

Directory of cantering / galloping sessions

We thought it would be interesting to draw up as exhaustive a “directory” as possible of the training sessions commonly used to prepare eventing horses. Better understanding, shared terminology, facilitating understanding of training and planning sheets, and above all clarifying what we hope will be many discussions, are the objectives of this fact sheet. Each session corresponds to a particular objective and is presented in terms of its content and duration, but also according to the metabolisms involved and the estimated recovery time between each session of the same type.

by **Guy BESSAT - Patrick GALLOUX - Philippe MULL** | 13.02.2018 |

Translated from french by : Alison Drummond

Technical level 



© N. Genoux

What you need to know before you start

A metabolic contribution suited to each type of session

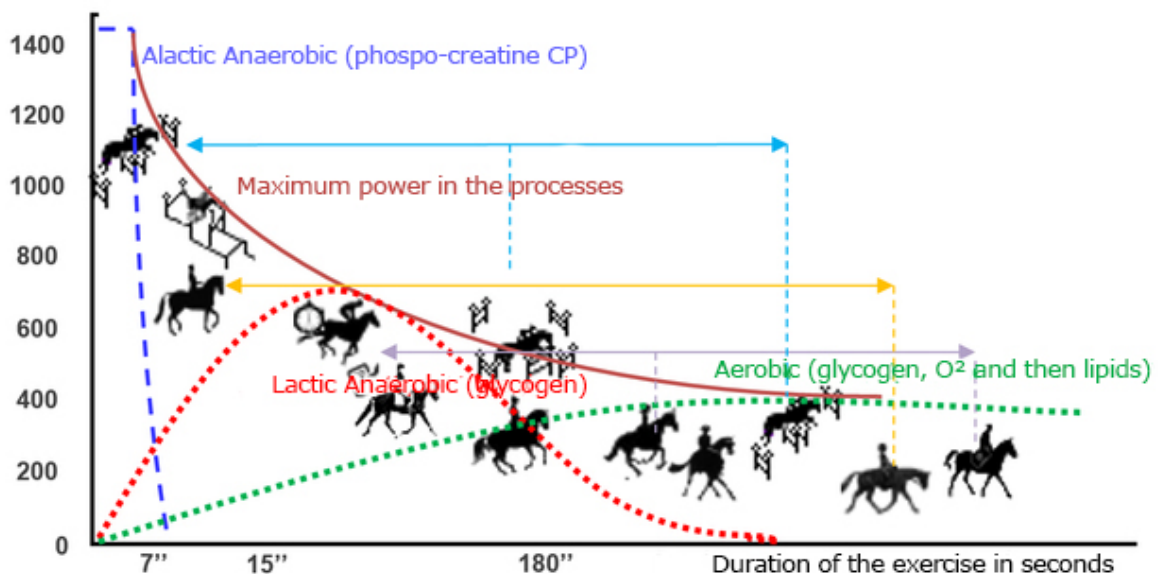
The form, intensity, duration, recovery times and demands on the muscles... depending on the type of session, determine the metabolic contribution for each of them. Ideally, it is on the basis of these demands that the programme and then the plan should be developed, according to the objectives set. The duration of the sessions should be adjusted according to:

- The age of the horse
- Its level of training
- The period in the programme

The sequence of sessions during periods, cycles and microcycles according to the characteristics of each rider/horse combination will result from this. All of these parameters make it possible to define training loads (energy expenditure, oxygen consumption and type of recovery required).

Shorter and therefore more intensive activities (e.g. cavaletti jumps or obstacles with full or semi-full recovery) mainly place demands on the anaerobic alactic metabolism; while an often less intensive and rather "long" trotting session will only work the aerobic metabolism. In show obstacle sequences, with repeated sequences and little intermediate rest, the anaerobic lactic metabolism will be dominant, as in a muscle strengthening session.

