Equine Welfare Series

THE BODY CONDITION SCORING SYSTEM

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Maintaining proper equine health requires a combination of proper nutrition, including access to feed and water, adequate shelter, and quality care. For those managing and/or owning horses it is important to periodically evaluate management practices to ensure the well-being of each horse. A horse's body weight can fluctuate due to season, food availability, changes in exercise, reproductive activities, parasites and dental problems. Also, body weight can affect reproductive capabilities, ability to do work, and overall health status. Identifying animals that are extremely over- or underweight can be relatively easy; however, identifying body condition of horses in-between can be challenging.

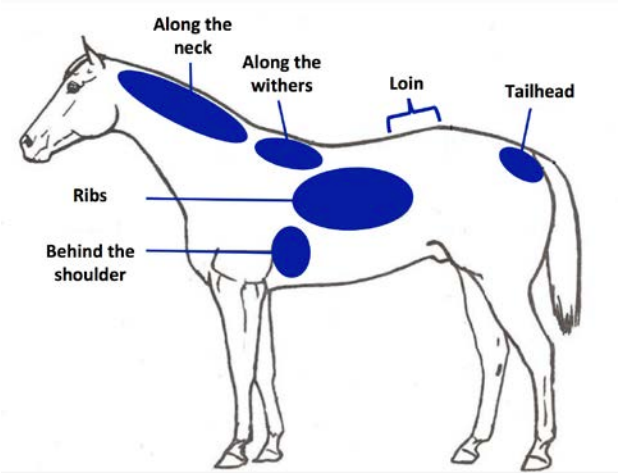

Figure 1: Regions of importance for body condition scoring. Assessment of body condition score (BCS) should be evaluated at the tailhead, loin, ribs, behind the shoulder, and along the wither and neck on both sides of the horse. Determination of fat coverage in each area should be made by visually observing and touching each area.

How do I evaluate my horse's body condition?

Body condition scoring is a useful tool in assessing and managing body weight of horses. Developed by Dr. Don Henneke and colleagues in 1983 as a tool to accurately assess stored body fat in horses, the body condition scoring system has become standard for evaluating equines across breed and age. Using this technique is relatively straightforward yet does require some basic knowledge of horse anatomy and conformation. The body condition score (BCS) utilizes predictable patterns of fat deposition and removal over certain areas during the course of weight gain or loss.

By evaluating six specific regions including the neck, withers, ribs, behind the shoulder, loin and tailhead, determination of overall body condition can be made (Figure 1). Visual and tactile evaluation (touch, palpation) of these areas on both sides of the horse is very important, as it is often difficult to determine the amount of fat coverage without touching each area. Visual examination alone can be used to determine BCS if close proximity to the horse is not possible. After assessment, a numerical value ranging from 1 (emaciated) to 9 (obese) is then assigned based on combined total fat coverage in each of these areas (Table 1). Half scores can be assigned if a horse falls in- between condition classifications. A horse's BCS should be evaluated every four to six weeks as healthy changes in body weight are achieved over time.

*Table 1: Description of individual body condition scores**

Score	Condition	Description
1	Poor	The horse is extremely emaciated. Ribs, tailhead, backbone (spinous and transverse process) and hip bones project prominently. Bone structure of the neck, withers, and shoulder are easily noticeable. No fatty tissues can be felt.
2	Very Thin	The horse is emaciated. A slight fat covering over the vertebrae is present. Ribs, backbone (spinous and transverse process), hips and tailhead are prominent. Neck, shoulders and withers are discernable.
3	Thin	Fat built up about halfway on vertebrae (spinous process can still be felt). Tailhead evident, but individual vertebrae cannot be seen. Slight fat cover over ribs. Hip bones appear rounded but are still noticeable. Withers, shoulders and neck are emphasized.
4	Moderately Thin	Negative crease along back. Faint outline of ribs is noticeable. Fat can be felt around tailhead, prominence is dependent on conformation. Hip bones cannot be seen. Neck, withers and shoulders are not obviously thin.
5	Moderate	Back is level. Ribs are not easily seen but can be felt. Tailhead fat feels spongy. Hip bones are not noticeable. Withers, neck and shoulders are not obviously thin.
6	Moderately Fleshy	Slight crease down back may be present. Fat over ribs can be felt and tailhead fat feels soft. Fat beginning to be deposited on sides of withers, behind shoulders and along the neck.
7	Fleshy	May have crease down back. Individual ribs can be felt, but fat filling between ribs is noticeable. Tailhead fat is soft. Fat deposited along withers, behind shoulder and along the neck.
8	Fat	Crease down back. Difficult to feel ribs. Fat around tailhead is very soft. Areas along withers and behind shoulder are filled with fat. Thickening of neck is noticeable. Fat deposited along inner thigh.
9	Extremely Fat	Obvious crease down back. Patchy fat appearing over ribs. Fat bulging around tailhead, along neck, behind shoulder and along wither. Flank filled with fat. Inner thighs may rub together.

