

TALKING MINIS

The Newsletter with News, Views & Practical Advice

from the **Editor**

Over recent years, Minis have become popular because they are enjoyable small horses and are easy to handle and keep compared to their larger relatives. In fact, with the importation of American and other bloodlines, we now have some of the best genetics and bloodlines of miniature horses and ponies in the world.

Minis are susceptible to a few problems – particularly impaction colic and founder, as well as conditions such as bent legs in foals and locking patellae in growing minis. In this newsletter, we provide some helpful hints on avoiding these common problems. We discuss feeding to manage founder.

If you have the time, log onto our website www.kohnkesown.com – there's lots of information being uploaded on a regular basis, with fact sheets, articles and lots of handy hints. If you would like to receive E- newsletters or articles on minis as they are published, add your email contact address by emailing newsletters@kohnkesown.com

All the best – enjoy your minis...

Regards Dr John Kohnke BVSc RDA

THIS ISSUE

Feature Article

- **Colic – some helpful hints**
- **Founder – how to minimise the risk**
- **Foals – knock knees – what to do**
- **Locking patellae – simple hints**
Also handy hints, seasonal reminders and lots more

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HANDY HINT

Rain Scald

Young and aged minis with long winter coats are particularly susceptible to rain scald – particularly when they are outside during 3-4 days of wet weather in muddy conditions. The long drought period has resulted in bare paddocks and lots of contaminated mud when it finally rains. Rain scald is caused by invasion of the skin and hair follicles by a bacterial, fungal-like (branching bacteria) organism common on horse, sheep and cattle grazing areas. The skin softens during wet weather and minis with low skin immunity (young and aged minis) are more likely to become infected. The initial treatment can be carried out with PVP iodine (20% Vetadine wash), lathered up on wet skin and allowed to remain on the hair coat for 10 minutes to kill the organism before rinsing off with clean water. Do not apply and rinse off straight away. Repeat every second day for 3-4 washes if necessary, with a clean rug and stabling if the wet weather continues until the infection clears up. Seek advice from your vet if the condition persists or the skin becomes devitalised.

2

HANDY HINT

Minis carrying adult Pinworms often rub their tail butts on walls, trees and fences. The adult egg laden female Pinworm travels to the rectum and protrudes her egg laying tail end out through the mini's anus, laying up to 500-600 eggs in a sticky, itchy mass around the anus. The itchy deposit triggers tail rubbing, which dislodges the eggs onto the bedding or ground surface to complete the Pinworm lifecycle. Pinworms are becoming more common as many wormers lose their efficiency. Some minis will continue to rub their tails for 7-10 days after worming because the sticky, itchy mass still remains. Carefully wash around your minis anus, buttocks (perineal area) and under the tail itself with a Chux® or paper toweling soaked in warm, soapy water to remove the itchy deposit. Rinse off with a damp towel. If you wash your minis' buttocks each time you groom, you will effectively break the pinworm lifecycle and assist control.

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Kohnke's Own

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Looking For An Ideal Present?

**Talking Horses Common Problems Edition 1 -
written by Dr John Kohnke.**

This book is based on the popular Talking Horses Newsletters, Issues 1 – 14. The 100 pages are a handy reference on many common problems. Full of helpful information and over 200 Handy Hints, this book is available from saddleries and produce stores. See website www.kohnkesown.com

COLIC

Although there are 8 common causes of colic in horses and ponies, minis are prone to impaction colic during cold weather and over the recent drought, sand colic must also be considered as a cause low grade colicky symptoms and less than optimum condition despite regular worming, teeth care and a good balanced ration.

The experience of having a mini go down with acute colic is one that most owners find alarming. The animal risks physical injury in its attempts to roll or relieve the acute gut pain. On average, a horse will suffer from a painful colic about 3 times during its lifetime. Up until 20 years ago, over 90% of colic cases were caused by heavy burdens of Bloodworm larvae, but nowadays, with effective worming programs to target these worms, the incidence of worm related colic has dropped to 2% on well managed properties.

What is Colic?

Colic is a general term that has been used for hundreds of years to describe any cause or degree of pain in the abdomen of a horse.

