

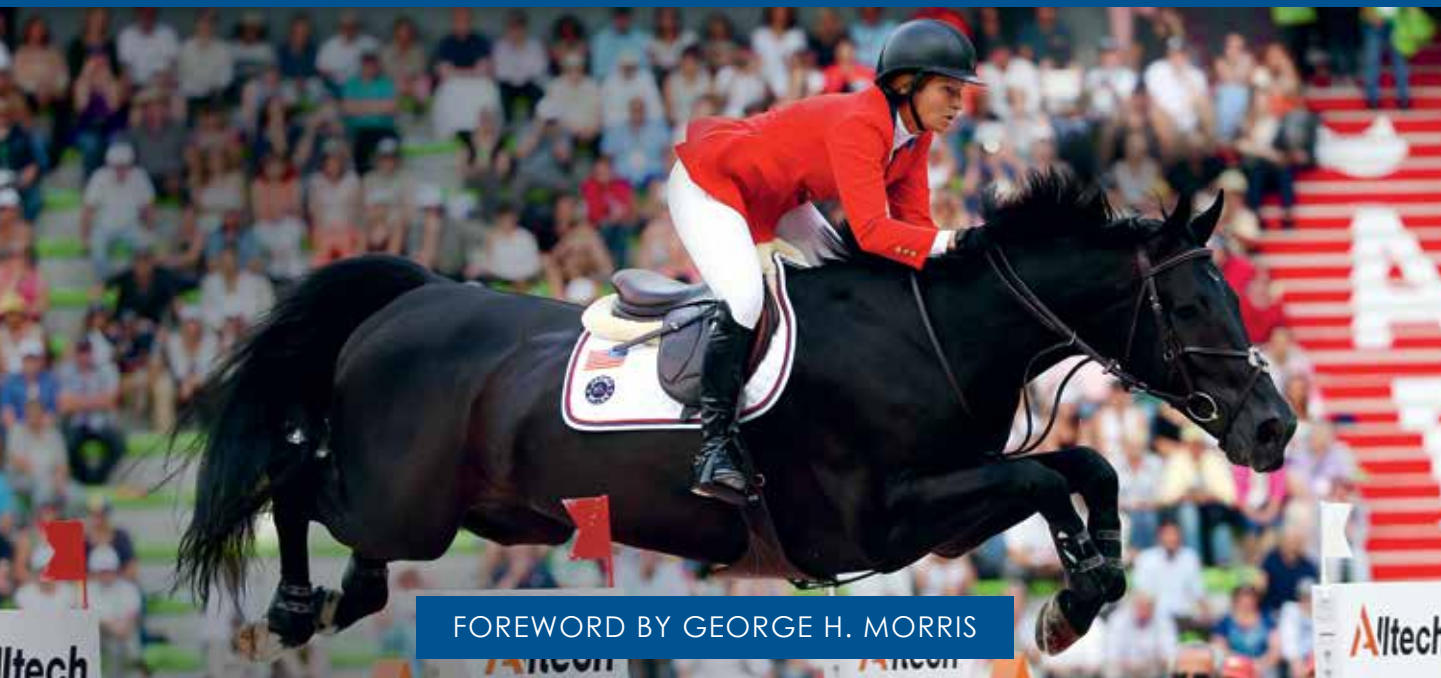


SPORT HORSE

SOUNDNESS AND PERFORMANCE

TRAINING ADVICE for DRESSAGE, SHOWJUMPING and EVENT HORSES
from CHAMPION RIDERS, EQUINE SCIENTISTS and VETS

Dr Cecilia Lönnell



FOREWORD BY GEORGE H. MORRIS

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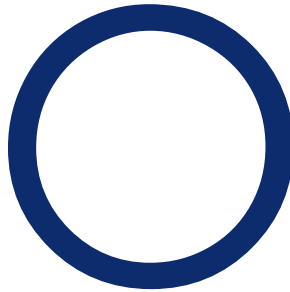
**‘Don’t overfeed – an
overweight horse puts
unnecessary load on his
joints.’**

Dr Sue Dyson and Carl Hester

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7. Feeding, supplements and water



ne aspect of performance and reading the horse is to give the right feed. It is the feed that provides fuel and building blocks for the body. Recent years have seen a shift in feeding strategies for top-level sport horses. The focus today is more towards a good-quality coarse feed,

feeding several times a day and giving more fibre and less easily digested carbohydrates ('GI-diets!'). All this is more in tune with the horse's natural needs than giving plenty of hard feed and small/few portions of hay or haylage.

The EEHNC in Belgium in the spring of 2015 had feeding the sport horse as one of its key themes. The famous UK feed scientist and vet Dr Pat Harris gave a passionate talk about the importance of good-quality coarse feed for horses. She emphasised that the horse is, by nature, a grazing animal. The horse therefore has both a physical and mental need to eat grass (dried as in hay or haylage for storage purposes). In the wild it is natural for a horse to graze many hours per day, but he will consume a portion of hard feed in a few minutes. (Chapter 2 about the horse's body discusses these differences.)

