**Supplements: An holistic approach**

**Do our horses really need them?**

Supplements. They can be a contentious topic. Yet nearly all horse owners, trainers and riders use them at some stage in one form or another on their equines. As a naturopath, I am sometimes asked that if a horse is fed ‘properly’ then does it really need supplements? The answer is both no and yes! Horses have evolved to live outdoors, on natural land which hasn’t been over-farmed and/or over-grazed, eating a diet of natural forage and plant matter, roaming considerable distances each day, with their primary stress in life to stay alive and outrunning predators. In this case, there would be little need for supplementation. Today’s horses however, generally live in stark contrast to this: most often they spend time in small areas of turnout (many spend considerable time in stables), having minimal access to pasture (which is often over-grazed, and in some cases tried to be compensated by commercial fertilisers); exposed to toxic metabolites such as medications and environmental chemicals (insecticides, herbicides, pesticides, xeno-oestrogens); expected to be trucked all around the countryside to events; exposed to stressful situations; undertaking rigorous activity through training and competition events; often eating highly refined and processed diets; living outside of a natural herd environment; and in many cases developing illnesses, injuries and diseases, often as a direct result of these practices. It is for these reasons that yes- most horses will benefit immensely from *appropriate* supplementation, even more so if we want our horse to enjoy the very best of health and perform to their full potential.

**Types of supplements**

Supplements most commonly come in oral or injectable forms. For the purpose of this article, we will focus on those taken orally (either eaten or syringed directly into the mouth). Equine supplements can fall under several broad categories:

**General nutritional-**most commonly complex vitamin and mineral supplements (similar to multivitamins for humans). The vast majority of processed equine feeds also have extensive vitamin and mineral fortification, so this should be taken into account too.

**Single or specific combination nutritional-** examples include mineral supplements (such as magnesium) and vitamin supplements (such as vitamin E) or combinations (such as selenium + vitamin E).

**Supplements for specific conditions-** may be a combination of nutritional and/or herbal products. Supplements for joint health; gastric health; immune health; metabolic health; calming supplements; hoof growth and strength; and ‘blood tonics’ commonly fall under this category.

**Herbal-** may be dried herbs, tablets, powders or liquid products. Sometimes individual herbs (such as chamomile) or a combination of products (for example an ‘immune mix’ containing Korean Ginseng and Echinacea).

**Homeopathic-** prescribed in pillules or drops, this form of therapy isbased on the concept of ‘like cures like’. It is guided by the principle that minute concentrations of a particular toxin cure the very same symptoms it would cause in larger doses. Homeopathic remedies contain no traceable amount of the original substance (ie homeopathic arnica does not contain any measurable amount of arnica or its active constituents).

**Choosing a supplement- Important Considerations**

**Purpose for use**

When choosing supplements to use, it is of key importance to remember that supplements should not replace a balanced diet. The first step is to evaluate and optimise dietary practices. There are instances where supplements are needed to correct shortfalls in nutrient requirements in an otherwise balanced diet, but they are not an excuse to continue poor feeding practices. An example of appropriate supplementation to correct a dietary shortfallth is the use of selenium in horses maintained on pasture in selenium deficient soils.

Supplements should also not be used to replace poor management practices. A classic example of this is the overuse of ‘nerve/calming’ supplements. Before using such a supplement, the following needs to be asked and addressed: does the horse have good gastric health; is the horse being exercised frequently; is the horse in pain; does the saddle fit correctly; do the horse and rider capabilities match; is the rider relaxed when riding? Without addressing primary root causes, truly effective results will never be obtained. Any benefit derived from the supplement will be a poor ‘band-aid’ fix.

When selecting a supplement, the question needs to be asked ‘why are you adding it?’. Was it because someone said ‘your horse needs it’ or ‘its good for them?’ Supplements added to the diet should only be done when you can confidently answer the question as to why you are using them, with specific modes of action and therapeutic goals to be achieved.

