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Foaling in the Mare

A mare foals about 11 months after breeding and usually needs no help, but time is critical if there is a problem

Overview

Foaling occurs between 338 and 345 days after the last breeding. However, a normal foaling can occur anywhere from 320 or more days after the last breeding date without the foal being considered either pre- or post-mature. Gestation length varies based on season, breed, and other "unidentified" factors. [2] Unfortunately, in some studies as many as 25-40% of bred mares do not produce a live foal.[3] While many of the factors contributing to a poor outcome are uncontrollable, owners are encouraged to be as prepared as possible for foaling by appropriately managing the mare throughout her pregnancy and collecting the necessary equipment (e.g., a foaling first-aid kit) and information (e.g., vaccination history, the veterinarian's phone number) and having it readily available for when the foal is born.[4]

Important Pre-Foaling Considerations

There are a number of issues to consider before the foal's feet hit the ground. For example, the mare should be appropriately dewormed and vaccinated several weeks before foaling.[5] If possible, move the mare to the farm where she will foal a minimum of 4–6 weeks prior to the estimated foaling date. This will allow the mare to produce infection-fighting antibodies to the particular bacteria and viruses in that environment to help protect the foal from disease after birth. If the mare has had a Caslick procedure (i.e., stitches in the vulva to minimize wind-sucking), the veterinarian will need to open the Caslick to minimize tearing of the mare's perineum during foaling.

One major pre-foaling concern is leaking colostrum, which is the mare's first milk. Colostrum provides antibodies to the newborn foal to help him/her fight infections. Some dripping from the mare's teats can occur close to foaling, but excessive dripping is a concern and can lead to failure of passive transfer. More information is available on the free downloadable "Failure of Passive Transfer" fact sheet on TheHorse.com.

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"Foaling" refers to the time period commencing with onset of uterine contractions, lasting until the mare fully passes the placenta (afterbirth).

Predicting Foaling

Foaling can be predicted by:

- Estimating length of gestation based on the last breeding date;
- Testing calcium levels in mammary secretions daily as the due date approaches (using commercial test kits); and
- Evaluating physical changes in the mare (e.g., filling of the udder and teats with colostrum, dripping milk, waxing of the teats, and relaxation of the external genitalia and tailhead.

Attending the Birth

With the advent of foaling monitors, it has become easier to attend foalings. Owners can use video cameras mounted in the stall or on the halter that alert the owner or caretaker when the mare is lying down ready to foal. Other monitors attach to the vulva and signal when the vulva opens and foaling has started.

Many mares do prefer to foal without an audience; however, some veterinarians recommend attending all of foaling (e.g., for high risk pregnancies, to minimize failure of passive transfer, to manage a foal susceptible to neonatal isoerythrolysis, or as a standard supervisory procedure on larger operations). This can be achieved by turning mares out in the day but tied up close together at night. In this situation, only mares that are going to foal will lie down, which can be detected with a foaling monitor.

Foaling

In equine medicine, "foaling" (parturition, or labor) refers to the time period commencing with onset of uterine contractions, lasting until the mare fully passes the placenta (afterbirth), and is typically divided into three distinct phases. Colorado State University veterinarians encourage all owners of pregnant mares to familiarize themselves with the three stages of parturition (labor).[7]

Stage 1 marks the beginning of labor when the uterus is contracting to direct the foal through the cervix into the birth canal. During this phase, which typically lasts 1–4 hours, the mare is anxious, restless, and can appear colicky. She might kick at her abdomen. At the end of this phase, the fetal membranes rupture and the allantoic fluid (normally amber colored) is expelled through the vulva (ie, the 'water breaks'). It is not normal for the intact red-fuzzy membranes to be pushed through the vulvar lips without the water breaking, and indicates premature placental separation is occurring. This is an emergency and the membranes must be cut and delivery assisted to avoid suffocation of the foal.

Stage 2 begins when the mare's "water breaks," which is when the outer placental membrane—the chorioallantoic membrane—ruptures, resulting in a gush of fluid from the vagina and ends when the

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foal is fully expelled. This stage normally proceeds rapidly and is complete within 5–30 minutes. At the start of stage 2, the mare often continues to change positions, stands up and lies back down frequently, and she might even roll to properly position the foal for birth. Ideally, the foal is in a diving position where both front feet present first (one slightly ahead of the other), followed by the head (nose first), shoulders, body, and then the hindquarters. The umbilicus usually remains intact if the mare foals lying down, until the foal or mare stands up. It is best not to disturb the mare so that she rises too early, which can sometimes cause umbilical damage.

Stage 3, the passing of the placenta, is generally completed within one to three hours of the foal's delivery.

Postpartum

Healthy foals begin to move within a few minutes of birth, attempt to rise within 30 minutes, and nurse soon after standing (within 90 minutes of birth).The foal's umbilical stump requires cleansing with an antiseptic (e.g. usually a dilute chlorhexadine or tamed iodine solution) several times during the first 24–48 hours of life. Be sure to note the foal's passage of the meconium (black, tarry stool) and urine.

When to Help or Call the Veterinarian

Foaling usually proceeds in an uncomplicated manner[1], and most mares and foals typically require little to no assistance. Common reasons for intervening are if the umbilical cord fails to break or if fetal membranes, bedding, or other debris is covering the newborn's nostrils.

Reasons to call your veterinarian are if stage 1 or 2 are prolonged, the foal is not properly positioned, the foal does not stand to nurse within 2-3 hours of birth, or if the entire placenta is not passed. Fortunately, dystocia, a difficult birth due to an abnormal size or position of the foal, occurs in only an estimated four in 100 foalings.[8]

All mares and foals should be examined by a veterinarian within 12–18 hours of parturition. It is particularly important to ensure the entire placenta was expelled as a retained placenta is a serious medical condition that can cause a massive, life-threatening infection of the uterus (metritis) and laminitis.

KEY REFERENCES

1. Govaere, J.L., Martens, K, Vanhaesebrouck, E.M., et al. Foaling Mare: Insights inside the Foaling Mare. Proceedings of the annual convention of the AAEP. 2009;55:266-267. www.ivis.org/proceedings/aaep/2009/z9100109000266.pdf

2. Macpherson, M. Induction of Parturition. In: Ball, B.A. (ed). Recent Advances in Equine Reproduction. www.ivis.org/advances/Reproduction_Ball/parturition_macpherson/chapter_frm.asp?LA=1

3. Vaala, W.E. Assessment of the mare during late gestation. In: Large Animal Internal Medicine, third edition. Smith, B.P. (ed). Mosby, 2002; Philadelphia.

4. Equine Reproduction Laboratory at Colorado State University. Prepare now for January foaling. www.TheHorse.com/13198

5. American Association of Equine Practitioners (AAEP) Vaccination Guidelines. www.aaep.org/vaccination_guidelines. htm

6. Lesté-Lasserre, C. Fetal heart rate measurements aid health monitoring. www.TheHorse.com/15891

7. Equine Reproduction Laboratory at Colorado State University. Know the stages of foaling mare labor. www.TheHorse.com/13514

8. Bhoi DB, Suthar DN, Parmar JJ, et al. Dystocia in Mare due to fetal Postural defect. Veterinary World 2010;3(7):2010. Available at: http://www.scopemed.org/mnstemps/2/2-1290504642.pdf.

Further reading and free horse breeding enewsletter: www.TheHorse.com/foaling

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