We now know that 'colic' is most commonly caused by digestive disturbances, but abdominal pain can originate in the liver, urinary tract, uterus or other internal organs.

Unfortunately, a mini's digestive layout predisposes it to digestive disturbances due to changes in feed, with increased gas production that expands the large bowel to cause pain, increased motility of the intestines, and blockages due to food mass compaction. The symptoms of colic can range in severity from a mild discomfort, to an extremely intense, localised and painful form, which can be life threatening. Studies indicate that about 10% of colic cases are fatal, often associated with extreme distress and physical injury.

Colic caused by heavy Bloodworms infestations, sand accumulation, intestinal infections, bowel twists and digestive upsets may not respond to simple 'colic' drenches, and these can be fatal if not properly diagnosed and treated by a veterinarian.

What Your Mini Feels

The pain associated with colic can vary from a **vague, dull, persistent gut ache** to a **sharp, fluctuating pain with periods of relief between the attacks**, such as occurs in spasmodic colic. In severe cases, the pain can be so intense and agonizing, that the horse will **roll, sweat and thrash around with self destruction in an attempt to relieve the pain and discomfort**. This can lead to further injury and may worsen a strangulation, displacement or malposition, or overfill condition affecting the bowels. The horse may develop severe shock, with vascular deterioration and death.

This is a RED ALERT –you must summon a vet immediately. A silent 'belly' sound is the worst sign associated with colic and is a serious condition. First aid for colic includes making your mini as comfortable as possible and walking the animal to relieve gas build-up until signs reduce or veterinary help arrives to diagnose and treat the cause.

NOTE:- A full review of all types of colic is contained in the Talking Horses Common Problems book pages 78-79, or factsheet No 37.

HANDY HINT 5

Minis with a locking patella (our kneecap) can be a problem. If a horse is 'locked' – then push it one step backward to free the "lock". Some cases resolve in 3-4 weeks with rest, others persist for years, occasionally "locking" when the horse gets up or leans back on its hocks. Despite earlier concerns that cutting the medial patella ligament increased the risk of arthritis in the stifle, new research has found that there are no untoward long term problems or risk of arthritis associated with this simple operation. Consult your vet. It is important to ensure that the hind toes are trimmed short with adequate heel height to avoid the mini leaning back on its hocks.

MANAGEMENT TO REDUCE THE RISK OF COLIC

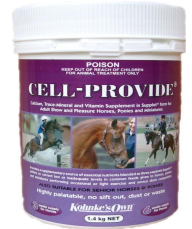
Always feed only good quality at all times, avoiding mouldy or poorly cured hay and chaff in particular. Finely cut cereal chaff has been associated with a risk of impaction colic in miniatures. A long cut, 'rough cut' or coarsely shredded white chaff stimulates more chewing and increases moisture from salivation to ensure better preparation of the fibre for digestion. Do not feed left-over damp feeds that may have gone sour, musty or fermented.

Ensure that feed bins and hay racks are provided to reduce the risk of sand ingestion on soils containing fine sand.

Regularly check your minis teeth and repeat dental care at 6 month intervals, especially in aged minis over 16 years of age. Prevent access to all poisonous plants, especially those which persist under drought conditions (eg Patterson's' Curse).

Regularly worm with a broad spectrum paste or liquid formulation every 6-8 weeks to control the major internal parasites. Two wormings, 3 weeks apart will help to break the Small Strongyle lifecycle. Rigorous pasture and stable hygiene to reduce manure contamination improves the effectiveness of worming alone by 5-10 times in controlling worm burdens.

Cell-Provide®



The ideal supplement for all minis

The growing popularity of minis for show and driving, as well as growing and aged minis, **Kohnke's Own Cell-Provide** has been formulated their needs as a lightly worked, small horse. **Kohnke's Own Cell-Provide** contains 3 separate Supplet® pellets to provide bone minerals (white pellet), trace-minerals (brown pellet) and essential vitamins (yellow pellet) as the most convenient 'all-in-one' supplement available for minis - It's economical too – only 15-20g per day is required to make up the short falls of pellet, chaff, hay and pastures based diets.

