

**American Association  
of Equine Practitioners**

**Horse Health Education**

# **FOALING MARE & NEWBORN**

**Preparing for a Safe  
and Successful Foal Delivery**

The AAEP horse health presentations are endorsed by the AAEP in its original format.  
The AAEP prohibits editing or personalizing them in any way.

**[www.aaep.org/horseowner](http://www.aaep.org/horseowner)**



# HORSE HEALTH EDUCATION: FOALING

## CARING FOR THE FOALING MARE & NEWBORN



Mares seem to prefer to foal at night in privacy, and apparently have some control to their delivery. Despite frequent visits to the barn, your mare may give birth the minute you step away.



# HORSE HEALTH EDUCATION: FOALING

## CARING FOR THE FOALING MARE & NEWBORN

In case problems arise, it is advisable to have your veterinarian's phone number nearby.



# HORSE HEALTH EDUCATION: FOALING

## A SAFE PLACE TO FOAL

---



*Photo courtesy of Louise Reinagel*

Your mare will need a clean, safe quiet place to foal. Horses have been giving birth on the open ranges for many years, and this is still an acceptable choice.



# HORSE HEALTH EDUCATION: FOALING

## A SAFE PLACE TO FOAL

---



Allowing the mare to foal in the pasture has some advantages.

- An open, grassy area is likely to be cleaner than a stall.
- A pasture provides a healthy environment with adequate room to foal.
- You do not have to worry about the mare crowding into a corner or foaling too close to a wall.



# HORSE HEALTH EDUCATION: FOALING

## A SAFE PLACE TO FOAL

---



Should you choose to foal your mare in a stall, provide one that is minimum of 14 x 14 feet.

- The stall should have adequate bedding.
- The floor should be readily cleaned and disinfected.



# HORSE HEALTH EDUCATION: FOALING

## A SAFE PLACE TO FOAL

---

Dirt or clay floors make sanitation more difficult.

Straw (particularly wheat straw) is preferable to shavings, as it will not cling to the newborn or mare and is used to prevent eye ulcers in the newborn.



# HORSE HEALTH EDUCATION: FOALING

## A SAFE PLACE TO FOAL

---

Remove manure and soiled bedding promptly and disinfect the stall between deliveries.







# HORSE HEALTH EDUCATION: FOALING

## THE COUNTDOWN

---



Mares provide clues that they will soon give birth. The following is a general guideline, but be prepared for surprises:

- The mare's udder begins filling with milk 2 to 4 weeks prior to foaling.
- The muscles of the vulva and croup relax. The tailhead may become more prominent a few days prior to foaling.
- It is common to see some abdominal swelling/edema along the midline in the weeks prior to foaling.



# HORSE HEALTH EDUCATION: FOALING

## THE COUNTDOWN

---



- The teats become engorged 4 to 6 days prior to foaling.
- Waxing of the teats occurs. (A yellowish, honeylike secretion [colostrum] appears 1 to 4 days prior to foaling; the secretion may drip, and the udder may drip milk several days prior to birth).
- If a mare has had a Caslick's procedure, this should be opened about 2 to 4 weeks in advance of expected foaling date.

*Vaccinations should also be administered to your mare 4 to 6 weeks prior to foaling. Consult with your veterinarian regarding recommended vaccinations as well as deworming intervals.*



# HORSE HEALTH EDUCATION: FOALING

## THE COUNTDOWN

---

- The mare becomes anxious and restless. She may appear to be colicky, kick at her belly, pace, lie down and get up, look or bite at her flanks and sweat. She may also frequently raise her tail and urinate. This is the first stage of labor.

*Be aware, however, that colic remains a possibility. If such behavior is prolonged for more than an hour or two without progress towards foaling, contact your veterinarian.*



# HORSE HEALTH EDUCATION: FOALING

## PREPARING FOR BIRTH

---

It is best to allow the mare to foal undisturbed and unassisted. If a problem becomes apparent, contact your veterinarian immediately.

