

FEEDING AFTER INJURY

**Dr J H Stewart BVSc BSc PhD MRCVS AAIM
Equine Veterinarian and Nutritionist Consulting to MITAVITE**

Loss of appetite affects all body systems, making it more difficult to resist disease and reducing the ability of sick or injured horses to recover and to respond to treatment. Even in healthy horses, reduced food intake depresses the immune system by up to 40%. Nutritional support is an adjunct to treatment – without antibiotics or other medicines, it is not possible to cure infections, but drugs alone will not save a starving horse. Both are necessary and correct nutritional support reduces the number of complications and shortens the recovery time.

Specific Conditions

- *Hyperlipaemia* Nutritional support is vital to prevent the life-threatening condition known as hyperlipaemia. The major risk factors and triggers for this disease are obesity, stress, malnutrition, internal parasites, pregnancy and disease. Regardless of the cause, reduced feed intake leads to rapid mobilization of body fat stores. First the liver and blood, then other body systems are affected.
- *Laminitis* Horses at risk of, or recovering from laminitis or founder are particularly susceptible to hyperlipaemia if food intake is restricted. For 2 reasons it is important to maintain adequate nutritional support for these horses. Firstly, to reduce the risk of hyperlipaemia and secondly because the hoof has usually suffered extensive damage. To repair the hoof and re-establish the bonds in the laminae, requires essential amino acids, vitamins and minerals. Weight reduction can be achieved gradually by reducing feed intake, but a nutrient-dense supplement should be provided to supply the nutrients vital for healing. Poor quality meadow hay is ideal to maintain chewing and keep the gut functioning but a readily absorbed, nutrient-dense concentrate is necessary to promote healing and recovery.
- *Diarrhoea* is usually a disease of the large bowel. To improve nutritional balance and boost the immune system and body weight, steam-extruded feeds that are well digested in the small intestine should be used. This maximises nutrient absorption and avoid the influx of starch and protein into the large intestine. Many bacteria such as Salmonella and Clostridia are favoured by high starch/high protein diets that are poorly digested in the small intestine. Small frequent meals and easily digested feeds improve nutrient uptake and allow the large bowel to return it's normal role as the site of fibre fermentation. Add protexin, enzymes. Adding electrolytes or other substances to the water can be dangerous. If veterinary advice indicates that it is desirable to add electrolytes or other substances to the water, then fresh

water must also be supplied so the horse can regulate fluid and electrolyte intake.

- *Horses recovering from hoof defects* or foot surgery may benefit from biotin supplementation. Horses with thin brittle hooves, crumbly, cracking walls, tender soles or open white lines can improve with prolonged supplementation (up to 3 years) if the diet is deficient in biotin. If there are problems deeper in the hoof wall that are causing cracks, then biotin supplementation will not help. In these cases, protein and calcium-enriched feeds are required. As it is not possible to easily determine where the weakness is occurring, a feed containing adequate amount of protein, calcium and biotin should be used or individual supplements given.
- *Inflammatory diseases* Omega 3 oils have a protective effect against laminitis and prevent or lessen the effects of infections and blood poisoning. Recent research into the potential uses of Omega 3 fatty acids in equine diseases has found that supplementing with Omega 3 oils assists in the treatment and prevention of many inflammatory conditions, including dermatitis, arthritis, respiratory and kidney disease and gastro-intestinal disorders. Omega 3 oils moderate inflammatory diseases by reducing the production of inflammatory hormones such as histamine and prostaglandin.
- *Starvation* Thin horses should have free access to salt and water, but hay and concentrate should be restricted to 1 – 1.5% of body weight, not the usual 2-2.5%. After 1-2 weeks, allow free access to hay and increase the balanced concentrate. At this stage, horses may consume 2.5 – 3% of the body weight as feed each day. Horses can gain around a kg per day and regain good condition within 6 – 7 weeks. If horses are very thin, only 40% of optimum body weight, they are unable to stand and support themselves then veterinary guidance is required.
- *Enteroliths* Stones in the bowel are more common in Arabians and Morgans and geographical location and diet have been implicated. Diets high in wheat bran and/or lucerne have been associated with intestinal stones. Adding 1 cup of apple cider vinegar twice daily, using grass or meadow hay and avoiding high lucerne/high bran diets may be beneficial in preventing stone formation.

STIMULATING APPETITE:

Sick or convalescing horses should be encouraged to eat unless there are swallowing problems or damage to the esophagus. If the horse has had dental surgery or has mouth pain, veterinary therapy is indicated to reduce pain. Then green grass or soft mashes can be fed. Fever will also depress appetite and after a veterinary examination to diagnose and treat the condition, appetite will usually return.

Some sick horses reject feeds which are usually palatable but will consume poor quality hay or bedding. Let the horse guide you in what to provide. Allowing them a choice of feeds will encourage appetite and as the horse begins to feel stronger, a wider range of feeds can be introduced. Feed intake can be increased by feeding small meals 4 times daily, removing uneaten food after 2 hours and by offering a variety of fresh feeds such as fresh lucerne, grass, fruit and vegetables. Bran mashes are high in phosphorus and irritant to the bowel wall. Bran is deficient in almost all vitamins, minerals and essential amino acids and has less fibre than oats, lucerne, hay grass and many prepared complete feeds. Adding salt, warm water and molasses to lucerne pellets and a complete extruded feed provides much better nutrition and is often more palatable than a bran mash.

Fully steam-extruded feeds such as Mitavite Breeda, Promita and Gumnuts supply all essential amino acids, energy, proteins, vitamins, minerals and trace elements in a readily-digestible form. They can be easily converted to a mash with the addition of warm water and because they are almost completely digested in the small intestine, absorption and nutrient availability are maximised. Mitavite Promita is most suitable for horses that require all nutrients in a small volume – such as those that need to lose weight, have reduced appetite or require small amounts of feed with a high nutrient-density for example after surgery.