Icelandic Horse Society of Great Britain
Rider weight for Icelandic horses

The Icelandic horse is a sturdy, strong and larger-boned breed of horse known for its extra gaits, the tölt and pace. The Icelandic horse is an average weight of 330-380kg and does not generally grow higher than 14.2hh, like many native breeds. It is referred to as a horse rather than a pony, perhaps due to the breed's weight, bone structure and weight-carrying abilities. The legs are strong and short, with relatively long, large cannon bones and short pasterns.

The German Veterinary Association for Animal Welfare (TVT) states that a rider should be no more than 15% of the horse's weight, assuming the horse is of normal weight, adequately muscled and regularly trained. However, based on the cannon bone index described by the TVT, the Icelandic horse appears to have relatively higher resilience to carrying more weight compared to other horse breeds, indicated by its larger circumference of cannon bone relative to its normal weight (TVT Leaflet; Rider weight - ehorses Magazine). In studies with larger horses, it is shown that a body weight ratio (BWR) of 20% or more leads to welfare issues (Dyson *et al*., 2019). Such a high weight load of 20% may therefore only be tolerated under optimal conditions, such as with Icelandic horses who have a suitably resilient physique, are in a very good condition and the required performance is rather moderate (TVT Leaflet). Interestingly, the mounted games organisation stipulates a maximum BWR of 20% (http://www.mounted-games.org/imga/games/weight/index.html), where ponies used do not exceed under 15hh.

In studies performed specifically using Icelandic horses in the tölt, assessing the effect of increasing rider weight (including saddle) on various scientific measurements, it was found that an average of ~23% BWR (range of 17-27.5%) was the upper limit in the healthy Icelandic horse for longer periods of tolt (GJ Stefansdottir *et al.*, 2016). This was based on unsustainable lactate accumulation (i.e. muscle fatigue) during a leisure ride of 4km which included short periods of medium tölt. The variation in the individual horses' maximum BWR where lactate levels were unmaintainable was found to be correlated to the back (*Musculus longissimus dorsi)* conformation or back body condition score (BCS). Gunnarsson *et al.* (2016) also showed that with increasing rider BWR above 20%, stride length, frequency, and limb support was negatively affected which would indicate a decline in gait quality according to the breeding goals of the Icelandic horse.

Powell et al. (2008) also demonstrated in light riding horses that significant muscle tightness and soreness following a 6km ride was seen to increase at a BWR of 25% and above and muscle soreness was negatively correlated with increased cannon bone circumference and back width, despite unsustainable lactate levels seen at 30% BWR and above. Other studies confirm that overall body condition of the horse is important for functional welfare (Garlinghouse and Burrill, 1999) and that the rider's balance and technique (De Cocq *et al*., 2010) is highly relevant.

Therefore, even with these scientific studies, it is difficult for the IHSGB as a breed society to state a standard recommendation for how much weight an Icelandic horse can carry and is highly dependent on several factors: the type of the horse, its destined use and its build/conformation, particularly the back, legs and girth. Furthermore, the skills of the rider, the level of training of the horse, the fitness and length of time the horse is ridden in tölt, and

the riding equipment used all play an important role, and each horse and rider should therefore be assessed individually. With the current available information, the basic size of the horse is not a simple and decisive measure of how much weight it can carry and for how long and requires further analysis. Assuming the horse is the correct weight and suitably fit, the average of the reported BWRs (i.e. less than 23% including saddle etc.) could perhaps be used as a 'guide' for general riding. It should be noted however, that this limit will likely be less if the conditions mentioned above are not ideal.

As a breed society, it is the IHSGB's responsibility to ensure that the welfare of the Icelandic horse is always considered. It is our desire to educate our members so they have knowledge of the relevant factors to enable assessment of the suitability of the horse in relation to the rider weight, the skills to care for their horses in the best way with long term back and leg comfort and soundness part of the aim, and to keep and train their Icelandic horses to a suitable condition for their use; for example, ensuring the horses are fit and trained sympathetically enough towards the competition season or all year round as a leisure horse.

We hope that our research on this topic will be of benefit as a helpful overview of the currently available information, and we will update this guide when new data is available.

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