Strength of the exercise



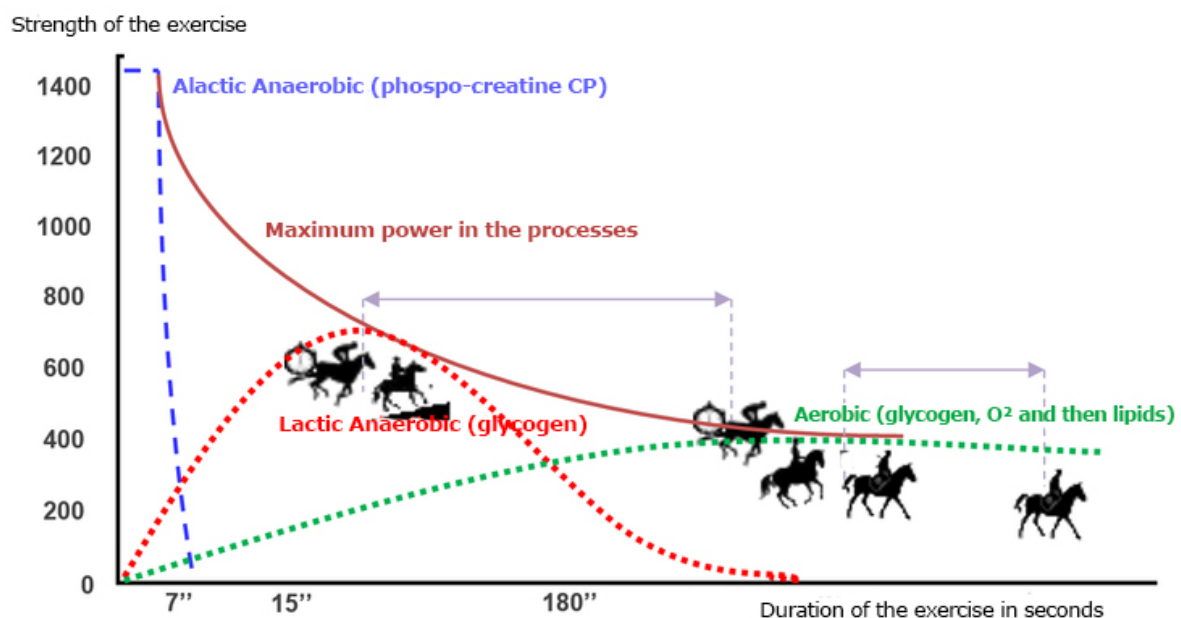
Graph 1: Example of metabolic contribution at work according to exercise intensity and duration. Obstacles (blue arrow), dressage (orange arrow), cantering (purple arrow)

For each session, we define:

- An **average time** excluding warm up and recovery;

- The **necessary intensity** of the session, i.e. the demand or power (%VO2 max, amount of force or maximum height depending on the discipline);
- The **necessary recovery time** after the session: this value, which is generally defined according to experience, is key, alongside the metabolic contribution, and is indispensable for defining the amount of work and the sequence of sessions;
- The **main metabolic contribution**, remembering that this may, for equal work, evolve according to the period, duration, intensity and with a different management of recovery.

Directory of cardio and cantering sessions



Graphic 2: Metabolic contribution at work according to the intensity and duration of the "cardio" exercises - From left to right: cantering/ galloping according to speed, duration of the plateaus and recovery, varied terrain when trotting or cantering, continuous cantering, continuous trotting.

Conditioning sessions

Interval Trotting

This is reserved for getting a horse back into condition after a long rest or for young horses starting their flat work.

It consists of a series of trots lasting a few minutes each, interspersed with walking.

Average length of the session	20 to 45 minutes
Required session intensity ²	30%
Recovery time required after the session	6 to 12 h
Dominant metabolic contribution	Aerobic

“Trotting” sessions

This involves trotting continuously over gently rolling terrain on suitable and even ground¹. The horse should be relaxed and trot in a horizontal frame and at a sufficient intensity (250 m/min).

Due to the low demand, there is no need to extend the trot time beyond 20 to 30 minutes.²



1- Trotting on tarmac, which has long been recommended for tendons, is no longer required because it generates vibrations that are harmful and repeated shocks to the locomotor system.

2 - Very long trots, as may have been practised in the past, notably for the purpose of preparing for the road events, which no longer exist; moreover, they had the disadvantage of “wearing the horse out” through excessive demands on body fat.

