

# **Equine Body Condition Scoring**

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The Body Condition Score (BCS) system was developed by Dr. Henneke et al. (1983) as a tool to estimate the nutritional status of horses. It is used universally across breeds and does not require the use of special equipment. Each evaluated individual is assigned a number from 1 to 9 based on the amount of fat cover they carry in key areas. An overall BCS of 4-6 is considered ideal; horses that score under 4 are underweight while horses scoring over 6 would be considered overweight.

## **Importance of Body Condition Score**

BCS can be used as an aid to determine if the horse's nutritional needs are being adequately met. BCS is a valuable tool for Law Enforcement, Animal Control, and Veterinarians who are asked to assess a situation where the animal's health and well-being are in question. It can also be useful for the average horse owner as they make feeding and work plans for their herd. It is important to note that BCS is not the final determinant of a horse's overall health status. Age, reproductive status, use, and the presence of disease and/or parasites also play a role in determining the overall health of a horse.

## **Other Important Factors**

Body Condition Score is a great tool in evaluating animal health however it should not be used as the only tool. Knowing the horse's actual weight is critical when administering medications. Ideally, weight is determined by scales but if there is not a livestock scale available a weight tape can be used to provide an estimate.

## **How to evaluate BCS of the Horse**

There are 6 points on the horse that are useful in assessing fat cover. These 6 points are:

- The Neck
- The Withers
- Loin
- Tail Head
- Ribs
- Fore Flank/Behind Shoulder

## Body Condition Scoring System

Condition	Neck	Withers	Loin	Tailhead	Ribs	Shoulder
<b>1 Poor</b>	Bone structure easily noticeable, animal extremely emaciated, no fatty tissue can be felt	Bone structure easily noticeable	Spinous processes project prominently	Tailhead (pinbone) and hook bones project prominently	No fat cover over ribs.	Bone structure easily noticeable
<b>2 Very Thin</b>	Faintly discernable, animal emaciated	Faintly discernable	Slight fat covering over base of spinous processes. Transverse processes of lumbar vertebrae feel rounded. Spinous processes are prominent.	Tailhead prominent	Slight fat cover over ribs. Ribs easily discernable.	Shoulder accentuated
<b>3 Thin</b>	Neck accentuated	Withers accentuated	Fat buildup halfway on spinous processes but easily discernable. Transverse processes cannot be felt.	Tailhead prominent but individual vertebrae cannot be visually identified. Hook bones appear rounded but are still easily discernable. Pin bones not distinguishable.	Slight fat cover over ribs. Ribs easily discernable.	Shoulder accentuated
<b>4 Moderately Thin</b>	Neck not obviously thin	Withers not obviously thin	Negative crease along back	Prominence depends on conformation; fat can be felt. Hook bones not discernable.	Faint outline discernable	Shoulder not obviously thin
<b>5 Moderate</b>	Neck blends smoothly into body	Withers rounded over spinous processes	Back level	Fat around tailhead beginning to feel spongy	Ribs cannot be visually distinguished but can be easily felt	Shoulder blends smoothly into body
<b>6 Moderately Fleshy</b>	Fat beginning to be deposited	Fat beginning to be deposited	May have slight positive crease down back	Fat around tailhead feels soft	Fat over ribs feels spongy	Fat beginning to be deposited
<b>7 Fleshy</b>	Fat deposited along neck	Fat deposited along withers	May have positive crease down back	Fat around tailhead is soft	Individual ribs can be felt, but noticeable filling between ribs with fat	Fat deposited behind shoulder
<b>8 Fat</b>	Noticeable thickening of neck	Area along withers filled with fat	Positive crease down back	Tailhead fat very soft. Fat deposited along inner buttocks	Difficult to feel ribs	Area behind shoulder filled in flush with body
<b>9 Extremely Fat</b>	Bulging fat.	Bulging fat	Obvious positive crease down back	Building fat around tailhead. Fat along inner buttocks may rub together. Flank filled in flush	Patchy fat appearing over ribs	Bulging fat

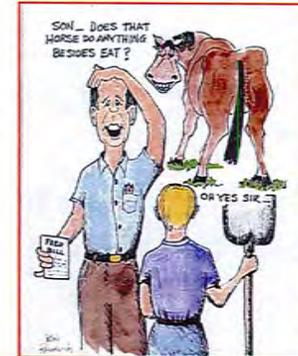
From: Henneke et al. Equine Vet J. (1983) 15 (4), 371-372

## Body Condition Scoring

- What is body condition?
- Why do we care about body condition?

## Energy Expenditures

- We know horses get energy from feed...so where does that energy go?



