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# Weighing It Out: Why The Equestrian Discipline of Jumping Is Behind Its Time—Part 1

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**Abstract**

The equestrian sport sector, and particularly the discipline of show jumping, has not progressed in a scientific, quantitative manner as needed by this point of its history, especially in comparison to other sports, considering modern advances that have been available for years. Show jumping, a discipline represented at the Olympic level and solidified in its own international championship opportunities, should be far more mastered—and significantly less injurious or fatal—than it has been in recent seasons. Organizations and associations responsible for guiding, shaping, and influencing the sport have not focused on key, basic, and necessary improvements both inside and outside of the competitive domain. Reform is needed in the show jumping arena, along with an aggressive pursuit of the benefits of technology in terms of precision, safety, and technique refinement. By 2027, a significant shift can and should begin to occur within the equestrian sport realm and especially within this discipline. One of the most catalytic steps possible to take at this time would be the development and subsequent availability of standardized athlete biometric data—to include basic data such as height and weight, which are currently unavailable to the public; in some cases, the data may be nonexistent.

## Introduction

In 1924, in a historic session of the International Olympic Committee (IOC) equestrian sports—to include jumping—were assigned to the category of obligatory sport.[1] It is one of the few sports in the world where men and women compete against each other at the Olympic level, a status that began in 1952.[2] One hundred years after the landmark decision by the IOC, in the very place where equestrian sports were first declared a necessary component of international sports (Versailles),[3] the 2024 Olympics were held, to include all three of the major equestrian disciplines of the English riding style: dressage, cross country, and jumping.

We have come a long way in the discipline of jumping since its early days—when riders used to lean back, under the mistaken belief that doing so was the best technique to use. Over time, this faulty and extremely dangerous approach would be replaced with the modern, and much more biomechanically suitable, form that we commonly see today: the rider leaning forward with the horse's motion while holding a squat-like position for the jump's duration.[4] Key pieces of equipment, such as saddles, pads, and girths—in an effort to maximize athletic performance—have also become highly advanced in comparison to past options. However, and of direct consequence for the equestrian sporting community today, despite all its historic standing and any improvement process to date, the discipline of jumping—along with equestrianism at large—has continued to face long-standing issues with being viewed as a less-than sport, if a sport at all.[5,6,7] Articles published under titles such as "Yes!

Equestrians Are Athletes!"[8] or "The Future of Olympic Equestrian Sports: A Response to an Opinion that the Horse Does All the Work"[9] point to the reality of differing perceptions of equestrianism as a "true" sport and whether or not it deserves respect and recognition.

## The Data Drought of Equestrian Sports

A glaring difference between most of the widely accepted sports and equestrian sport—especially those seen at the international level, such as those featured in the Olympics—is the lack of basic biometric data for not only for equestrian athletes but also the equine athletes. As of the end of 2025, the chasm of missing information spanned across all levels of competition within the discipline, from amateur to even world-renown riders. Considering that jumping is an inherently biomechanical activity, where all aspects (from weight and height, to take off and landing angle, to speed, and more) count in the various formulas working in concert to produce living, breathing motion through the athlete pairings, the current state of affairs for the discipline could not be more juxtapose to intuitive needs or even logic. For the sake of a contrast example, basketball was introduced to the Olympic stage in 1904, but this entry came only as a demonstration event; it would only be in 1936, years after equestrian sport had been named obligatory, that basketball would be integrated as a medal event in the Olympics.[10,11] Even so, a simple internet search for information about professional riders versus professional basketball players will reveal stark differences in sport development in terms of available athlete biometric data.

Another sport providing a fair comparison of intentional, well-rounded sport development is golf. Like horseback riding, golf is a sporting endeavor reaching back in time to the tune of centuries. Golf first made its appearance on the Olympic scene in 1900; it returned in 1904, before being taken off the Olympic sports roster for more than 100 years (being inducted back into the Olympics only in 2016).[12] Despite its extended absence from a major world stage, golf as a sport did not suffer in its efforts of gathering, analyzing, and applying data for technique, training, and performance improvement.

