

May-June 2021

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When in Doubt... Let Them Out!



WORDS BY Jessica Morton

Going down in history as one of the best Melbourne Cup wins, a horse named Kiwi, originally purchased to round up sheep, dashed to victory in the 123rd Melbourne Cup of 1983.

With only 100 metres to go, and at 10-to-one odds, the chestnut gelding upstaged the best long-distance thoroughbreds in Australia and charged past 22 rivals to win by just over a length.

What is even more remarkable about this win, was that the New Zealand-bred horse was purchased as a yearling for only \$1000, kept out on pasture and trained at home, on the farm.

After winning both the Wellington and Egmont Cup, he was flown to Victoria one week before Melbourne's prestigious event without a single lead-up race in Australia. The historic last-to-first win stunned the crowd and his run has become one of the most memorable performances in the history of the Melbourne Cup.

Growing up on green Taranaki pastures offered Kiwi many important benefits for his future life as a distance runner. He did not know it, but this relaxed upbringing was unconventional for a racehorse.

As a youngster, he had the room and stimulus to grow properly and develop bone density. His training over farmland mixing with sheep taught him balance and developed his famously easy-going character. His lungs were healthy thanks to the fresh air and he was less at risk of digestive problems due to his active outdoor lifestyle.

All of this helped him become not only an incredible athlete, but also the horse that jockey Jim Cassidy remembers as 'the only one in the starting yard that hadn't broken a sweat'.

Why don't all performance horses live out?

It is now fairly widespread knowledge that horses are healthier (physically and mentally) when kept outdoors, so why are most still living in stables?

Stabling horses is a human thing more than a horse thing; horses are obliging souls and will usually accept and adapt to less-than-ideal living situations, even if it negatively affects their health and their capacity to express normal behaviours.

There are many trainers and owners who still prefer to keep their equine athletes confined in stalls, with zero or limited turnout, despite the positive implications of keeping them, at least partially, on pasture. This practice is often shaped by personal motives, space or climatic restrictions, fear of injury or simply, resistance to change.

In Switzerland, horse owners have no choice. It has been a legal requirement since 2008 that all stalled horses must be able to see, hear and smell each other. Horses under two-and-a-half years old must be kept outside in groups to promote bone density and learn correct social behaviour.

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All working horses must be allowed free time in a field at least two days per week and non-working horses (such as broodmares) must have a minimum of 2 hours a day outside in the paddock. Stable managers are required to maintain a log to document turnout times.

A question of welfare

The term welfare is not so much about how well the animal looks but about how they feel about the world they live in. It is about how well they are faring physically and mentally. And the most recent thinking includes an evaluation of the impact humans have on their lives.

Handling, training, riding, medical interventions and transporting horses are situations where the interaction between humans and animals can lead to either negative or positive mental experiences.

Keeping this in mind, New Zealand Thoroughbred Racing (NZTR) asked Emeritus Professor David Mellor to assess and create updated minimum welfare standards, which have now been adopted by the International Federation of Horseracing Authorities.

IMAGE A: Turn out and a diet high in fibre are both known to reduce digestive issues such as colic and gastric ulcers.

IMAGE B: Good welfare is more than keeping horses round, shiny and safe - it involves understanding that horses are designed to spend their days outside, grazing in the company of other horses.

IMAGE C: One of the deadliest dangers of stall-bound isolation is the heightened risk of digestive problems.

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The Five Domains model for welfare assessment (see the article on end-of-life decisions in this magazine issue), allows evaluation during training, competitive events, and when horses are retired.

The model centres on the following five categories:

- **Nutrition:** Access to fresh water and a balanced and appropriate diet to maintain full health and vigor.
- **Environment:** A living environment that protects them from environmental extremes and allows them to move and socialise.
- **Health:** Prevention or rapid diagnosis and treatment of injury and disease.
- **Behaviour:** Opportunities for free movement and social contact with other horses.
- **Mental experiences:** Minimising negative experiences and maximising opportunities to engage in rewarding behaviours and activities.

