

THE NEW BORN FOAL

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A healthy, new born foal is well adapted for survival, but special precautions should be taken to reduce stress and risk of disease by careful foaling and post-natal management.

The majority of healthy mares have little difficulty in foaling, although overweight and fat mares, or very old mares are more likely to be less fit and lack muscle tone to ensure a quick foaling action. Obviously these mares require more careful observation, and any difficulties or a delay in the foaling process can increase the stress on the newly dropped foal.

Check the Foal and Mare at Birth

If you are present at the birth, ensure that the membranes are free from the foal's nose once the foal is born and on the ground. Avoid too much intervention – allow the mare to remain down and resting – up to one third of the foal's blood volume is transferred from the membranes within 1-2 minutes after foaling – leave the umbilical cord intact until the foal attempts to move away. The foal will normally break the cord itself as it moves or the mare stands up.

Check List:

1. Check the mare for foaling lacerations – seek advice from your vet if necessary.
 2. Check that the cord breaks and the foal is vigorous.
 3. Check the mare's membranes – they should come away (expelled) within 1-2 hours – check that the full membranes are present by spreading them out. If in doubt – seek advice from your vet.
- Note: If the membranes are retained for more than four hours – seek advice from your vet. An injection of oxytocin hormone may be necessary to release the membranes attached in the womb. If the membranes are not expelled within 6-8 hours, manual removal by a vet will be necessary. Membranes retained for more than eight hours, when the cervix closes, are difficult to remove and may develop infection, resulting in severe toxicity, with risk of laminitis (founder).
4. Once the foal is standing, check for any abnormalities.
 5. Attend to the cord - the umbilical stump should be sprayed with 10% iodine solution or cetrimide spray to help dry it up and reduce the risk of infection. If the stump is soft and leaking fluid (urine), seek advice from your vet.

HINT:

Most new-born foals stand and drink within 30 mins to three hours after being born. A new born foal is abnormal if it does not stand within 60 minutes of birth, fails to seek security and comfort from its mother within two hours of birth, or has not attempted to suckle within 3 hours of birth.

The Importance of Colostrum

For this reason, it is important the newly born foal receives colostrum milk as soon as possible to provide energy, protein and water, as well as essential antibody protection against disease. Colostrum (first milk) provides immunoglobulins or antibodies that are concentrated into a mare's milk during the 10-14 days prior to foaling. The transfer of circulating antibodies to the foal direct from the mare's blood is prevented by the numerous layers of the placental barrier during pregnancy. Only low levels of antibodies are present in the foal's blood at birth and intake



of colostrum is essential to provide immunity against common diseases during the first few weeks of life.

Failure to either obtain, or to absorb, adequate levels from colostrum within 16 hours after birth will predispose a young foal to a higher risk of bacterial infection. A foal that does not receive adequate levels of colostrum or antibody cover during its first day is more likely to fail to thrive and succumb to infectious disease. Many of these foals develop persistent diarrhoea or are retarded in their growth and development.

It is most important that all newborn foals receive adequate colostrum within 8-12 hours after birth. A healthy, active newborn foal weighing 50-55kg at birth will suckle from 2-3 litres of colostrum during the first 12 hours of its life.

Colostrum contains three types of protein immunoglobulins:

- IgG for immunity against bacterial and infective diseases.
- IgM for general immunity and health
- IgA which increases in milk after foaling after foaling and remains for up to three weeks. It is not absorbed into the body, rather it provides local gut protection against bacteria and other germs that commonly cause diarrhoea in a young foal, especially once a 7-10 day old foal starts to nibble pasture or share hard feed with its mother, which can overwhelm its gastro-intestinal defence.

Secretion of Colostrum

A mare only produces colostrum for the first 2-3 days of lactation, and the level of antibodies is highest during the first 6-12 hours. Surveys have shown that up to 23% of foals tested within the first few weeks of life, have low blood levels of antibodies in their blood. A less than optimum uptake of antibodies from colostrum can result from low levels in the mare's milk, or failure of the foal to suckle or to absorb sufficient amounts of colostrum within the first 12-16 hours after birth. After 24

hours the long chain proteins that form the immune antibodies can no longer be absorbed, but local immunity is provided from the milk by IgA for up to three weeks.

Up to 12.4% of mares pre-lactate, or 'run their milk', which is seen as thick milk dripping from the teats and splashing down the mare's legs, before foaling. If a mare runs her milk for more than three days before foaling, she will significantly deplete her colostrum levels of essential IgG and IgM, for systemic immunity, but usually adequate IgA reserves will remain to provide gut immunity for 2-3 weeks. There is no way to prevent pre-lactation in a mare near to foaling.

