

Strong in the Saddle: Management of the Equestrian Athlete And Rider

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Equestrian

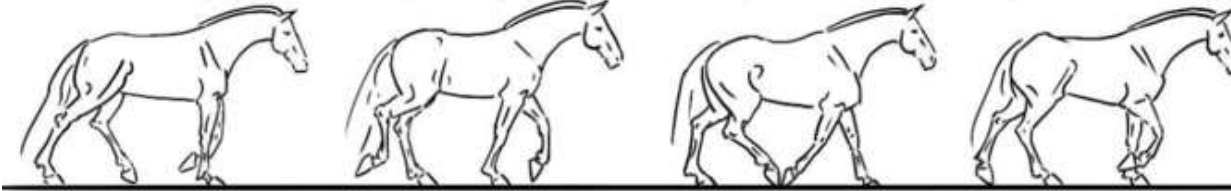


Overview of Disciplines

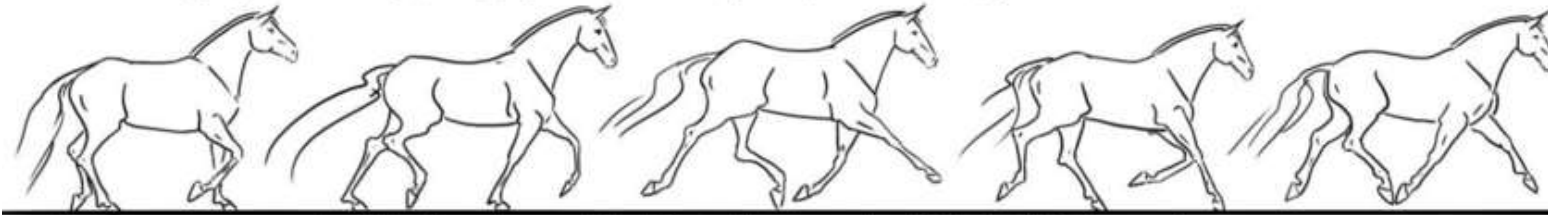


Gaits of the Horse

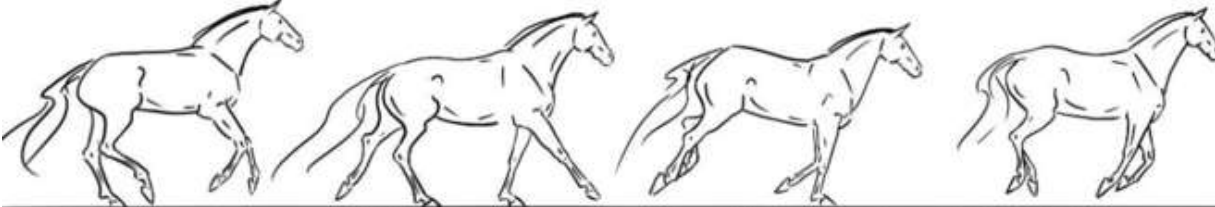
Walk: average speed of 4 mph; roughly 55 strides or cycles (220 footfalls) per minute.



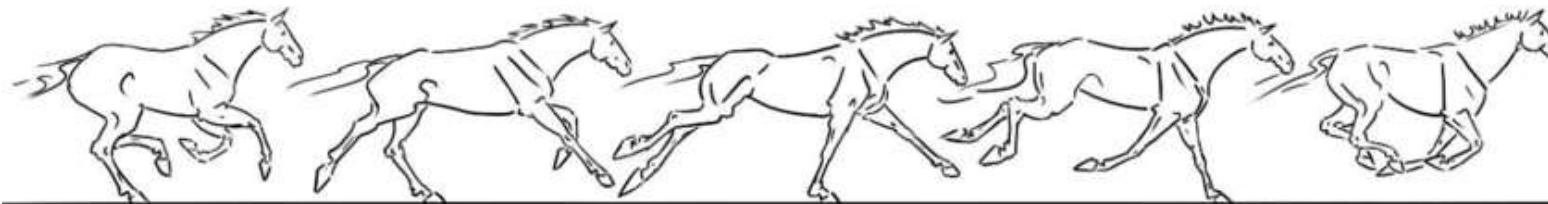
Trot: average speed of 8 mph; roughly 80 strides or cycles (160 footfalls) per minute.