**When assessing the tailhead, loin, ribs, behind the shoulder, along the withers and neck, classify where each region falls in relationship to the score description. Select which score best represents the condition of the horse currently. Half scores can be assigned if the horse falls between classification descriptions.*

Adapted from Henneke, et al., 1983.

What BCS should my horse have?

Originally it was recommended to maintain horses at a body condition score of 5; however, different scenarios can influence how each horse should be conditioned. Depending on the horse's intended use, such as breeding status or level of activity, a different body condition may be more ideal than another. A BCS range between 4 and 7 is reasonable when consideration is given to various factors. For example, pregnancy and lactation require increased energy reserves compared to maintenance levels. Mares entering the breeding season or foaling in low body condition have been found to display low conception rates and require more cycles to achieve a viable pregnancy than horses in a heavier condition.

Body condition scores of either extreme should be avoided. When horses exert energy levels above their dietary intake, or experience long periods of stress, the body will begin to burn fat stores for energy. At a BCS of 3 or less, there is very little body fat to spare so muscle protein is broken down to supply the horse with energy during times of need. Low temperatures or extreme weather conditions can also cause a horse to burn more calories than normal. In these instances, it is recommended to have horses at a higher condition prior to periods of high-energy expenditure in order to prevent reaching a BCS of 3 or below. Elderly horses should also be maintained with care, as a low BCS can be much more difficult to correct in a geriatric animal. Horses with a body condition greater than 7 are also predisposed to various health problems including colic, laminitis (founder) and endocrine imbalances.

Practice Makes Perfect

Using the BCS system often is the best way for evaluators to become consistent and accurate with the evaluation methods. Look at the images in Figure 2 to practice implementing the BCS system.

Figure 2: BCS Examples

A 

B 

C 

Horse A *is a BCS of 1. The horse is extremely thin and the ribs, tailhead, backbone and hip bones project prominently. Bone structure of the withers and shoulders are easily noticeable.*

Horse B *is a BCS of 5. The back is level and the ribs are not easily seen. The hip bones are not noticeable, and the shoulders, withers and neck are not visually thin.*

Horse C *is a BCS of 8. The areas along withers and behind shoulder are filled with fat. Thickening of neck is noticeable and an enlarged crest is displayed. A crease down the back is present.*

BCS Troubleshooting: Tips for Accurate Assessment and Correcting BCS

- Make sure to evaluate all areas of the horse equally as not all horses have the same proportions. Similarly, breed differences also occur and it is important to consider nutritional status of the entire animal, not just one region.
- Horses should not be excessively thin or enormously overweight. Each extreme can cause health problems and should be avoided.
- While using BCS is helpful to determine nutritional status of the horse, it is not an indicator of physical fitness. Other methods can be used to estimate cardiovascular fitness or athletic conditioning.
- Horses will have a longer hair coat in the winter and often appear heavier than they are. Make sure to use palpation to feel for fat covering in the appropriate areas as overestimation can occur when only using visual assessment.
- Increases or decreases to a horse's condition can be made safely through gradual changes in a feeding program. To change one condition score (for example, to take a horse from a BCS of 4 to 5) a gain or loss of approximately 35 to 44 pounds is needed but the exact value can vary with the mature size of the horse (NRC 2007). A horse can safely gain or lose one BCS over the course of 4 to 6 weeks. Be sure to consider a horse's age, health and need for weight change before implementing new feeding practices. Seek assistance from an extension specialist or county agent regarding any questions.
- Take into account age, reproductive status and overall health while body condition scoring. For example, mares in late gestation will often develop a large, pendulous belly. Similarly, horses with intestinal parasites also can display a rounder, distended abdomen. If you have any concerns regarding your horse's health, contact your veterinarian.

Literature Cited

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