

# Equine Welfare Series

## EVALUATING YOUR HORSE'S BODY WEIGHT AND CONDITION

*Jennie L. Ivey, PhD, PAS, Assistant Professor  
Department of Animal Science*

Evaluating a horse's weight and body condition is important for overall health and nutritional management. Estimates of a horse's weight made by owners are often under- or overestimated by as much as 150 pounds. Determining a horse's nutrient requirements requires calculating body weight and assessing body condition accurately. Body weight is measured in pounds or kilograms whereas body condition refers to how much or how little fat coverage the horse displays. Both can be useful tools when evaluating a horse's dietary needs. By estimating and meeting nutrient requirements on a daily basis, weight loss or gain can be avoided.

### Determining Body Weight

Body weight assessments are needed for many reasons, including determining the amount of feed or dewormer each horse should receive. The most accurate assessment of a horse's weight is achieved by weighing them on a scale. Weighing on a scale is the ideal means of determining body weight in horses and other equids and should be used whenever possible. Since most horse owners do not have regular access to scales, estimations can be made using body measurements and mathematical equations.

Calculating body weight from measurements of the heart girth and body length tend to be more accurate than those from heart girth alone. Most "weigh tapes" available in feed stores provide a rapid

estimation of body weight, but do not take into account horses with a longer or shorter body than what is considered average.

Horses should be weighed on a scale or measured for weight estimation at the same time of day, preferably before morning feeding time. The calculations in the example below are meant to be used for mature, non-pregnant, light breed horses. Using this equation on draft- or warmblood-type, miniature, growing, or pregnant horses is not recommended for reliable weight estimations.

### Taking Accurate Body Measurements and Estimating Body Weight in Mature, Non-Pregnant Light Horses

1. Make sure the horse is standing square on a flat surface.
2. Measure the size of the horse's heart girth by placing a tape measure around the horse's midsection, behind the elbow, and directly behind the highest point of the withers. Pull the tape measure to take out any excess slack. The tape measure should make contact around the horse's heart girth, without causing an indent in the body. Record horse's heart girth measurement in inches (figure 1).
3. Measure the horse's body length by measuring the distance from the point

Figure 1: Measuring the heart girth.



To take a measurement of the horse's heart girth, place a measuring tape snugly around the horse's midsection, behind the elbow, and directly behind the highest point of the withers. Make sure the tape is not hanging loosely below the horse or pulled too tight to cause an indent in the body.

Figure 2: Measuring body length.



Determine the horse's body length by measuring the distance from the point of the shoulder to the point of the buttock. The tape measure should be pulled to make contact along the horse's body to obtain an accurate body length measurement.

of the shoulder to the point of the buttock. Record the horse's body length in inches. Make sure the tape measure is laying flat, making contact along the horse's body between the two points (figure 2).

4. Insert the measurements for heart girth and body length into the following equation:

$$\text{Body weight (lbs)} = \frac{(\text{Heart girth (inches)} \times \text{heart girth (inches)} \times \text{body length (inches)})}{330}$$

#### Weight Estimation Example

A horse's measurements are recorded as:

Heart girth: 70 inches

Body length: 78 inches

And using the equation:

$$\text{Body weight (lbs)} = \frac{(\text{Heart girth (inches)} \times \text{heart girth (inches)} \times \text{body length (inches)})}{330}$$

The horse's weight is calculated to be 1,158 lbs.

$$\text{Body weight (lbs)} = \frac{(70 \times 70 \times 78)}{330} \quad \text{Body weight (lbs)} = 1,158 \text{ lbs}$$

## Determining Body Condition

While knowing a horse's weight is important, their weight does not indicate if the horse is too thin or too fat or in good overall condition. Body condition score or BCS is assigned by physical and visual examination of the horse's body. A detailed explanation of the body condition scoring system can be found in the UT Extension publication SP 782 "Equine Welfare Series: The Body Condition Scoring System" or online at UTHorse.com.

Briefly, the body condition scoring system was developed by Dr. Don Henneke as a method to estimate fat coverage in horses. By evaluating six areas of the horse (neck crest, loin, tailhead, ribs, along the withers and behind the shoulder), a number ranging from 1-9 is assigned, where 1 is extremely thin and 9 is obese. Please reference the additional publication for the body condition scoring scale. This system is easy to learn and implement. However, the scale is subjective and should be completed by the same person at each evaluation. Horses should be evaluated every 4 to 6 weeks, as changes in body condition score should be achieved gradually. Rapid changes in body condition score should be avoided and can be a sign of nutrient deficiency or excess and/or disease.

## What Is the Ideal Weight and Body Condition Score?

Determining ideal body weight and condition score can be challenging. Since all horses' height, muscle mass, and skeletal structure vary based on breed differences, it is not possible to assign a certain ideal weight. Rather, body weight should be considered on a horse-by-horse basis, in combination with body condition score. Usually, a body condition score between 4 to 6 is considered ideal. Certain circumstances such as pregnancy, lactation, or horses in heavy or very heavy work may also impact the ideal body condition score for that

animal. Avoiding either body condition extreme is recommended, as horses with body condition scores on either end of the scale can be at risk for serious health problems. Horse owners should work with their county Extension agent, equine Extension specialist or veterinarian to determine what is ideal for their horse(s) and ensure daily nutrient needs are being met.

## Resources

Johnson, E. L., R. L. Asquith, J. Kivipelto.

Accuracy of weight determination of equids by visual estimation. Proc. 11th Equine Nutrition and Physiology Symposium. 1989. P 240.

Henneke, D. R., G. D. Potter, J.L. Kreider, and B.F. Yeates. Relationship between condition score, physical measurements and body fat percentage in mares. Equine Veterinary Journal. 15:371-372.



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