Canter: average speed of 10-17 mph; roughly 100 strides or cycles (300 footfalls) per minute.



Gallop: average speed of 25-30 mph; roughly 135 strides or cycles (540 footfalls) per minute.



Sarah Hamilton Rigg, 2022.



Evidence In Motion

Saddles



Equestrian Seat Western



Equestrian Seat English



Rising/Posting Trot

Equestrian Athlete/Rider Demands

Aerobic Demands

- Increase HR
- Increase oxygen uptake

Anaerobic Demands

- Lactate Response

Strength, Motor Control, Posture

Balance of:

- Strength
- Power Capacity
- Mobility
- Stability

Lee, Jordan Talmadge, et al. "The feasibility of an 8-week, home-based isometric strength-training program for improving dressage test performance in equestrian athletes." *Comparative Exercise Physiology* 11.4 (2015): 223-230.

Austin, Jennifer, and Erin Schneider-Gaal. "A Narrative Review of Physical Fitness and Injury Research in Equestrians." *Internet Journal of Allied Health Sciences and Practice* 23.2 (2025): 22.

Lamperd, Warren, et al. "What makes an elite equestrian rider?." *Comparative Exercise Physiology* 12.3 (2016): 105-118.

Common Injuries in Equestrian Athletes

Acute Injuries

- 1 in 350-1000 riding hours
- 0.49-0.6 Hospitalizations per 1000 hours riding
- 29.7 Severe injuries and deaths per 100,000 participants per year
- 308,820 ER visits in the last 10 years
 - Abrasions, Contusion, MSK injuries
 - Head and Torso

Loder, Randall T. "The demographics of equestrian-related injuries in the United States: injury patterns, orthopedic specific injuries, and avenues for injury prevention." *Journal of Trauma and Acute Care Surgery* 65.2 (2008): 447-460.

Meredith, Lauren, Robert Ekman, and Karin Brolin. "Epidemiology of equestrian accidents: a literature review." *Internet Journal of Allied Health Sciences and Practice* 17.1 (2019): 9.

Keener, M. M., and K. I. Tumlin. "Self-reported acute injury and chronic pain in American equestrian athletes." *Comparative Exercise Physiology* 19.4 (2023): 279-292.

Young, Jason David, et al. "Orthopaedic injuries in equestrian sports: A current concepts review." *Orthopaedic journal of sports medicine* 3.9 (2015): 2325967115603924.

Common Injuries in Equestrian Athletes

Chronic and Overuse Injuries

- Chronic Low Back Pain (20.4%)
- Chronic Hip Pain (FAI)
- Chronic Knee Pain (Patellar Tendinitis)
- Chronic Elbow Pain (Lateral Epicondylitis)
- Chronic Foot/ankle Pain – (Achilles Tendinitis, Plantar Fasciitis)

Common Postural Faults, MSK Impairments and Muscular Imbalances

- Increased Lumbar Lordosis
- Anterior Pelvic Tilt
- Hip Flexor Tightness
- Adductor Tightness
- Gluteal muscle weakness
- Decreased WB ankle mobility
- Decreased Lumbar intersegmental flexion
- Hip external rotator muscle weakness
- Core Asymmetries
- Tight Pectoral Muscles
- Weakness in scapular stabilizers
- Asymmetrical Lower limb use
- Decreased Hip mobility

Manual Therapy

- Hip Mobilizations
- PNF to promote hip extension
- Ankle mobilizations
- Decreased intersegmental flexion in the spine
 - PNF for posterior pelvic tilt

Corrective Exercises

- Dead bug
- Bird dogs
- Side planks
- Step-ups
- Barbell reverse lunge
- Shoulder elevated glute bridge
- Landmine Row
- Hip flexor stretch
- Single leg RDL's
- Adductor mobilization
- Landmine Press while holding another weight
- Eccentric hip flexor lower















Interdisciplinary Collaboration

- Trainer
- Vet
- Saddle Fitter
- Groom
- Etc.