Instead of stagnation over the years, the application of technology—as it became available—plowed a field of possibility within the sport, leading to refinement and mastery as the decades progressed. In fact, the Professional Golf Association (PGA) has worked out its athlete data enough to be able to make statements such as "21 percent of PGA golfers are [six-foot-two inches] or taller."[13] Both the PGA and the Ladies Professional Golf Association (LPGA) are able to readily report information such as their tallest and shortest players.[14] While these observations might not seem like much at first, they go on to inform and impact many aspects of the sport at both the hobby and competitive level.

As of the beginning of 2026, we still had no such ability to report similar data observations on the equestrian community, including the show jumping circuit. To demonstrate the lack of available (and verified) information about even well-known, professional riders (including multiple-time Olympic medalists), it is worth noting that even the height and weight of close to seventy of the top 100 professional jumping riders (per Jumping – Longines Ranking, N 299°)[15] appeared to be unavailable anywhere online despite various search engines and using multiple key word searches. The reasons for this data needing to be readily available information should not be difficult to argue.

Again, jumping is a discipline for which biomechanical principles are integral, whether riders are aware and applying them or not. No movement, and certainly no jump performance, can occur outside of biomechanics being at work. Even so, the largest victories

around the world are being won, noted, and publicized—all without the most basic data of height and weight being consistently available. In this absence, there is also an absence in the ability for us to understand the discipline in full, which deprives us of the ability to improve it. Kent Farrington, considered the number-one professional jumping rider in the Longines Rankings toward the close of 2025,[16] said of his approach to riding, "I ride a lot off of feeling. It's important for me to feel what is right for the horse and not a matter of robotic routine. Go with what feels right for that particular horse on that particular day. If he's a little stiff or a little slow, I might spend more time at the trot. If he feels good, then I might move on more quickly to the canter."[17] Farrington's approach is not wrong; but it is limited. There is much more to the story of performance than feel.

Related, the lack of data has created an information shortage leading to well-intentioned but ultimately controversial efforts to create standards that may sound scientific but are not truly so. For example, one equestrian operation in the Netherlands announced a rider weight limit: 90 kg (198 lb) for women and 100 kg (220 lb) for men.[18] This effort quickly garnered pushback from organizations such as the German Equestrian Federation, and that for good reason.[19] Limiting weight arbitrarily is not the same thing as limiting weight objectively. To properly limit weight, a variety of factors should be considered, and ultimately the combination of factors will include not only consideration toward the rider but also the horse that a rider would be paired with.

To make proper rulings when it comes to topics such as weight restrictions, we must take into account the contributing realities from both biomechanics and exercise physiology. Weight in terms of mass is not the same as a well-rounded evaluation of body composition. A heavier rider who has a lot of lean mass, to include muscle, may be a more capable rider than one who is lighter but weaker (i.e., has a higher fat composition). So, weight is not the sole factor in an aspect such as biomechanical impact, and therefore it should not be treated as the sole determinant of whether or not a person can participate in a particular sport or discipline. This discussion point is only one of many that highlight the need for the equestrian sport sector to advance as quickly as possible into responsibly taking advantage of valid scientific applications.

## The Record Speaks for Itself

There is so much more to the jumping world, and yet we have kept this world small—restricted and cast by what we have yet to know and understand. We have not, despite noble intentions that we would, actually unleashed the power of technology in our favor.[20] Sometimes unleashing the power of technology does not require the use of a 3-D motion sensing camera; sometimes it is simply using a digital weight scale or a height stick. As elementary as these forms of technology might sound, the stark truth is that we have not weighed out or measured the individuals (whether equestrian or equine) like we should have within this sports sector. Instead, we have kept doing what we have always done—we have relied on instincts, intuition, and "feel." All of which are good—even necessary—things, to some extent; but they are not enough to actually advance, refine, improve, and grow a discipline as we need to, especially one so scientifically stagnated as show jumping.

