American Association of Equine Practitioners

Update on the AAEP Prescription for Racing Reform

Dr. Kathleen Anderson

Dr. Nathaniel White

RAISING THE STANDARD IN HORSE HEALTH

Prescription for Racing Reform

10-point plan was developed in 2015
to protect the health and welfare of the racehorse
and help ensure the long-term viability
of U.S. racing.

Prescription for Racing Reform

#1:
Continue support of National Uniform Medication Program in all U.S. racing jurisdictions.

Prescription for Racing Reform

#2:
Ban the use
of anabolic steroids in training.

Prescription for Racing Reform

#3:

Restrict the administration of NSAIDs to 48 hours before racing.

Prescription for Racing Reform

#4:
Pursue uniform regulations
for compounded medications.

Prescription for Racing Reform

#5:
Support implementation of effective security measures to enforce medication rules.

Prescription for Racing Reform

#6:
Support tougher sanctions for rules violators.

Prescription for Racing Reform

#7:

Support the implementation of a national uniform program for out-of-competition testing.

Prescription for Racing Reform

#8:

Create national uniform procedures for veterinarian's list reciprocity.

Prescription for Racing Reform

#9:

Investigate alternative management strategies for EIPH with the intent to eliminate race-day medication.

Prescription for Racing Reform

#10:

When successful in finding a non-race day alternative as efficacious as furosemide, AAEP will support the elimination of race-day medication.

The EIPH Dilemma

Use of furosemide (Salix) to help prevent pulmonary hemorrhage
VS.
Goal of no medication on race day.

EIPH Research Panel: November 2015

Nine research panelists examined the following topics:

- **Epidemiology**
- **Vascular physiology**
- **Venous remodeling**
- **Cardiology**
- **Regional blood flow**
- **Efficacy of furosemide**
- **Regenerative medicine**

EIPH Research Panel Goals

1. Propose and prioritize research that advances the understanding of EIPH in horses.

2. Propose and prioritize research that advances prevention and management of EIPH.

3. Report Panel deliberations and final recommendations.

Our Current Knowledge of EIPH

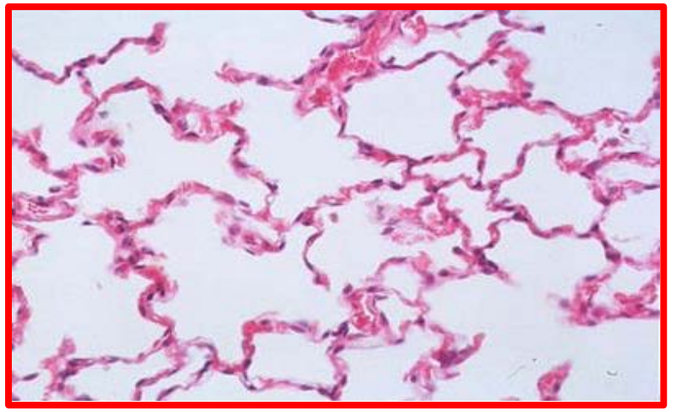
- All horses undergoing acute intensive exercise experience EIPH.
- 50-60% of racehorses have EIPH (based on endoscopy).
- Horses with >grade 2 EIPH have decreased performance.

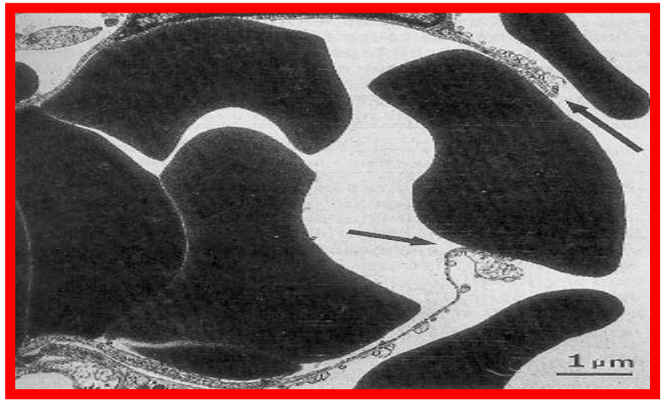
Our Current Knowledge of EIPH

- **Salix decreases the severity of EIPH.**
- **95% of thoroughbreds race on Salix.**

Our Current Knowledge of EIPH

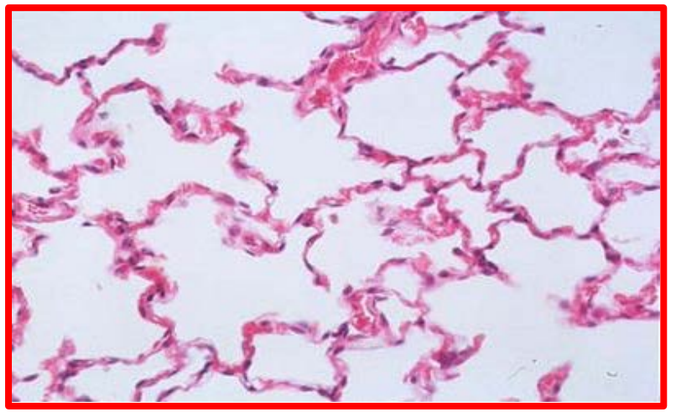
- **EIPH is the result of physiologic response involving the heart and lungs.**
- **The heart pumps 500 liters per minute (132 gallons).**
- **Air flow is 60-70 liters per second.**



