

How human behaviour change science can help us manage obesity in horses

Equine obesity is one of the biggest welfare concerns facing our leisure horses today. As a preventable issue, with many serious consequences, obesity should be simple to fix (by reducing energy input and increasing exercise) – yet this issue remains one of the most complex and pervasive problems for the UK’s horses. Despite many campaigns to raise awareness and improve owner education, levels of obesity in horses are thought to be as high as ever. In this article, we unpick some insights gained from the fields of psychology, sociology and human behaviour, which will help practitioners to find ways to buck the trend and encourage the equine community to manage horses’ weight proactively.

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It is an unfortunate fact that changing our own behaviour is not as easy as we would hope. Despite humans being an apparently rational and intelligent species, we still do all sorts of things that we know are bad for our health and wellbeing. This can include exercising too little, scrolling through social media too much, spending too little time with our loved ones, and not eating as healthily as we could. Often, when we try to change, we have good intentions which last a short while, but we are unsurprised when our efforts ultimately fail.

Despite our own experiences with change, when we want other people to change their behaviour, we often have unrealistically high hopes. It is commonly assumed that we can simply impart knowledge on a person, and they will subsequently change. This is often the case when an equine professional is presented with an overweight horse. However, because of the slow and meandering process of human behaviour change, it can be difficult to bring about change in owners quickly, unless there is an urgent concern such as laminitis. A better understanding of how the process of change happens can help to facilitate conversations that subsequently improve animal welfare more quickly, reducing the frustration felt by equine professionals.

The stages of change

A useful way of thinking about how change happens is to divide it into stages, as in the stages of change model (Prochaska and Velicer, 1997; DiClemente and Prochaska, 1998) (Table 1).

It is important to note that people can exit and enter the cycle of change at any stage. Some people may not even move beyond the ‘contemplation’ stage before giving up, whereas others might

spend a very long time at one stage. The model also normalises the process of relapse, suggesting that this is an accepted part of learning to change, that should be embraced in order to learn lessons from the process of relapsing.

In terms of helping owners manage their horse’s weight, this model provides some valuable insights. The author suggests that professionals begin conversations with the owners of overweight horses by asking the owner “what do you think of the horse’s weight?”. This is good practice in bringing the owner into the conversation on their own terms and inviting their opinion, and also has the benefit of showing the professional which stage of change the owner is currently in. If the owner thinks the horse’s weight is perfectly fine, they are likely in the precontemplation stage and the professional’s efforts can be directed towards helping the owner redefine their view of the horse’s body. On the other hand, if the owner explains that they know there is an issue and they are already trying to address it, the professionals’ time can be spent discussing the methods the owner is already using to address weight, and helping them try other strategies if need be.

The stages of change model also highlights the importance of helping owners to plan for the difficulties of weight management. Because of the individual horse and owner personalities, as well as the management allowed on the yard in question, weight management is usually a case of trial-and-error, rather than one size fits all. Even within one method of management, there could be many options, such as choosing a grazing muzzle from all the available versions. Helping the owner to see that there are lots of options, and that they are initiating the process of finding ones that suit them, will help the owner to understand that this will be a case

Table 1. The six stages of change from the transtheoretical mode (DiClemente and Prochaska, 1998)

Stage of change	Meaning	Example
Precontemplation	This is the stage before the person even thinks the potential change is relevant to them	The owner does not realise the horse is overweight or, alternatively, they do know but do not yet want to change
Contemplation	The person is thinking about making a change, without actually doing anything about it yet	The owner recognises that the horse should lose weight, and is thinking maybe they should make a change (but not doing anything yet)
Preparation	The person is thinking about how to make a change	The owner is deciding which weight management strategies to use
Action	The person is starting to make a change	The owner starts to make some changes to their equine management
Relapse	The person stops making the change, or goes back to their old ways, which can happen many times	The owner can no longer maintain the change. It is important to note that horses can also cause relapses, such as jumping out of a starvation paddock or refusing to exercise
Maintenance	Performing the new behaviour, ideally until it becomes a habit or part of life	Weight management becomes a part of normal horse care

of making tweaks, rather than doing things in a certain way and feeling they have failed if they cannot do so.

