

Feeding horses during periods of rest and recuperation



Note: If you believe your horse may be injured or unwell, please seek advice promptly from your veterinary surgeon.

Diet is an important factor in recovery from injury or illness

A period of rest and recuperation is inevitable during your horse or pony's career, for example, as the result of lameness or colic or due to an illness or disease such as laminitis or following surgery. Diet plays an important role in supporting recovery from illness and repair of injured tissues such as bone, muscle or tendons by providing a number of different nutrients which are needed to support the healing process.

Protein is a crucial ingredient in your horse's diet as it is broken down into amino acids during digestion which are used to build new proteins and tissues by your horse as they recover from illness or injury. Every protein in your horse's body is made up of an "alphabet" of just twenty-one building blocks called amino acids. Although your horse is able to make some of these amino acids within their body, the remainder are called essential amino acids, and have to be supplied in their diet.¹ Any deficiency in these essential amino acids can limit protein production in the body.² Amino acids are critical building blocks for proteins involved in repair and healing.

During recovery from an injury or infection, or during exercise, the rate of protein manufacture within your horse's body may increase.³ So whether your horse or pony is recuperating on box rest, or is slowly being brought back into work following an injury, particular care and attention needs to be paid to their diet to fully support their recovery. There are 3 basic rules:

- 1 **Provide enough, but not too many, calories (energy)** – your horse's energy or calorie intake will be lower during box rest as they are less active. Even if they have just started back into work energy intake should ideally be limited to keep them calm and so reduce the risk of further injury.
- 2 **Provide a balance of nutrients** – nutrients such as fibre, protein and carbohydrates, as well as vitamins and minerals, all aid the healing process by supporting normal digestion, muscle function, immunity and respiratory health.
- 3 **Provide a good quality protein source** – protein is needed to aid the recovery and repair of body tissues. By providing amino acids in the diet, the raw ingredients for protein synthesis are available to your horse. It may also help limit the amount of muscle mass which is lost during the rest period.

HERE ARE SOME TIPS TO HELP YOU FOLLOW THESE RULES

Feed concentrate feeds on a 'little and often' basis

While your horse is on box rest, a concentrate feed that is high in fibre and low in starch is most suitable and this can be continued once exercise starts to be re-introduced.⁴

Concentrate feeds should be kept small and fed on a 'little and often' basis because small meals allow the digestion of both starch and protein to be maximised in the small intestine.⁵ Enzymes, found in the small intestine, are needed to break up the complicated structure of dietary protein in order to absorb its nutrient content, and so feeding 'little and often' avoids overloading the digestive capacity of these enzymes.

Ensure your horse has plenty of high quality clean forage

Good quality clean hay or haylage is essential to help maintain your horse's digestive health and avoid problems associated with poor quality forage, like respiratory disease.⁶ Forage also takes much longer to eat than concentrate feed and so a high forage diet will help satisfy the natural chewing behaviours of your horse and avoid boredom which is especially helpful during times of rest and recuperation. The risk of stable vices or stereotypic behaviours such as windsucking and wood chewing may increase if your horse is stabled and fed a high starch diet with a low level of forage.⁷ However, whilst forage is good for behaviour and digestion it will not provide your horse with an optimum balance of amino acids and this will need to be addressed.

Supplement your horse's diet with high quality protein

Some sources of dietary protein are considered to be of a higher quality than others because they contain more of the essential amino acids needed by your horse, especially during times of greater protein requirement.⁸ To provide your horse with the best balance of amino acids you must ensure that the protein in their diet is of good quality and can be easily digested in the small intestine.

Forage, cereals and cereal by-products all provide your horse with some dietary protein, however it may not be high quality and highly digestible.⁹ Your horse will not derive any amino acids from either starch or oil as neither contains any protein. Therefore a concentrate ration that offers plenty of forage, together with high fibre, low starch, and sometimes high oil, whilst beneficial in many respects, is unlikely to deliver an optimum level and balance of amino acids. Since your horse needs the right balance of amino acids to support healthy tissue growth and repair during recovery and return to work, Equitop Myoplast can be fed alongside this type of ration to supply important and essential amino acids.

Equitop Myoplast is a good source of both dietary essential and non-essential amino acids and specifically contains arginine, ornithine, glutamine and leucine, all of which have been shown to be involved in normal healthy repair and recovery processes.

Provide sufficient antioxidants in the diet

Free radicals are highly active biological by-products of many normal metabolic processes. During injury and disease, your horse will produce more free radicals which can contribute to ongoing tissue damage.² Antioxidants are thought to help protect against the damaging effects of free radicals on tissues. A complex mixture of antioxidants are found naturally in plants and vegetables. Feed ingredients such as alfalfa, rosehip and ricebran contain a complementary mix of natural antioxidants which can be beneficial to your horse as part of a balanced diet.¹⁰

What should you do when the level of exercise starts to increase?

Following a period of box rest, or restricted exercise due to injury, your horse will slowly be returned to full work. This is a critical phase, as fitness and strength needs to be regained without causing further damage to the injury in question which is likely to be still healing. For this reason, you may restrict energy (calorie) intake in order to prevent excessive weight gain and to avoid overexuberance. However, your horse still requires a well balanced diet that provides plenty of forage and limits the intake of starch. It is also vital that your horse is provided with an adequate level of quality digestible protein because once horses have returned to work, and their level of exercise starts to increase, there is an even greater demand for protein to support the increased rate of muscle protein turnover (breakdown and repair) that occurs with exercise.² Equitop Myoplast is ideal to supplement your horse's existing ration providing a high quality and digestible source of protein.

In summary, when your horse undergoes a period of rest and recuperation, or whilst they are being returned to work, they will benefit from plenty of forage coupled with a low starch and high fibre concentrate feed, sometimes with additional oil. Supplementing their ration with Equitop Myoplast delivers a high quality and digestible protein source, providing essential amino acids to support the normal recovery process and muscle turnover when exercise is resumed.



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Advice on the use of Equitop Myoplast or other therapies should be sought from your veterinary surgeon.
Further information available from Boehringer Ingelheim Vetmedica, Bracknell, Berkshire, RG12 8YS, UK.
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