HAND HINT 3

Reduce the Risk of Colic during Winter

Soak hay during winter for ponies and minis. Ponies and minis often do not drink enough water, especially under cold conditions, to maintain fluid content in their hindgut reserves. Ingestion of dry hay can increase the risk of impaction colic during winter when the hindgut is not well hydrated. Soaking hay in luke-warm water for 5-10 minutes and allowing it to drain for 10-15 minutes before feeding, helps maintain hindgut fluid content and can reduce the risk of impaction colic in miniatures.

HANDY HINT 4

Fine beach or river sand is the most likely to compact, with an increased risk when minis harbour heavy burdens of resting small larvae of Strongyle worms, which reduces the motility of the large intestine. Regular sand removal with a suitable laxative preparation, such as psyllium husk at 70g/100kg body weight for 2 consecutive days each month, will help remove sand picked up when grazing. Walking your mini for 10-15 minutes will often assist gut movement to allow gas to move through the intestine. Relaxant medications will relieve spasms and reduce discomfort and bouts of colic pain. Consult your vet.

Early Signs of Joint Disease in Foals

Foals with Knock Knees – What to Do?

Although you may be pleased that a young foal between 1 and 5 months of age prior to weaning is growing quickly and is well developed for its age, it is important that you regularly monitor the foal's joints for signs of early joint disease. Rapid growth rates, fuelled by a high milk intake during the peak of lactation in a mare, which occurs between 4-10 weeks after foaling, can result in excessive increase in size and body weight of the nursing foal. A mini mare can produce up to 4.5 litres (1 gallon) of milk a day at the peak of lactation, which can be readily consumed by a "good doing" foal. Milk can be low in essential trace-minerals, including copper, zinc, manganese, iron and selenium, which are important for cartilage and subchondral bone development.

A rapidly growing foal will take in enough energy and protein to fuel growth, but if the mare's diet is not supplemented with essential trace-minerals, the rapid body weight gain can lead to damage of the developing joints. The tendons and joint cartilage are fully developed by 5 months of age in growing foals. However, the formation of "weak" cartilage and underlying bone in the fetlocks, knees and hocks, as well as shoulder and stifle joints in grossly overweight foals, can lead to bent legs, knock-knees, enlarged joints and upright pasterns or 'contracted' tendons, all often caused by a lack of important trace-minerals required for cartilage growth.



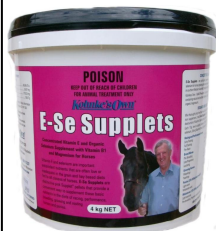
Management of Foals with Joint Disease

- **Step 1.** Restrict exercise in a young foal exhibiting the early signs - lying down more than other foals, enlarged joints, upright pasterns and shortened stride - confine to a small yard with its mother. Limiting exercise will reduce the trauma and loading on the devitalised joint surfaces. Consult your own veterinarian.
- **Step 2.** Limit the foal's milk intake by hand stripping the mare 2-3 times daily and discarding the milk. This will help to reduce the volume of milk consumed and the excess intake of energy to fuel growth. It is also helpful to reduce the mare's feed intake by 10% - do not restrict feed or water more than by 15% as the mare is likely to 'dry up' in 3-5 days.
Note: It is not beneficial to deny the foal access to nursing by separating the mare and foal, as the hungry foal will usually drink and consume more milk when it is reunited with its mother.
- **Step 3.** Fortify the mare's feed, and mare and foal feed, with calcium and bone minerals, trace-minerals and vitamins to ensure the foal receives adequate for bone and joint development. Feeding extra essential trace-minerals to ensure joint cartilage formation, including copper, zinc and manganese, will help ensure that the milk secreted by the mare will contain normal levels of all the important trace-minerals. However, only a low copper concentration in milk will be marginally increased above normal levels in the milk by supplementation. Shortfalls of other trace-minerals in the milk, in an otherwise deficient diet, will not be corrected by adding extra to the mare's feed. A daily supplement of **Kohnke's Own Cell-Grow® or Cell-Provide®** given to the mare will help ensure her diet contains adequate levels of important trace-minerals which will be secreted into her milk.
- **Step 4.** Consult your farrier or vet for advice on the need to trim hooves to help correct front limb deviations.
- **Step 5.** Monitor the foal's growth rate, behaviour and comfort when standing, as well as the improvement in gait. Consult your vet for advice if necessary.
- **Step 6.** Usually, 3-4 weeks of restricted exercise and reduction in energy intake in the ration will slow down the growth rate and help improve the gait and overcome the risk of cartilage defects. Once the foal improves, it can be let out into a larger paddock for short periods, taking care to avoid excessive exercise and the risk of overloading the joint cartilage and subchondral bone.