Dr Pat Harris referred, for example, to a study from The Swedish University of Agricultural Sciences led by Professor Anna Jansson. It showed that young Standardbred trotters in training worked well on only haylage, provided it was an early harvest with high nutritional value.

In developed countries across the world it is nowadays more common for horses to be overfed rather than the other way around. Equine obesity has become an issue just as for humans and pets. Studies also show that some horse owners underestimate the horse's body score and do not spot signs of surplus weight.

'An overweight horse will put unnecessary load on his legs and joints, and run increased risk of metabolic syndrome', Dr Sue Dyson said in her soundness advice. She was referring to

'Buying new riding breeches? Please do, but first get a proper feed analysis'

This was the message in an advertisement for a Swedish feed laboratory a few years back, with World, European and Olympic medallist Peter Eriksson as the model. It might have been an advertisement, but is thought-provoking about the priorities of a rider or horse owner.

the realisation from scientific research that obese horses are at increased risk of developing laminitis.

Large portions of hard feed can result in the horse becoming overweight, and have also been shown to increase the risk of both colic and ulcers.

Poor feed hygiene is also suspected of increasing the risk of gastrointestinal disturbances and colic. Pay attention to choosing a really good-quality coarse feed, is the advice from Dr Sue Dyson. Her point fits in with Beezie Madden's advice:

1. Good hay should be the basis of the feeding (almost always a first crop for competition horses, as the hay made early in the season has higher nutritional value).
2. Give plenty of hay! Pay close attention to whether the hay has any signs of mould or similar, and discard that.
3. Before you spend lots of money on supplements, first make sure you do what is best for the horse regarding hay and hard feed.

The only supplement Beezie gives is a joint supplement, plus electrolytes when needed (that is in, hot weather or if the horse is otherwise sweating a lot). One important point made at the EEHNC was that, when horses are given electrolytes, it is very important that they also drink plenty of water.

Marketing supplements for horses is a massive industry, whereby many horse owners and riders spend vast amounts of money for products that, unlike the requirements for ordinary medicines, seldom have any proven effect. Anky van Grunsven commented in a panel discussion at the EEHNC that she was puzzled at the high number of different supplements some horse owners give their horses.

The thought that this or that product will keep the horse healthier or help him perform better can be tempting. But bear in mind this:

1. Either the product has no effect, and you have thrown away your money ...
2. ...or else they do have an effect and, in that case, you

'Good hay is the basis of our feeding regime ... Before you spend a lot of money on supplements it is important to first be sure that you have done everything right for the horse regarding the fundamentals, roughage feed and hard feed.'

Beezie Madden

Advice and warning!

Always read the contents label for feeds and supplements very carefully. Do not handle a product that does not display its contents. The International Equestrian Federation (FEI) website has a anti-doping section with specific warnings against supplements in particular.

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**Reading
suggestion**

The feeding of the horse is a very important area to know about and understand as a rider. Apart from the health and performance aspects, the rider/horse owner can also become a more savvy consumer by learning more about feeding.

***The Truth About
Feeding Your Horse,***

by Clare McLeod
MSc RNutr (J.A. Allen/
Crowood, 2007) is
a comprehensive
guide to all aspects of
feeding, including for
performance horse.

run the risk of breaking forbidden medication or doping rules! This is especially relevant for herbal products, that, for example, claim to have a calming effect.

Hard feed, for example oats, which contain plenty of starch (fast carbohydrates) can also affect the horse's behaviour. This is a traditional viewpoint that, in recent years, has been proved by studies.

One rider who reflected on this was Rodrigo Pessoa, with the Olympic and three-time World Cup Champion Baloubet du Rouet. One challenge with the stallion was harnessing his enormous natural energy, and the feeding was therefore something that the Pessoas analysed carefully. Baloubet did not get oats or barley, but a specially made muesli that, in combination with the roughage, covered his needs. One piece of the puzzle was that his daily lunch was a big serving of carrots, instead of ordinary feed – ‘and then the right amount of work’, Rodrigo said.

When you are determining the nutritional needs of your horse, do have a look at the heart rate table and levels of physical exertion that are discussed in Chapter 9. Many riders in equestrian sport overestimate how hard their horses are working, and this easily results in overfeeding.

To evaluate whether your horse is overweight, just right, or underweight you can get him weighed in a clinic the next time you visit. You can also search the internet and find protocols for equine body scores. Do also ask an independent person for their opinion.

Research: glucosamine joint supplements


There is a study from one of the world's leading vet schools, at Guelph in Canada, of (supposedly) glucosamine-based joint supplements. The scientists did lab tests of the contents of some ten different joint supplements to see if the glucosamine level stated was correct. It showed that some

producers sold products where what was stated on the container and the actual contents did not match. Some products had a lower glucosamine content than advertised; some had higher, and for one producer the amount of glucosamine in the supplement was zero!



Olympic, World, European and World Cup Champion Valegro on pasture at home. The horses in Carl Hester's yard have daily paddock time. Note, in addition to the insect protection, also the protective boots and the well-built fencing. (Photo: Jon Stroud.)

Photo: Roland Thurnholm

A rider in a light grey jacket and black helmet is riding a dark brown horse through a lush green field. The horse has white wraps on its lower legs. The background is a dense line of green trees and bushes.

