



# EFTBA Veterinary Newsletter 39



## Shipping Fever nature, causes, effects, and prevention

Fig. 1 Macroscopic pneumonic lesions with dark red in colour at the right cranial lung lobe in a case of Shipping Fever (Courtesy: Maeda and Oikawa)

## Welcome to EFTBA's veterinary newsletter

Dear EFTBA members and fellow European thoroughbred breeders,

On behalf of EFTBA (European Federation of Thoroughbred Breeders' Associations) I proudly present the latest edition of our Veterinary Newsletter, which has been well researched and produced by Dr Hanspeter Meier, a member of the federation's Veterinary Advisors Committee.

In the previous edition Dr Meier discussed the transportation of thoroughbreds. In this edition, he takes us through a side effect of transportation, namely Shipping Fever and the studies into it.

Dr Meier documents the history and clinical picture of the disorder, including symptoms and examination, which he thoroughly researched. This research includes reference to a Captain Horace Hayes, who in 1902 documented the shipping of warfare horses between the years of 1889 - 1901. This edition aims to make breeders au fait with the disorder as well as the best treatment and prevention of it.

We thank Dr Meier most sincerely for his time and total dedication given to the production and publication of all 39 editions of the EFTBA Veterinary Newsletters.

EFTBA continues to represent and work for approx. 23,000 thoroughbred breeders right across Europe, who in turn sustain over 150,000 jobs in the European breeding and racing industry.

I would like to take this opportunity to wish all European breeders the very best with the remaining sales of 2021.

All the best

*Joe Hernan*

Chairman, EFTBA

## Editorial

In the last newsletter, we occupied ourselves with the most important issues of transporting horses – above all in regard to their soundness. As already mentioned there, even if we try to transport them as well as possible, health risks still do exist, especially the so called "Shipping Fever". This is a disease of the respiratory tract which empirically can affect just about any travelling horse. This risk certainly is reason enough to get as familiar as possible with the nature and means of prevention of this disease.

*Dr Hanspeter Meier*

EFTBA veterinary advisor & Newsletter editor

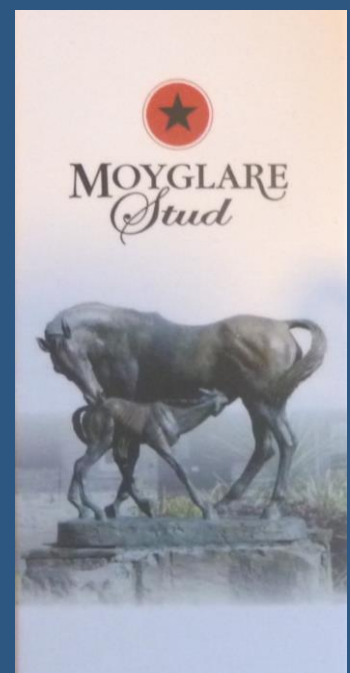
## November 2021

. Pleuropneumonia associated with transport is still one of the most common and detrimental disorders of long-distance transports of horses

. In our days, the causes and the processes by which this disease develops, is well researched

. Possibilities for prevention therefore are recognized and certainly will contribute to the welfare of our horses

***"Many thanks to Mrs. Eva-Maria Bucher-Haefner, Moyglare Stud Farm, for her valued sponsorship of this newsletter."***



## Introduction

According to our experience, the transport of horses is a crucial component of their management. This has been a fact for already more than hundreds of years, and comprehensive veterinary studies already had been made at the begin of the last century. In these times, transports were mainly due to warfare, when large global maritime transports were made. Economic losses due to diseases of shipping horses and mules were of great importance. Therefore, informative statistics and studies were made, and the best known presentation of this subject was the book "*Horses on Board Ship – A Guide To their Management*", written by captain Horace Hayes (1902). He got his excellent experience by being in charge of the shipping of remounts from England to South Africa. His endeavors were remarkable (Fig. 2), and moreover, he also studied the percentage of equine mortality at sea (tables 1 & 2).