Good welfare is more than just keeping horses round, shiny and wrapped up in cotton wool to prevent injury - it involves understanding that horses are designed to spend 16-20 hours a day grazing and consuming roughage in the company of other equids.

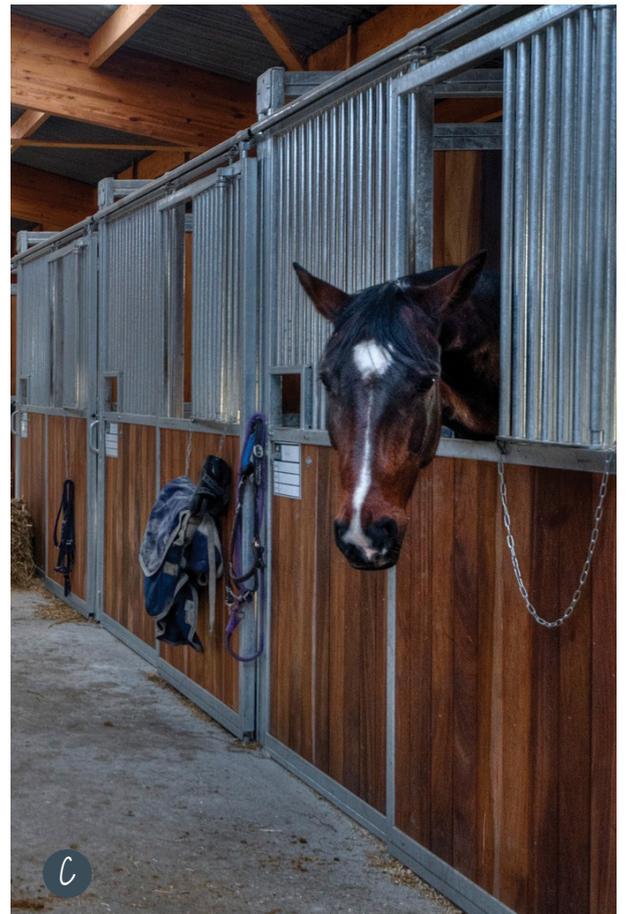
We now know that living outside is a natural way of being for horses and that the benefits are not only physical, but also physiological, and psychological.

The guts of the problem

One of the deadliest dangers of stall-bound isolation is the heightened risk of digestive problems, when compared to pasture kept horses.

Studies at the University of Nottingham have found that horses kept isolated in stalls for prolonged periods of time, are more susceptible to all kinds of gastrointestinal disorders such as colic, gastric ulcers and intestinal inflammation.

Key risk factors listed include intense exercise, eating large amounts of grain, eating on an irregular schedule, stall confinement, administration of drugs



such as non-steroidal, anti-inflammatory drugs (NSAIDs), exposure to pathogenic bacteria and viruses, and increased emotional and physical stress.

Veterinarians like the study's lead researcher Sarah Freeman, a Professor of Veterinary Surgery, have long recognized that horses kept outside colic less than those living in stables.

"Impactions often occur in horses who have a management change from pasture to stabling or enforced box rest due to weather conditions, injuries, etc.

"We think that the results of this study are a significant step towards understanding why horses develop impaction colic when stabled. The changes in function were rapid and marked and were most significant during the first five days after change in management. We think this represents the high-risk period for colic."¹

A horse's digestive system functions best when he is happy, has constant access to forage that encourages chewing, and can move about freely as he eats. In addition to being designed to be constant grazers, intense exercise, or lack of adequate exercise while kept in a stall interferes with normal digestive function.

Jane Hancock runs Corrie Stables in Ireland. Her daughters Tiggy and Lucy Hancock are international event riders, and they have thirteen horses living on pasture. Jane has seen how some horses react adversely to isolation. When one of her horses suffered an injury and was put on box rest, he developed gastric ulcers, colicked and began cribbing. Once that horse was turned out again, his ailments cleared up immediately.

Turnout is an excellent way to lower stress levels and improve trainability and performance. It greatly reduces the risk of colic and gastric ulcers and reduces behaviours associated with compromised psychological well-being.