- Colostrum can be collected from another mare within 12 hours after she foals. The best choice is a healthy, good producing mare that is still secreting colostrum after feeding her own foal. Up to 250mL (1 cupful) of colostrum can be stripped from a newly foaled mare at hourly intervals after each time her own foal has nursed.
- Colostrum can also be collected from a mare that has had a still born foal, or one that has lost her own foal soon after birth. Colostrum must be collected within the first 6-8 hours after the mare has foaled. Once a mare's own foal has suckled and removed 2-3 litres of colostrum, the quality of the subsequent colostrum secreted after 12 hours declines as the antibodies are drained

Alternative Sources of Colostrum

- In areas where major horse studs are grouped, frozen colostrum is usually available from a colostrum 'bank' for orphaned or colostrum-deficient foals. Some horse breeders routinely collect colostrum from newly foaled mares and may make sufficient amounts available to you or your vet. Colostrum can be stored frozen for 12 months without deterioration.
- Where mare colostrum is not available, similar volumes stripped from a newly calved dairy cow will provide an adequate level of IgG and IgM antibodies, as well as IgA protection to the foals gut against common germs in the environment. However, cow colostrum will not give the long lasting immune protection provided by the IgG in mare colostrum.

HINT:

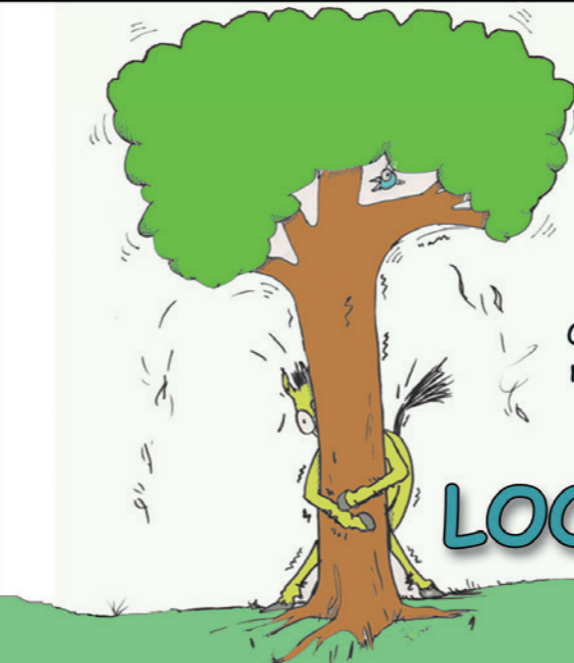
If you observe that a foal is attempting to suckle almost constantly, or appears to be uncharacteristically worrying a mare by attempting to suckle more frequently than usual, or is aggressive as if hungry, check to see if the mare has a full udder and sufficient milk. A nurse mare or hand rearing may be necessary if a mare has dried up, developed mastitis or secretes only a small amount of milk.

Check the Mare's Teats

Flat shiny teats indicate that a foal is drinking or the mare has little milk. Enlarged, dirty teats suggest that a foal has not been drinking regularly. Occasionally, a maiden mare will not be accustomed to her foal suckling and not allow it to drink. A foal may not be able to drink because it is sick, or the mare may have developed an infection in her udder (mastitis). Consult your vet for advice. After the first week of life, a foal drinks 2-3 times per hour, or up to 60-65 times daily. The peak of lactation in a mare occurs at about 4-10 weeks after foaling. A well fed mare will provide enough milk for her foal to obtain most of the nutrients from milk, as well as some grazing and nibbling at its mother's feed to meet its needs as it doubles its birth weight in the first month after foaling.

ABOUT JOHN KOHNKE:


Dr. John Kohnke is arguably Australia's leading nutritional and practical feeding advisor and his services are sought throughout Australia and worldwide for advice on the feeding and management of horses. He has over 35 years experience as a veterinarian specialising in equine nutrition and management. Dr. Kohnke gained his early professional experience with horses as a veterinarian on a leading Thoroughbred horse breeding and racing stud. In March 2002 he started his own company John Kohnke Products and formulated an innovative range of feed supplements and horse care products, distinguished by the Kohnke's Own brand name. The large range of Kohnke's Own supplements are formulated to meet the specific needs of all types of horses, based on the latest research in nutritional standards (NRC 2007) and manufactured to the highest quality standards. Check out the Kohnke's Own website www.kohnkesown.com



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