Helping people along the stages of change

One thing is clear across nearly all human behaviour change literature; confrontation in a conversation between someone wanting to bring about a change in the other person, is the biggest predictor of failure to change (White and Miller, 2007). When we are confronted, we feel defensive, and when we are defensive we reinforce our beliefs and actions. This is why, after an altercation with someone, you might find yourself dwelling over your actions and attempting to justify yourself internally. Studies have found that if people are confronted with alternative knowledge, they actually hold on tighter to their own beliefs than they did in the first place – meaning they have practiced and reinforced their own reasons for certain behaviours (Lord et al, 1979).

Box 1. Example conversation using motivational interviewing approach

Vet: What do you think of his weight at the moment? [open ended question]
Client: He's not too bad. He is a chunky cob.
Vet: You feel like he's a bit chunky at the moment? [reflecting the participant's own speech]
Client: Well, he is quite big boned.
Vet: Yes. He is a lovely horse [affirmation]. He is big boned [reflection], are there any bits that you'd be concerned might be fat rather than his shape? [open ended question]
Client: I guess he has a bit of a crest. He's always been like that though.
Vet: Yes, that's well spotted because crests are one of the areas lots of owners miss [affirmation]. This bit here is the nuchal ligament, can you feel that? So the bit above it is fat, because there's no muscle above that ligament. So you're absolutely right, that is quite a fatty deposit there.
Client: I suppose so. I can't do anything differently though, he already has soaked hay and I can't ride any more than I am.
Vet: OK, that's great that you're already being proactive about his weight [affirmation]. What sorts of things would worry you about him being overweight?
Client: I suppose I'd be worried about laminitis.
Vet: Yes, I see. So, you recognise he's got some fatty areas and you want to avoid him getting laminitis, but you feel like you're already doing quite a bit to manage his weight [summary]. It's great that you're already thinking about this stuff, you're obviously very proactive. If you'd like, I can go through some management options to see if there's anything else we can do that might help?

This is important, because when faced with an animal welfare issue, particularly one as frustrating as obesity, people sometimes assume that some level of confrontation with the person, such as scaring them with the risks of laminitis, will help the person see the error of their ways and change their behaviour. This is particularly the case when dealing with obesity in animals, because of common internally held beliefs about owners of overweight pets in the veterinary profession. One study found that small animal vets felt disgusted and frustrated with owners of obese animals, which inhibited their conversations with those owners (Pearl et al, 2020). However, because of our innate response to any level of confrontation, this approach is unlikely to be successful.

Instead, a more collaborative approach is likely to be more successful. Human medical practitioners are now familiar with motivational interviewing, an evidence-based brief therapy which uses conversational techniques to build rapport and engage the person in their own narrative about why they want to change (Velasquez et al, 2006; Miller and Rollnick, 2014; Bard et al, 2017). It makes use of four tenets; open ended questions, affirmations, reflections and summaries, to reflect back at people their reasons for change (Box 1). Using this type of supportive dialogue works with our internally held beliefs, and can help owners to move through the stages of change model. As well as being used in human medicine to encourage patients to make lifestyle changes for conditions such as obesity and addictions, motivational interviewing has been used

