

Care of the Expectant Mare

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Tasks that should be completed prior to sending your mare to be foaled out at the Equine Reproduction Laboratory, Colorado State University, include:

Calculation of the Due Date

The duration of pregnancy in the mare is approximately 340 days, but may range from 320 to 360 days. An approximate foaling date may be calculated by subtracting 25 days from the day the mare was bred or ovulation was detected. Obviously, calculation of the potential foaling date is much more accurate when an actual breeding or ovulation date is known as compared to if the mare was pasture bred.

The length of pregnancy is usually 5-10 days longer for mares due to foal in the late winter or early spring than for mares that foal out in the late spring or summer. Mares will often (but not always) carry a foal for a similar time period during each pregnancy.

Housing and Management

Pregnant mares should be separated from other horses on the farm to limit transmission of diseases that potentially could have a detrimental effect on pregnancy. Exercise should be encouraged during early to mid pregnancy. Mares in late pregnancy will generally obtain sufficient exercise from grazing in a pasture or walking in a paddock. Stress should be avoided as much as possible. Routine dental care and foot care should be provided as needed. We generally recommend that annual dental examinations and procedures be performed after the mare foals and before she is re-bred to avoid the stress of the procedure(s) and avoid sedation while pregnant.

It is recommended that pregnant mares be transported only when necessary. *The mare should be moved to the Equine Reproduction Laboratory at least 7-14 days prior to the calculated foaling date.* This will allow her to become acclimated to her new environment and to begin to develop immunity or antibodies against the local pathogenic organisms. These antibodies will be passed on to the newborn foal through her colostrum.

Vaccinations

Vaccination to prevent rhinopneumonitis or equine herpesvirus (EHV-1) abortion should be performed at 5, 7 and 9 months of pregnancy. On farms with a history of EHV-1 abortions, it may be recommended that the vaccination series against EHV-1 be initiated at the third month of pregnancy. Currently, there are two killed virus vaccines approved for use in pregnant mares to prevent EHV-1 abortion: Pneumabort-K[®] (Fort Dodge Animal Health, Ft. Dodge, IA) and Prodigy[®] (Intervet, Inc., Millsboro, DE).

In high-risk situations, it may be beneficial to vaccinate pregnant mares against equine viral arteritis (EVA). The vaccine (Arvac[®], Ft. Dodge Animal Health, Inc.) is not labeled for use in pregnant mares. However, many hundreds of pregnant mares have been vaccinated with this modified live virus vaccine without adverse effects (i.e. no abortion or congenital infections in foals). Consequently, if the risk of exposure to the field virus is high and an owner wants to limit the possibility of abortion and/or potential infection when breeding the mare back after foaling, vaccination of the pregnant mare should be considered. Vaccination during pregnancy will also provide the neonate with immune protection via passive transfer of maternal antibodies in colostrum. The vaccine may be safely administered from 3 months of gestation out to approximately 6 weeks prior to the potential due date. We are currently not recommending vaccination in the first 3 months of pregnancy or the last 6 weeks prior to foaling. As an alternative, mares may be vaccinated against EVA approximately 7 to 10 days after foaling. In this instance, one would skip the foal heat and breed the mare back on her 30-day heat.

Pregnant mares should be vaccinated 4 to 6 weeks prior to their due date against tetanus, eastern and western equine encephalomyelitis (EEE and WEE) influenza, and West Nile Virus (WNV). This will provide immunologic protection to the mare as well as increase the amount of antibodies available for uptake by the mammary gland. These antibodies will be passed to the newborn foal in the colostrum. Administration of vaccines against other pathogens, such as strangles, botulism, Potomac horse fever, rotavirus, and rabies, depends on geographic location, potential for exposure and medical risk.

We are currently recommending the following vaccinations for late-term pregnant mares to be foaled at the Equine Reproduction Laboratory, Colorado State University:

1. 4-way vaccine – one month prior to foaling
 - Eastern equine encephalomyelitis (EEE)
 - Western equine encephalomyelitis (WEE)
 - Tetanus
 - Influenza
- 1 West Nile Virus – one month prior to foaling
- 2 Rotavirus – CSU is following the guidelines of the American Association of Equine Practitioners (AAEP) in recommending that the Rotavirus A vaccine be administered at 8, 9 and 10 months of pregnancy to optimize passive transfer of antibodies and reduce the incidence and severity of rotavirus diarrhea in foals.
- 3 Equine Viral Arteritis – see above comments
- 4 Rabies

Please contact your regular veterinarian to schedule these prefoaling vaccinations.

Deworming

Anthelmintics (dewormers) should be administered to pregnant mares on a routine basis, with the specific agent and frequency based on the exposure level, parasite load and farm management practices. Most commercially available dewormers are safe for use in pregnant mares. However, it

is recommended that the product label be examined before administering dewormers or any other product to a pregnant mare. Routine deworming of the pregnant mare throughout gestation will decrease the exposure of the newborn foal to parasites. *We recommend that you deworm your mare approximately one month prior to her anticipated due date.*

One of the first parasites a foal may encounter is the intestinal threadworm (*Strongyloides westeri*). Larvae of this parasite may migrate to the mammary gland of the pregnant mare and subsequently be passed through the colostrum to the newborn foal as it nurses. An infestation of *Strongyloides westeri* can cause enteritis (inflammation of the gastrointestinal tract) and diarrhea in foals and may predispose foals to other intestinal problems. Administration of an ivermectintype dewormer to the mare immediately after foaling will prevent or reduce the degree of *Strongyloides westeri* infection in the foal. *This will be performed at CSU as part of the routine foaling management program.*

Caslick's Management

Mares that have had a surgical procedure to partially close the dorsal or upper portion of the vulva (Caslick's surgery) should have the sutured portion of the vulva opened 7-14 days prior to the predicted foaling date. Failure to open a sutured vulva will result in a difficult birth and potentially a serious tear in the perineal region of the mare. The Caslick should be opened earlier if the mare exhibits signs of increasing udder development more than two weeks prior to her due date. *We will examine each mare upon arrival well in advance of her expected due date to check for the presence of a Caslick. If present, the Caslick will be opened at an appropriate time by a staff veterinarian at no charge.*

We look forward to working with your pregnant mares. Please contact us if you have any questions at (970) 491-8626 (office phone) or (970) 491-7005 (fax) or by email ERL@colostate.edu.