8. Riding surfaces – vary where you ride

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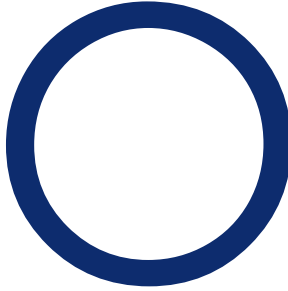


‘Train the horse on different surfaces and not just in one arena; vary where you ride and pay attention to the surface you choose.’

Rolf-Göran Bengtsson, Yogi Breisner, Jan Brink,
Dr Sue Dyson, Carl Hester and Beezie Madden

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ne of the key messages from champion riders and vets concerns the riding surface – pay attention to it and give the horse variety. Both racehorse research and experience has long shown that one important risk factor for injury is the surface the horse trains/competes/races on. This risk is, at the same time, something the rider can influence through knowledge and common sense.

As most people in equestrian sport know, discussions and opinions on surfaces have been very subjective, but research in the past decade has made objective testing possible. It has since been a valuable tool in preparations for the equestrian arenas at the 2012 and 2016 Olympics.

Scientific testing of equestrian surfaces was first developed within Thoroughbred and Standardbred racing, where for decades scientists have studied associations between orthopaedic injury and surface properties.

The FEI and World Horse Welfare helped finance pioneering work on testing and profiling of riding surfaces, at the Swedish University of Agricultural Sciences, undertaken by Professor Lars Roepstorff and his Ph.D student, now Dr Elin Hernlund. They developed an equestrian version of a ‘mechanical hoof’, called OBST (Orono Biomechanical Surface Tester) originally developed for racecourse testing by Professor Mick Peterson at the University of Maine.

The evaluation points for arenas are:

- Impact firmness.
- Cushioning.
- Grip.
- Responsiveness.
- Uniformity and consistency.

SURFACE CHARACTERISTICS AND USE

Think about how your arena, outdoor and/or indoor, scores on these criteria. At the same time note that a person cannot judge, for example, hardness accurately, because the interaction of the horse and a surface will be different than between a much lighter human and the same surface. Even if you and others feel you have the ‘perfect’ riding surface, make a point of not riding there all the time. This might sound odd, but it is the same advice as given by the champion riders and by vets. If the horse is ridden constantly on the same surface his body will not be prepared for any variations, and this is suspected to increase the risk of injury.

When jumping riders talk of a ‘good surface’ at shows they often mean one that allows fast jump-offs; one that is firm and with excellent grip. But firmness and a high degree of grip at the same time increases the load on the horse’s legs and could thus increase the injury risk. So what is ‘good’ for individual performances can be different from what is ‘good’ for the horse. A non-scientific survey among top names in showjumping in 2014 showed that, at that high level, a majority had elected not to have competition-style surfaces at home. Instead, they had chosen surfaces with less grip and more elasticity than some typical competition surfaces.

To get more surface variation you can consider your surroundings at home and how you can plan your riding so that the horse gets to use different types of surfaces. Do you have access to forest/cross-country riding? Bridlepaths? Grassland?

One important expression in connection with surface use is that ‘speed kills’. In this context that means the effect of a surface increases at higher speeds and with jumping. This underlines the importance of using different surfaces in different ways. The higher the speeds you ride at (and also when you are jumping), the more important it is that the surface is even, uniform and has elasticity. But the horse will

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**Reading
suggestion**

As with feeding, riding surfaces present a very important subject for the rider to have an understanding of. This chapter is only a short background. The following handbook includes a wide range of information on surfaces. It was published in 2014, first in Swedish, commissioned by the Swedish Equestrian Federation with this author and Dr Elin Hernlund as main co-writers together with an international reference group:
http://inside.fei.org/system/files/Equestrian_Surfaces-A_Guide.pdf

For more in-depth background on biomechanics and surfaces, European and US equine surface scientists produced a white paper on surfaces, also published on the FEI website.

also benefit from, for example, riding on uneven terrain, to develop co-ordination and balance – but then at slow speeds.

Just as the body adapts to training, it will also adapt to different surfaces. Compare the effect on yourself if you normally do cross-country running and then suddenly decide to do a session on tarmac. Then, you will probably get sore shins. Among top-level international riders it is now increasingly common to prepare for big classes and especially championships by choosing shows with the same type of surface as at the bigger event.

MAINTENANCE

Irrespective of which arena types you have access to, their maintenance will have great influence on their properties. ‘It does not matter what material you put in [on an arena] if it is not maintained properly’, Ludger Beerbaum said back in 2007. This is supported by later biomechanical testing of arenas and by footing experts.

Scientific surface testing shows that the same material will offer different properties depending on how it is used and maintained, and that, in turn, different surfaces can share the same properties thanks to appropriate maintenance.

The survey on arena use with top riders in 2014 showed that a majority of them have daily maintenance of their home arenas – and even more than once daily if the arena is in intensive use, as during jumping training.

Opposite: The moisture content of a surface (so how wet or dry it is) is a key factor for its properties. Suitable watering is therefore an important part of maintenance.
(Photo: Dr Cecilia Lönnell.)

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