

Supplements – Complement or Cure All

Dr Catherine Dunnett BSc, PhD R.Nutr, advises on the use of feed supplements

Horse feed supplements are all legally classified as complementary feeds and they aim to support equine nutrition and health. Typical ingredients range from straightforward vitamins and minerals, to specific nutraceuticals (nutrients which claim health benefits).

Where horses or ponies are healthy and are being fed a balanced diet, they may not require any further supplementation. However, supplements can be useful in some situations to help maintain an aspect of health, especially where an animal is in an 'at risk' situation. For example, horses in hard work may be at a greater risk of joint dysfunction or digestive disorders.

Feed supplements are not legally allowed to claim to treat, cure or improve any disease process and the Veterinary Medicines Directorate is an organization that ensures that these rules are not abused in order to protect us from the unethical marketing of products claiming unproven health benefits.

A comparison of the level of active ingredients provided between supplement products is always useful. Care needs to be taken in the choice of supplement to ensure that the product has some benefit and that you are not simply just wasting your money.

There are a large number of supplements available, some examples of which are found below.

Nutrient Based Supplements

Probably the most commonly used is the broad-spectrum vitamin and mineral supplement, which aims to complement a horse's existing diet helping to provide a balanced ration. Others may provide individual micronutrients to address a specific issue e.g. provision of additional electrolytes or key nutrients such as biotin for hoof horn structure and growth.

When they can be used

- Feeding forage based diet (grass or hay) only.
- Feeding less than the manufacturers recommended intake of a cube or mix.
- Vet or nutritionist identifies a shortfall in a micronutrient.
- Horses in work requiring specific micronutrients



It is important to realise that 'more is not necessarily better'. An excess of certain micronutrients can be toxic in large doses or an excess of one micronutrient can have a negative impact on the absorption of others. Some nutrient-based supplements have common ingredients so avoid duplication, seeking advice if you are unsure. Pay particular attention to copper selenium and the fat-soluble vitamins A, D and E.

Digestive Aids

The horse's gastrointestinal tract, especially the hindgut, houses a large population of microflora including bacteria, yeasts and protozoa. Beneficial microflora present can assist in the fermentation of fibre, synthesis of a range of B vitamins and also support the immune system. Detrimental or pathogenic microflora present can contribute to disease including scouring, colic and laminitis.

The population of microflora in the equine gut is dynamic, with those that have died or been passed out in the faeces, being constantly replaced by new ones as a result of multiplication. The balance of microflora in the equine gut can be adversely affected by

- High starch diets, especially where meal size is large
- Inadequate fibre in the diet
- Travel or other environmental stress
- Medication e.g. some antibiotics and possibly wormers.

A healthy balance of microflora in the digestive tract can be maintained essentially through good feed and management practices, although digestive aids can help where this is unattainable. Their beneficial effects result from stimulation of beneficial and suppression of detrimental microflora. These supplements may contain one or more of the following ingredients:

Probiotics

Live Yeasts

- EU approved for use in horses
- Many scientific studies conducted in horses
- Maintain beneficial environment in the hindgut
- Stimulate fibre-fermenting bacteria.
- Help reduce hindgut acidity associated with high starch diets

Live Bacteria

- No EU approved strains for use in horses
- No convincing evidence of beneficial effect in horses

Pre-biotics

Fructooligosaccharides (FOS)

- Some scientific evidence for their use in horses
- Short chains of sugar not digested in the small intestine
- A food source for beneficial microflora
- Stimulates growth of beneficial microflora only

Mannanligosaccharides (MOS)

- Some scientific evidence for their use in horses
- Derived from yeast cell walls
- Binds detrimental bacteria in the gut and removes in the faeces
- Shown to reduce scouring in foals

When they can be used

- Horses prone to colic or other digestive disturbances,
- Horses with loose droppings,
- Poor do-er's
- During travel or competition
- During antibiotics or worming
- For horses fed a high starch diet with restricted forage

Joint supplements

Normal cartilage structure is essential to maintain a joint's durability, strength and flexibility. However, cartilage is dynamic and is normally simultaneously broken down and renewed. Joint supplements provide building blocks for the formation of cartilage and also ingredients that claim to counteract the inflammatory processes involved in joint disease.

A few of these products have some scientific support for their use, although there is controversy on how much of the active ingredients reach the target tissue. There is also considerable difference in the level of active ingredient supplied per daily serving between products. Careful consideration of the type and brand of product is therefore essential and veterinary advice is advised.

When they can be used

- For horses in active training
- To support recovery following injury in conjunction with veterinary treatment
- For old horses

Herbal Supplements

Herbs and other plants have been used for centuries as nature's healer with some evidence for their action being found in historical texts. Many modern drugs, for example, aspirin, atropine, and digitalis were originally discovered and derived from plants. However, with the exception of a few ingredients, for example Echinacea or devils claw, the number of studies carried out in horses to support their use is limited.

Health Based Supplements

Many supplements contain ingredients that aim to maintain health in horses or ponies prone to specific conditions such as laminitis, azoturia, anaemia, exercise induced pulmonary haemorrhage (EIPH) or gastric ulcers. A few of these supplements are based on sound scientific knowledge, whilst for others there is no proven efficacy in horses. For gastric ulcers, for example, there are a number of products that are supported with a scientific trial that may be useful as an adjunct to veterinary therapy for horses at risk from recurring gastric ulcers.

Supplements can often be portrayed as a panacea for all of your horse's ills. It is important to remember that they should not be regarded as cure alls but are simply intended to complement your horse's existing diet forming an important part of the overall picture with respect to maintaining health.