

Body Condition Scoring and Weight Estimation of Horses

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Objective

- Given a body condition scoring evaluation sheet, a measuring tape, and several animals, participants will practice body condition scoring and weight estimation.

Enabling Objectives

- Explain body condition scoring system
- Identify pertinent parts of the horse
- Discuss importance of body condition scoring and weight monitoring
- Define body condition scoring “levels”
- Calculate weight using a given formula and horse measurements

Body Condition Scoring

- Definition:
 - Objective system of evaluating a horse's level of body condition (amount of stored fat) and assigning a numerical score to enable comparison between animals.

The Skinny on Fat

- Fat = energy storing tissue
- Produced when animal digests more energy than needed for maintenance
- Located subcutaneously, beneath the skin
- Can be visibly assessed in several specific locations

The Skinny on Fat, cont'd.

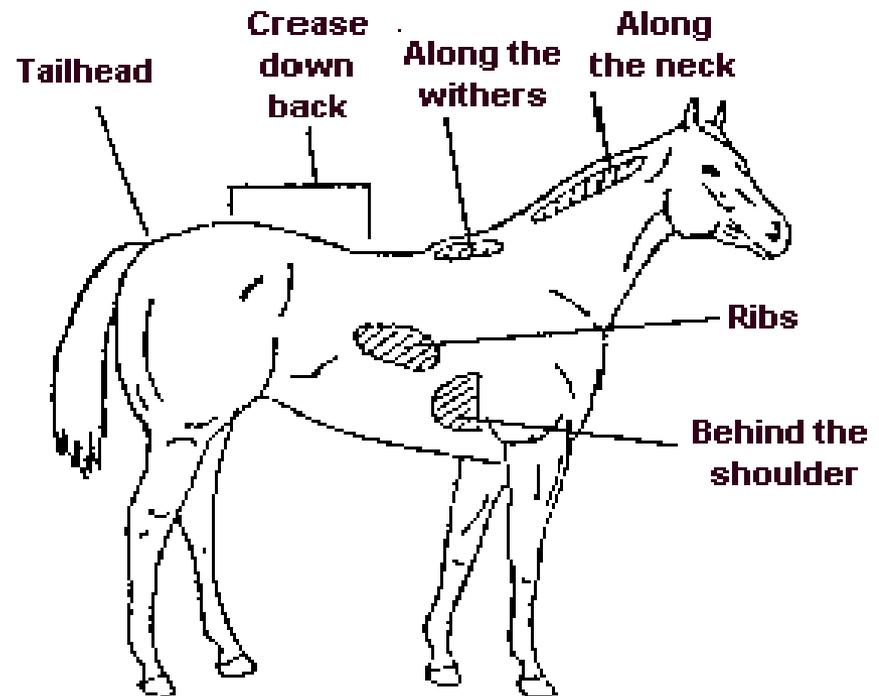
- Over time, increased energy intake without adequate use will lead to increased fat.
- Over time, decreased energy intake with need for more will lead to an increased use of existing animal fat for an energy source, thus decreasing the level of body fat.

The Body Condition Scoring System

- Developed at Texas A&M University in the early 1980s
- Main name associated with the development: Dr. Henneke
- “Rating” system for determining condition of animals
- Assesses specific parts of the horse

Pertinent Areas of the Horse

- Behind the shoulder
- Ribs
- Along the neck
- Along the withers
- Crease down back
- Tailhead



So, What?

- Why does it matter to know the weight and body condition of your horse?
- What sorts of people should monitor their horse's weight and body condition?

Importance of Body Condition Scoring

- Allows for ration adjusting
- Enables assessment of pregnant mares
- Used for inter-breed comparisons
- Ability to gauge horse condition in winter months

Importance of Weight Monitoring

- Calculating ration adjustments
- Diagnosis of early illness symptoms or parasite infestation
- Evaluate feed efficiency

Who Should Body Condition Score?

- Trainers
- Horse enthusiasts
- Weekend riders
- Breeders
- Performance showmen
- ...Anyone who cares about the well-being and fitness level of their horse, no matter what their sport.

Partial Review

- What does body condition scoring actually measure?
- What purpose does fat serve in the body?
- Name at least two places fat is deposited in the horse.
- Give one reason for monitoring weight and body condition scores.