Rebecca Menzies of Howe Hills Racing in the United Kingdom, has 65 horses in training. They range from two-year-old colts and fillies to 13-year-old national hunt horses.

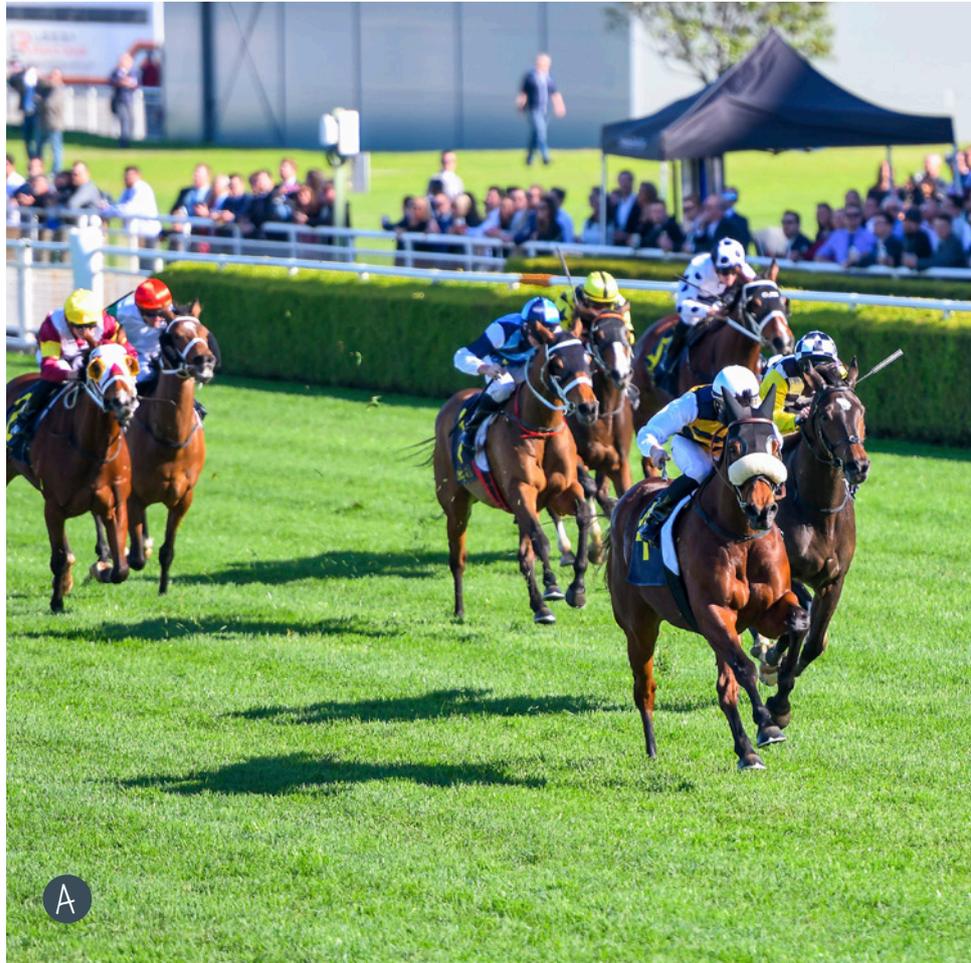
Menzies buys many of the horses from other yards; often these horses have been sold on cheaply due to behavioural problems. Almost all of Menzies' horses are turned out daily and, during the summer, many of them live outside on fields with shelters.

Turnout is an excellent way to lower stress levels and improve trainability, and performance. It greatly reduces the risk of colic and gastric ulcers, and reduces behaviours associated with compromised psychological well-being.

IMAGE A: Respiratory issues, common in racehorses, are best managed by allowing them to spend long periods outside, away from dust and ammonia, which tend to concentrate in and around stables. Grazing with a lowered head helps drain their airways. Photo sourced from www.shutterstock.com.

IMAGES B & C: Most of the 45 racehorses in work at Howe Hills Racing in the UK become easier to handle with a daily schedule of turnout and socialization. Images courtesy of Howe Hills Racing.

