



Body Condition Scoring and Muscle Development Scoring

The equine industry is utilizing a **Body Condition Scoring (BCS)** system, developed by Texas A&M University, as a tool to evaluate the thickness of body fat on a horse. This is based on the amount of calories consumed per day vs. needed per day to maintain desired body weight. The "green" indicates optimal, the "yellow" indicates caution, and the "red" indicates potential health problems, with BCS (front page) and performance problems with MDS (back page).

DESCRIPTION OF BODY CONDITION SCORES (BCS = 1 THRU 9)

<u>Score</u>	<u>Name</u>	<u>Description</u>
1	Poor	Animal extremely emaciated. Spinous processes ribs, tail head, hooks and pins projecting prominently. Bone structure of withers, shoulders and neck easily noticeable. No fatty tissues can be felt.
2	Very Thin	Animal emaciated. Slight fat covering over base of spinous processes; transverse processes of lumbar vertebrae feel rounded. Spinous processes, ribs, tail head and hooks and pins still prominent. Withers, shoulders and neck structures faintly discernible.
3	Thin	Fat buildup about halfway on the spinous processes; transverse processes cannot be felt. Slight fat cover over ribs. Spinous processes and ribs easily discernible. Tail head prominent, but individual vertebrae cannot be easily identified. Hook bones appear rounded, but easily discernible. Withers, shoulders and neck accentuated.
4	Moderately Thin	Spinal processes still visible and can be palpated. Can see outline of ribs. Tail head prominence depends on conformation also. Pin bones not discernible. Withers, shoulders and neck not obviously thin.
5	Moderate	Ribs cannot be visually distinguished when standing, but can be easily felt. Fat around tail head beginning to feel spongy. Shoulders and neck blend smoothly into body.
6	Moderately Fleshy	Fat over ribs feels fleshy-spongy. Fat around tail head is visible & feels soft. Fat beginning to be deposited behind the shoulder and along the neck.
7	Fleshy	May have crease down back, making it difficult to determine a true back & loin Muscle Development Score. Individual ribs can be felt, but noticeable filling between ribs with fat. Fat around tail head is soft. Fat continues to be deposited behind shoulders and along the neck.
8	Fat	Fat crease along top-line: withers, down back and loin area filled with fat, making it more difficult to determine a back & loin Muscle Development Score. Difficult to feel ribs. Fat around tail head very soft. Area behind shoulder filled with fat. Noticeable thickening of neck. Fat deposited along inner thighs.
9	Extremely Fat	Obvious crease down back making it extremely difficult to determine Muscle Development Score. Patchy fat appearing over ribs. Bulging Fat- fat around tail head, along withers, behind shoulders and along neck. Fat along inner thighs may rub together. Flank filled with fat.

Progressive Nutrition has developed a Muscle Development Scoring (MDS) system to complement the current BCS system. This is based on the amount of muscle building nutrients a horse has eaten per day vs. needed per day, to attain their optimal muscle development. The extent of muscle will be directly related to their individual genetics, i.e. muscle type. Many horses today are showing signs of inadequate muscling and it is affecting their ability to grow, reproduce and perform up to their genetic potential. This deficiency is first seen as a poor top-line. The top-line is determined by the amount of and balance of amino acids in their diet, plus their genetic make-up of "muscle type", i.e. fast twitch vs. slow twitch. Their genetics, will determine if they have "bulky" muscles or "long & lean" muscles. When these muscles are "nutritionally" built-up to their "genetic" potential, they can then be "condition and defined".

All horses have the ability to "store" essential nutrients in different parts of their body. For example: calories fed in excess, will be deposited as fat on the body. Protein will be stored in the muscle, but will not continue to build up excess amounts similar to fat storage. If amino acids (protein) are in short supply, horses have the ability to pull them from their body reserves to maintain normal body function. Calories (fat) and protein (muscle) are two nutrients you can visibility monitor and physically palpate. Owners must watch their horse's nutrient input – output relationship of these two nutrients. If calories are in short supply, their fat stores will be used up and they will lose body condition (weight). If amino acids (protein) are in short supply, their muscle mass will be sacrificed and their top-line, then their hindquarters, will be compromised.

Progressive Nutrition's Muscle Development Scoring (MDS) system will assess your horses' muscle status, and with the BCS, will give your horse two independent scores. The first score (1 thru 9) will be their body fat thickness and the second score (A thru E) will be their muscle development. A "BCS of 5", with a "MDS of A", is ideal for optimal growth, health and performance in all horses.

DESCRIPTION OF MUSCLE DEVELOPMENT SCORES (MDS = A thru E)

<u>Score</u>	<u>Name</u>	<u>Description</u>
A	Good Back	<p>Evaluate the Back area from the side and from the rear of the horse looking down over this area. Assess the muscle development on both sides of the spinal column in the back and withers area. This is the first area that muscle is lost when amino acids are not balanced or are in short supply, and the last area the horse develops or rebuilds when adequate amino acids are provided. The back should <u>not</u> be concave, but should blend smoothly into their ribs from each side of the vertebra.</p> <p>An ideal back area is assigned a grade of A; if not, a lower grade is given.</p>
B	Concave Back but Good Loin	<p>Evaluate the Loin area from the side and from the rear of the horse looking down over this area. The loin should be visually level, round and blend smoothly into their ribs. Additional hands-on evaluation is recommended to help define this area. The height of the muscles on each side of the spinal processes should be equal to, or higher than they are, preventing you from seeing or palpating their vertebra with the flat palm of your hand.</p> <p>An acceptable loin is assigned a grade of B; if not, a lower grade is given.</p>
C	Concave Loin but Good Croup	<p>Evaluate the Croup area from the side and from the rear of the horse. The muscles in this area should be level to or higher in-between the center of the vertebra and the point of the hip, with no indentation or concave appearance, as it ties-in with the hindquarter.</p> <p>An acceptable croup is assigned a grade of C; if not, a lower grade is given.</p>
D	Concave Croup But Good Stifles	<p>Evaluate the Hindquarters with a view from the rear of the horse. The primary area for evaluation is the development and width of the stifle. This area must be equal to or wider than the points of the hip in all breeds of horses. The muscle crease down the back leg will be dependent on their individual muscle type, i.e. fast twitch (thick) or slow twitch (long and lean).</p> <p>An acceptable hindquarter is assigned a grade of D; if not, a lower grade is given.</p>
E	Narrow Stifles	When the width of the stifle is narrower than the width of the points of hip, a grade of E is given.

Rule of Thumb: on "Time to Improve Each Area": The horse will build or develop muscle in the reverse order in which they lost it: hindquarter, croup, loin and the last will be their back & withers area. It will take an average of 30 days to improve one grade.

(12/06)