

Endurance Vetting Procedures

1. Australian Vetting Systems

1.1 Standard Veterinary Check

The standard veterinary check involves a one-hour rest period. The competitors time is recorded as the leg is completed and the ride team is given a time slip. The horse is “cooled out” and re-presented to the veterinary ring at exactly 30 minutes. The horse then rests until just under the hour when re-saddling for the next leg commences.

The Standard veterinary check is straight-forward. TPR stewards usually record the heart and respiratory rates at exactly 30 minutes. The vet then conducts a brief, but thorough, examination and evaluates a short trot out.

1.2 Vet-Gate Into Hold

“Vet-gate into hold” checks are used most commonly in international competitions. All International Championship rides use this system for veterinary checks. As Australian horse and rider combinations become increasingly interested in competing at an international level, so has the interest grown in this type of vetting.

This system is labour intensive and needs careful organisation to run effectively. Under Australian conditions, this results in rides with smaller fields and a high ratio of veterinarians to competitors being workable. The longer, 160 kilometre rides, run very effectively under this system. Shorter eighty kilometre events tend to be less satisfactory. Unless the field is small the vetting area becomes quickly back-logged.

After arrival, the horse may be presented at any time within the first thirty minutes. If the heart rate is not below the required figure (usually 64bpm) the horse may be re-presented at 10 minute intervals until 30 minutes elapses. If the horse does not achieve the required heart rate in this time, they are eliminated. When the horse passes the heart rate criteria the “hold period” commences, and the remainder of the veterinary check is completed. The hold period varies from 2-40minutes, with the duration determined by the Head Veterinarian and being announced prior to the ride start.

It is common for the Ridgeway Trot to be incorporated into this form of vetting instead of the more conventional trot out.

Theoretically the Vet-Gate Into Hold system does not impede the progress of the horses with the better recoveries. They are seen to be coping with the ride and conditions. Many combinations can walk straight off the leg, pass the heart-rate gate and into vetting. The horses that are less well conditioned have to wait varying amounts of time to recover. These horses are judged the horses at most risk. They are therefore split from better conditioned companions and are less likely to be over-ridden.

1.3 Training Rides

Training Rides should have a mid-ride veterinary checkpoint. A pace rider or minimum time is utilised to restrict the speed of the field. The innovation of 10-km markers has enabled novice riders to gauge their speed more consistently. A pace rider is an experience endurance rider who sets an appropriate pace and is not passed by the field. Training Rides are usually conducted over distances of 40-60 km. The heart rate must be under 55 bpm at all times.

Into Rides follow the same veterinary requirements as the Training Ride, except that they are one leg (up to 20ish km) and vetting occurs at the completion of the distance.

2.Pre-ride Veterinary Examination

Table 1: Guidelines -Pre-Ride Personnel

Chief Steward	<u>Organises Veterinary Ring-</u> in conjunction with the Head Vet. Organise competitors in an orderly, systematic fashion. Checks horse identity and authenticity of Logbook. Liases with everyone - especially any one with problems!
TPR	Takes the rates: T emperature P ulse R espiration Note any obvious abnormalities. A brief check of shoes may also be completed.
Veterinarian/s	<i>Detailed examination - of each competitor</i> <i>This should (with practice) be completed in no more than 3-4 minutes i.e. with pencilling should aim to process. -1 horse/5mins or 12 horses/hr.</i>

The pre-ride examination is usually conducted the day prior to the ride in an area that is spacious and level enough to permit proper examination for lameness.

The primary function of the pre-ride examination is to determine the fitness of the horse to compete; the secondary function of this examination is to establish a base-line for a particular horse against which changes which may occur during the ride can be assessed. This information is recorded in the appropriate section in the horse's logbook (or card for a day member).

Accurate values for temperature, pulse and respiration are obtained, and following the guidelines listed in Table 2, a thorough clinical examination of the horse is completed.

All horses must be shod to compete. A full-set of E-Z boots is acceptable.

If a horse is intractable in the vetting ring and an examination is not possible then the horse is eliminated from competition. If a horse will not trot out without being chased or hunted then that horse may be eliminated on the basis of "failure to lead".

All horses competing in Endurance Rides must be 5 years or older which is defined as having a full mouth with the permanent corner incisor teeth in wear. Horses, which are between 4 ½ and 5 years, may participate in Training Rides only. These horses must have a full mouth but the corners need not be in wear. The importance of advanced old age is left to the discretion of the veterinarian.

Table: 2 Vital Sign Assessment by the Veterinarian.