IMAGE D: Jane Hancock runs Corrie Stables in Ireland. Her daughters Tiggy and Lucy Hancock are international event riders, and they have thirteen horses living on pasture and says injuries are virtually non-existent. Image courtesy of Jane Hancock.





Menzies says she has found all of her horses are easier to handle with a daily schedule of turnout and socialization.

Ulcers are a condition often associated with racehorses that are confined to stalls and exercised intensely. Yet none of the horses preventively scoped for gastric ulcers at Menzies' yard has returned a positive diagnosis.

Pasture-kept horses breathe easy

Horses are nasal breathers; their nasal passages are large and can expand during strenuous exercise in order to increase the intake of air.

They are gifted with large airways and lungs, which is how they can achieve such impressive speeds over distance. Their airways bring oxygen down into the lungs where it passes into the blood to be pumped around the body.

Common equine respiratory conditions include exercise-induced pulmonary haemorrhage (EIPH), inflammatory airway disease (IAD) and recurrent airway obstruction (RAO).

The latter two are now labelled equine asthma, because both are characterized by airway inflammation and mucus accumulation. Asthmatic horses are particularly sensitive to dust particles in their environment (often found in hay or dusty bedding).

When an affected horse breathes in these triggers, his airways become inflamed, the muscles constrict, and air flow is restricted to the lungs. As a result, a horse might operate as a top competitor one day and experience poor results only a few hours later.

Prevention or management of this condition is best accomplished by minimizing dust in the horse's environment. It is also well known that grazing with a lowered head, helps drain their airways.

A group of equine medicine specialists led by Laurent Couëtil, DVM, PhD, professor of large animal medicine at Purdue University, USA, found that 80 percent of thoroughbred racehorses suffer from mild or moderate asthma. The results, which were published in the *Journal of Veterinary Internal Medicine*, show that the worse a horse's asthma is, the worse their performance.

None of the horses preventively scoped for gastric ulcers at Menzies' yard has returned a positive diagnosis.

Joana Simões and a team of researchers from the University of Lisbon in Portugal found that "environmental management should be the primary goal of facility managers, because clinical signs and lung function quickly improve in a low-dust environment, even without medication." However, when airway inflammation goes on for prolonged periods, horses can experience "irreversible airway remodelling" that affects respiratory function for life.

Ventilation is important not only for horses, but also the staff working with them. Horses with respiratory problems are best managed living outside and care must be taken not to allow them access to round bales, which could exacerbate a respiratory condition. Round bales (even those of a high quality) have more dust and mould than small square bales. Piggy eaters will spend all day with their nose inside the round bale breathing in endotoxins and dust particles, exacerbating the problem.

Exercise induced pulmonary haemorrhage

Exercise induced pulmonary haemorrhage (EIPH) is another disorder commonly observed in performance horses working at speed, such as three-day eventers, racehorses, and polo ponies. It can also occur in racing camels, greyhounds, and even human athletes.

EIPH presents a huge cost to the racing industry and is a potential problem for any discipline. With oxygen-carrying capacity limited, what follows is usually disappointing athletic performance and constant interruptions in training. Horses who have suffered from EIPH benefit from as much turnout and fresh air as possible; this prevents further lung damage from dust particles in the air and allows their lungs to heal.

When Menzies took on an unlucky EIPH mare from a competitor's racing stable, one of the first things she did was turn her out with company on pasture and let her heal. Once she had rested mentally and physically, the mare bounced back and went on to win six races. Menzies is now building runouts from her stalls so horses in training can always access the outdoors - and each other.

Injury risk

Owners of expensive sport horses often make the decision to not turn out their horses based on the possibility of injury - without considering how confinement affects the physical and emotional well-being of their horses.

Australian equitation scientist Dr Andrew McLean keeps all of his horses out with company and recommends all horse owners should do the same. "Understanding our horses' social interactions helps us understand them more effectively" he says.

Dr McLean studied feral horses in both the United States and United Kingdom and says that true aggression (kicking or biting) between horses is rare. In feral horses it usually only occurs when stallions fight for mares or when mares are protecting their newborn foals.