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Fig. 2 Contents of the book "*Horses on Board Ship*" by Captain Hayes (1902). He obviously examined all the important issues of shipping horses.

Hayes (1902) also occupied himself with the 'ability of horses to bear transit by sea' and wrote the chapter 'percentage of equine mortality at sea'. These figures referred to remounts shipped to South Africa from November 1899 to July 1901 (tables 1 & 2).

Table 1. Mortality of remounts shipped to South Africa from November 1899, to July 1901.

Country of Embarkation	No. Shipped	No. of Deaths	% of Loss
Great Britain and Ireland	49'095	3'054	6.2
U.S. America and Canada	42'501	2'481	5.8
Australasia	13'360	591	4.4
Austria (harbour Fiume)	16'984	525	3.0
Argentine Republic	26'561	208	.78
Mules			
Various countries	46'121	1'257	2.7

Tab. 1 Hayes: In comparing these figures, we should bear in mind the following points:

1. Horses going to South Africa from Australia and the Argentine Republic have not to pass through the tropics, which is a serious danger that animals proceeding from Europe and North America have to encounter.
2. Horses embarked at Fiume escape the perils of the Bay of Biscay and Portuguese coast, to which those leaving Great Britain and Ireland are subjected.
3. The length of the voyage from Buenos Aires to Cape Town is only half that from England.
4. Usually the weather is finer of voyages from Buenos Aires and Australia to South Africa than from England and North America (New Orleans and Montreal (Hayes 1902)).

Table 2. The following instances of successful voyages are well worthy of honourable mention:

Name of Ship	Country of Embarkation	No. Shipped	Loss
Surrey	South America	938	nil
Hyson	Australia	533	1
Iona	Austria	760	4
Mount Royal	North America	464	3
Cymric	England	441	3
Fremona (Mules)	Italy (Naples)	1'000	1

Tab. 2 Tribute of Hayes (1902) for transports with few deaths

## Studies in our times

In our times now, the possibilities for researching health problems in horse transports did become better and the term 'Shipping Fever' got best known in our industry. However, in spite of all the research and progress in this field, the incidence of shipping fever still may approach 20% of horses travelling by air (Leadon 2004). On that account, there has still a lot of work been done in the research for combatting shipping fever in our times and we will now have a look at two studies from Australia (Padalino 2017) and Japan/Qatar (Maeda and Oikawa 2019).

### **Padalino B. (2017): Transportation of horses and the implications for health and welfare** (289 pages).

One of the newest studies on transport of horses and its implication for health and welfare is the thesis of Barbara Padalino (Faculty of Veterinary Science in Sydney, 2017). With this epidemiological study, she aimed to prove the hypothesis that there may be an association between the transport management and the development of behavioral and health problems.

For this investigation, Padalino occupied herself with a review of approximately 30 years of publications concerning horse transport, analyzed 214 transport-related health cases in Australia and also explored the effects on a four-day journey (by road from Perth to Sydney) on the issues of health and welfare. - All this work resulted in a publication of almost 300 pages, but here, we only will occupy ourselves with her findings on the subject "shipping fever".

On the one hand, her investigations showed, that journeys longer than 24 hours were seen to increase the risk for the development of severe transport-related health problems (respiratory and gastrointestinal disorders or death); respiratory disease was the most frequently reported problem.

On the other side, Padalino explored the effects on the four-day journey on health and welfare, with particular emphasis on the immunological and respiratory systems. This journey was associated with changes in the clinical examination with acute phase responses. These results supported the hypothesis that a horse's immunological capacity is decreased after a long-distance transportation, predisposing it to the development of severe diseases.

On top of this, she also tested an eight-hour journey without water and feed, and this trial induced an acute phase response, e. g. dehydration, fatigue, electrolyte imbalance and an increase in mucus and bacteria (mainly *Pasteurellaceae*) in the lower respiratory tract.