Heart Rate	<i>Rate</i> is recorded by the TPR <i>Character</i> is assessed by the vet. Optimally a low rate, with a regular and strong beat Common to hear 3 or 4 heart sounds and occasionally skip a beat- this is generally not significant The Rule of Thumb is that the competitor should be healthy in every other respect and any questionable irregularity should resolve with exercise. The HEAD VETERINARIAN may refuse to start a competitor with unsatisfactory heart sounds
Respiratory Rate	<i>Rate</i> is recorded by the TPR <i>Character</i> is assessed by the vet. Many horses will have frequent, shallow respiration at pre-ride – <i>this is generally not significant.</i> Soft, hard to hear respiratory sounds Alight noise on respiration is normal. No coughing!
Temperature	<i>Recorded</i> by TPR <i>Assessed</i> by the vet. Normal 37.0-38.0 C If above 38.5 C – Why? Is the horse excited or just un-loaded? (Retake in 30-60minutes if still > 38.5 C – consider non-starter!)

Table 3: Guidelines for Parameter Check at the Pre-Ride Check

Parameter	Requisite
Eyes	Check both eyes for vision - <i>i.e. menace reflex</i>
Nasal discharge	Should be minimal - no "snotty or runny noses"
Mucous membranes	Should be free of blemishes, pink and moist No unexplainable petechiae <i>i.e.</i> "bruises"
Teeth	Check lateral (corner) incisors for age <i>Training Ride</i> - permanent's erupted (4 1/2 years) <i>Novice/Endurance</i> - ifi wear (5 years)
Jugular	Free of recent blemishes and good refill
Skin Pinch	Should be taken at the point of shoulder Elastic and crisp without time delay.
Heart Sounds	Evaluate as above
CRI -(Cardiac Recovery Index)	Reflects the cardiac reserve and level of fatigue of the individual. * (May or may not be utilised - usually at "Vet-Gate-Into-Hold")
Respiratory Sounds	Evaluate as above
Gut Sounds	Gut noise is assessed in all four quadrants. Rate and character of gut noise. Gut noise can often be heard when listening to the chest, this may reduce the need for a lengthy abdominal evaluation
Saddle Area/ Girth	Free from heat, swelling and pain. Check for fresh galling Check old galls for activity.
Muscles and back	Free from heat, swelling and pain Check for tightness, tone
Anal Tone	Check for tone Note any evidence of diarrhoea
Joints/ Legs	Free from heat, swelling and pain. Check for any fresh wounds Check old injuries for activity.
Hooves/Shoes	Must have 4 well-shod feet. <i>A veterinarian may refuse to start a horse that is poorly or unsuitably shod!</i>
Gait	Check for symmetry and even consistent gait Freeness of movement Loose rein with good forward impulsion <i>A horse that will not trot out CANNOT start the ride!</i>

** *The CRI accurately predicts horses in trouble BEFORE they show physical signs of problems - more relevant at vet-checks during the course of the ride.*

3.2 Guide to Assessment

Table 4: GUIDELINES FOR UNDERSTANDING THE VETERINARY CHECK

PARAMETER	GREEN	GREY	RED
<i>Grade</i>	<i>(A-B)</i>	<i>(C)</i>	<i>(D)</i>
Eyes	Bright, Clear	Glassy	Fixed Stare, sunken eyeball
Mucous membranes	Pink, Moist	Pale, tacky	Dry, purple, blue
Capillary Refill	0-1s	2-3s	4+s
Jugular Refill	1-2s	2-3s	4+s
Skin Pinch	0-0.5s	2-3s	4+s
Heart Rate (after strenuous exercise)	<68 in 10 min	68 in 10-30 min	>68 in 30 min
Gut Sounds	Normal	Reduced/Increased	Absent
Respiratory Rate	Relaxed/regular	Panting/Inversion	Laboured/Abnormal
Joints/Legs	No heat or swelling	Heat/Swelling	Heat/Swelling/Pain
Wounds/Saddle/Girth	Nothing visible	Heat/Swelling/Tenderness	Pain/Raw/Bleeding
Muscles/Back	Relaxed	Tight, tender	Very tight/ pain
Anal Tone	Tight	Slightly loose	Anus/Penis relaxed
Rectal Temperature	<38.6 C pre-ride	39.5 C-40.5 C	40.5 C
Impulsion	Free, willing	Stumble/short stride	Stiffness
Attitude	Bright/eats/drinks	Depressed/ lethargic	Dull, not interested absence of thirst, appetite/urination or defaecation
Gait	No abnormal gait	Slight gait change	Consistent gait change/non-weight bearing

Taken from: King, A. *Equine Vet Educ* (1996) 8(6): 342-345

3.3 The “Trot-Out”

Examination for lameness should include trotting the horse in hand on a loose rein in a pattern chosen by the Head Veterinarian. For consistency, all officiating veterinarians should use the same pattern. Unusual gaits should be noted at this stage on the horse’s veterinary card.

