

Estimated Number of Jumps (Competition and Warm-Up) for FEI Jumping Horses

Author(s): Tim Worden, PhD

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The International Olympic Committee (IOC) states 'the aim of load management is to optimally configure training, competition and other loads to maximise adaptation and performance with a minimal risk of injury'. Load management has gained significant attention in most sports over the past twenty years due to its data-driven approach to applying as much load as necessary to maximize development while simultaneously ensuring the applied workload does not exceed the body's capacity (which would lead to burnout or injury). Simply stated, monitoring workload provides guardrails for trainers and coaches regarding how much work an athlete should do in training/competition, with going outside of these reference values (either doing too much or too little) being associated with poor performance and injury.

To better understand the jumping load experienced by FEI horses in competition, I examined the classes jumped by the top 100 riders on the Longines FEI Ranking List in 2019, and based on the competition history for their horses in the preceding twelve months, generated an estimate for the number of jumps horses are taking at FEI competitions (including warm-ups and the competition ring). This data can serve as a rough estimate of the number of jumps taken in competition and can help to inform future studies on the topic. Additionally, for riders and trainers, it can help them to understand how their individual horse's workload compares to the average FEI horse.

All horses ridden by the top 100 riders on the Longines FEI Ranking List (July) were evaluated on their performance over the past 12 months. Based on the average number of jumps on course (adjusted for different class types) and the average number of jumps taken in warm-up by FEI riders, an estimate of the total number of jumps taken by each horse was generated (for a one-year period). Data is displayed in a boxplot below (see image for details on how to interpret the boxplot). Data is for 561 horses and the average number of jumps taken by a horse was 746 jumps per year. This data does not factor in the number of jumps taken when training at home.

IMPORTANT: Note that this estimate includes only the results available on the FEI database – thus results from national shows are missing. Horses were only included if they did not have any gaps in their competition calendar of more than five months. Also, this is only an estimate based on average number of jumps on a course / jump-off and average jumps taken in warm-up: each horse's individual data may vary slightly.

Despite these limitations, the data gives a rough picture of the number of jumps these 561 horses took over the past 12 months (directly related to competition). The data could be used to identify programs that have their horses jumping much less or much more than the average horse, and the potential effects of this on performance and injury.

