

Failure of Passive Transfer in the Newborn Foal
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Spring is here, and with that brings newborn foals. In most instances, things go well, and the mare and her newborn are healthy. There are a few things owners, and with the help of their veterinarian, can do to help protect the health of the foal.

Foals do not absorb any antibodies across the placenta, and are born without any antibody protection. Colostrum (the first milk) is a thick, cream colored milk, that has high concentrations of antibodies. Absorption of antibodies (which are large proteins) only occurs in the first 12-24 hours of life. Foals must nurse soon following foaling to allow for absorption of the antibodies from the colostrum. The antibody concentration of the colostrum decreases within hours following foaling. Failure of passive transfer (or lack of absorption of antibodies from the colostrum) is a serious problem which can lead to septicemia. Reasons for failure of passive transfer include failure to nurse shortly after foaling, the mare leaking and losing colostrum prior to foaling, or colostrum with poor antibody concentrations.

Foals should attempt to stand within 30 minutes. The foal should be standing and nursing within 60 to 90 minutes. If the foal is unable to stand and nursed within 2-3 hours, you need to contact your veterinarian. It is very important for the foal to nurse as soon as possible to ensure adequate colostrum intake and absorption. The umbilical stump should be treated with a disinfectant such as dilute chlorhexadine (Nolvasan) diluted in 1 to 4 parts water, or tame 1-2% iodine solution. This should be done 2-4x a day for the first 2 days. Strong iodine (7%) can result in skin irritation, and is not recommended. The foal should urinate within the first few hours of life, and meconium should be passed within 12 hours. It is common practice for owners to administer an enema (Fleet enema) if the foal is observed to be straining.

Provided that everything is going well (the foal has stood and nursed, the mare has passed her placenta), it is ideal to have a veterinary examination for a newborn foal 12 to 24 hours of life. In addition to examining the foal, the foal should be tested for adequate antibody absorption from the mare's colostrum. The most common test is a semiquantitative test called a SNAP test. Adequate antibody concentrations are greater than 800 mg/dl. Foals with complete (less than 400 mg/dl) or partial (400-800 mg/dl) failure of passive transfer are at risk for development of septicemia (bacterial infection within the blood). Failure of passive transfer can be treated with intravenous commercial plasma. Colostrum from another mare can be used in foals less than 24 hours old.

In summary, most mares and foals do not have any serious problems following foaling. However, it is very important to make sure that your foal continues to stand frequently and nurse. Septicemia is a very serious and life threatening problem. Failure of passive transfer plays a significant role in the development of septicemia. The mare should be vaccinated 30 days prior to foaling to provide specific antibodies against the specific diseases.