Where it is felt that circumstances warrant it, the veterinarian may request to examine a horse ridden. *The use of diagnostic aids such as flexion tests and hoof testers during the ride is not permitted. These tests may be used after the ride is completed, if the veterinarian is required to determine the cause of lameness.*

4. Sectional and Final Veterinary Examination

If time permits, horses should be observed when entering a checkpoint and any adverse clinical signs or injuries noted.

Depending on the system of check, i.e. the “Standard” or “Vet-Gate-Into-Hold” checks, the horse may or may not have been checked by a TPR steward. The heart rate is taken initially – the rate is confirmed with character and rhythm assessed.

In the “Standard” veterinary check the rest of the clinical examination is then performed. It is best to work out a regular routine early on. The conventional method is to check the heart rate and respiration, then to check the rest of the parameters. This is usually done by beginning at the nose and working towards the tail. The top-line of the horse is competed first and then lastly the legs. The legs and shoes are usually checked just prior to the trot-out.

The “Vet-Gate-Into-Hold” utilise the Cardiac Recovery Index. The Ridgeway Trot is another term used to describe this system.

What is the Cardiac Recovery Index?

- The heart rate is taken over 15 seconds and recorded.
- At the end of this 15 seconds the time is recorded. The horse then has 60 seconds to trot out 40 metres and back 40 metres.
- This distance is marked clearly for the competitor to see. (This trot-out usually takes approximately 30 seconds.)
- At precisely 60 seconds the heart rate is once again taken over 15 seconds.
- The two values should be within 4 beats of each other.
- The veterinarian may complete a check of the horse’s parameters before or after completing the CRI.

The CRI indicates the cardiac reserved of the horse’s heart. It is a measure of fatigue. It gives a guide to whether or not a horse has the capacity to cope with the next leg. If the CRI is high and fails to consistently return to within 4-8 beats of the original score then there is cause for concern.

The CRI is viewed in conjunction with the overall assessment of the horse/s parameters – it is seldom used as a sole basis for the elimination of competitors.

A horse is eliminated from a ride if:

1. For all 80 km rides, the heart rate fails to recover by 30 minutes after arrival at a check point to a figure of **55 bpm or below at the first check point**, and to **60 bpm* or below at subsequent check points, including the final check point**.

There are a couple of exceptions to this rule.

- a. The **NOVICE horse must recover to 55 bpm at every check.**
- b. Where the ride is **less than 80km then the heart rate must be 55 bpm at every check.**

Failure to pass a “Gate and Hold” examination within 30 minutes of arrival at the check point.

- a. The heart rate must fall below 55 bpm during in a Training Ride
- b. The heart rate must fall below 64 bpm during an Endurance Ride.

In the opinion of the examining veterinarian, **any factor** indicates that the horse would be unduly stressed if allowed to continue in the ride.

The horse shows **any lameness**.

At both check types the general clinical examination aims at careful evaluation for any signs of severe stress and possible impending exhaustion. The assessment of hydration status is particularly important. Pay particular attention to loss of skin turgor, anal sphincter muscle tone, prolonged capillary refill time and reduced or absent gut sounds. The heart rate, rhythm and character are also important in the

assessment of a potentially exhausted horse. The heart rate may increase in rate or become *labile*. (i.e. fluctuating rate and rhythm).

Evidence of lameness, stiffness, “tying up” and surface lesions such as fresh or aggravated pre-existing cuts, girth galls and saddle sores.

Any information that may be of use at a subsequent examination must be noted in the horse’s logbook and the examining veterinarian should sign it after each inspection. Reasons for elimination should also be noted in the logbook.

Only those horses which are not lame, with heart rates that fall to the required level at the veterinary check, and which are considered “fit to continue” should be allowed to “vet through” any sectional of final veterinary examination.

2. Best Conditioned/Best Managed Horse

The veterinary team has the duty of selecting the winners of these awards. In recent years, the advent of standardised fittest horse criteria have led to this assessment being more consistent than it had been in the past. Only the 5 horses, to complete successfully, in each division are eligible for the **Best Conditioned Award**. The ride committee specifies the divisions included in each Award.

Criteria used include:

- Time taken to complete the course
- Heart rate recoveries during and after the ride
- Weight carried
- Clinical status of the horse

Judging usually takes place a minimum of 1 hour after the ride finishes. In longer rides it may even occur the next morning. (Usually between 1-12 hours post-ride).