At best, we are going in generational circles—aiming mostly for what's already been done. Just ask the records of the highest jumps in the last century, and the evidence is ready to testify that we are playing a repeat game. The last two major (confirmed) records set on the basis of jump height were from the years 1978 (2.32 meters) and 1949 (2.47 meters), with these performances belonging to Nick Skelton and Lastic and Captain Alberto Larraguibel and Huaso, respectively.[21,22] To put the

implied non-event into numeric perspective, it has been over seventy-five years since we have set a height record within the discipline of jumping. And, if we are brutally honest with ourselves, it's likely at least partly due to the fact that "over seventy-five years" ago may have been the last time that we devoted ourselves to achieving something new or truly doing something differently.

This perspective is not meant to disregard the accomplishments that have been made: the horses who won multiple Olympic medals over the years; the riders who have set records; or the slowly increasing use of wearable technology (such as heart rate monitors on equestrians or their sport horses during training and performance). But the progress has been—and still is—painfully slow; the framework most needed requires elements and approaches that are still missing, to include a centralized effort to enact pivotal change on this front. Most of the data-related efforts made around the jumping discipline have seemingly been more of a grassroots and individualistic nature—the experimentation of curious and growth-oriented equestrians—rather than widespread practice across the training and instruction industries or the outcomes of intentional decisions made by equestrian sport administration.

**What We Need Now**

Many of the today's riders focus on good and relevant practices: How we treat our horses; how we raise our horses; how we train our horses. We have, for the most part, successfully replaced the rather harsh "cowboy culture" ideology of horse training (which tended to assume that any non-compliance was a sign of disrespect) with the more accurate understanding that horses—as physiological beings with an individual psychological aspect—may experience pain, fear, discomfort, or confusion. To a major and noticeably beneficial extent, we have—over recent generations—majorly rewired as needed in how we approach our interpretations of equine behavior to achieve new levels of relational success. And, to an extent, this relational success might empower us to reach new areas and ideas performance-wise. Perhaps the strongest example of this possibility from recent decades is the historic performance by Stacy Westfall at the All-American Quarter Horse Congress in 2006, when she competed in the freestyle reining without any tack on her horse; twenty years later, the concept she explored is still impacting other disciplines. However, until the measurements are taken or the assessments are implemented, we still lack the details for measurable, confirmable improvement or the development of a data-driven compass to better outcomes.

The slew of major wins that the world has watched even over the past year in the jumping arenas cannot be scientifically interpreted, and that is largely because we lack the pieces of the puzzle needed for the process. Upon cheering for a successful round of jumps, we can only say, "They must have really practiced," or, "The rider is so experienced," or, "That horse was born to jump." Then we all but ignore—and even seemingly forget—the numerous and pivotal moments when it does not work out for a horse and rider (which is really just the result of the science of the sport not being fully known or applied). We move on far too quickly from incidents like Shane Sweetnam's face-first fall in the Tokyo 2020 Team Jumping Qualifier, complete with an experienced equestrian and sport horse who were, at least, at high risk of injury in that moment. The reason for any jump-related crash can be primarily summarized in a single word: *biomechanics*, supplemented with a proper consideration toward exercise physiology. The concept of biomechanical and exercise physiology contributions to overall pair performance are visualized in Figure 1.

In fact, these two dynamics—biomechanics and exercise physiology—can and should be analyzed and learned from as much as possible in the present, with the hope that correct

application of them will help reduce (if not altogether eliminate) such dangerous incidents in the future—potentially saving who knows how many horses and riders from not only injury but maybe even fatality; if we will let us ourselves finally acknowledge the possibility of applying something to the sport that should have been a part of it long ago.