All these findings showed a significant association between the horse behaviour 'en route', particularly in regard to the time spent with the **head in an elevated position** and the **frequency of stress related behaviours**. The increases in mucus, bacteria load and free radicals in the respiratory tract were found to be in a positive correlation. All these results did confirm previously reported risk factors of journeys which contribute to **shipping fever** or **pleuropneumonia** (e. g. Leadon et al. 1989).

### **Maeda Y. and Oikawa M. (2019): Patterns of Rectal Temperature and Shipping Fever Incidence in Horses Transported Over Long-Distances.**

The colleagues Maeda and Oikawa (2019) from Japan and Qatar aimed above all to demonstrate the individual fluctuations of body temperature during transport, particularly febrile changes. They examined 53 Anglo-Arab and Thoroughbred horses aged 23 - 30 months, who had been transported by road over different distances and durations (36 - 61 h; 1'492 - 2'921 km). Their 3 investigations were carried out in the spring and mid-summer in the northern hemisphere.

The results showed that the incidence of fever (characterized by rectal temperature  $>38.6^{\circ}\text{C}$ ) was highest from 20 to 49 h after the start of transport, and clinical signs of shipping fever were observed in 25 of the 53 horses (47.2%), of which 10 horses (18.9%) exhibited fever at the end of transportation and 15 horses (28.3%) did not. This showed that horses that develop shipping fever do not necessarily present with fever at the end of transportation.

In their opinion, these finding supports the suggestion that measuring body temperature upon arrival to determine the presence or absence of shipping fever could result in missed diagnoses for some horses with subclinical pneumonia. Therefore, they recommend to take multiple temperature measurements at intervals from 20 h of transportation as a simple method for not missing horses with subclinical pneumonia. They proved this opinion with necropsies of 20 horses immediately after transportation.

At first view, these results may put queries, but the authors explained that the incidence of transport-related pyrexia in horses increases with different travel times and distance. These circumstances only show a so-called cumulative percentage of horses and does not accurately reflect the actual temperature fluctuations and their patterns in relation to shipping fever.

Moreover, Maeda and Oikawa (2019) also explain the nature of shipping fever both in detail and very well illustrated.

Even these newest publications show that it is still **not always easy to recognize shipping fever**. We therefore want to get familiar with the nature of this important and difficult disease.

## The clinical picture of Shipping Fever

Generally speaking, shipping fever is a disease of the respiratory tract of horses, of the lung and the pleural cavity - a so-called **pleuropneumonia**.

This disorder most often occurs in performance horses, frequently after long-distance transport. The risk increases with the duration of transport, but the length of the journey is not the only contributing factor at all. For instance, if ventilation in the means of conveyance is inadequate, the horses may be exposed to a higher concentration of irritants or allergens from the hay and bedding.

Maeda and Oikawa (2019): Shipping fever is characterized by microbial invasion of the lower airway, accompanied by environmental irritants including particulate hay, dust, carbon, and exhaust chemicals.

In addition, ammonia from urine acts as an irritant to the airways, as do temperature extremes and overcrowding. Beside this, travelling horses may consume less hay and water, and so they run a risk of becoming dehydrated.

The stress of travel also can contribute to shipping fever, as the stress-hormone cortisol decreases immunity and therefore also the ability to combat infection.

On top of all these factors, **the head position of horses** for protracted periods during long-journeys, even on the ground, is considered to be the most important reason for the development of transport-associated shipping fever due to pleuropneumonia (Anon. 2015, Davis 2007, Leadon et al. 2008, Norton 2016, Padalino 2017).

## Etiology and pathogenesis of pleuropneumonia

(The set of causes and the processes by which a disease or a disorder develops)

'Shipping fever' is the name of the already mentioned disorder, and in connection with fever, one certainly thinks first of infections and not of the head position of the sick horses. – What are the explanations for this connection?

According to Davis (2007), most cases of equine pleuropneumonia really do result from bacterial infection, and reports demonstrate that viral and mycotic agents may be isolated also. They may be associated with a single pathogen, but more often results from a mixed infection that may include aerobic and anaerobic organisms. As we know, such pathogens can be around anywhere and anytime. Therefore, just the question remains, how do they get into the respiratory tract? – The answer to this process is the head position of the horses – the head maintained above the level of the withers (considered to be necessary for safety in many trailers) (Maeda and Oikawa 2019).

