Does Lasix Use Result in a Reduced Number of Starts? A Preliminary Evaluation

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Why do we use lasix

- Lasix substantially reduces [80%] the severity of bleeding from Epistaxis/Exercise Induced Pulmonary Hemorrhage (EIPH)
- Lasix virtually certainly reduces the rate of sudden death from EIPH



QUESTION?

What about countries that don't use Lasix?

How does not using Lasix affect the average number of starts per horse?

Germany

and the second states to

- Germany does not allow Furosemide use in racing
- Germany limits breeding program premiums for horses that race on medication



Germany

In Germany, which has a rigorous policy when it comes to breeding stock, a stallion that has raced on medication is allowed to produce registered foals, but those offspring are NOT
 ELIGIBLE to earn breeders' premiums that account for 24% of Germany's purses for 2-year-olds and 3-year-olds and 20% for older horses.

 Source, Bloodhorse article "Breed Integrity" - By Eric Mitchell, June 21, 2011

GERMANY/USA AVERAGE # STARTS



USA

Average Number of Starts Per Horse in a Year



Year

GERMANY/USA

Year	Germany	USA
2002	6.2	6.7
2003	5.9	6.6
2004	5.9	6.5
2005	5.6	6.4
2006	5.4	6.4
2007	5.5	6.3
2008	5.2	6.2
2009	5.1	6.2
2010	4.9	6.1

CONCLUSION

German horses have made fewer starts per year without lasix than American horses DO WITH LASIX.

United Arab Emirates [UAE]

and the state of the state of the state

- UAE defines
 bleeding as blood
 from both nostrils
- No medications are allowed within 48 hours of post in Dubai



Photograph by Adam Mooshian

UAe /USA average number starts



Year

UAE/USA Number of Starts

Year	UAE	USA
2002	3.5	6.7
2003	4.0	6.6
2004	3.6	6.5
2005	3.5	6.4
2006	3.2	6.4
2007	3.2	6.3
2008	3.4	6.2
2009	3.3	6.2
2010	3.4	6.1

CONCLUSION

Horses in the UAE racing without Lasix make considerably fewer starts than American horses with Lasix

Hong Kong

and and the second of the state

- No Lasix allowed in racing or training
- Limited # of horses and breeding
- Limited # horses leads to more starts per horse



Hong Kong/USA average number starts



Hong Kong

and a solution when any support the second

- If furosemide use affected number of starts, we might expect countries without Lasix to have related/similar average numbers of starts ?
 - Does not appear to be the case
 - Hong Kong has high average number of starts
 - Hong Kong has limited number of horses

Canada

Louis Andrew Martines - Al Street to

- Canada allows
 Furosemide on race day
- Data not available for 2008, 2009



Canada/USA average number starts



Canada/USa average # starts

Year	CANADA	USA
2002	5.8	6.7
2003	5.5	6.6
2004	3.2	6.5
2005	5.4	6.4
2006	5.3	6.4
2007	5.4	6.3
2008	N/A	6.2
2009	N/A	6.2
2010	4.8	6.1



Lasix helps prevent fatalities sudden death is most severe EIPH outcome



Approval of Furosemide dramatically reduces epistaxis

Epistaxis cases dropped markedly on approval of furosemide in New York in 1995

New York Bred Data from Jockey Club Fact Book

Starters	Starts	Wins	Earnings	average earnings per runner	average starts per runner
3513	24055	2798	63,677, 618	18,126	6.85

Comparison to "Lasix free" countries starts

Jurisdiction	Average Number of Starts		
New York 2011 - 2010 data not available	6.8 [US 6.1]		
Australia 2010	6.1		
France 2010	5.8		
Germany 2010	4.9		
Ireland 2010	4.9		
New Zealand 2010	5.6		
South Africa 2010	6.2		
UAE 2010	3.4		

Countries with higher average Starts per horse

Country	# Flat Races	Horses	Starts	Average # of Horses Per Race	Average Starts per Horse
Chile	5,172	4,201	53,833	10.4	12.8
Macau	557	638	6,797	12.2	10.7
Peru	1,951	1,541	17,559	9.0	11.4
Turkey	3,920	4,687	42,264	10.8	9.0
USA	46,220	62,458	37,933	8.2	6.1

Probability to race

And Black and the all the states the

- Data shows that the probability of racing has, in fact, risen from 65.8% for the foal crop of 1989 to 72.5% for the foal crop of 2001
- Over a 25-year period the breed average to reach the races was approximately 70% in each year examined, the probability to race for horses entered in yearling sales was approximately 80%, and for horses in 2-year-old sales the probability of racing rose to the upper 80% range.

Source- Jockey Club Annual Round Table Conference, Speaker- Dr. Larry Bramlage

Aged starters

Measure of durability- number of aged starters

Control States and a Contract Line

- Aged horse → Horse over 5 years old
- Number of aged starters is amazingly stable above 30% of the racing population, dipping slightly during the glut of the 50,000-plus foal crops of the mid-1980s but rising again in the last 15 years.

Source- Jockey Club Annual Round Table Conference, Speaker- Dr. Larry Bramlage



why would starts per horse decrease?

some thoughts to consider

field size, starts,

- Starting opportunities are a product of the number of races available times the decision to run; this decision determines the field size
- The field size is determined by the decision of the trainer to run the horse. Field size was nearly static at 9 horses per race for 40 years; then it dropped by 0.7 horses per race in 7 years in the mid-1990s

Trainers influence number of starts

- Top 5% of trainers in 2007 controlled 30% of the starters, 31% of the starts, and accounted for 41% of the wins.
- Win percentage of trainers remain important.
- The demand to fill the 9th through the 14th positions in a race has not risen in 60 years- field size not increasing

If no increase to field size-

If field size does not increase and the number of races run in the USA is decreasing in amount, then average number of starts per horse per year will decrease.

• 4x times more horses raised now than in 1950's

 More horses, fewer races, no increase in field size → fewer starts per horse.

Size of Field and Starts

Year	Starters	Races	Starts	Average Field	Average Starts per Runner
1950	22,388	26,932	244,343	9.07	10.91
1960	29,798	37,661	337,060	8.95	11.31
1970	47,778	56,676	488,326	8.62	10.22
1980	64,506	68,243	593,849	8.70	9.21
1990	89,716	79,971	712,494	8.91	7.94
2000	69,569	60,872	493,682	8.11	7.10
2010	68,235	50,918	417,192	8.19	6.11





Source: Jockey Club Online Fact Book

Why should we continue to use lasix?

- Lasix use does not appear to affect the number of starts per horse
- Lasix protects horses from EIPH syndrome
- Lasix protects jockeys from injuries



Training is more of a factor than Lasix

- Data shows that horses that raced as 2-year-olds raced many more times in their lifetime in each of the years examined when compared to horses that did not race until after their 2-year-old season.
- Average lifetime earnings per starter for horses that raced as 2-year-olds are almost twice the amount earned by horses that did not race as 2year-olds.

Source- Jockey Club Annual Round Table Conference, Speaker- Dr. Larry Bramlage

2 year old racing influences racing career

 Career average earnings per start for horses that raced as 2-year-olds exceeded average earnings per start for horses that did not race as 2-yearolds in every year from 1975 to 2000 examined.

 The percent stakes winners in horses that raced as 2-year-olds is nearly three times higher than in horses that did not race until their 3-year-old year or later.

> Source- Jockey Club Annual Round Table Conference, Speaker- Dr. Larry Bramlage