## Why What Has Been Done Is Not Enough

While the need for reform across the show jumping sector in terms of performance understanding and approaches as they apply to riders is a clear necessity, it would be unfair to say that no work has been accomplished toward this end. A limited number of studies have been performed with a focus on either equestrian or equine athletes and jumping.[23,24] The fact that any studies exist is helpful to a degree. However, those to whom peer-reviewed research results may be helpful will vary across the equestrian community. It would not be impractical to say that, most likely, it could only be accessed, understood, and applied by very few overall. Studies may represent jargon that is relatively unfamiliar to anyone who has not formally studied the topics on which the research questions were based, with real-life example phrases including, "Greater head-neck ventroflexion at take-off was associated with decreased hock flexion,"[25] or "This study examined the effects of the rider on the linear projectile kinematics of show-jumping horses."[26]

Aside from the very possible issue of a language barrier based on technical terminology, relatively few of the equestrian community—whether amateur or professional—have or can afford many of the technician-type skills required to successfully operate advanced equipment. Further, even if every equestrian could afford the equipment or hire/manifest the skills needed at this level of data collection and processing, that hypothetical poses the issue of efforts being done in isolation (i.e., siloed). The pressing need for the discipline is to have collective data freely available that is of such a practical nature that it is usable and meaningful to equestrians in general—without requiring advanced skills or special

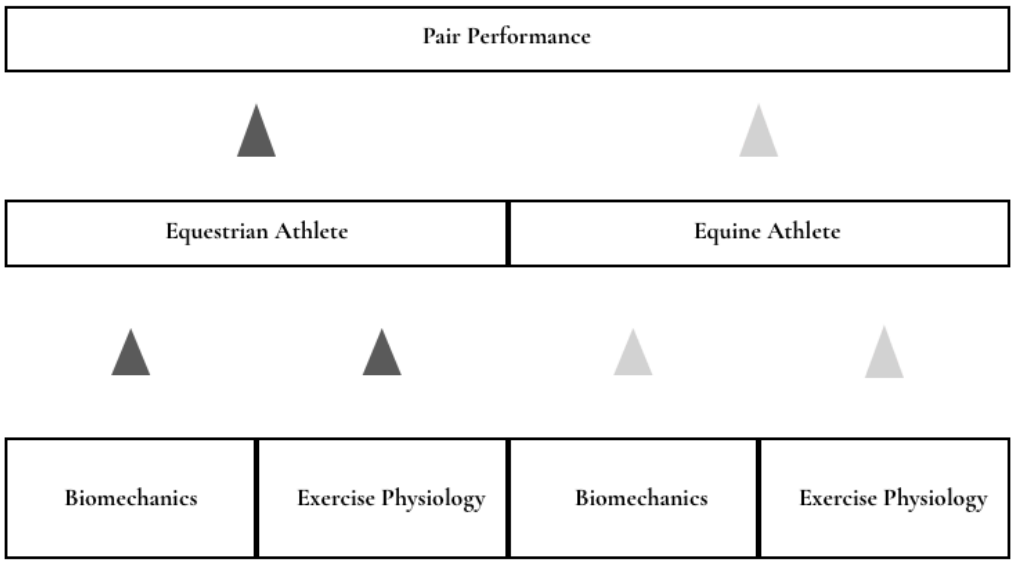



Figure 1—The contributions of biomechanics and exercise physiology to pair performance.

training to run or understand the numbers.

From an administrative organization standpoint, the Fédération Equestre Internationale (FEI) did release a report in 2023 that contained information highlighting the differences in competition level and placement between male and female equestrians; but it is worth noting that this report still does not outline basic athlete biometric data (for either horse or human athletes) aside from average ages of male and female equestrian competitors.[27] All in all, the efforts made so far—while in a positive direction and of value—do not meet the current need. We lack consistent access to data for efficient growth and development of equestrian sports in general and show jumping in specific, even where the data may currently exist (e.g., Olympic-level competition requiring athlete screening). Most of the data that exists is not adequate for sports performance analysis of any depth with relevance for competition training. And, as we collect and develop the needed data bases, we must shift away from methods that require specialist terminology or technical skill training that may otherwise create a lasting gap between a "good idea" and relevant, practical application of it.