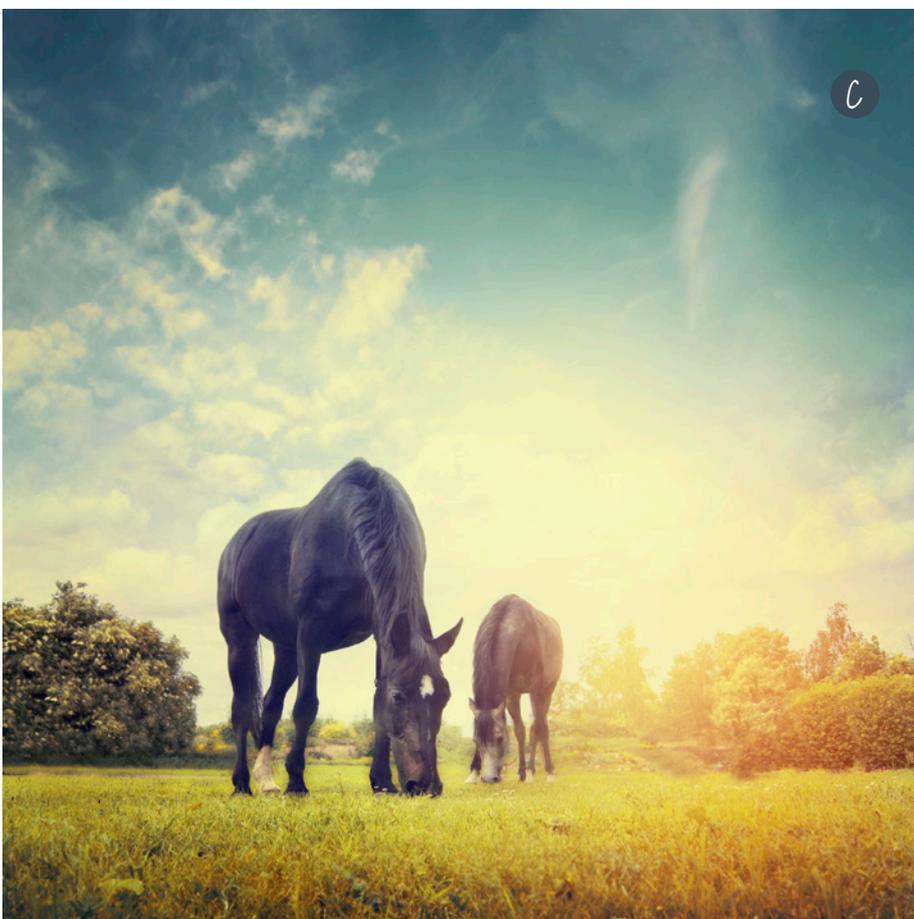
"Domestic horses living together communicate with threats of aggression or submissive behaviour. If two horses challenge each other (usually over a shared resource such as food or water) the stronger horse usually succeeds in accessing the resource without resorting to an actual fight.

"Horses 'speak' using subtle threats and submission rather than outright violence. Typical threats include squeals, facial expressions (ears pinned back/teeth exposed), tail swishing or a deliberately lifted back leg. When this occurs, the other horse will generally back off, and move away. After every experience, horses learn. This affects future conflicts between them and determines priority access to resources such as food, water, and shelter."

IMAGE A: Dr Andrew McLean highlights that the negative effects of confinement on horses' physical and emotional well-being is often overlooked by owners who decide to not turn out their horses based on the possibility of injury.

IMAGE B: Movement and socialisation are not just good for horses, they are essential to their mental and physical well-being. Photo sourced from www.shutterstock.com.

IMAGE C: Grazing with the head lowered helps drain the airways. Allowing performance horses to graze for long periods could help reduce a number of common respiratory issues. Photo sourced from www.shutterstock.com.



Dr McLean points out that unlike what was formerly believed, herd hierarchies are not solid and unvarying. Horses tend to form bilateral relationships, where a new deal is concluded separately for each herd member, as well as each new situation or conflict.