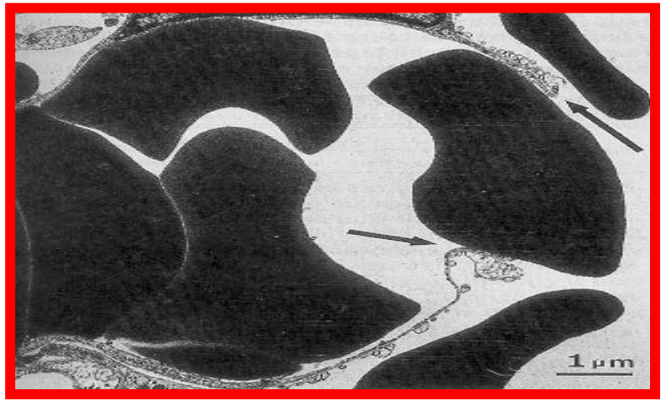


Our Current Knowledge of EIPH

- **Heart overload during strenuous exercise increases back pressure into the lung's blood vessels.**



- **The increased pressure in the lung's vessels and the decreased pressure in the lung airways causes capillary rupture.**



EIPH's Impact on the Lungs

- Lung inflammation
- Lung fibrosis
- Pulmonary vessel scarring
- Permanent damage

Current Grayson-Jockey Club Research Foundation EIPH Projects

- Research conducted in two studies one by Dr. Warwick Bayly (WSU) and one by Dr. Heather Knych (UCD).
- Both projects are evaluating Salix administration 24-hours prior to exercise.
- Horses in these studies have a history of EIPH.
- Evaluation on a treadmill and at racetracks.
- Based on preliminary data which suggests Salix administration 24 hours prior to racing decreases EIPH.

Research Supporters

- AAEP Foundation
- Churchill Downs
- Del Mar Thoroughbred Club
- Keeneland Association
- Kentucky Downs
- NYRA
- Oaklawn ParkThe
- Oak Tree Racing Association
- The Stronach Group
- Thoroughbred Horsemen's Association

Preliminary Results from GJCRF Projects

- **WSU study includes 5 treatments: a control (no treatment), 2 different doses of Salix 24 hours before exercise and restricted water with and without Salix.**
- **Restricted water did not affect EIPH severity compared to controls.**
- **A statistical analysis has yet to be completed on the remaining trials.**

Preliminary Results from GJCRF Projects

- **Phase1: Selected two treatments which appeared to be the most beneficial**
- **Phase 2: These two treatments will be tested during match races at Washington State University racetrack.**
- **Phase 3: The treatment with most potential will be tested in simulated races at Emerald Downs.**

Preliminary Results from GJCRF Projects

- **UCD study is a direct comparison between control horses and horses administered Salix at 4 and 24 hours prior to exercise at race speeds.**
- **Phase 1: 8 of 15 horses have completed this phase on the treadmill.**
- **Phase 2: 15 horses will be tested in simulated races.**

AAEP EIPH Panel Recommendations for Future Research Projects

- **Evaluate the release of cytokines during exercise and the effect with and without Salix.**

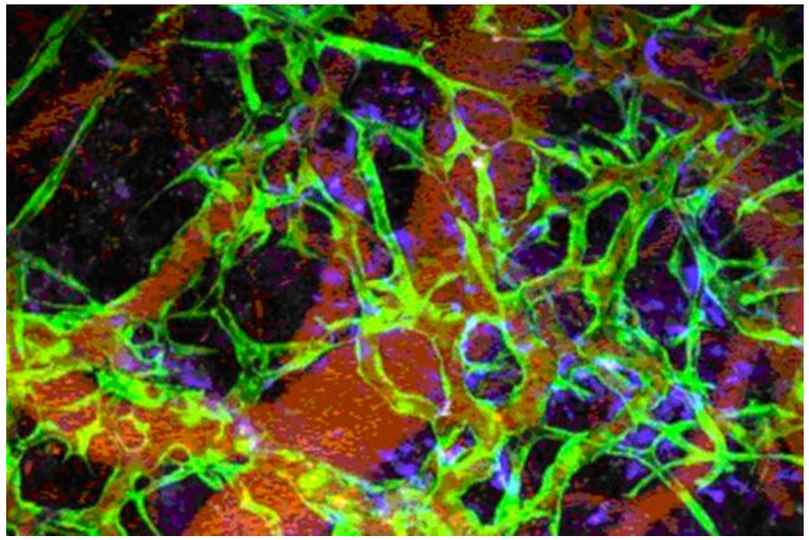
- **Decrease blood volume during exercise to determine if cardiac overload increases pulmonary vein pressure.**

AAEP EIPH Panel Recommendations for Future Research Projects

- **Test the effectiveness of nasal strips in mitigating EIPH.**
- **Examine the difference in blood vessel response to exercise in raced and unraced horses.**
- **Determine amount of EIPH during training.**

AAEP EIPH Panel Recommendations for Future Research Projects

- **Develop biomarkers for lung inflammation from EIPH.**
- **Assess stem cell potential to decrease inflammation and repair damage from EIPH.**



Source: Harvard Gazette July 2013

Next Steps

- AAEP to continue collaboration with GJCRF on EIPH research.
- Speak to the industry about the need for EIPH research.
- Develop an EIPH research consortium to increase research collaboration.
- Seek additional financial resources for research.
- Continue scientific rigor in evaluating research proposals.

Collaboration Leads to Success