The Role Of Physical Rehabilitation in Veterinary Medicine

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Veterinary Physical Rehabilitation

- Fairly Recent Trend (2000) University of Tennessee
- Public Awareness of benefits in the human field
- Canine Benefits
  - Arthritis, hip dysplasia, post surgery, orthopedic and neurological conditions, “age and stage deconditioning”, soft tissue injuries, overuse injuries, sporting dog injury
  - Wellness aspects include weight control, cardiovascular fitness, agility and sporting dogs conditioning
- Feline and equine benefits also
Modalities

- Underwater Treadmill
- Gait Analysis
- Class 4 K-Laser and Cold Laser
- Ultrasound (therapeutic and diagnostic)
- Tui-na and Massage
- Exercise Program Development
- Splinting, custom bracing, supports, hobbles, carts
- Home assessment
- Therapeutic Balls, Fitbones, Discs
- Home Programs for Walking and Exercises
- Passive Range of Motion, Stretching, Myofascial Release
- Spinal and Joint Mobilization
- Essential Oils
Underwater Treadmill
Underwater Treadmill Properties

- Temperature of water
- Depth of water
- Speed of treadmill
- Duration of treadmill
- Direction of gait
- Buoyancy
- Resistance
- Refraction
UWTM SESSION 1 FOR RILEY
UWTM SESSION 6 FOR RILEY
Gait Analysis

- Walk, Trot, Run and Gait Transitions
- Stride Test
- Stand/sit, Stand/down, Hop Tests
- Single leg stand, Curb Stretches
- Circles, Figure 8’s and Zig Zags
- Stairs
- Curb waves and Slope waves
- Backward and Sideways Walking
- Hills
WALKING GAIT
SIT, DOWN, STAND, WALK
SIT, DOWN, SIT, STAND
DOG IN STANDING POSITION
Canine sit with CCL deficiency—look at the spine especially on the left
K-laser and Cold Laser

K-Laser

- Class 4 Therapeutic Laser
  - Infrared light source
  - Targets chromophores on the mitochondria
  - Decreases inflammation, pain, and promotes healing
  - Excellent for joint problems, muscle problems, skin wounds and healing
  - Power measured in Joules

Multi-Radiance Cold Laser

- Anti-inflammatory
- Tissue repair
- Reduce pain
- Reduce swelling
- Blue light for infection, wounds

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- Infrared light source
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K-LASER FOR SHOULDER
SMILES ALL AROUND!
Ultrasound/Electrical Stimulation

USES LIGHT WAVES TO PROVIDE DEEP HEAT TO HELP REMODEL SCAR TISSUE, DECREASE PAIN AND INFLAMMATION, INCREASE MOTION

MEASURED IN W/CM²

IMPORTANT IN MEDICAL MANAGEMENT OF THE DEFICIENT CCL.
DIAGNOSTIC ULTRASOUND
SOFT TISSUE

MUSCLE

TENDON, LIGAMENT

JOINT CAPSULE AND
SURROUNDING
STRUCTURES
Diagnostic Ultrasound/Surgery

- **Diagnostic Ultrasound:** Soft tissue, muscle, tendon
- **Echogenicity:** the way the ultrasound wave is reflected back to the transducer. Compares tissue in relation to other tissue or as compared to its “normal state”. Change in pattern can reflect a problem. Looks for fiber disruptions, mineralization, irregular attachments, loss of fiber alignment, thickening and fluid accumulation.
- **Shoulder arthroscopy (scope)**
- **CCL – TTA, TPLO, Extracapsular, Tight Rope, TTO (a “little of both” of the TTA and TPLO)**
- **FHO – Femoral Head Osteotomy**
SPINAL AND JOINT MOBILIZATION

PASSIVE MOVEMENT OF THE ARTICULAR SURFACES TO DECREASE PAIN AND IMPROVE JOINT MOBILITY

REGAIN MOTION/GLIDE AT LOCAL LEVELS

IMPROVE GAIT MOTION
Tui-na

- Chinese Medical Massage and Manipulation Technique
- Dates back to the Ming Dynasty
- Focuses on the whole body, manipulates meridians and acupoints and encompasses over 200 techniques
- Tui-na works by stimulating acupoints and channels leading to promoting blood circulation, removing stasis, restoring injured soft tissue and correcting abnormal location of bone and soft tissue
PASSIVE RANGE OF MOTION
MASSAGE: increase circulation, reduce inflammation and pain
Range of Motion, Passive Stretch
THE FAMILY THAT MASSAGES TOGETHER.....STAYS TOGETHER!
CATS LOVE REHAB AND MASSAGE TOO!
Exercise Programs

- Home exercise programs will vary from case to case
- Based on diagnosis, age of animal, companion or working animal, agility sport dog
- May include therapy discs, fit bones, wobble boards, cavaletti, various terrain
- Will focus on core and limb, static and dynamic movements for strengthening, proprioception, balance and endurance
- THERE IS NO COOKBOOK TREATMENT!!!
STABALIZATION EXERCISES
INFLATTABLE EXERCISE EQUIPMENT
Custom Bracing
MEASURING FOR A CART TO ASSIST WALKING
ESSENTIAL OILS AND FLOWER ESSENCES
The Integrated Practice

- Integrating Conventional and Holistic Modalities
- Keeps Your Pet Healthy the Natural Way
- Combines traditional medicine with acupuncture, physical rehabilitation, herbals, essential oils, flower essences, and modalities
- Consider the whole picture: lifestyle, history, health status, age, breed, home environment
- Nutrition
- Traditional Chinese Veterinary Medicine
ATRIUM WHITE WATER CLUB!!!
SWIMMING IS GREAT EXERCISE ESPECIALLY WHEN YOU ARE LOOKING GOOD!!!!!!!!!!!

THANK YOU FOR ATTENDING TONIGHT!!