Average length of the session	30 minutes	
Required session intensity	50%	Active: 240 m/min, Hr 100 bts/min
Recovery time required after the session	6 à 12h	([La] between 1 and 2 mmol/l
Dominant metabolic contribution	Aerobic	

Trotting in varied terrain sessions (slopes of 4 to 6%)

Carried out on hilly terrain, these sessions combine trotting and cantering depending on the terrain in a series of repetitions of climbs and descents. The horse trots and canters freely.

Average length of the session	30 minutes	of which 15 to 20 min intensive
Required session intensity	40 à 60%	Hr between 120 and 160 bts/min
Recovery time required after the session	24 to 48 h	If demanding on the muscles
Dominant metabolic contribution	Aerobic/anaerobic	[La] between 2 and 3 mmol/l

Cantering / galloping sessions

Cantering sessions

These sessions take place continuously, aerobic metabolism, on natural tracks. Often overlooked in winter work, these cantering sessions are essentially intended to prepare the body for future cantering and the work to come. The horse canters without apparent effort, without pulling, looking for height in the stride, the gait is regular or varied (progressive, alternating, etc.)

If natural tracks are available, this work should be prioritised over trotting, which is soon insufficient and whose pace is too different to that of cross-country.



IFCE riders practice shorter type 1 canters: 2000m at 350m/min (6min) or type 2: 2000m at 450m/min (4min30).

Average length of the session	One hour	6 to 12 min canter at 400-450 m/min
Required session intensity	50 to 70%	Hr between 140 and 150 bts/min
Recovery time required after the session	24 to 48h	Usually less as soon as the horse is ready
Dominant metabolic contribution	Aerobic	[La] between 2 and 4 mmol/l depending on the degree of preparation

Note: From at least level 2 and above, but more probably whatever the level, and if the track allows it, it is recommended to finish with an acceleration so as not to "send the horse to sleep" and so that its intrinsic speed is not altered by this type of "slow" and/or regular session due to the duration of the continuous exercise*

Below:

Table 1: Example of cantering sessions carried out continuously on the IFCE Saumur site (natural sand track in Verrie, France): 1,980m, 30m cumulative height gain with short slopes 315m at 3%, 144m at 4.4%, 190m from 9% to 4.7%)

PPG Gallop	Distance	Speed	Lap time (1,980m)	Approximate duration
Type 1 Gallop	1,980 m	350-400 m/min	5 min	5 min
Type 2 Gallop	1,980 m	450 m/min	4 min 30	4 min 30
Type 3 Gallop	3,960 m	450 m/min	4 min 30	8 min 50
Type 4 Gallop	5,940 m	470 m/min	4 min 15	12 min 40
Type 5 Gallop	7,920 m	470 m/min	4 min 15	16 min 50

Galloping sessions

These generally take place at intervals (sequenced) or continuously (over distance): the horse gallops several times. Duration, intensity and recovery time vary depending on the period, level, capacity and the effect that is sought after. They can be divided as follows:

- **Galloping sessions aimed at developing aerobic capacity:** the horse will gallop on fairly intense repetitions at the speed required (450m/min at minimum to get close to its threshold speed of between 520 and 600m/min on a flat track). It will adapt its real speed according to the soil (deep sand) and the undulating terrain³. For example, series of 3 x 3min or 4 x 3min or better decreasing 4'-3'-2'. Recovery between rehearsals must be more or less incomplete⁴ according to the purpose of the session and takes place following the trainers, either cantering or trotting.
- **Galloping sessions oriented towards the development of maximum aerobic power (MAP).** The horse will gallop on short and intense reps (1 to 2min) at high speed (V200 or between 600 and 700m/min) on a good track with semi complete recoveries. These faster sequences, which are often avoided out of fear of injury, are essential to preserve intrinsic speed and for to prepare for cross-country runs in which the horse can reach these speeds for short periods. They must be planned very precisely in terms of duration, sequence and therefore recovery time.

These sessions must be systematically monitored with a heart rate monitor and a final and 10 minute later blood lactate measurement. For more individualised training, it is recommended to identify the horse's speed at the anaerobic threshold V4 or Fc4 and the V200 (see the "Evaluating the physical condition of the horse" fact sheet).

The heart rate monitor tracks the heart rate at the different plateaus and during recovery time, which helps modify the number of repetitions based on the response to the session. It is also important to ensure that the horse has recovered before the next practice session.



