

Body Condition Scoring of Horses

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Introduction

Equine body condition is primarily a function of the balance between a horse's intake and expenditure of energy and is affected by both external and internal factors. Availability and amount of feed and water, reproductive status, changes in weather, parasite load, performance demands, and dental abnormalities are all factors that may influence the body condition of horses. This system of appraisal is based on the amount and proportion of fat and muscle present on an animal. A numerical value 2 (emaciated) to 8 (very fat) is assigned to horses based on visual appraisal and palpable fat cover at six areas of the horse's body (Fig. 1). These areas can be described in such detail as to provide the equine appraiser with a visual image for scoring (Table 1). To accurately determine body condition, horsemen must rely on both visual observation (what the horse looks like), and manual palpation (what the horse feels like). The technique of evaluating and quantifying a horse's body condition is a tool horsemen can use for nutrition and reproduction management decisions.

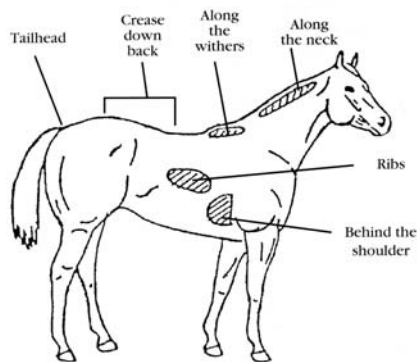


Figure 1. Diagram of areas emphasized in condition score.

Body condition of horses is affected by both external and internal circumstances. Availability and amount of feed, water, reproductive status, changes in weather, parasite control, performance demands, and dental abnormalities are all factors that influence the body condition of horses.

This visual method of assessing horses may be used to supplement regular weighing programs. Body condition or change in body condition is a more reliable indicator of nutritional status than liveweight or change in liveweight. It is important to note that all horses of the same weight will not necessarily have the same body condition score. For instance, a 1200 pound horse may either have high or low body condition score depending on the animal's frame size, muscling and fat deposition. Each animal is scored according to its individual characteristics.

Reproductive performance of broodmares is also related to condition score. Poor body condition of broodmares (below BCS 5) has been shown to:

- increase number of days to first estrus
- require more services per conception
- increase foaling intervals
- lower percentage of pregnant mares

Evaluating Body Condition

It is not difficult to learn how to evaluate equine body condition. Initially, almost all horsemen will be able to recognize the difference between BSC 2 and BSC 5.

Minor differences may be more difficult to detect until scoring has been practiced. Condition scoring requires a modest amount of training and will improve with experience.

First, know the definition of Body Condition Score 5. A BCS 5 horse will look average - neither fat nor thin. The ribs cannot be seen, but can be easily palpated. The horse's back will be level and the body will appear smooth. In addition, definition of muscling on the hind legs will be apparent.



Figure 2.

After a mental picture of a BCS 5 has been established, this image can be used as a benchmark for determining other condition scores. Condition scores of 4 or higher generally reflect fat deposition, whereas BCS 3 or lower often reflects both fat and muscle loss.

Second, visually and manually evaluate the amount of fat deposition and muscling as it occurs on the following sites:

- ✓ behind the shoulder
- ✓ ribs at mid-barrel
- ✓ crest of neck
- ✓ withers
- ✓ crease of the back, and
- ✓ at the tailhead.

Third, consider external and internal factors. Fill or shrink from digestive contents and/or pregnancy can change the appearance of moderately fleshed horses. Long hair may also make it difficult to visually appraise body condition. When horse are difficult to evaluate visually, the amount of body fat in relation to musculature must be determined by feel.

Finally, compare result of direct observation and manual palpation with the descriptions of body condition scores given in Table 1.

Table 1. Description of Body Condition Scores

BCS	Description
2	Emaciated No evidence of any fat deposits. Bony structure of ribs, spinal column and hips prominent. Animal may show signs of weakness and/or uncoordination when asked to move.
3	Very Thin Very little evidence of fat deposits. Spinal column is the highest part of the horses back from the withers to the tailhead.
4	Thin Ribs are evident. Spinal column is the highest part of the horses back from the withers to the croup. A slight amount of fat may be felt around the tailhead.
5	Desired Condition The horse's body is smooth. Ribs are not visually evident, but are easily felt. Back is level, no crease or ridge noticeable. Withers are rounded, shoulders and neck blend cleanly into the body. Fat around the tailhead will feel spongy. Muscles of the hind leg are evident.

Table 1. Description of Body Condition Scores (cont.)

BCS	Description
6	Excess Condition Moderate pressure needed to feel ribs. Horse may have crease down back. Fat deposits around the tailhead will feel soft. Fat deposits may be readily felt behind the shoulder and along the crest of the neck. Areas between muscles beginning to fill with fat.
7	Fat Ribs are difficult to feel. Crease down back; croup filled with fat. Fat around tailhead very soft; area along withers and behind shoulder filled with fat. Noticeable thickening of neck, fat deposits along inner thighs. Muscle definition no longer apparent.
8	Very Fat Excessive pressure needed to feel ribs. Definite “gutter crease” down back with extensive fat deposits over much of the body. Soft patchy fat: over ribs, around tailhead, along withers, behind shoulders, and along the neck. Fat on inner thighs may rub together.

Recommendations

- Adjust feeding program to ensure adequate energy intake from a forage-based diet
- For horses below BCS 5, provide higher quality forages or higher levels of energy supplements balanced with protein to reduce weight loss or improve condition score
- Provide free-choice mineral year-round
- Control disease and parasites by developing an appropriate herd health program (Consult your veterinarian)

Summary

When performed on a regular basis, condition score may be used to provide an overall view of the nutritional status of the herd as well as individual horses in the herd. Condition score is a helpful tool in determining the amount and type of forage, concentrate, and supplement needed.

Adjustments of condition score should be made prior to breeding (Table 2). Research has shown higher conception rates with fewer services for mares that enter the breeding season with a BCS 5 or greater (Henneke, et al., 1984). Even though excess body fat was not shown to adversely affect conception rates, obese mares may: experience difficulty foaling, produce less milk, and be more prone to laminitis problems.

Table 2. Adjusting Concentrate Intake

Score	Condition	Adjustment
3 or less	Very thin	+40%
4	Thin	+20%
5	Desired cond.	0
6	Excess cond.	-20%
7	Fat	-40%
8	Very fat	-60%

References:

- Henneke, D. R., Potter G. D., & Kreider, J. L. (1984). Body condition during pregnancy and lactation and reproductivity efficiency of mares. Theriogenology, 21(6), 897-909.
- Henneke, D. R., Potter G. D., Kreider, J. L., & Yeates, B. F. (1983). Relationship between condition score, physical measurements and body fat percentage in mares. Equine Veterinary Journal, 15(4), 371-372.

Johnson, E. L. & Asquith, R. L. (1993). Recognizing the healthy horse. Horse Industry Handbook. Lexington, KY.: American Youth Horse Council.

Kunkle, W. E., Sand, R. S., & Rae, D. O. (1994). Effects of body condition on productivity in beef cattle. University of Florida Extension Service Publication SP 144.

Ott, E. A. (1981). Criteria for assessing the body condition of horses. Presented at Marion County Cooperative Extension Equine Technical Class.