The most compelling evidence for this claim is the observation that horses transported long distances, without restraint of head position, did not develop changes in lower airway cytologic findings. In contrast, horses without other stress had an estimated 75% increased likelihood of developing lower airway accumulation of bacteria and inflammatory debris after a minimum of 24 hours of head restraint (Davis 2007).

Being tied-up for the duration of a journey is one of the biggest problems, as the horse is stuck in an unnatural, head-high posture. Unable to put their head down, this will affect the clearance of mucus from the airways and cause bacteria to spread to the lower airways, causing inflammation and infection (Anon. 2015).

**Other reasons** which enhance the development of shipping fever are quite numerous:

- One reason are impaired lung defence mechanisms that normally help to clear infectious material, e.g. **dehydration**, that also may make the kidneys susceptible to damage from NSAID usage (Anon. 2015, Miles 2018).



- **High-intensity exercise** in combination with long-distance transport and stress due to other reasons further contributes to development of lower airway inflammation and impaired immune clearance mechanisms. The stress-hormone **cortisol decreases immunity** and the ability to combat infection, making the horse more susceptible to the bugs heading into the lungs (Davis 2007, Anon. 2015, Norton 2016).

- If **ventilation** is inadequate, the horse may also be exposed to a higher concentration of irritants or allergens from the hay and bedding. In addition, ammonia from urine acts as an irritant to the airways, as do temperature extremes and overcrowding (Anon. 2015).

- Horses are commonly transported in close **contact with horses of mixed origins**, which leads to increased pathogen load among already compromised horses (Maeda and Oikawa 2019).

After having considered the different causes for shipping fever, we certainly want to know why the prolonged upward fixation of the head and neck of trailered horses is considered the main reason for causing pleuropneumonia. Research on this subject has shown that the prolonged upward fixation significantly decreases the rate at which inhaled foreign particles move out of the trachea. This leads to a significant increase in the number of inflammatory cells and pathogen agents in the trachea and lungs. Combined with a weakened immune system, shipping fever therefore can develop (Norton 2016).

The reasons for the inhalation of agents into to the respiratory tract are shown with figures by Maeda and Oikawa (2019) (Fig. 3 and 4).

Normally, both in humans or horses, with any breath, many tiny particles of dust or droplets and also bacteria, viruses, fungi and inhaled agents can get into the airways and the lung. The nature therefore did build an innate defense mechanism that protects the pulmonary system and covered the mucous membrane of the respiratory tract with so called *vibrating cilia*, tiny hairs in its uppermost cell layer and also *cup cells*, responsible for producing mucus (Fig. 5 & 6). The mechanism of this phenomenon is called **mucociliary clearance**.



Fig. 3 Horse restrained with a long tether. The head is turned downward only slightly and to a net with hay - close to the nostrils, the breathing zone (Maeda & Oikawa 2019)



Fig. 4 Nostril, the breathing zone is stained with mud from hay (Maeda & Oikawa 2019)

### **The miracle of the mucous membrane of the airways**

In their research on shipping fever, Maeda and Oikawa (2019) explain the reasons for the clearance of the airways under normal circumstances, with the natural carriage of head and neck of the horse - the possibility to turn them downwards. The natural clearance mechanisms of the middle and lower airway are only possible under this requirement.

These mechanisms are due to the normal task of the so-called **vibrating cilia** in the trachea. These cilia are part of the mucous membrane of the airways and serve as a *mucociliary escalator* for the clearance of the pulmonary system, to adequately eliminate contaminants.