**Horses with elevated requirements beyond dietary intake.**

Horses at risk of, or with specific health conditions may require elevated levels of nutrients to help optimise health. For example, a horse with insulin resistance (IR) may benefit greatly from appropriate magnesium and/or chromium supplementation to help increase insulin receptor sensitivity and thereby reduce and stabilise blood glucose levels.

Another classic example is a horse with an active infection. The need for particular nutrients during times of infection (such as zinc and vitamin C) are elevated, and the judicious use of indicated supplements can help to hasten and improve recovery from illness.

**Interactions**

Most nutrients and herbs have the ability to interact with other nutrients, drugs and herbs to some degree. Some of these interactions are beneficial (for example, the use of pre and probiotics together to optimise microflora colonisation), some are harmful, and some negate the benefit of each other (concurrently feeding iron and zinc supplements, which impairs the absorption and uptake of both minerals). For this reason, it is vitally important to seek professional advice when using herbs, minerals and medications: both to minimise risk, and optimise efficacy and safety.

**How/when they are given**

Some supplements are most readily available to the horse when given in conjunction with feed (for example vitamin E is best absorbed when given with a fat source in the feed), others are best given away from main meals (for example glutamine). Following specific guidelines for individual nutrients allows optimal therapeutic and nutritional effect to be achieved.

**Contraindicating conditions**

The use of some nutrients is contraindicated/unadvisable in certain circumstances- as it may slow recovery or put the horse at risk of harm. An example is the use of iron supplements during infection or inflammatory conditions, which may worsen or prolong the infection and/or inflammation.

**Quality**

Supplements given to a horse should always be from a respectable and trusted source, with clearly labelled packaging and full list of ingredients- stating both their form and quantity. This is especially important with herbal and combination products. Supplements which don’t meet this criteria should not be used.

**Available nutrients per serve**

A very important consideration is how much of the actual nutrient(s)/herb a horse receives per serve of the product. Unfortunately, many products contain such small doses of the actual active constituent they are advertised to have (for example the actual amount of magnesium in a magnesium product) that they are of minimal if any therapeutic benefit to the horse. Another common example of this are expensive products such as omega-3 oils. These products often contain high amounts of vegetable and other omega-6 containing oils (which promote rather than reduce inflammation).

**Bioavailability**

Bioavailability refers to the actual amount of a nutrient that can be digested and utilised. For example, a product may contain 400mg of elemental zinc. Zinc may be found in many forms including: zinc chelate; zinc proteinate; zinc sulphate; zinc citrate to name just a few! The amount of zinc which the horse is actually able to absorb and metabolise depends largely on what form that zinc is in. Therefore, if the product mentioned in the example above contains a poorly bioavailable source of zinc, the actual amount the horse is able to use is far less than the 400mg.

**Toxicity**

Some minerals and fat-soluble vitamins have the potential to be harmful (and even fatal) when given incorrectly and/or in large doses. This is especially important to consider when giving fortified feeds, then additionally feeding supplements. The importance of correctly measuring supplements cannot be overstated.

**Absorption**

A supplement can only be effective if it is absorbed and metabolised properly. This depends on horse having good gastric health. It also means supplements must be given under conditions that allow for absorption (ie a horse on an ulcer medication will not be able to properly utilise supplements fed at the same time!)

**Summary**

The appropriate use of many supplements can provide outstanding results in a myriad of health parameters in the equine. In order to ensure safety and optimise efficacy all supplements should:

* Have a clear and definite reason for use in the diet
* Have a clear timeline for use in the diet
* Contain highly bioavailable ingredients in therapeutic dose amounts
* Be clearly labelled stating exact ingredients, quantities and dosage rates
* Be used in conjunction with holistic feeding and management practices- NOT used to replace them!
* Be given under conditions which optimise absorption and metabolism
* Be prescribed under qualified guidance and tailored to each individual horse’s needs.

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