

Maintenance of the “Easy Keeper” Horse

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Some horses gain weight easily, even under conditions where other horses will lose weight if not fed additional feed. These are commonly called “easy keepers.” They are a joy to own because it takes less feed to keep them in good condition. However, the dangers of obesity are a real concern. The challenge of maintaining such horses is to meet their nutritional requirements while managing to avoid obesity.

What is Obesity?

Webster’s Medical Dictionary (1992) defines obesity as “a condition of the body in which an abnormal amount of fat accumulates beyond body requirements,” or “over-weight.” Horse owners differ in their perception of what constitutes an abnormal amount of fat in their horses. A horse that one person would consider obese, another would call pleasantly plump. Even in human medicine, opinions differ as to what constitutes obesity, ranging from 5 to 20% over the “normal” weight for age and sex in weight tables (Anderson et al, 1982). Unfortunately,

there are no normative tables to define ideal body weight in horses.

However, there are several condition scoring systems (Henneke et al, 1983, Carroll and Huntington, 1988) in which 4 to 7 areas of the horse’s body are scored on a scale of 1 to 5 or 10. The lowest scores are for thin or emaciated horses, the highest for fat or obese horses. It is important to assess more than one area since individuals may distribute their fat deposits differently. If your horse has more than 1 or 2 of the signs listed in Table 1 when you feel/look at the various parts of its body, it’s time to think about weight reduction.

Table 1: Signs of excess fat accumulation:

Ribs are difficult to feel even with firm pressure.

Neck is “cresty” and bulging.

Withers are rounded with only the very top of the spinous processes palpable or covered with fat.

Girth has fat build-up around the lower area such that the girth makes an indentation when tightened.

Loin has a distinct crease (indentation) in the area behind the saddle position and in front of the croup.

Tailhead area at both sides of the root of the tail is bulging and feels very soft.

Inner thighs rub together more than ¼ of the way down when the horse is standing square.



The Dangers of Obesity

Excessive fat deposits adversely affect horses in a variety of ways. While some body fat is essential as an energy source during prolonged exercise, excess reduces the horse's stamina. Extra weight requires more effort to move and the fat layers serve as insulation, reducing the horse's ability to dissipate heat loads generated during strenuous and/or prolonged exercise. Heat stress can be a serious problem in overweight horses asked to perform strenuous work.

Obesity in horses, as in humans, is associated with abnormal glucose regulation. The overly fat horse becomes relatively resistant to the action of insulin, which results in abnormally high levels of insulin being secreted when the horse eats a meal of grain. The high insulin response is associated with an increased risk of laminitis (inflammation of the sensitive laminae of the hoof) or founder (separation of the laminae and downward rotation of the pedal bone in the hoof). Excess weight carried by obese horses further increases the risk of actual rotation of the pedal bone.

Horses accumulate large amounts of fat in their abdominal cavity. Excessive abdominal fat can lead to the formation of lipomas. Lipomas are solid balls of fat encased in the mesenteric tissues that form a long stalk which can wrap around the intestines. This causes a strangulation colic that requires surgery to correct. Abdominal fat layers also make wound healing much more difficult if the horse does require abdominal surgery.

Obese horses also are at greater risk of a life threatening metabolic disorder called hyperlipidemia (abnormally high blood lipid concentrations) if deprived of feed. When any horse is deprived of feed for more than 24 hours it mobilizes its body fat to meet its energy requirements. This is normal and is not a problem in normal or underweight horses. But in obese horses and ponies the fat deposits are large and rapidly mobilized. In severe deprivation, the horse or pony can develop hyperlipidemia. This puts an abnormal stress on the liver where the lipids are metabolized and may cause irreparable liver damage.

Weight reduction strategies

Weight reduction will occur only if the horse's energy requirements are greater than its energy intake. This can be accomplished either by increasing its level of exercise or reducing the amounts of feed it is consuming, or both. However, care must be taken neither to overstress an unfit, obese horse nor to starve it.

Due to the risk of hyperlipidemia described above, obese horses and ponies should not be placed on starvation diets. All grain should be eliminated from the diet over the course of 3 to 4 days. Confinement of the horse to a dry lot paddock and offering only moderate to good quality grass hay at 1 to 1.5% of the target (not current) body weight, free choice water and trace mineral salt, often is all that is required for gradual weight loss. If the hay is not good quality, a balanced vitamin/mineral supplement should be offered in recommended amounts in ¼ lb of oats or beet pulp-based, low fat (<4%) sweet feed to insure that the nutrient requirements other than energy are met. Unfortunately, the restricted amount of hay is frequently consumed within much less than the usual 10 to 12 hours a horse naturally spends eating in a 24-hour period. Divide the total amount of hay fed into several feedings per day to reduce the amount of time the horse spends without feed.

If a drylot paddock is not available and the horse has to be turned out on pasture, a "grazing muzzle," which allows the horse to drink, but not graze effectively, can be used.

If turnout space or availability is limited, the horse should be exercised regularly, if physically capable of working. If possible, the horse should be exercised more than it had been before dieting. If the horse is sound and otherwise healthy, this is one of best options for weight loss, especially if the horse is usually sedentary. Gradually increase the demands placed on the horse to avoid causing metabolic problems associated with exhaustion and heat stress. Monitor the horse's heart rate after exercise. If it recovers to less than 60 beats per minute within 10 minutes or less after cessation of work, increase the speed or duration of exercise the next time out. If, however, it requires 20 to 30 minutes to recover to 60 beats per minute, hold the horse at that level of work for a few more days. If it takes more than 30 minutes for the horse to recover, back down to a lower level of work.

Time constraints often preclude increasing exercise by riding or driving the horse and this may not be an option for some owners. Just turning the horse out in a paddock or pasture will not necessarily increase its exercise because most horses prefer to just stand when not walking around grazing. If time for riding or driving the horse is limited, even encouraging the horse to run in its paddock or turnout area for 10 to 15 minutes once or twice a day will help with the weight reduction process. Shaking a plastic sack at the horse can do this, or use some other noisy/visual cue that will stimulate the horse to trot or canter away.

Managing the easy keeper long term

After the horse has reached the desired body condition, increase the amount of grass hay fed gradually to the point where the horse is no longer losing weight, again feeding several small meals throughout the day. Grazing muzzles still may need to be used during the summer for horses and ponies on lush pasture. Salt blocks and water should still be offered free choice. If the horse is only on dry grass hay, a balanced vitamin/trace mineral supplement should be offered in recommended amounts. If grain must be fed for the horse to consume the supplement, offer it in less than ½ lb of oats or beet pulp-based sweet feed mix. If the hair coat starts to lose condition, a protein supplement may also be needed. Soybean meal, ¼ to ½ cup per feeding, provides good quality protein without adding a lot of calories.

In short, easy keepers are both a joy and a challenge. Their dietary requirements are simple: good quality forage, salt

and water. But keeping the weight off them, especially in the summer when they are at greatest risk of heat stress and founder, can be a challenge.

References

- Anderson et al. 1982. Nutrition in health and disease. J.B. Lippincott Co., Philadelphia. pp469-481.
- Carroll C.L., Huntington, P.J. 1988. Body condition scoring and weight estimation of horses. *Equine Veterinary Journal* 20:41-45
- Henneke D.R., Potter G.D., Kreider J.L., Yeates B.F. 1983. Relationship between condition score, physical measurement and body fat percentage in mares. *Equine Veterinary Journal* 15:371-372.
- Lewis, L.D. 1995. Feeding and Care of the Horse, second edition. Williams and Wilkins, Philadelphia, PA.

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