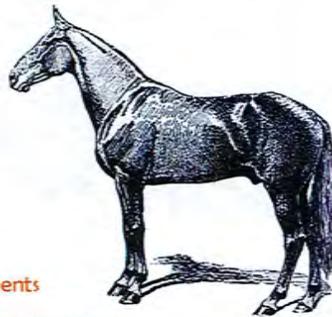
## Energy Requirements

### Maintenance Requirement

- ✓ Breathe
- ✓ Metabolize
- ✓ Regulate Temperature
- ✓ Normal Daily Activity
- ✓ Reproduction
- ✓ Growth/Development

+ Additional Energy Requirements

= Total Daily Requirement



## The Skinny on Fat

- Fat is an **energy bank**
- Deposit nutrition
  - When Nutrition = Requirement
    - Flat balance
  - When Nutrition > Requirement
    - Profit
  - When Nutrition < Requirement
    - Debt



## The Skinny on Fat

- The amount of fat cover a horse has tells us about the state of his energy balance



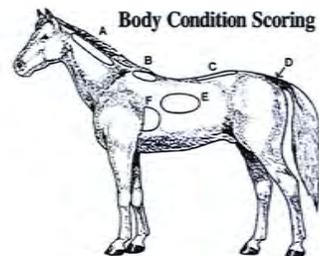
- How can we compare one horse to another given differences in height, muscle and breed type?

## Henneke Score

- Developed by Dr. Henneke in 1983
  - Repeatable, Consistent
  - Allows easy comparison between animals
- Previously a complex mathematical formula had been used, not helpful on the farm

## Henneke Body Condition Score

- Fat laid down in predictable patterns
  - Organs
  - Loin
  - Ribs
  - Tailhead
  - Withers
  - Neck
  - Shoulder



## Henneke Body Condition Score

- Scale of 1-9
- Allows for improved nutritional management
- Useful when conditioning athletes
- Abuse cases
- Reproduction

## Loin

- One of the first places external fat is laid down
- An extremely thin horse will have a ridge down the back
- As a horse gains weight this ridge will flatten out then become a crease



## Ribs

- An extremely thin horse will have prominent ribs, easily seen and felt
- Ideally ribs are not visible but easily felt



## Tailhead

- Prominent in thin horses
- Will begin to bulge as horse moves from fit to obese



## Withers

- Do not be fooled by naturally prominent withers



## Neck

- Fat deposited along top



## Shoulder

- Fat deposited behind the shoulder



## Evaluating BCS

- Look and Touch
  - Don't get fooled by coat thickness, conformational differences, height etc.



## Score 1 – Poor

- Extreme emaciation
- No fatty tissue can be felt
- Ribs projecting prominently
- Bone structure easily noticeable



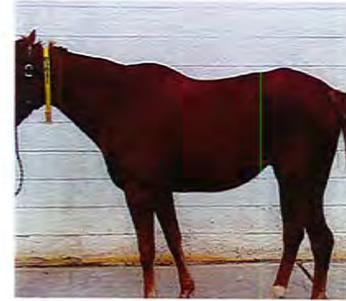
## Score 2 – Very Thin

- Emaciated
- Ribs prominent
- Vertebrae prominent
- Bone structure noticeable



## Score 3 - Thin

- Thin layer of fat over ribs
- Ribs still easily discernible
- Tailhead prominent



## Score 4 – Moderately Thin

- Faint outline of ribs discernable
- Ridge along back (negative crease)
- Fat can be felt around tailhead
- Withers, shoulders, neck not obviously thin



## Score 5 - Moderate

- Back is level
- Ribs cannot be visually distinguished, but can be easily felt
- Fat around tailhead beginning to feel spongy
- Withers appear rounded
- Shoulders & neck blend smoothly into body



## Score 6 – Moderate to Fleshy

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



## Score 7 - Fleshy

- Crease down back
- Ribs can be felt with noticeable filling of fat between ribs
- Fat around tailhead is soft
- Fat deposited along withers, behind shoulders and along neck



## Score 8 - Fat

- Crease down back
- Difficult to feel ribs
- Fat around tailhead is soft
- Fat around withers and behind shoulder
- Noticeable thickening of neck
- Fat deposited along inner buttocks



## Score 9 – Extremely Fat

- Obvious crease down back
- Patchy fat appearing over ribs
- Bulging fat around tailhead, around withers, behind shoulders, and along neck
- Fat along inner buttocks
- Flank filled and flush



## What is Ideal?

- “Each horse has his own ideal condition for his breed and occupation” – Dr. Henneke
- Broodmare: 5-7
- Breeding Stallion: 5-6
- Performance Horse: 4-6



## The Danger Zone

- Which horse is more at risk?



## What Impacts BCS?

- Too thin
  - Abuse or neglect
  - Poor quality feed
  - Not enough feed
  - Consumption of toxic plants
  - Tooth and jaw problems
  - Advanced age
  - Excessive energy expenditure
  - Parasites
  - Gastric ulcers



## If Your Horse is Too Thin

- Rule out other health problems
- Evaluate your feeding program with the help of your livestock agent and/or vet

Improving 1 Condition Score		
Days Needed	Daily Gain	Additional Grain Needed
60	0.75 lbs/day	4.5 lbs/day
90	0.50 lbs/day	3.0 lbs/day
120	0.40 lbs/day	2.3 lbs/day

## What Impacts BCS?

- Too fat
  - Too much concentrate
  - Not enough exercise
  - Mismanagement
  - Metabolic disorders



## If Your Horse is Too Fat

- Screen for metabolic disorders
- Consider minimizing or eliminating concentrates from diet
- Switch to a lower energy hay
- Increase exercise/turnout