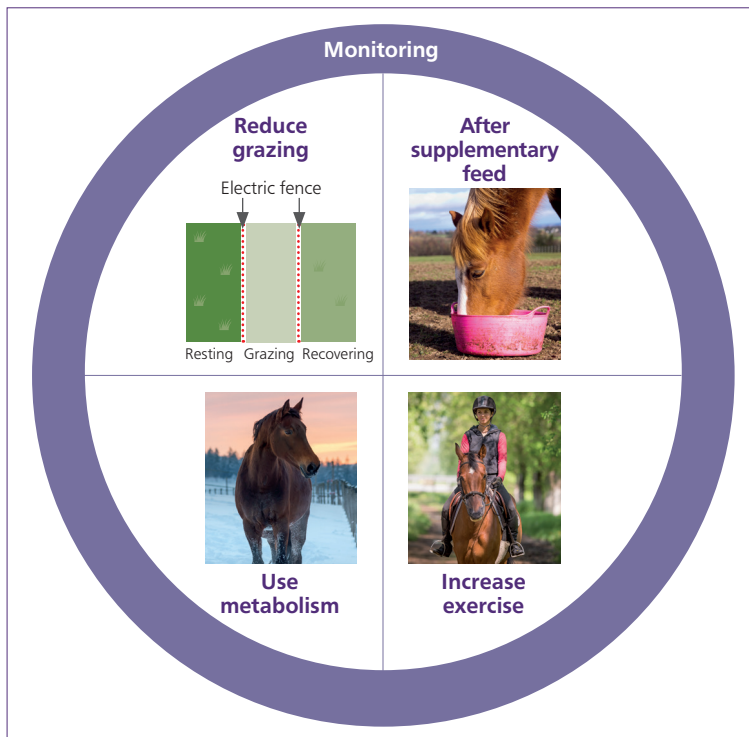


Figure 3. The four categories of weight management (Furtado et al, 2019)

successfully by vets to help farmers improve herd health (Svensson et al, 2020), as well as by welfare staff to deal with pervasive issues such as equine hoarding (Williams et al, 2020).

Recognising the horse is overweight

The author's research has previously shown that many owners recognise their horse is "chunky" or "big", yet find it very hard to separate out which parts of the body represent removable fat, and which parts are simply the horses' shape, this is particularly true for chunkier breeds such as native ponies and cobs (Furtado et al, 2020). Therefore, the fat is essentially invisible to them, and they may need help in recognising which areas are fat, or visualising what shape their horse might be underneath its layers.

The fact that owners may use words like chunky (even if they simultaneously deny the horse being extremely overweight), is a useful place to start a dialogue, by reflecting back that it is positive that the owner can perceive that the horse is chunky and initiating a discussion which examines the horse carefully, helping the owner to distinguish (ideally with hands-on examples) which areas are fat. Other useful ways of helping this conversation along might include helping the owner to identify changes over time (for example, looking at past pictures of the horse from a year or several years ago, in order to compare the horse's body over time), or showing the owner pictures of similar horses who have lost weight so that they can visualise the removal of fat from the body.

Helping to plan weight management

Weight management in horses is best approached through targeted, specific strategies tailored to the individual horse, owner, and yard (German, 2016). Something that works well for one owner, such as a grazing muzzle, might be problematic for another. The

authors' research showed that owners found it difficult to compromise short-term welfare (for example, through removing a horse from its friends) for the benefit of its long term welfare (weight management). Therefore, working with weight management strategies that the owner considers better for the horse's welfare will help the owner to continue to manage weight over time.

Weight management can be simply broken down into four categories: increasing exercise, increasing metabolism (for example not rugging so that the horse uses its own energy to keep warm), reducing supplementary feed (any forage or bucket feed) and reducing grazing (Figure 3). More extensive reading options for all four categories are offered in the further reading section.

It is important to help owners to discover resources like this, with diverse weight management options, rather than making suggestions about what to do. This is because some owners may find that the more unusual options, such as leading from another horse, paying a professional to ride, or turning the horse out with youngsters actually suit them better than more standard suggestions for exercise, such as lunging or hacking. Rather than making suggestions, the professional can instead use this opportunity to empower the owner, by telling them that they are the expert on their system and their horse, so it is up to them to decide the right strategies, but they will have professional support in doing so.

Horse owners are often very invested in the minutiae of horse care and in weight management, owners often ask very specific questions, for example, exactly how many hours should hay be soaked for; what are the relative sugars in long versus short grass; which hours are safest for turnout; which is the most successful weight management option, and so on. Ultimately, it is impossible to give an entirely evidence-based answer to any of these questions, because all forage is different and all horses are different. Instead, a useful approach can be to reassure owners by helping them to find a way to frequently monitor their horses. This way, rather than worrying about the minutiae and getting things exactly 'right', they can simply measure for change and adjust methods if weight is not being lost or, alternatively, if the horse is losing weight too quickly.

Measuring change

Helping owners to measure change is an important part of assisting owners through the maintenance phase of behaviour change, but is often overlooked. However, because humans (like all animals) respond favourably to positive reinforcement, the process of measuring change and seeing the difference than has been made to equine weight can be used to encourage and prolong maintenance behaviours. There are three parts to this monitoring that are important:

- Measuring small changes using a weight tape or piece of string, in order to be able to see any alterations week-on-week.
- Measuring longer-term changes by using condition scoring and photographing the horse once a month.
- Recording changes – this is just as important as doing the actual monitoring.