## Breaking and Making Traditions

Perhaps it seems a violation to some to break into the space of what has been left qualitative for so long; but it does not really matter. It is nearly 2027, and it is well past time to move forward. Almost everyone else in sports has—ball sports, gymnastics, swimming, boxing, etc. For so many professional athletics, we have sought the best and brightest in terms of technology and understanding; but, somehow, we did not let the same technological and data-based advancements transform and enhance equestrianism. And now—as a distinct result—equestrian sports are lagging behind in terms of well-rounded development and clear future improvement. In a list ranking the thirty top sports, equestrian sport was nowhere in sight.[28]

Improving on traditions is not the same as parting with them—after all, they are integral to what equestrianism is. At the same time, rider height and weight reporting—along with equine height and weight reporting—especially in the context of jumping-based competition, should be a tradition. We should have had a century-old data book on such details by now, and we do not; but we can start one. We can be in a completely newer and better place—we can begin the process of taking this sport to a new and past-due level—by 2027.

## Conclusion

Industry professionals talk of biomechanics or physiology in relation to equestrian sport—and maybe that sounds really aware and proactive of us to do so—but the real question is, "Are we really applying these concepts?" Are we taking even something so basic as height and weight measurements of horses and riders and then making that information available so that the public can access and learn from it in order to improve the equestrian sport from the ground up? Clearly not.

Official athlete pages are inconsistent with the type and degree of data available, at best; some data are simply non-existent where public access is concerned. Not even individuals who are well-known and have spent decades in the sport at the professional level are reliably noted with the most basic of athlete information, such as height and weight. The most readily available information that we have is composed of scores and ranking. Scores and ranks are fine; but there is an issue with relying on them: They are an output, not an input. We cannot advance the discipline of show jumping without being able to take account of the inputs as needed. Therefore, it is time that

we track the inputs, from the ground up, so that we can understand the outputs that we have been seeing in the international performance arenas for over a century.

For equestrian athletes, multiple websites and sources were consulted in attempt to acquire basic information about individual athletes that is readily available across most other sports. As of the end of 2025, items as simple as height and weight on the top 100 riders in international show jumping were only inconsistently available; most of the information gathered came not from official sources directly associated with or guided by the equestrian sports industry and none of it comes with any guarantee of accuracy.

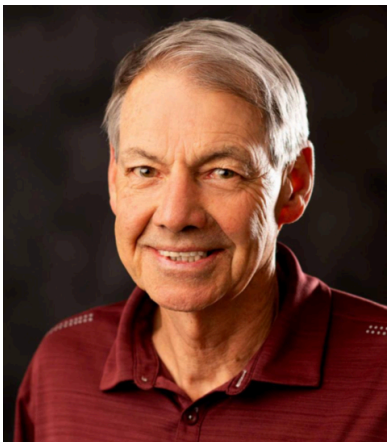
The topic of sport horses—including show jumpers—faces a similar dilemma of data unavailability. Almost no data were available on height and weight for successful show jumping horses—including horses that were Olympic participants, winners of the FEI World Cup, or United States Equestrian Federation champions. Since each pairing in the competition arena requires both an equestrian and equine athletes, the data for both parties is necessary to fully understand the entire performance story behind each ride and success level.

What can be sourced across the internet still leaves out many of the professionals whom the industry needs to include in the data sets for maximal effectiveness of the effort to understand the relationships between biometric data-related aspects and performance (including where the influence of biometric data ends and where differences in individual training, details related to the equine athlete, or the varying performance environments begin). We have history-making competitors (both people and horses) that—essentially—next to no one (except for the immediate ownership/management team or sport-governing authorities) knows the height or weight of, in a discipline that boils down to the ability to effectively understand and control a combination of heights and weights within the context of speed, direction, and constantly changing forces. On this basis, reform is direly needed; the current state of affairs is simply unacceptable. As we pursue excellence, including going back to the basics of sport development by capturing and making available fundamental athlete biometric data, we can expand both the foundation and the potential of equestrian sport in general and jumping in specific.

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Jillian Emma Hatcher is a long-time horsewoman and former member of the Mississippi State University (MSU) Horse Judging team. She holds a master degree in Exercise Physiology from MSU and is currently pursuing a PhD in Exercise Science from MSU. Her occupational experience includes operating as a legislative correspondent in the U.S. House of Representatives and operating in the publication sector for multiple years, specializing in the self-help and wellness book genre. Her research interests focus on nonpharmacological treatment options for individuals living with developmental disabilities and sensory disorders.



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