3- The use of a heart rate monitor is strongly recommended to compensate for the effects of the soil, hilly terrain or weather conditions.

4- The heart rate curve during the recovery phases shows a progressive rise in heart rate as the plateaus of accumulated fatigue are reached. At the beginning of preparation, in aerobic capacity, the recovery time is equal to half of the plateau, in maximum aerobic power, it is equal to the duration of the plateau.

Average length of the session	One hour	8 to 12 min excluding final recovery
Required session intensity	80 to 90%	Hr between 160 and 200 bts/min
Recovery time required after the session	48 to 72 hours	
Dominant metabolic contribution	aerobic / lactic anaerobic (capacity)	[La] between 4 and 6 mmol/l in aerobic capacity, 8 to 10 mmol/l in aerobic power

Below:

Table 2: Example of specific cantering sessions carried out with high-level horses or recommended by field studies.

The horse must canter in a relaxed way, with an extended attitude but remain level ("be able to jump"). It may be necessary to do a long canter before the specific work.

According to the authors, there are many options, whether in a sequenced or continuous form, with various recoveries (not active, trot, canter). Some examples are given here, the important thing is that the goal set by the trainer (aerobic capacity or power) is met.

Example 1: Type of gallops on sand used nowadays for high level horses

PPG Gallop	Model	Intensity of repetitions	Recovery intensity	Total duration of intensive gallops
Type 6 Gallop	6 times 1'(1')	500 m/min (deep sand)	350 m/min (gallop)	6 min
Type 7 Gallop	7 times 1'(1')	500 m/min (deep sand)	350 m/min (gallop)	7 min

Example 2: Type of gallops on track used nowadays for high level horses

PPG Gallop	Model	Intensity of repetitions	Recovery intensity [1]	Total duration of intensive gallops
Gallop type 8 (aerobic capacity)	3 times 4(2) or 5(2)4(2)3	Hr ₄ (550-600 m/min)	Trotting T=50% of the plateau	9–12 mins
Type 9 Gallop (Maximum Aerobic strength)	3 times 2(2) or 1(1)	V ₂₀₀ (600-700 m/min)	Trotting T=100 % of the plateau	3–6 mins

[1] Duration: Recovery can be reduced as preparation progresses

Mixed sessions

These sessions, too rarely used in horse riding, are nevertheless highly relevant for preparation of the so-called combined or multiple tests, such as those involved in eventing competitions.

The point is to work on the physical as well as mental capacities of the rider and the horse, to combine the qualities of different tests into the same session. The sequence of two or three sequences organised in duration, intensity and recovery time according to the periods, allow to tackle a particular theme (balance when cantering / galloping for example...).

Here are a few examples of sequences: dressage, obstacles, canter / dressage, canter, obstacles/ strengthening, canter, canter / canter, obstacles, etc. The constant aim is for high quality work. It is also important to change the saddle from one sequence to the next.

From a metabolic point of view, the choice of a more lactic or aerobic workout can also give this type of session a real added value. The important thing is that

the objective of the session is defined before riding the horse and does not evolve with the work, without an objective reason for doing so.

Average length of the session	45 minutes to 1 hour
Required session intensity ²	70 to 80%
Recovery time required after the session	24 to 48 h
Dominant metabolic contribution	aerobic / lactic anaerobic (capacity)

Conclusion

Presentation of these types of generic sessions, which can be adapted to other disciplines if necessary, should enable the reader to construct varied and progressive cycles and microcycles according to training periods and sequencing. The knowledge of the metabolic contributions of each session and the length of recovery time will allow effective sessions to be followed without harming or cancelling one another out.

The rules that enable the rider to adapt them to the horse and the objectives, must include the assessment of the training load of each session.

About our writers

Guy BESSAT IFCE Saumur

Patrick GALLOUX IFCE Saumur

Philippe MULL IFCE Saumur

Bibliography

- **GALLOUX P. ; BESSAT G.** (2018) : L'entraînement du couple cheval de sport / cavalier. IFCE, 252 p.
- **GALLOUX P.** (2011) : Concours complet d'Equitation. Belin, 234 p.
- **GALLOUX P.** (1991) : Contribution à l'élaboration d'une planification de la préparation énergétique du cheval de concours complet (thèse de doctorat). Poitiers