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Is my horse/pony obese and should I be worried about it?

ISES Media release

The ongoing problem of obesity in equines is not a recent one. However, the increase in the number of obese horses and ponies predominantly found in the leisure industry in some industrialised countries, has now become a globally recognised welfare concern.

Carrying excess weight places increased stress on the skeletal system of the horse, can limit reproductive performance, adversely affect athletic performance and may lead to an increased risk of laminitis, osteoarthritis, heat intolerance and certain types of colic.

Dr Pat Harris, a veterinary specialist in equine nutrition from the Equine Studies Group, WALTHAM Centre for Pet nutrition in the UK gave a plenary speech on equine obesity at the 2018 ISES conference in Rome. Dr Harris reviewed the current research, raised concerns about the growing number of overweight horses worldwide, and gave practical advice to help horse owners and keepers recognise early signs and manage the condition.

The increase of obesity in domestic horses may not only result from the way they are fed, managed and exercised, but also a result of owners and keepers not being able to recognise when their horses are starting to become overweight. In recent years, there may also have been a shift in the perception of what is considered an ideal condition for the horse favouring higher condition scores.

Equine obesity can be a very difficult condition to manage. Weight loss programmes are complex and require changes to diet, management and increased exercise. Ponies can eat up to 1% of their body weight in dry matter in just 3 hrs of turnout at grass, and nearly 5% over 24hrs which means that, in order to encourage weight loss, management changes often have to be quite marked.

Managing weight loss involves time and planning on the owner's part and in practice requires more than just reducing energy (calorie/kilojoule) intake in order to help keep the horse healthy and maintain long-term weight loss. It is vital an appropriately balanced diet is provided throughout – horses must have the correct protein, vitamin and mineral intake to avoid negative health consequences.

Weight loss programmes also need to consider that horses are trickle feeders and cannot be left for long periods without forage. However, taking steps such as soaking hay in water before feeding it to reduce sugar and starch content, using small-holed hay nets and slow feeders to slow-down intake, introducing more exercise if the horse or pony is sound, appropriately using well-fitted grass muzzles to allow them some access to pasture (after

training the horse to wear and use one) and removing rugs so they can spend energy keeping themselves warm, can all help.

Dr Harris stressed that prevention is better than cure and the need for owner education on the subject is vital. Once horse owners understand the dangers of obesity, they better appreciate the reasons why horses should not be allowed to become obese in the first place, and therefore, recognise the need for them to be able to regularly monitor their horse/pony's condition.

Teaching horse owners to recognise when their horses and ponies are starting to put on weight will mean that necessary changes to management and feeding strategies can be implemented earlier.

Many horse owners assess their horse's weight simply by looking at them or using a weigh tape – neither option will give an accurate record of the horse's condition or where fat deposits may be accumulating in the body.

To produce consistent, reliable results when routinely monitoring condition requires both experience and skill. Dr Harris stressed that it would be very helpful for all owners to learn how to assess their horse's Body Condition Score (BCS) correctly by feeling and palpating the horse as well as observing their appearance.

In a useful practical demonstration Dr Harris outlined how to correctly assess the BCS of several horses using the Henneke System. This 9-point scale uses a combination of visual observation and palpation in six areas of the body: neck, behind the shoulder, withers, ribs, loin/back and tailhead. A numerical value is assigned based on the fat accumulated in all six areas (see Table 1 below).

Firstly, an initial observation should be taken from both the side and back of the horse at a distance of approximately 2.5m. This provides a general overview of the body shape and enables the assessor to look for the possible presence or absence of key bony 'landmarks' – e.g. the hips or ribs.

Whilst a visual inspection can give an indication of the BCS, anatomical differences as well as variations in hair coat means that the assessor must run their hands over the different areas of the horse's body to determine the correct final condition score.

Palpation of the fat storage sites at the 6 key body areas (neck, withers, shoulder, ribs, back and tailhead) should be performed in a consistent way, for example, starting with the neck and then moving to the tail. Each area is assessed and independently scored against the 9-point scale to take into account individual differences in regional fat deposition. The individual scores for observation and palpations are then added up and divided by 6 to give the final overall score for the animal.

The final scale ranges from 1-9 with 1 defined as 'poor' and 9 as 'extremely fat'. Both a severely underweight (taken as a BCS of 3 or less) or obese (defined as a BCS of 7 or more out of 9) result are associated with a higher risk of health problems.

