## THERAPEUTIC EXERCISE FOR THE NEUROLOGICAL PATIENT Laurie Edge-Hughes, BScPT, MAnSt(Animal Physio), CAFCI, CCRT

## **The Canine Fitness Centre**

Calgary, Alberta, Canada www.caninefitness.com

- 1. PNF patterns: Visualize and perform a passive running pattern with the dog's front or hind leg be aware of stimuli under the pad of the foot when appropriate in the cycle. PNF patterns not only help with range of motion, but they are naturally ingrained pattern of movement and will also stimulate the neural pathways and aid in neural regeneration or reprogramming. What other patterns of movement does a dog have??
- 2. Vibration: The use of a small electrical vibrator can help to stimulate muscle contractions in neurological cases
- 3. Ice massage: Works in the same way as Vibration
- 4. Tapping: Fast and steady tapping over a muscle belly can lead to muscle contractions as well as stimulus of neural receptors in the muscles and tendons.
- 5. Postural Reflexes: Hopping, Parawalking, Wheelbarrowing, Directional Rolling over a Physioball
- 6. Weight bearing techniques listed above
- 7. Treadmill exercise: This is useful because the therapist can then direct and appropriately place the affected foot/ feet or leg(s) while the animal is walking, but the therapist does not need to follow the animal around while in a hunched position to do so!
- 8. Underwater treadmill or supported swimming
- 9. Supported Standing
- 10. Rhythmical stabilizations: Have the animal stand to balance and rhymically push on the animals hind (or front) end to try to cause a displacement...push only hard enough that the animal is able to resist and return to the normal alignment for standing
- 11. Ball Rocking: Drape the Neuro dog over a ball and proceed to rock the ball slowly from side to side to elicit paraspinal contractions.
- 12. Tensor bandaging: wrapping the tensor gently around both the front and hind limbs. This just helps to create awareness and connection between the front and hind end.
- 13. Joint Compressions: Hold the limb from above a proximal joint and below the joint distal. Compress the two together along the line of the bone in between. We are not

trying to cause joint movement with this technique – only a compressive force. However, it is acceptable to perform this technique in varying ranges of joint motion. This stimulates awareness and blood flow to the joint but also stimulates extension of that joint.

- 14. Joint Distraction: stimulates flexion of the joint or limb.
- 15. Tactile sensory stimuli: Any sensory stimuli you can provide to the superficial skin receptors is beneficial. So brushing, gently pulling the hair or rubbing the hair in the wrong direction. Zig zag petting. Also tapping, mild pinching, or picking up the skin.
- 16. Tellington Touch: This is a technique of touching the skin (enough to also move the skin) in small circles. A Circle and ¼ is what is described. Starting your circle at 6 o'clock and ending after a full circle and beyond at 9 o'clock. Various hand / finger positions are described but any stimulus in this manner is useful.
- 17. Clapping over the body (with the hand in a cupped position so as not to slap)
- 18. Wringing the limb: Gently move your hands circumferentially around the limb of the animal as though you were ringing out a wet towel gently, up and down the limb.
- 19. Acupuncture / Acupressure / AcuTENS / Laser Acupuncture
- 20. Craniosacral Therapy Techniques
- 21. Education in Lifestyle Management during Recovery: no jumping, no stairs, non-slip flooring, perhaps raising the food and water bowls
- 22. A neurologically impaired animal may require a cart or sling. Some trade names include:
  - **♦** Canine Carts
  - ♦ Walkabouts
  - ♦ Eddie's Wheels
  - ♦ Doggon Wheels
- 23. Support as necessary. Splinting may be required. I have tried to make some of my own splints using PVC (plumbers) pipe, padding, duct tape and bandaging material, I have also utilize an occupational therapist for creation of splint. You can custom make a splint by using a light casting material by Orthocast, casting it on, cutting it off, hole punching it and lacing with shoe laces for a removable splint. Orthovet is a company that manufactures ready-made splints. (www.orthovet.com)