Horses should be examined both at rest and in motion, and move freely with minimal stiffness and no lameness. The attitude and action of the horse should be evaluated when being led at the trot on a loose rein and /or when being ridden under saddle. Contenders for these awards in rides of 160km or over must be paraded under saddle. The Head Veterinarian or a panel of officiating veterinarians may complete the judging, with the final decision being that of the Head Veterinarian.

A **Best Managed Horse Award** may also be awarded based on veterinary evaluation. The eligible competitors being all successful completors. This award is usually restricted to Marathon Rides, although it is up to the discretion of the Ride Committee. *In 1997, a “Tambo Teddy” trophy was presented to the Best Managed Horse at the Queensland State Championship (Longreach to Winton).*

6. Lameness

Lame vs Not Lame

“Lame” in the context of an Australian Endurance Ride is elimination from the event.

Lameness is an indication of a structural or functional disorder in one or more limbs that is manifested during movement or in the standing position.

The standard definition for lameness under Australian endurance conditions could be viewed as:

“A consistent, inconsistency in gait which differs substantially from the pre-ride trot-out. A horse will be given the benefit of the doubt if the veterinarian/s can not judge the horse lame after two trot outs.”

The degree of lameness is not often recorded in Australian logbooks. For the purposes of an endurance ride a horse is either lame or not lame. In clinical practice and in international competition grading systems are used to assess severity.

7. Definition of Adequately Shod

Before a horse can compete in an Endurance Ride it must be deemed to be “adequately shod”. **What constitutes “adequately shod?”**

As a competitor:

“At the beginning of the endurance season, I sit down with the Ride Calendar and work out a sensible program for my horse/s. This program will be largely dictated by the horse’s age and career stage. It will take into account anticipated ride conditions, ride location and expense.

Then I sit down and plan when my horse will be shod. I attempt to organise my farriery around the competitive events. Farriery is a primary concern. I believe that the condition of the hooves and shoes are a controllable management issue. There is no substitute for good farriery. It can ultimately mean the difference between a competitive, sound horse and a non-competitive cripple.

I try to arrange the farrier 5-10 days prior to ride. I then have time to “set” the shoes and make sure they fit correctly. Perhaps optimistically, I anticipate some sole growth to help protect from stone bruising. Another advantage is that the nail-heads are not worn smooth in this time and the chance of slipping, on bitumen or dry pasture, is minimised.

On some horses I like to use the flat, heavy, wide-web shoes – more for protection than any other reason. They also are more secure – these days I rarely lose a shoe. On my present horse I like lighter, concave shoes as the heavier shoes did not suit him. You will need to evaluate each horse separately. Some will need pads. It is a trade-off. Protection and support versus weight. Whatever works for you – there are no set-fast rules.

I don’t like extensions on the shoe- heels. I believe these put excessive strain on the flexor tendons and associated structures and make it more difficult going down-hill. I prefer to roll the toe, to an excessive degree if necessary.”

As a veterinarian:

“Shoes should not be thin, loose, sprung at the heels, “off the wall” or collapsed. If a problem is noted the rider should be asked about shoeing history. Occasional riders are surprisingly ill equipped in the assessment of their horse’s shoes. Most riders know better. It is our job to provide a yard-stick of what is acceptable, and more importantly, what is unacceptable.

*In my mind, if the horse is inadequately shod then entering the Ride is a waste of time and money. It is little more than “a preventable lameness waiting to happen”. I require horses with inadequate shoes to be re-shod and re-presented before they pass the pre-ride examination. I am deaf to protests concerning this issue. **The horse must be shod properly.***

I do not have a problem with E-Z boots. They work well in my experience. There are very few horses that vet out lame as a result of wearing a well-fitted boot. In the USA they have been known to use four as a method of “shoeing”. I wouldn’t have a problem starting a horse in a set of E-Z boots. **This is probably an unlikely scenario under Australian conditions (Cost >\$50.00 each).**

When a horse presents at a check with a lost shoe at the required 30 minute check I perform a normal evaluation, including a trot out. If the horse is sound then I require the competitor to re-present and demonstrate that the hoof is re-shod before they leave base on the next leg. If the horse is unsound then the horse is eliminated.

*It is the competitor’s responsibility to have the horse re-shod **before the veterinary check** if they wish it to be evaluated with all four shoes. If the horse has entered base with an E-Z boot in place then I will trot the horse out with the boot in place if the competitor so wishes. I will also allow a horse with a well-fitted E-Z boot to continue on the next leg with the boot in place if conditions warrant.”*

Jo Hamilton (Veterinarian & endurance rider)