

Carlson College of Veterinary Medicine  
Department of Clinical Sciences



# Triaging Equine Sports Injuries

*Recognizing and responding to tendon, joint, and bone injuries*

Dr. Stacy Semevolos and Dr. Katja Zellmer  
Equine Performance and Rehabilitation  
Large Animal Surgery

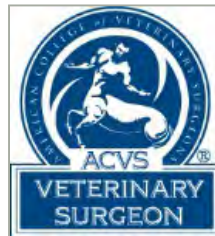


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# Dr. Stacy Semevolos



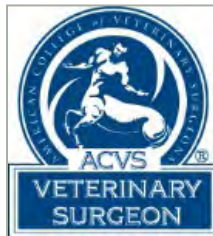
- Grew up in Illinois-Pony Club, eventing, dressage, polo
- University of Illinois-DVM
- Cornell University-Surgery residency
- Professor at Oregon State since 2002
- Certified Equine Rehabilitation Practitioner



# Dr. Katja Zellmer



- Born and grew up in Germany
- Equestrian vaulting, dressage, jumping
- Veterinary University Hannover – Dr.med.vet.
- Michigan State University – Research Scholar
- Virginia Tech – Surgery Residency
- 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?**

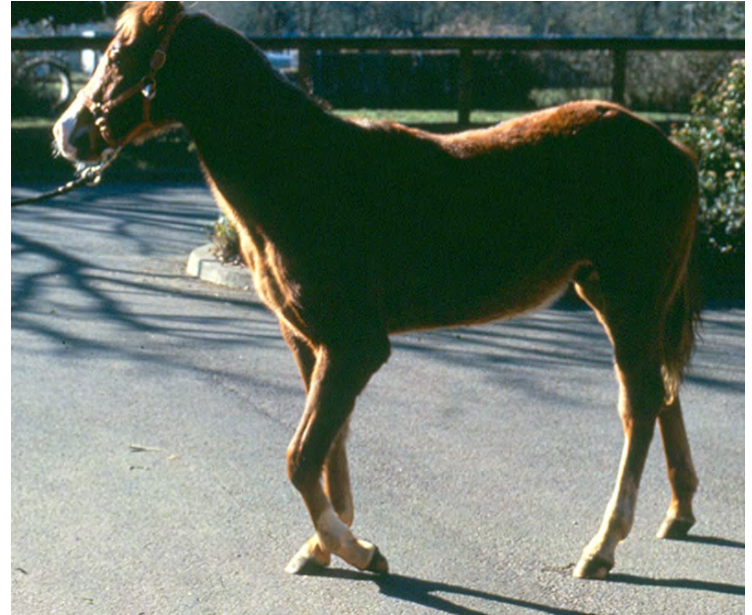
- A. Tendon injury
- B. Joint injury
- C. Bone injury
- D. Other type of sports injury
- E. Never had an injury



# 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
- "Bowling" 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

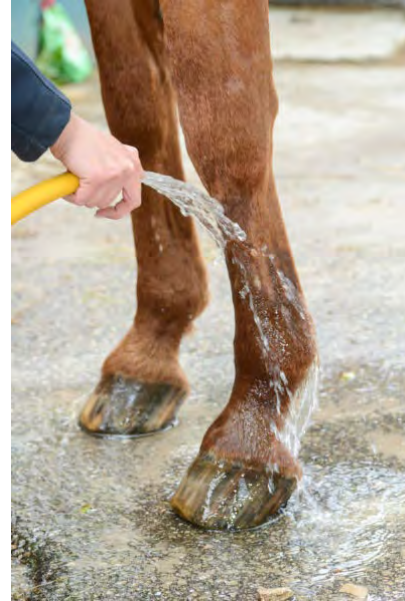
- Which injuries require immediate vet attention?
  - Fractures
  - Breakdown injuries of fetlock
  - Complete laceration of flexor tendons
  - Lacerations extending into joints
- What to do immediately:
  - Call your vet if needs immediate attention
  - Calm yourself and your horse, get to quiet stall 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?



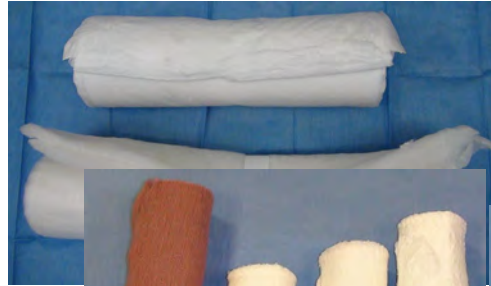
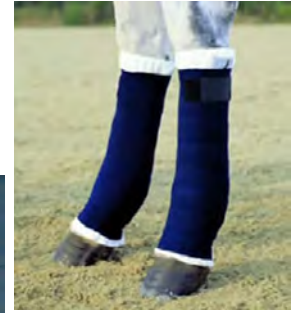
# Ins and Outs of Cold Therapy

- 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?!

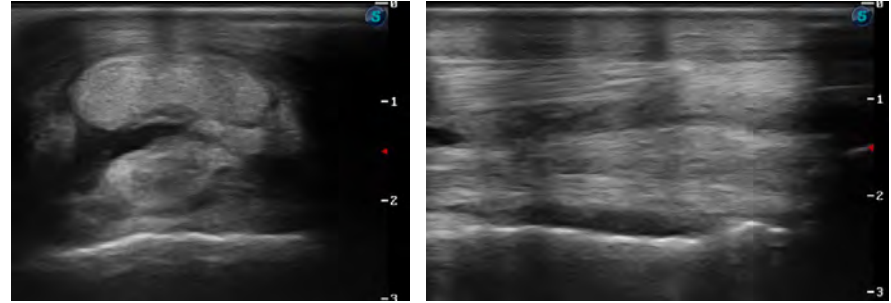
- Rules of Thumb
  - Appropriate padding
  - About folds...
  - Tightness of bandage
  - Preventing slippage
- Process
  - Gather your materials
  - Have your horse restrained
  - Let's go!





# 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





A close-up photograph of a brown horse's face, looking directly at the camera. The horse's eyes are dark and visible, and its long, thin whiskers are prominent. The background is slightly blurred, showing a wooden fence and green grass.

# Questions?



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## Contact Information

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Upcoming Events

# Future FURst Aid

[vetmed.oregonstate.edu/furst-aid](http://vetmed.oregonstate.edu/furst-aid)

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