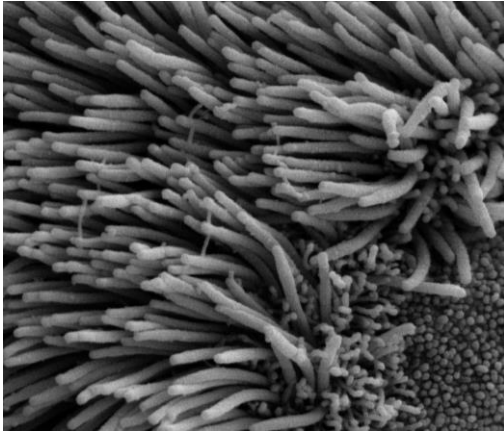


Fig. 5 Vibrating cilia in the uppermost cell layer of the mucous membrane tissue of the trachea (of horses and humans) (Wikipedia)

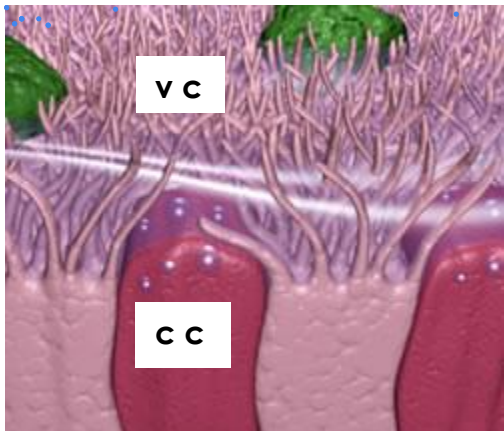


Fig. 6 The mucous membrane of airways have both vibrating cilia (vc) and cup cells (cc) (Source: Deutsche Lungenstiftung, Wikipedia)

The mucus of the **cup cells** keeps the membrane in the trachea moist and the millions of mobile cilia move themselves wave-likely in the direction to the larynx (in humans about 1000 times/minute), and any unnecessary particles are moved to the larynx with a velocity of about 1cm/minute – just like a conveyer belt). Beside this, coughing may also help to clean the airways (Lungenärzte 2021).

## Symptoms

According to different sources, clinical signs of shipping fever include:

- Lethargy
- Depression
- Loss of appetite
- Reluctance to drink
- Shallow breathing pattern (breathing is painful)
- Deep cough (may be quiet cough because of pleural pain)
- Nasal discharge (bilateral, may smell foul and be bloody)
- Reluctance to move (stiff, stilted gait), to lie down, to pass dung (the chest may be sore) – can be mistaken for another illness (e. g. laminitis, colic, etc.)
- Standing with elbows abducted
- Pain may be demonstrated with pawing
- Anxious facial expressions
- The horse may seem depressed
- Licking, chewing
- Elevated temperature (pyrexia)
- Horses with subacute to chronic pleuropneumonia will often demonstrate weight loss - which may be dramatic.

Summarizing all these symptoms, the initial clinical signs of shipping fever obviously can be insidious, but pyrexia is considered the most common sign. There is the advice to contact a veterinarian immediately if you notice any of these symptoms. Shipping fever, if left untreated, can lead to severe pleuropneumonia, which can be life-threatening. The faster an infection in the lower airway is treated, the quicker and more likely the horse can recover (Anon. 2015, Davis 2007, Leadon et al. 2008, Lukens 2016, Maeda and Oikawa 2019, Padalino 2017).

## Examination and Diagnosis

Horses with pleuropneumonia obviously may demonstrate a variety of clinical signs. However, disease should be suspected in horses with an appropriate history (e.g. recent travelling) and exhibiting symptoms as above.

The clinical examination usually shows tachycardia and tachypnea, and jugular pulsation and severe respiratory distress may occur.

Nasal discharge is often present and can vary from serous to muco-purulent to muco-hemorrhagic in character. A fetid odor associated with nasal discharge, breath or pleural fluid should increase the clinicians' suspicion of anaerobic infection.

Ballottement or percussion of the thorax typically reveals reduced air resonance and may elicit a painful grunt.

Mucous membrane color may be dark red or pink to injected (for instance near the incisors), in case the horse is experiencing significant toxemia or ventilatory compromise.

To run bloodwork is another diagnostic tool (blood cell count, chemistry test, biomarker) that will tell whether the horse needs intravenous fluids.