For each method, it is important to help the owner to practice techniques, such as weight-taping or photographic analysis, to estimate body condition and carefully assist with body condition

scoring (see the *further reading* section). Having records of changes made over time will help owners to reflect on what has worked well for them (or not worked at all), as well as helping them to better identify weight on their horses in the future.

Finally, the owner-equine professional relationship is important to owners, but only if they feel the professional is on their side. Feeling like the vet/farrier/instructor is invested in their journey, through requests to check in and perhaps sending pictures of their horse's progress, is an important part of encouraging and rewarding change.

Track systems for weight management

Track systems are becoming a popular way of managing weight. Instead of a square paddock, the owner instead creates a track around the edge of the paddock, with resources (hay, water, enrichment) placed at different points so that the horse has to move between them. Horse owners are particularly keen on this system because it is perceived as being high-welfare. Rather than depriving the horse of its herd life or forcing it to exercise, the horse is perceived as being in an optimised environment where it has free movement, freedom of choice, low calorie forage and a social life.

Track systems can be very useful for weight management and many owners enjoy creating them by adding enrichment and different surfaces, as they can offer sustainable ongoing weight management options for both horses and owners. However, there are a couple of common pitfalls to avoid:

- First, it is important to ensure that weight is frequently monitored, because it can be necessary to add additional means in order to reduce grass on the track, for example by strip grazing the track or adding a grazing muzzle.
- Secondly, some owners prefer to feed ad-lib hay while on a track system, which can be problematic for horses who are prone to simply waiting by the hay feeder.
- Finally, some horses may find the corridors of track systems stressful, particularly if there are problems with cohesion in the herd, or if the system is set up in a complicated shape such as zig-zags or spirals (horses being notoriously poor at mazes, of course), so careful monitoring of the horses' emotional wellbeing on tracks is important.

Conclusions

With obesity being one of the most pervasive issues facing the UK's leisure horses, understanding how owners make decisions around their horse's care is vital to assisting them in making changes to their horse's weight. Considering these decisions, in light of behaviour change models such as the stages of change, will help to clarify where help is needed. Above all, a compassionate, collaborative attitude (as promoted by motivational interviewing approaches) will assist in obesity management.

Further reading

- Equine weight management guide: <https://www.liverpool.ac.uk/media/livacuk/equine/documents/Equine,Weight,Management.pdf>

Learning to condition score different types of horses:

- Highly recommended video around condition scoring

KEY POINTS

- Behaviour change is a gradual process with different stages; people usually move from a process of precontemplation (not knowing change is needed) towards contemplating the change, preparing to make a change, taking action, relapsing, and maintaining behaviour.
- It is normal for some stages to take time and for relapse to occur. However, behaviour change science can teach us how to help people move through the stages more quickly.
- The biggest predictor of failure in conversations where someone is trying to change another person is confrontation, or anything that makes the person feel in the wrong.
- Motivational interviewing, using conversational techniques, such as open questions, affirmations, reflections and summaries, is an evidence-based way of helping the owner move through the stages of change more quickly – this practice is now common in human medicine.
- Horse owners often recognise on some level that their horse is 'large' or 'chunky', but find it impossible to separate the fat from the shape it is meant to be (particularly for chunkier breeds such as native ponies and cobs).

(Teresa Hollands, Redwings): https://www.youtube.com/watch?v=Zih1jT_pUgQ

- Recorded webinar with example condition scoring of several different types of horses, plus discussion with nutritionist Clare Macleod: <https://www.youtube.com/watch?v=PFCO6XNN4Sc&t=4837s>

Working out the right weight management option for the individual:

- Equine weight management guide: <https://www.liverpool.ac.uk/media/livacuk/equine/documents/Equine,Weight,Management.pdf>
- Recorded webinar about weight management, showing how to adapt different options to suit (with example of track system usage): <https://www.youtube.com/watch?v=MTk0RC52VZQ&t=3783s>
- Blue Cross' "Fat Horse Slim" guide: <https://www.bluecross.org.uk/fat-horse-slim>
- World Horse Welfare "Right Weight?" guide: <https://www.worldhorsewelfare.org/advice/management/right-weight>

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