

Pregnancy Supervision

Once a mare has been bred it often seems as if all that needs to be done is to sit back and wait for the foaling date. Instead, it is important to keep a monitor throughout the mare's pregnancy. Equine fetus development takes about 11 months from conception to birth. There are critical times during this period, when careful observation might detect a problem in time to correct a serious issue before it becomes harmful for mare and/or foal.

Normal Gestation.

"Normal gestation length, for a mare, ranges from 335-345 days. Unless a mare has been bred in the pasture, the exact breeding dates are usually known. Foals delivered before 325 days gestation are considered premature. If a foal is delivered before 300 days of gestation, it is rarely compatible with life, even with the support of our advanced neonatal intensive care units. As a general rule, at least a 325-day gestation is a minimum necessary for a foal's successful survival. A foal that is born premature with complications may end up being healthy if supported with aggressive veterinary care. It is suspected that fillies are carried two days longer than colts on average, although in general, there is little difference in gestation length based on fetal gender.

Whether a mare tends to follow a gestational length similar to previous pregnancies, individual mares tend to follow a similar pattern with each pregnancy although normal gestation lengths can vary by two weeks in the same mare."

A key feature that correlates with a mare's hormonal changes associated with impending foaling is mammary development. Udder development usually begins four to six weeks before foaling, although maiden mares might not show mammary development until just before parturition. The mammary secretions normally turn from a sticky, serous secretion to a watery, 'skim-milk' consistency, to thicker, somewhat yellowish colostrum just before foaling. Observable physical changes in a mare's body are, in the month before foaling, the mare's abdomen will enlarge and become more pendulous (hanging down). The Para lumbar fossa (in the flank area) will look more sunken, and the gluteal musculature at her tail head will relax. Due to stretching of the skin on either side of the tail head that can cause mild pruritus (itching), the mare might want to rub her tail. Also during this pre-foaling time, she might become sedentary and spend more time lying down and even exhibit signs of mild colic.

Foaling Monitoring Devices

There are products that test the calcium level in the milk; when it rises above 250 ppm, there is a greater than 90% likelihood that the mare will foal within 24 hours."

An alarm system that attaches to the halter is an alert device that signals when a mare lies down in lateral recumbency. Unfortunately, these alarms also go off if the mare lies down to take a nap or to roll and scratch, thereby eliciting some false alarms. And there is the occasional mare that foals in a standing position. Vaginal alarms sewn into the vaginal entry are another way to monitor foaling, but won't always alert someone if a mare is in serious trouble. If a foal's feet

don't enter the vaginal vault, the vaginal alarm might not go off; the mare could remain in trouble with no alert to the owner.

Video monitoring systems are especially useful. One that attaches to the television can cost less than \$100, and an owner can roll over in bed every couple of hours to check the mare on the TV.

A baby monitor provides excellent audio feedback to alert the owner to abnormal sounds from the foaling stall.

Regardless of which monitoring method/ methods are also used regular checking is necessary as immediate veterinary response will improve the survival rate of both mare and foal when a foal is lodged in an abnormal presentation in the birth canal."

Impending Abortion

Not all mares make it to the expected date of parturition. High-risk situations increase the possibility of an abortion or a seriously sick foal. A mare that has had a septic foal in the past, or a dystocia (difficult birth), or has had a history of premature placental separation or red bag is a mare that needs to be monitored closely throughout her pregnancy.

Often, there is little or no warning that a mare is going to abort. Unless there is an outbreak of an infectious disease that causes abortion (rhinopneumonitis or equine viral arteritis), the most common stage of pregnancy loss is in the embryonic phase of development." And the most critical time of embryonic loss is within the first 50 days of pregnancy.

The best means to detect embryonic loss is to have your veterinarian perform rectal ultrasound exams to image the fetus. This is an excellent diagnostic tool to check for the presence or absence of an embryo, and to identify twin pregnancies.

Not all pregnancy loss occurs early in gestation; mid- to late-term abortion does occur. The most common cause is placentitis, an inflammation or infection within the placenta.

The most common clinical sign of placentitis is premature lactation. It is not very common to see a vaginal discharge. A vaginal or cervical discharge can be tested with a bacterial culture to identify the causative organism. The mare rarely exhibits any signs of generalized illness."

Possible external signs of an impending abortion or potential foaling complications include any of the following, particularly if not in timing with an anticipated due date:

- Premature udder development;
- Premature lactation;
- Vaginal discharge;

- Any abnormal physical exam findings that indicate a systemic problem;
- Softening of the vulvar lips and/or tail head signalling impending foaling;
- Excessive abdominal oedema or swelling that might portend pre-pubic tendon rupture, or excess abdominal size that might indicate hydrops (excess fetal fluids in the uterus), which could create dystocia.

It is important to realize that a mare experiencing stress for any reason can be at risk. Physiological stressors such as disease, injury, surgery, etc., can cause abortion."

Physical abnormalities such as decreased appetite, increased digital pulses (suggestive of laminitis), or abnormal colour and refill time of mucous membranes might be symptomatic of an unrelated problem that could have significant repercussions, including abortion.

An abortion can occur at any time although typical periods of fetal loss are:

Twins abort seven months to term;

Equine herpes virus aborts in the last four months;

Septic foals abort in the last two months;

Excess uterine scar tissue can cause abortion at any time due to limited nutrition as the foal grows; timing of abortion depends on the extent of uterine scar tissue; and

Equine viral arteritis causes abortion at any stage of pregnancy, within one to three weeks of exposure to the virus.

The Mare's Foaling Place

To create the best foaling environment if a mare is to be transported that should be done four to six weeks before her due date so she can develop adequate antibodies in her colostrum unique to the new property's endemic pathogens.

Every pregnant mare should be examined daily during the last month or two of gestation. This can be done briefly during a walk in the field or during turnout.

This enables you to follow the progress of udder development, check for premature lactation, and look for waxing of the teats.

The ideal place to foal is in a grassy field in mild weather, however, due to many factors, such as lack of space, lack of pasture, cold weather, and value of the foal, the mare often foals in a large stall, deeply bedded with straw (not shavings), that is under 24-hour surveillance. In order for the mare to become used to being stalled, she should spend daily (or nightly) time in the stall during the few weeks prior to the expected foaling date."

Good hygiene is critical to foal health. One easy strategy can limit ingestion of microbes by the newborn foal when nursing: Washing of the mare's udder, perineum, and hind legs just prior to foaling. Clipping the underside of the mare may also be an advantage as a neonate seeks the udder in his first nursing attempts; he contacts all these body parts, licking and sucking contaminating faeces and debris into his mouth. The more microbes ingested, the greater the likelihood that some will cross the intestinal barrier to create a systemic or joint infection. During the weeks preceding foaling, it is good to get the mare used to washing and gentle handling of these hind end areas.

A mare should be foaled out in a location that has experienced personnel to monitor the mare and has access to a veterinarian who is able to provide a rapid response time for a foaling emergency.

In situations where the mare is in a high-risk pregnancy, it is best to have her in a location where she will foal under constant veterinary observation and monitoring.

Even the most experienced mare can have complications during her pregnancy or delivery that can jeopardize her life and the life of her foal. Taking precautions, such as proper monitoring of the fetus and mare, might help you head off an impending disaster and have a healthy mare and foal.