The Henneke Body Condition Scoring System

9 Levels of “Fatness”

- Poor (1)
- Very Thin (2)
- Thin (3)
- Moderately Thin (4)
- Moderate (5)
- Moderate to Fleshy (6)
- Fleshy (7)
- Fat (8)
- Extremely Fat (9)

Poor (1)

- Animal extremely emaciated
- Spinous processes, ribs, tailhead, and bony part of pelvic girdle are prominent
- Bone structure of withers, shoulders, and neck are noticeable
- No fatty tissue can be felt

Very Thin (2)

- Animal is emaciated
- Slight fat covering over base of spinous processes
- Transverse processes of loin area vertebrae feel rounded
- Spinous processes, ribs, shoulders, and neck structures are faintly discernible

Thin (3)

- Fat is built up about halfway on spinous processes
- Transverse processes cannot be felt
- Slight fat cover on ribs
- Spinous processes and ribs are easily discernible
- Tailhead is prominent, but individual vertebrae can't be visually identified
- Withers, shoulders, and neck are accentuated

Moderately Thin (4)

- Negative crease along back (spinous processes protrude slightly above surrounding tissue)
- Faint outline of ribs discernible
- Fat can be felt around tailhead
- Hook bones not discernible
- Withers, shoulders, and neck are not obviously thin

Moderate (5)

- Back is level
- Ribs can't be visually distinguished, but easily felt
- Fat around tailhead begins to feel spongy
- Withers appear rounded over spinous processes
- Shoulders and neck blend smoothly into body

Moderate to Fleshy (6)

- May have slight crease down back
- Fat over ribs feels spongy
- Fat around tailhead feels soft
- Fat begins to be deposited along the sides of the withers, behind the shoulders, and along sides of the neck

Fleshy (7)

- May have crease down back
- Individual ribs can be felt, but with noticeable filling of fat between ribs
- Fat around tailhead is soft
- Fat is deposited along withers, behind shoulders, and along neck

Fat (8)

- Crease down back
- Difficult to feel ribs
- Fat around tailhead is very soft
- Area along withers is filled with fat
- Area behind shoulders is filled in flush with rest of body
- Noticeable thickening of neck
- Fat is deposited along inner buttocks

Extremely Fat (9)

- Obvious crease down back
- Patchy fat over ribs
- Bulging fat around tailhead, along withers, behind shoulders, and along neck
- Fat along inner buttocks may rub together
- Flank filled in flush with rest of body

Activity

- Working from the handout given on body condition scoring, try to score the next three horses, to the best of your ability without being able to actually touch them.



Horse 1

Horse 1: Thin (3)

- Prominent tailhead
- Ribs easily discernible
- Rounded hook bones
- Accentuated withers, shoulders, and neck



Horse 2

Horse 2: Moderate (5)

- Level back
- Ribs not visually discernible
- Rounded withers
- Shoulders and neck smoothly blend into body



Horse 3

Horse 3: Fat (8)

- Area along withers filled with fat
- Noticeable fat on neck
- Thickening of neck
- Area behind shoulder nearly filled in flush with body

When rating, consider...

- Visual assessment vs. actual touch
 - increase accuracy by actually palpating fat areas
 - avoid mistaking long hair for thicker fat covering
 - avoid being fooled by different body conformations, ie a taller, larger framed horse seeming to be leaner than a shorter, smaller framed animal with a similar body condition

When rating, consider...cont'd

- Mares late in gestation may have “alterations” in their body fat
 - less fat on ribs due to weight of fetus pulling downwards
 - place more emphasis on fat from other areas to determine condition score

When rating, consider...cont'd

- Forage diets
 - horses on a large percentage forage diet will usually have larger bellies and lower distended abdomens
 - don't overestimate body condition because a hay belly looks "fat"

Weight Estimation

- Method of Measurement
 - measure from point of shoulder to the buttocks
 - measure girth just behind front legs
 - measure in inches to calculate weight in pounds



Weight Estimation, cont'd

- General formula for weight estimation:

Length (in inches) x length (in inches) x girth (in inches)

330

Exercise

- For each of the following animals, calculate the estimated weight.
 - Horse 1: girth = 80 inches, length = 60 inches
 - Horse 2: girth = 70 inches, length = 64 inches
 - Horse 3: girth = 86 inches, length = 72 inches

Answers

- Horse 1 = approximately 873 pounds
- Horse 2 = approximately 869 pounds
- Horse 3 = approximately 1350 pounds

“Ideal” Body Condition Scores

- Vary with performance level
- Vary with type (broodmare, etc.)
- Vary with breed (Thoroughbred vs. Icelandic)
- Average horse: 5-6 is good
- Also...mid-scores are possible (i.e., 3.5, 4.5, etc.), if a horse falls between two levels

Review

- Give a characteristic of a Poor scoring horse.
- Give a characteristic of a Moderate scoring horse.
- Give a characteristic of a Fat scoring horse.
- What range will most average horses fall into?
- What two measurements are necessary to estimate weight?

Activity

- Head out to barn and body condition score and estimate weight of at least three horses

Summary

- Body condition scoring helps to monitor a horse's fatness or condition
- Monitored for several reasons, including...?
- Weight estimation is also important because.....?