Herd anomalies do exist, but these are the exception not the rule. "Lunatic horses are generally made by humans." Dr McLean mentions rare examples of horses who struggle to accept living in a group, such as orphaned foals that were hand reared and stallions kept for years in strict isolation.

In a 2008 study of more than 2000 Swiss horses, ponies and donkeys published in the *Equine Veterinary Journal*², 18% of injuries occurred due to a change in the horses' environmental management - regardless of whether the horse was kept alone or in a group. The researchers recommend horse owners approach any changes to management slowly and carefully to maximise safety.

Switzerland has strict equine laws for the minimum size requirement of shelters, boxes, and paddocks. Barbed wire fencing is banned and every horse on turnout must have visual contact with another horse.



Horse welfare is more likely to be compromised by not allowing them to socialise with other equines and being kept isolated in a stall for long periods of time.

In the past, owners of expensive sport horses often decided whether to turn out their horses or not, based on the possibility of injury - without considering how confinement affects the physical and emotional well-being of their horses. But during the first wave of COVID-19 related lockdowns, owners could not visit, ride or exercise their horses, and livery staff were so overwhelmed with the workload that they couldn't do anything more than quickly lunge each horse before returning them to their box.

Without the room to turn horses out either, some facilities had to confine their horses to their stalls for up to 23 hours a day. Those that were unlucky and found themselves closed up for weeks and months at a time suffered from a plethora of ailments, including swollen legs, loss of muscle mass, stiffness, lameness, and repetitive habits caused by boredom such as cribbing, weaving and aggression towards humans and other horses.

What's best for the horses in a domestic environment?

Research conducted in four Nordic countries indicates that horses are unlikely to get severely injured from being turned out in groups, but their welfare is more likely to be compromised if they are not allowed to socialise with other equines and are kept isolated in a stall for long periods of time. (Keeling, 2016).

Research, technology, and the internet allow us to learn and share information about equine welfare and management like never before. We all want our horses to be happy and relaxed. Happy performance horses are nice to handle, easy to ride and enjoyable to spend time with. They enjoy work more and will stay sound longer.

Together we can change the narrative. Finding ways that allow us to turn them out safely and for longer periods, we can offer a brighter, happier future to equestrian sports' most important players - the horses.

Horses are turned out for the first time on dry, even ground with a double fence between them and the next paddock. "I always remove halters, and if a horse is shod, they will have leg protection applied for security. Only horses with the hind shoes removed go out in a group".

She also suggests spending time hand walking a new horse around the fence line, visiting the water source and doing some groundwork exercises in the area before they are turned loose.

Turnout has had a positive effect on each of the 50 horses living in her facility. But it is especially notable in the competition horses. Alterreno was designed to provide horses with a natural livery alternative, and many horses are brought there because they have developed serious behavioural problems under saddle at other yards.

Three notable examples who have turned around their athletic performance due to extended turnout are an anxious PRE dressage stallion, a warmblood mare who napped and reared when asked to move forward, and an uncontrollable jumping horse with a tense, blocked back. All three have improved so much under saddle that they are virtually unrecognizable.

"Improved athletic performance and pasture turnout go hand-in-hand" says Schneider.

Then came the pandemic

2020 was a game changer. Horse owners have not been immune to the economic hardships brought on by forced closures and lockdowns, and many competitive riders are searching for alternative housing and management systems.

Jane Hancock turns out her daughters' eventing horses as much as possible and injuries are virtually non-existent. "I find horses who live outside in fields understand how to take care of themselves. We had a new livery mare arrive recently who had not seen any turnout in 6 months; we approached the process slowly and the mare adjusted to her new environment easily without any wild explosions."

Sounder, longer

It is not easy keeping a horse happily competing into their senior years. Eventing is a tough sport and years at the top levels can take their toll. But with careful management, some horses can withstand the test of time and carry on competing into their late teens. Two of Jane's daughters' event horses are successfully competing internationally at 18 years of age; a testimony to what a happy life on pasture offers equine athletes.

Angelika Schnieder, the owner of Alterreno in Tuscany, is a firm believer in letting horses just be horses. All of the horses boarded at her facility go out daily or live outside permanently in groups.