BREEDING MINIS

Dry mares wintering on pasture need extra energy and protein for at least 6 weeks before breeding to help ensure optimum ovarian function, fertility and chance of conception. Low dietary intake of phosphorus, selenium, vitamin A and vitamin E have been associated with reduced fertility and conception rate in both dry and lactating mares. Although adequate phosphorus and vitamin A is usually provided by spring pastures, selenium and Vitamin E may be low or inadequate to meet daily needs.

A daily supplement of **Kohnke's Own E-Supplets™**, containing organic selenium and vitamin E, will help correct these low or inadequate levels to help ensure optimum fertility.



HANDY HINT

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Start daily supplementation with **Kohnke's Own E-Supplets™** about 4 weeks before breeding your mare. **E-Se Supplets™** are especially suited as an economical Vitamin E and selenium supplement in areas where the soils are deficient in selenium. A low intake of selenium and vitamin E can adversely affect the fertility of mares and lead to poor muscle development and weakness in growing foals, weanlings and yearlings.

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Handy Hint - Minis in foal

Every heavily pregnant mare needs an assured intake of essential bone minerals, trace-minerals and vitamins as her unborn foal almost doubles its size during the last 3 months of pregnancy. The developing foal needs to store adequate copper, zinc, selenium, iron and vitamins A and E in its liver as a reserve during the first 2 months of life on a predominately milk based diet, which is low in these nutrients. Pasture and hay based diets do not provide an adequate intake of these essential nutrients, which if low or imbalanced, can increase the risk of bone and joint weakness and long term skeletal breakdown. **Kohnke's Own Cell-Grow® is highly recommended for pregnant and lactating mares where pastures or feeds are low in essential nutrients.**

Feeding after Laminitis (Founder)

Minis which have suffered a single, or recurring episodes of laminitis, or the more serious structural hoof changes associated with pedal rotation, as in founder, require careful dietary management to reduce the risk of further episodes, as well as to promote re-growth of affected hooves. A prior episode of founder increases the likelihood of further episodes as the hoof structure and its circulation is often compromised. Many overweight 'cresty' minis, or elderly minis, develop an insulin resistance due to high circulating insulin levels as they are unable to tolerate high intake of simple sugars which trigger increase high insulin levels.

Note: Refer to website www.kohnkesown.com – click on **Articles** - for more information on Equine Metabolic Syndrome (EMS) and use of the new supplement TRIM™, when combined with a low GI diet, to help minimise the risk of 'cresty' necks and founder in well-fed or grazing minis.

Steps to Avoid Laminitis

The management goals in preventing 'grass' founder should be observed from the start of Spring or following late summer rains, when pastures are likely to produce either fructan sugars (Spring pastures), or high amounts of soluble non-structural carbohydrates, which overload into the hindgut of grazing horses (Autumn pastures).