Using ultrasound, a veterinarian can identify many impairments of pleura and lung (e. g. pleural roughening, lung consolidation, abscesses, pleural effusion).

Finally, in severe cases the veterinarian might perform a transtracheal wash to obtain a sterile sample for bacteriology; this helps to gauge the sensitivity of the bacteria to medications. In cases with significant pleural effusion, one also might culture the fluid and test its sensitivity (Anon. 2015, Davis 2007, Miles 2018).

## Bacteriological examination

As already mentioned, the mucociliary clearance in the airways of travelling horses often doesn't work properly. The organism can't get rid of bacteria, that normally may live in the upper airways or may get into them due to an infection. Therefore, it also makes sense to carry out a bacteriological examination.

Padalino (2017) and Maeda and Oikawa (2019) did find these germs:

*Pasteurella* spp.

*Streptococcus* spp. (does belong to the normal oropharyngeal flora)

*Staphylococcus* spp.

*Bacteroides* spp.

## Treatment

Immediate medical attention is vital for horses with shipping fever and it is crucial to begin treatment at the earliest signs. Pneumonia and pleuritis are serious diseases that must be treated aggressively. Initial treatment usually includes antibiotics, anti-inflammatories, and hydration, but transtracheal aspi-

ration for bacterial culture and sensitivity should be performed prior to administering antibiotics to the patient (Arthur 1990).

Regarding the complexity of the disease pictures, their treatment cannot be generalized. - In severe cases, even surgery may be indicated (e. g. removal of a rib and placement of chest drains (Lukens 2016, Miles 2018)).

## Prognosis

Prognosis also depends very much on the severity of the cases and Davis (2007) mentions, that the possibilities for return to previous level of athletic function may be guarded to poor in severe cases. Moreover, complications associated with pleuropneumonia, such as laminitis and chronic abscess formation, may negatively influence the future athletic performance of affected individuals.

Miles (2018) refers to numbers and declares, that survival rates range from 30% to more than 90% and the chance of a full recovery is improved with early diagnosis and prompt and aggressive therapy. In her opinion, any case is likely to need lengthy antibiotic therapy.

According to Maeda and Oikawa (2021), pneumonia associated with transport is still one of the most common and detrimental sequelae of long-distance transport of horses, and the detrimental effects span from decreased performance to hypoxia and respiratory distress that requires humane euthanasia.

## Pathological findings

In their study, Maeda and Oikawa (2019) found pathological alterations in 7 of 20 necropsied horses. They were small and well-defined dark red coloured areas of consolidation, with a propensity to affect the right lung (Fig. 1).

Numerous cells, fibrinous exudates and particles of hay were observed in the bronchial, and bronchiolar lumen. The pathological finding of these lesions was bronchopneumonia.

## Prevention

In consideration of the seriousness (and involved costs) of shipping fever, possibilities of prevention are in great demand.

First of all, only sound horses should be transported and it is important to ensure that horses are fit for

the journey and do not have any ongoing respiratory problems. Therefore, it is at least advisable to check their temperatures before they travel. Consider delaying the trip if they have a high temperature before they start; they could already be incubating an infection and therefore also be a risk for other horses (Anon. 2015).

Early detection of horses at a high risk of shipping fever pneumonia is of utmost importance in maintaining healthy and successful athletic horse populations. Early and accurate detection of at-risk individuals allows for focused prophylactic treatment and decreased losses (Maeda and Oikawa 2019).

Discontinue any immune-suppressant drugs 48 hours prior to travel (steroids, above all dexamethasone) (Lukens 2016).

If you are travelling on the road, split up long trailer rides over several days. Be sure to take breaks and - if ever possible - let horses out of the trailer at least every 6 to 8 hours (Lukens 2016).

Ensure the horse is properly hydrated before travel (oral or IV fluids) (Lukens 2016).

Very dry air can desiccate the respiratory system and therefore interfere with clearance from the airways (Leadon et al. 2008).

