics this month! (Just wanted to preface my frame of mind for you 😊)

HIP LUXATION TRIANGLE

<https://directvetsurg.com/wp-content/uploads/2018/08/DVM-Morbidity-Hip-luxation.pdf>

If you want to “wow!” your clients with magic hands, integrate the Hip Triangle into your physical exam/triage for an injured or lame pet. Once you get used to it, you will absolutely love the ease of it.

TTA XRAY AT STANDING ANGLE

Accurate radiographs are key to accurate surgery which is key to optimal outcome. So, everyone involved is a weak (or strong!) link in patient management for a TTA procedure. *To support the diagnosis of a ruptured ACL* (and ruleout other bad juju), one needs two views of the stifle (lateral and AP). Other than actually lateral and actually AP positioning (and the absence of a prepuce over the joint!), no specific technicals are needed for this stage of radiographs.

*To make quality preoperative measurements (for a TTA), an actually lateral stifle with the stifle at 135 degrees (the “standing angle” of a dog leg) is ideal. (Save time and money and hassle, and make your diagnostic stifle lateral ALSO a preoperative measurement stifle lateral!) **Attached is a printable diagram of “135 degrees” for training purposes.***



PATELLA VS. ACL IN OLDER TOY BREED

<https://directvetsurg.com/wp-content/uploads/2018/08/DVM-Morbidity-Patella-lux.pdf>

When your medical record notes say that a toy breed patient has had non-clinical luxating patellas for her/his entire life, and s/he is now 9 years old, think **“Cruciate!”** when they hobble in with an acute lameness. The loose knee caps are just a *red herring*, perhaps made slightly looser by the capsule distension created by the effusion of an ACL rupture. Surgery is targeted at the ACL instability, and a little nip and tuck gets the patella flying straight!

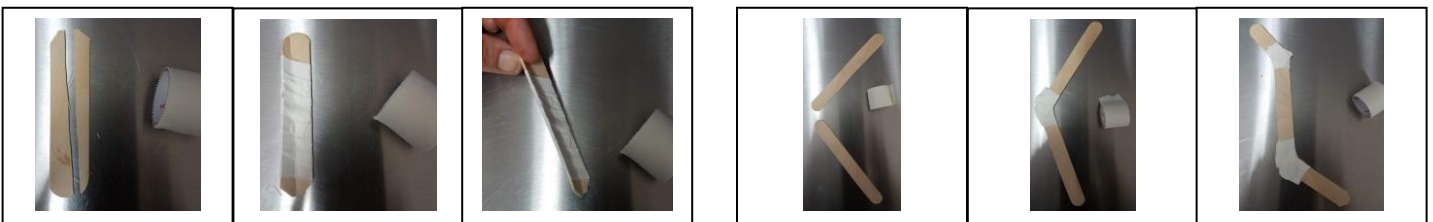
TOY BREED SPLINTS (AND PUPPIES/KITTENS TOO)

I have removed more splints that outweigh the patient to which they were attached than I can count. Not to sound glib...but this is just silly. Two things are working against healing here...

- 1) abundant cotton prevents actual rigid immobilization because the leg is swimming around in the puffy stuff; and/or
- 2) the splint material is WAY over rigid for what the tiny bone needs for stability.

Both of these issues are not helping healing, and they are directly contributing to bandage complications, headaches, hassles, patient discomfort, grumpy clients, etc. (And, bottom line, it uses up more of your supplies!)

Tongue depressors are our friends in these cases. (Or as a colleague said recently, “that popsicle stick thing you were yammering about”) Whole or split in half lengthwise, trimmed to length, taped together to customize a shape and, *VOILA*, you have a perfect sized, perfect rigidity, cheap little device. Most common applications for me are feet (MC, MT, phal frxs), hocks/distal tibia, carpus/distal radius. (See photos taken during construction of a couple of splints.)



TTA POSTOP DRAWER/THRUST

Dynamic vs. passive stabilization...that's the difference between the TTA/TPLO concept and the extracapsular (lateral suture, ligament "replacement") concepts for treating ACL rupture. Translate that to mean...when a dog is walking on a TTA/TPLO augmented knee, the dynamic force of "tibial thrust" is being off-set. When same said dog is lying down, and her/his knee is under your palpating hands, cranial drawer is quite obvious. (What!?)
Yep,

Now, when a dog is walking on an extracapsular lateral suture augmented knee, the dynamic tibial thrust is off-set AND the passive drawer under your hands is off-set (well sorta, that's a whole other story...)

Just sayin!

PUPPIES AND SPLINTS

Broken puppies don't need much! And they don't need it for very long! Mutter that to yourself when you are collecting supplies and writing up go-home instructions for that little three-month old punkin' with the broken tibia. Splints cause as many, if not more, problems as the fracture itself. Make sure you are counselling owners of this under-appreciated fact when they are heading home with "just" a splint repair (vs. surgical repair).

Don't get me wrong, I am a strong advocate of splinting as a treatment option for select juvenile long bone fractures. They can do extremely well. It's just not the "easy" treatment so many folks think, and careful application, monitoring and attention to wear time/healing must be employed for an optimal outcome.

General guidelines:

(for more on splinting, see <https://directvetsurg.com/orthopedic-emergencies-part-2/>)

Less is more. Close fitting, precisely applied, non-bulky splints with appropriate (but not over the top) rigidity are essential to optimal splint effectiveness.



- Cut your cast padding (and Vetwrap) down to 1” rolls to make it a more precise application to a tiny chihuahua leg.
- Use “Specialist Cast Padding”; you will fall in love.
- Custom create your splint material. The prefabbed products are all lousy (ok, broad statement, but close!) They are either too rigid or poor fitting and hard to cut/customize. Tongue depressors and 3M casting tape are all you need to stock.

Standing angles are most comfortable and physiologic. Don't make a rearlimb look like a forelimb; give it its knee and ankle angles. Everything is growing in there, so when they are held rigid at abnormal angles, bad things are created.

Baby bones are eager beavers. They will heal while you chat with the owners over a plan! Complete radiographic union and mature remodeling are NOT our targets for taking off the splint. The goals are clinical union (i.e. no movement on palpation, no pain on palpation) and early radiographic bridging callus (extrapolate what it looks like from 2 views; it does not need a 360-degree wall, just vigorous activity talking across the gap). Send them in to me for a quick peak if you want additional feedback to make your decision. Lots of variables involved, but rough numbers...

- 8-12wks old, 1-3wks wear
- 16-20wks old, 2-4wks wear
- 24-36wks old, 3-5wks wear

If you ever have questions about the bones, feel free to give us a call...lots of drive-time to chat!

Lara Marie Rasmussen, DVM, MS
Diplomate, American College of Veterinary Surgeons
Direct Veterinary Surgery, LLC



Standing Angle for Lateral Preoperative Radiograph
Used to Measure for a TTA procedure