- Restrict access to lush spring pastures to 1 ½ hours in the early to mid-morning (after the dew has dried off) before the warmth of the sun enables the plants to produce sugars for growth and again in the mid to late afternoon. The peak production of fructan sugars, which increase insulin levels and the risk of laminitis in the leaves of plants synthesised by sunlight photosynthesis, occurs over the late morning to mid afternoon period.
- Always soak good quality grass hay, eg. grass and clover hay grown in early spring, which can contain high levels of soluble carbohydrates, for 1 hour in double its volume of luke-warm water. Soaking in this way can remove up to 33% of the soluble sugars from grass hay and 25% from lucerne hay. Remove and air dry to drain away the water, or tease out the hay on a wire netting - soak in the morning, drain during the day for the evening feed, and vice-versa. Do not add the soaking water to the feed. Ensure that the hay is free of mould or a "musty" smell
- Offer chaff (avoid large volumes of good quality (high carbohydrate) oaten chaff – soak if necessary) or 'soaked' hay before turning out to graze in the early morning or late afternoon to fill the stomach and limit the rate of fill when grazing, as well as dilute the intake of fructan grasses, consider the daily use of Founderguard® or Equishure™ to limit any lactic acid accumulated in the hindgut and the cascade of damaging bacterial toxins during high risk periods. Although, these products do not directly help prevent grass founder in an insulin resistant animal, it should also be supplemented after the initial attack of laminitis. They may help reduce the risk of sudden death of large numbers of hindgut bacteria which can cause a secondary, more damaging episode of laminitis about 7-10 days later.
- A grazing mask (founder mask) to reduce the volume of grass that can be consumed is also helpful.
- Regular exercise in 'cresty' over weight mini's, especially those which are insulin resistant, can help reduce the risk of laminitis by utilising more glucose during exercise, but do not exercise an animal with laminitis as severe internal hoof damage and further rotation of the pedal bone can occur – consult your vet or farrier for advice.

Note: Trim the hooves more often at 3-4 week intervals, paying particular attention to trimming back long toes and allowing the heels to increase in height to help restore hoof shape and minimise the 'rotational' pull on the pedal bone in minis with a history of recurring laminitis. Round off the hoof edges to help prevent chipping and breakaway as the hooves grow out.

Hoof Growth Aids

Protein supplements containing lysine and methionine, calcium, zinc, Vitamin A and Biotin (also known as Vitamin H) are useful to promote hoof re-growth (eg a Biotin supplement combined with a well formulated trace-mineral and vitamin supplement, such as **Kohnke's Own Cell-Provide®** -contains calcium as well- is recommended.) Dolomite is not a suitable source of calcium as it is poorly absorbed in minis.

Remember, dietary management, regular exercise and hoof trimming to maintain short toes is paramount to preventing repeat episodes of founder.

Handy Hint 8

Soak Hay

A polywoven chaff bag is a suitable soaking bag to reduce leaf loss and a hay net can be used to air dry the soaked hay. If hay (or chaff) is soaked on a regular basis, soluble nutrients such as calcium, trace-minerals, salts and vitamins will be leached out of the hay. These should be replaced in the feed with a salt mix (eg **Kohnke's Own Cell-Salts**) and a trace-mineral and vitamin supplement (eg **Kohnke's Own Cell-Provide** or **Cell-Vital**).

Handy Hint 9

Provide Good Quality Protein

Although, protein does not trigger a laminitic episode alone, excess protein can be converted to blood sugars which can result in an insulin 'surge' and risk of laminitis. During recovery from laminitis, is important to help provide nutrients for hoof growth and repair. A half a cupful of cracked lupins or canola meal (33% crude protein), or one third of cupful of full fat soya bean meal (38% crude protein) will help contribute essential amino acids for hoof wall growth. This rate of supplementation with half a biscuit of lucerne hay (soaked for 60 mins in luke-warm water) will also contribute good quality protein and calcium. Protein sources, such as copra meal, (23% of crude protein) are low in lysine and contribute lower levels of essential amino acids. Excess protein intake from lucerne hay and clover hay (sugars and protein) must be avoided.

FEEDING HAY

Many hays contain natural mould which can proliferate under damp storage conditions. Cover hay during wet weather as the outer layers can absorb up to 10% extra moisture, increasing to 20% total moisture and bale weight by 1-1½ kg for lucerne or clover hay. Always check clover hay for 'musty', 'fume' areas which can indicate mould – do not feed mouldy hay. Do not feed hay as round bales left in the paddock for minis to consume - the hay may be contaminated with moulds - always portion out the hay, thoroughly checking it for mould and soak or saturate it prior to feeding.