The air quality, when travelling by road, can be improved by good ventilation, but this is not so simple on a plane, where windows cannot be opened (Anon 2015, Miles 2018).

Offload dirty bedding (if ever possible), otherwise use a low-dust bedding material such as paper or cardboard on rubber matting (Anon. 2015).

Feed well soaked or low-dust hay or haylage and offer plenty of water (Anon. 2015, Miles 2018).

And most important: **Help to drain mucus from the airways** by encouraging horses to lower their heads at least occasionally during travel, for example by feeding them titbits at floor level. And on the road, it is important to ensure that the horses have rest breaks and are unloaded and allowed to move (Anon. 2015). Try hard to allow a way of restraining the horse in a head-up posture (Maeda and Oikawa 2019, Miles 2018).

And finally: **Post travel management is also important** to reduce the incidence of respiratory disease. Padalino (2017) reported: "*Following transport, horses were at pasture during daytime and within 24 hours all signs of respiratory insult had disappeared, and the respiratory system was completely restored by 7 days. Contrariwise, horses that were stabled after the journey and when scoped 5 days after the*

*journey, 6 out of 11 showed protracted inflammation of the airways.*"

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## Cargo shipping to-day

In regard to shipping racehorses and their well-being, this summer and autumn, quite a few articles appeared in trade journals in the United States (e. g. Blood Horse Daily & Thoroughbred Daily News). The reason for this was, that American racetracks have started taking a stand against a long-time practice of shipping inexpensive racehorses to Puerto Rico by cargo ship (Fig. 7). The often grueling trip, which many characterize as cruel and inhumane, has attracted a growing clamor of protests industry-wide, sparked by the brutal death of 9 (of 15) horses during a cargo shipment two years ago from Jacksonville to San Juan (Mitchell 2021).



Fig. 7 Transport of Thoroughbreds on cargo ships from the US to Puerto Rico (source: peta.org)

The problem with shipping horses on a cargo boat (Fig. 8) is the container they occupy, which is in no way comparable to a box stall on a tractor trailer. These containers are 40-foot steel boxes with windows cut out of the sides, metal hay racks welded inside, wooden dividers installed to separate the animals, and a fan affixed to a small window on one end to circulate air. Horses, commonly 10-12 but sometimes up to 15, are loaded from one end to the other and stand side by side as if in a starting gate for days. "The worst of all of this is the way these containers are made," said Dr. Jose Garcia Blanco, a veterinarian and bloodstock agent who buys for the Confederación Hípica of Puerto Rico:

*"Once you put your second horse in there, you don't have access to your first horse. The attendant can have access to their heads so they can feed them and give them water, but once you put that second horse in there, if something goes wrong with the first horse, he's doomed, because you cannot get to him".*



Fig 8. Inside a cargo shipping container used to transport horses to Puerto Rico by boat (Courtesy Confederacion Hipica / Mitchell 2021, Blood Horse Daily)

*"You have them in close contact with each other, and they can't put their heads down. When a horse cannot lower its head, you are predisposing it to all kinds of respiratory disease because you're taking away one of their main barriers of protection, of cleaning up their respiratory system", said Garcia Blanco. "When horses lower their heads to eat, their respiratory system drains. They have all kinds of excrement and urine in that container, and they can't move, which is another method that gets their circulation going. So you're predisposing them to shipping fever by the stress you're putting on them. The respiratory system is probably the one that gets affected the most" (Mitchell 2021).*

In the meantime, multiple track executives implemented policies that allow any owner or trainer with horses stabled at their facilities to be banned if they are associated with shipping a horse in this manner.

According to Mitchell (2021), in the meantime multiple track executives implemented policies that allow any owner or trainer with horses stabled at their facilities to be banned if they are associated with shipping a horse in this manner.

**Indiana Grand**, who became the first track Aug. 9 to implement a ban related to cargo shipping: “We feel the welfare of the horses is most important.”

A similar ban was announced Aug. 17 by **The Stronach Group's entity**, operating Gulfstream Park, Santa Anita Park, Laurel Park, Pimlico Race Course, and Golden Gate Fields.

