Triaging Equine Sports Injuries

Recognizing and responding to tendon, joint, and bone injuries

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Equine Performance and Rehabilitation
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- Equestrian vaulting, dressage, jumping
- Veterinary University Hannover – Dr.med.vet.
- Michigan State University – Research Scholar
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- Colorado State University – PhD
- Certified Equine Rehabilitation Practitioner
Common Sports Injuries

- Tendon or ligament:
  - Strains or ruptures
- Joints:
  - Fractures involving joints
  - Soft tissue injury involving joints
  - Bone and cartilage fragments
- Bone:
  - Fractures
  - Bruises
Poll Question

What sports injuries has your horse(s) experienced?

A. Tendon injury
B. Joint injury
C. Bone injury
D. Other type of sports injury
E. Never had an injury
Recognizing Sports Injuries

Four Common Signs:
1. Lameness
2. Swelling
3. Heat
4. Sensitivity to pressure
Recognizing Tendon Injuries

- Heat and swelling
- Sensitive to pressure
- Lameness
- Thickening of tendon
- “Bowing” of tendon
Recognizing Joint Injuries

- Joint fluid swelling
- Decreased joint motion
- Pain when flex joint
- Sore in affected limb
Recognizing Bone Injuries

- Lameness
- Heat or sensitivity
- Swelling in some cases
Poll Question

What injuries require immediate attention by vet?

A. Bowed tendon
B. Bone fragment in joint
C. Bone fracture
D. Laceration of flexor tendons
Responding to Sports Injuries

• Which injuries require immediate vet attention?
  • Fractures
  • Breakdown injuries of fetlock
  • Complete laceration of flexor tendons
  • Lacerations extending into joints

• What to do immediately:
  • Call your vet if needs immediate attention
  • Calm yourself and your horse, get to quiet stall if possible
  • Stop excessive bleeding—bandage
  • Stabilize limb if unstable—bandage
  • Avoid touching wounds with bare hands (wear clean nitrile gloves)
Responding to Sports Injuries

• Which injuries require non-emergency vet attention?
  • Bowed tendon
  • Bone fragment in joint
  • Bone bruise
  • Joint swelling without instability

Initial treatment for non-emergent injuries
• Stall rest until have diagnosis
• Cold therapy for 15-20 minutes twice daily if swelling and heat
• Bandaging to reduce swelling
• Phenylbutazone (Bute) as prescribed by your vet
• Treatment as prescribed by your vet
  • Medical, surgical, rehab
How to Administer Cold Therapy?

• Cold water hosing
• Applying ice
• Commercial cooling units
Poll Question

How long do you have to apply cold therapy for it to be effective?

A. 1 minute minimum
B. 5 minutes minimum
C. 10 minutes minimum
D. 15 minutes minimum
E. Who knows?
Ins and Outs of Cold Therapy

- Anti-inflammatory effects
- Can cause frostbites!
  - Skin appears blanched
  - Reddened skin is ok
- Don’t use over open wounds or necrotic tissue
- Not the best for muscle recovery!
Bandaging – easy peasy?!

- Re-usable materials
  - Quilts
  - Polo wraps
  - Commercial bandages

- One-time use materials
  - Sheet cotton, roll cotton, combine
  - Conforming gauze
  - Vetwrap, Coflex
  - Elastikon
Poll Question

Is it true that there is a right and a wrong direction to wrap a bandage on a horse’s leg?

A. Yes! Always pull the wrap towards you over the front of the leg.
B. Yes! Always pull the wrap towards you over the back of the leg.
C. No! Either direction is fine, as long as all layers are wrapped the same direction.
Bandaging – easy peasy?!

• Rules of Thumb
  • Appropriate padding
  • About folds...
  • Tightness of bandage
  • Preventing slippage

• Process
  • Gather your materials
  • Have your horse restrained
  • Let’s go!
Diagnosis and Treatment of Injuries (by vet)

- Tendon/Ligament injuries
  - Diagnostic ultrasound
  - CT
  - MRI

- Stall rest with incremental exercise program
- Intralesional injections
- Shockwave therapy
- Laser therapy

- Extensor vs. flexor tendon injuries
Diagnosis and Treatment of Injuries (by vet)

- **Joint injuries**
  - Radiographs
  - Diagnostic ultrasound
  - CT imaging
  - MRI
  - Surgical options for fragments
  - Joint injections for synovitis
  - Other therapies

- **Bone injuries**
  - Radiographs
  - Diagnostic ultrasound
  - CT imaging
  - MRI
  - Fractures:
    - Surgical stabilization vs conservative management
  - Bruises:
    - Conservative management
Rehabilitation of Sports Injuries

Goals:
• Decrease pain
• Improve healing
• Maintain some strength
• Support “healthy” movement patterns
• Retrain muscle groups

Therapies:
• Manual therapies
• Stretches
• Therapeutic exercises
• Physical modalities
  • Cold therapy
  • Ultrasound
  • Shockwave therapy
  • Laser therapy
  • Electrotherapy
  • Saltwater therapy
Preventing injuries

• Fatigue = Injury

• Proper conditioning is key to avoid injuries
  • Heart, lungs and muscles respond rapidly to conditioning (within several weeks)
  • Bone, cartilage, ligament, and tendons adapt slowly over many months
Preventing Injuries

• Regular exercise
  • Warm up
  • Stretching
  • Suppling exercises
  • Competition specific exercise

• Conditioning
  • Interval training
  • Competition specific conditioning

• Endurance and Cross Training
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