Optimizing Performance in the Canine Athlete: Advances in Canine Sports Medicine

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Sports Medicine aka Performance Medicine

- Physical fitness
  - “The ability to perform”
- Performance injuries
  - Prevention
  - Treatment
Why Fitness?

- Health
- Performance
Work!
Play!
Behavioral problems

• By exercising their bodies AND their brains can we reduce problems?
Starting a fitness program

• Be SAFE!
• Start slow
Impact of a few extra pounds?

Purina Body Condition Score
1= dangerously thin, 4-5 = ideal, 9=morbidly obese
Figure 1—Survival curves for 24 Labrador Retrievers fed a nutritionally complete and balanced diet (controlled-feeding group) and a second group of 24 Labrador Retrievers, consisting of sex- and weight-matched siblings of the first group, that was fed 75% of the same food (restricted-feeding group).

Kealy 2002 JAVMA
Ideal Body Condition
Not fat, but not fit!
Fun with Fitness

- Warm up!
  - 5 min of fast walking/trotting
- Rub down
SPORTS DEFINITION:

THE CAPACITY OF A MUSCLE OR JOINT TO MOVE THROUGH ITS FULL RANGE OF MOTION
Active Stretches
Active Stretches
Balance and Proprioception

Balance:
The ability of the body to achieve a state of equilibrium, equal weight distribution.

Proprioception:
An awareness of the position of one’s body and it’s limbs in space.
Body Awareness

• “Proprioception”
What’s wrong with this picture?
BALANCE AND PROPRIOCEPTIVE EXERCISES
Strength

Sports Definition:
The ability to carry out work against a resistance
Strength

- Posture
“posture down”
Strength
Cardiovascular

Activity that increases heart rate
Age appropriate cardio
CARDIOVASCULAR EXERCISE: TREADMILL
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TREADMILL SIZE GUIDELINES:

- Running deck 1.5 times body length
- 10” beyond stride length
- Room for drift and gait changes
- Typical human treadmills are 40-60” long
Cool Down!

- Walk it off
- Stretch it out

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Mental
Flexibility
Strength
Cardiovascular
Balance and Proprioception
BRUTUS

HISTORY

• 3 Year old intact male GSD/Belgian Malinois Mix

• Dual Purpose Police K9

• Presented for intermittent bouts of crying out in pain and reluctance/difficulty climbing stairs

• Current medications: Carprofen and Methocarbamol
BRUTUS

EVALUATION

• “Bunny hops” with hind limbs up stairs
• Mild discomfort during palpation over L-S region
BRUTUS

THERAPEUTIC EXERCISE MENU:

• CONTROLLED STAIR CLIMBING
• MONITORING TOOL!

Increase strength, proprioception
BRUTUS

The look on their face when they see the bite sleeve for the first time in a long while..............

Priceless!!!
HISTORY
7 month old intact female Dutch Shepherd
In training as a dual purpose Police K9
Lumbar pain (crying out) on tugging
Hypersalivation

Current medications: Fish Oil
ZOE

- DI: 0.44
- RT: 0.44
- LT: 0.50
**FUNCTIONAL GOAL:**

- Establish if she is “Fit to Work” as a police or detection dog

**REHAB GOALS:**

- Reduce L-S pain
- Improve or at least preserve hind limb strength
- Build overall core strength to support biomechanics

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**ZOE**
REHAB PLAN

- **Control Pain**
- **Therapeutic Exercise**
- **Activity Restriction**
- **Prevent Progression**
THERAPEUTIC EXERCISE MENU:

FLEXIBILITY:
Cookie stretches (on all surfaces), Figure 8s, Paws up, Bow and Counter stretch

PROPRIOEPTION:
Wicket walk, Ladder

STRENGTH:
Sit to Stand, Down to Stand on incline, Backwards walking, Side Stands, side stepping

BALANCE:
Wobble board/surfboard
ZOE

Therapeutic exercise menu:
Initial Restrictions:
Crawl
Chipmunk
Jumping
After 6 months of rehab
Zoe Fitness Assessment
4 months after Graduation
Take Home Starter Plan

Get medical clearance!
Warm up!

Daily active stretches
  – figure 8s, cookie stretches, up-stretch, bow & counter stretch

Start with 3-5 reps, hold for 5-10 seconds
On stable surface
Take Home Starter Plan

Proprioception 3-5 times/week
- feet in a box
- pivot bowl (both directions!)
- backwards walking (also strength!)

Low Cavallettis 10-12 poles, starting distance = to the height at the shoulder

Start with 3-5 reps
On stable surface
Take Home Starter Plan

Strength
3 times/week
Core! –down-stand-down, crawl, balance on air mattress, “posture sits”, “posture downs”
Targeted front or hind limbs

Start with 3-5 reps, hold for 5-10 seconds
Take Home Starter Plan

Cardio
Walks daily
Swim/run/treadmill 3 times/week
Build slowly
Age appropriate

COOL DOWN!