On the 15<sup>th</sup> of October, the **Kentucky Horse Racing Commission** (KHRC) also got active and issued a warning to licensees regarding recent reports of inhumane, dangerous, and sometimes lethal practices used in transporting horses internationally, via cargo ship, from the United States:

“Overcrowding horses in makeshift containers has reportedly led to numerous deaths and injuries”, a release from the KHRC read. “These cargo shipping practices are alarming, abusive and will not be tolerated in Kentucky. The KHRC will take immediately licensure action against any licensee who knowingly or willfully directs or participates in activities that abuse, neglect, or harm horses. The Commission also urges Kentucky’s racing associations and training facilities to take immediate steps to ensure that horses are protected from these practices” (Anon. 2021).

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## Transport and second chances for racehorses

Reading the chapter “cargo ships” (as above) – the transport of Thoroughbreds for a second career – we may remember that we already discussed “The Retired Racehorse” in our newsletters 16 and 20 (July 2015 & June 2016). This autumn now, an interesting further study on this subject was published by authors from Sydney, Auburn and Uppsala: „Owner-perceived behaviour in thoroughbred horses in secondary careers” (Hellmann et al. 2021).

In regard to the substantial number of Thoroughbreds leaving the racing industry annually, the authors are of the opinion, that there seems to be a need to develop better techniques to improve the success of horses transitioning into secondary careers. They point out that studies focussing on the wellbeing and traceability of racehorses are increasing, but they find the information in this area still to be poor. Moreover, **preconceived ideas that a majority of Thoroughbreds display erratic and dangerous behaviours, remains an issue of contention in the equine world.** Ex-racehorses are very often stereotyped by those outside the racing scene as possessing unsuited temperaments leading to an undesirable behaviour. Therefore, questions often are asked as to whether these characteristics may pose problems for transitioning Thoroughbreds into other disciplines. The aim of the study was than to investigate whether owner-perceived behavioural differences do exist between Thoroughbreds and horses bred for other disciplines (often a second chance for retired racehorses). Data were acquired through an online, internationally accessible owner questionnaire and the respondents provided both basic information on the horse (sex, age, etc.) and owner-perceived information on their horse's behaviour. The analyses considered behavioural data on 313 horses, from multiple breeds, across the four main disciplines (dressage, eventing, show jumping and recreational riding). The results showed only rare significant differences in owner reported behavioral differences between Thoroughbreds and horses bred for other disciplines ( $p < 0.05$ ). However, where differences occurred, it was generally the Thoroughbreds that were considered to behave more favourably. They were perceived as more social and were reported as demonstrating higher levels of “self-control” compared to horses of other breeds. In conclusion, the authors suggest that while potential behavioural distinctions can be made, **the notion that Thoroughbreds are unsuitable for certain disciplines, based on their temperament and subsequent behaviour, is not supported.** They expect that this information will aid to develop and modify programs seeking to place thoroughbreds into the most suitable careers upon racing retirement.

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Hellmann L., Hamilton N.A., Staiger E.A., Solé M., Velie B.D. (2021): Owner-perceived behaviour in thoroughbred horses in secondary careers – A pilot study. *Applied Animal Behavior Science*, 5. October <https://doi.org/10.1016/j.applanim.2021.105480>

# Working for the Thoroughbred Breeders of Europe



## GUARDIAN OF THE THOROUGHBRED

The European Federation of Thoroughbred Breeders Associations was set up in 1994 to provide a single focus for breeders to come together to discuss issues, formulate common policies, and to lobby at a European level on areas which affect thoroughbred breeders.

The federation represents 23,000 thoroughbred breeders right across Europe, who in turn sustain over 150,000 jobs in the European breeding and racing industry.

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If there is any area you would like covered in these very informative newsletters you should contact Kerry on [kryan@itba.ie](mailto:kryan@itba.ie) and she will forward your request on.

**Joe Heron, Chairman EFTBA**



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