

#46

V200 — The Speed at 200 bpm Is Your Fitness Scorecard

A Weekly Fitness Test You Already Run Every Time You Gallop

V200 is beautifully simple: it is the **speed at which a horse reaches 200 beats per minute**. As the horse gets fitter, it can run **faster before hitting 200 bpm**. A horse that previously reached 200 bpm at 10 metres per second can now hit that same heart rate at 11.5 m/s. That is a measurable, repeatable fitness improvement — no blood draw, no laboratory, no guesswork.

As the cardiovascular system adapts to aerobic training, the heart becomes more efficient. It pumps more blood per beat (higher stroke volume), so it does not need to beat as often to supply working muscles. The same speed now demands **fewer beats per minute**. **A rising V200 over weeks is proof the aerobic engine is growing.**

KEY POINTS

- V200 = the speed at which heart rate reaches 200 bpm — **higher is fitter**
- Rising V200 across the preparation = confirmed aerobic adaptation
- **Plateau in V200** despite ongoing training = adaptation stalled, time to change stimulus
- Test conditions must be standardised: same track, similar temperature, after warm-up
- Compare only to **that horse's own previous V200** — individual variation is large between horses

TYPICAL IMPROVEMENT RANGE

A well-conditioned horse starting from low fitness can see V200 rise by **1–2 m/s** over an 8-week aerobic base phase. That translates to a noticeably faster horse at the same cardiovascular effort — **less horse to go faster**.

WHY THE PLATEAU MATTERS

When V200 stops rising after multiple consistent sessions, the aerobic system has reached its adaptation ceiling for the current training stimulus. This is the signal to **change the training type** — add speed work, intervals, or increase volume.

STABLE QUESTION

"What was this horse's V200 at the start of this preparation, and what is it now? If you don't know, you may not be able to tell whether the last 8 weeks of work actually did anything."

TRAINER TAKEAWAY

V200 turns 'I think the horse is getting fitter' into **'I know the horse is getting fitter.'** Record it every 10–14 days. Plot it on a chart. When the line goes up, your programme is working. When the line goes flat, something must change. **V200 is the most useful single number in your training file.**

THE SCIENCE BEHIND V200 — VVO₂MAX & T-LIM

V200 is your field proxy for **vVO₂max** — Variable ② of the 7 Key Performance Variables. vVO₂max is the speed at which a horse reaches its aerobic ceiling. Two horses can have the same VO₂max but different vVO₂max values because one is more economical. **A rising V200 = a rising vVO₂max.** Variable ⑤ — T-Lim vVO₂max — measures how long the ceiling is held. The horse that peaks at 600m then flattens has a T-Lim problem, not a V200 problem.

#51 HR as Internal Load — What the Horse's Body Actually Experienced

What You See on the Clock Is Not What the Horse Feels

There are two different versions of every training session. The **external load** is what you observe: speed, distance, time. The **internal load** is what the horse's body actually experienced: heart rate, oxygen consumption, metabolic stress. **Two horses can run the same external session and experience completely different internal loads.**

A horse recovering from a respiratory infection will have a heart rate of 180 bpm during a canter that a healthy horse would handle at 140 bpm. Both horses did the same external work. One was barely stressed. The other was working at near-maximal cardiovascular effort. Heart rate monitoring is the most practical way to **see inside the horse** — to measure what the body is actually dealing with.

KEY POINTS

- **External load** = speed, distance, time — what you control and see
- **Internal load** = HR, lactate, oxygen use — what the horse's body actually experiences
- The same external load creates **different internal loads** in different horses or on different days
- A post-illness horse, a horse in heat stress all show **elevated HR at standard speeds**
- Heart rate monitoring bridges this gap — the **real-time window into internal experience**

PRACTICAL EXAMPLE

Two horses, same 800m canter at the same pace: Horse A hits **140 bpm**, Horse B hits **172 bpm**. They ran identical external sessions. Horse B experienced 23% more cardiovascular stress. Without HR data, you would not know.

USING IT DAILY

Check whether each horse's **HR at a known pace** is at, above, or below its expected value. Above expected = internal load is higher than planned (reduce tomorrow). Below expected = the horse is well-adapted (can consider progressing).

STABLE QUESTION

"Have you ever had a horse who 'looked fine' after a session but then trained poorly or got sick two days later? That horse's internal load was higher than the external session suggested — HR data would have shown it."

TRAINER TAKEAWAY

Managing training by external load alone is like managing a budget by watching what you spend but not what you earn. HR monitoring adds the other half. **When external and internal load both make sense together, you are training the horse — not just exercising them.**

CONNECTS TO →

Monday #41: Elevated resting HR + elevated exercise HR at standard pace = double overload signal. | **Wednesday #46:** V200 = field proxy for $\dot{V}O_2\text{max}$ (Variable ② of the 7 Key Performance Variables). | **Friday #43 HR Zones:** Zone 4 intervals at or near V200 speed are the primary $\dot{V}O_2\text{max}$ training stimulus.