As a guide for leisure horses and ponies, Dr Harris recommended a BCS of 5 tending to 6 towards the end of summer and around 5 tending to 4.5 at the end of winter. It is important for all horse owners to learn to carry out a BCS effectively so that horses at risk can be identified as soon as possible so appropriate changes in nutrition and management can be put in place, and/or veterinary/nutritional advice is sought.

But Dr Harris says that BCS scoring is only a part of weight management. Especially for some of the more obese animals and at least initially during a weight management programme, it is really important to be aware that the body condition score may not actually reduce despite them losing weight most likely because, at this stage, they lose the 'invisible' internal fat first rather than the external fat that we can palpate.

Therefore, Dr Harris always recommends regularly measuring and recording belly girth and rump width (taking care the horse is fully comfortable with the procedure). In addition, periodic and accurate body weight measurement (preferably using a calibrated weighbridge at a local veterinary practice), can be extremely helpful to ascertain early on if the management changes are having a positive effect.

From researcher Pat Harris:

"It can be very easy for some animals to gain weight and extremely difficult for them to lose weight, especially when limited facilities are available. It is, therefore, really important that all involved help support the owner/feeder in their efforts, rather than perhaps making them feel guilty for continuing to have an overweight or obese animal."

"Looking forward, we are working hard to find ways to identify those animals that are more resistant to losing weight than others so that we can better advise on the optimal weight management programme for an individual animal."

"I hope that new techniques will become available that will enable us to quickly and routinely measure the % Body fat in any animal which will not only enable better monitoring, but also the determination of disease risk level according to body fat content."

Table 1. Description of individual body condition scores.
Source: Relationship between condition score, physical measurements and body fat percentage in mares D. R. HENNEKE, G. D. POlTER, J. L. KREIDER and B. F. YEATES Texas Agricultural Experiment Station, Horse Section, Department of Animal Science, Texas A 8 M University, College Station, Texas, USA,
Equine Veterinary Journal – https://doi.org/10.1111/j.2042-3306.1983.tb01826.x

Score	Description

1	Animal extremely emaciated. Spinous processes, ribs, tailhead, tuber coxae and ischii projecting prominently. Bone structure of withers, shoulders and neck easily noticeable. No fatty tissue can be felt
2	Animal emaciated. Slight fat covering over base of spinous processes, transverse processes of lumbar vertebrae feel rounded. Spinous processes, ribs, tailhead, tuber coxae and ischii prominent. Withers, shoulders and neck structures faintly discernible.
3	Fat build up about halfway on spinous processes, transverse processes cannot be felt. Slight fat cover over ribs. Spinous processes and ribs easily discernable. Tailhead prominent, but individual vertebrae cannot be visually identified. Tuber coxae appear rounded, but easily discernable. Tuber ischia not distinguishable. Withers, shoulders and neck accentuated
4	Negative crease along back. Faint outline of ribs discernable. Tailhead prominence depends on conformation, fat can be felt around it. Tuber coxae not discernable. Withers, shoulders and neck not obviously thin
5	Back level. Ribs cannot be visually distinguished but can be easily felt. Fat around tailhead beginning to feel spongy. Withers appear rounded over spinous processes. Shoulders and neck blend smoothly into body.
6	May have slight crease down back. Fat over ribs feels spongy. Fat around tailhead feels soft. Fat beginning to be deposited along the side of the withers, behind the shoulders and along the sides of the neck.
7	May have crease down back. Individual ribs can be felt, but noticeable filling between ribs with fat. Fat around tailhead is soft. Fat deposited along withers, behind shoulders and along the neck.
8	Crease down back. Difficult to feel ribs. Fat around tailhead very soft. Area along withers filled with fat. Area behind shoulder filled with fat. Noticeable thickening of neck. Fat deposited along inner thighs.
9	Obvious crease down back. Patchy fat appearing over ribs. Bulging fat around tailhead, along withers, behind shoulders and along neck. Fat along inner thighs may rub together. Flank filled with fat.

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Save the date of August 19-21 for the 2019 ISES Conference being held in Guelph, Ontario, Canada. The theme of "Bringing science to the stable" will explore our relationship with horses through the past, present and future. Early bird discount closes June 1st.
For information visit: https://thehorseportal.ca/course/ises-2019/

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Notes for Editors

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The abstract can be found in the Proceedings of the 14th International Equitation Science Conference. https://equitationscience.com/previous-conferences/2018-14th-international-conference