What you can do:

- Write your veterinarian's phone number well in advance of the birth and keep it by all phones.
- Keep a watch or clock on hand so you can time each stage of labor. The watch will help you keep accurate track of the mare's progress during labor. Take written notes so that you will not have to rely on memory alone.



# HORSE HEALTH EDUCATION: FOALING

## PREPARING FOR BIRTH

---

- Wrap the mare's tail with a clean wrap when you observe the first stage of labor.

*Be sure that the wrap is not applied too tightly or left on too long as it can cut off circulation and permanently damage the tail.*

- Wash the mare's udder, vulva and hindquarters with a mild soap and rinse thoroughly.



# HORSE HEALTH EDUCATION: FOALING

## PREPARING FOR BIRTH

---

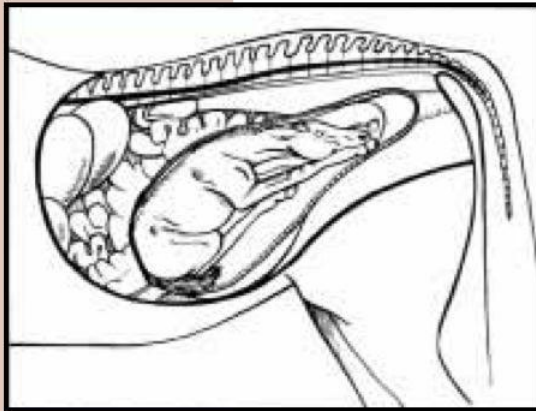
- Clean and disinfect the stall as thoroughly as possible and provide adequate bedding.
- Obtain test strips that measure calcium in mammary secretions. These strips are available commercially and aid the owner in predicting when the mare will foal. Sudden increases in calcium are associated with imminent foaling.



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

---



Normal presentation of the foal resembles a diving position, with front feet first, one slightly ahead of the other, hooves down, followed closely by the nose, head, neck, shoulder and hindquarters.

If you notice hoof soles up, the foal may be backwards or upside down, and you should call your veterinarian immediately. If you suspect any deviation from the normal delivery position, call your veterinarian.



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

---

Labor is divided into three stages:



**Stage one** begins with the onset of contractions and generally lasts 1 to 2 hours. Even in a normal delivery, the mare may stand up, lie down and roll several times in an effort to properly position the foal for delivery.

During this phase, contractions move the foal through the cervix and into position in the birth canal. The fetal membranes (allantois) may become visible at the mare's vulva. When the sac breaks, signaled by a rush of fluid, stage one ends.





# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

---



### Normal Placental Delivery

In very rare instances, you will see what is called a “red bag delivery” (premature rupture of chorioallantois).



### Red Bag Delivery



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

If red bag delivery presents itself, the foal is disconnected from its oxygen supply and the thickened placenta must be cut and the foal removed immediately.

*Even after the foal has been removed, it is still important to call your veterinarian immediately.*



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

---



**Stage two** is the actual expulsion of the foal. This stage moves relatively quickly. If it takes more than 30 minutes to deliver, there could be a problem. If there is no significant progress within 10 to 15 minutes after the membranes rupture, call your veterinarian immediately. If labor seems to be progressing, wait and watch.



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

---



**Stage three** labor begins after delivery and is the phase during which the afterbirth (placenta) is expelled. Most placentas are passed within 1 to 3 hours after the foal is delivered. If the placenta has not passed within 3 hours, call your veterinarian. A retained placenta can cause serious problems, including massive infection and laminitis.



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

### Postpartum Care for Mare and Foal

In the excitement of birth, it is important to remember some tried and true guidelines:

- Allow the foal time to break the fetal membranes. Once the foal breaks through, check to make sure it is breathing.



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

---

### Postpartum Care for Mare and Foal, continued:

- Generally, it is not recommended to cut or break the umbilical cord. If it has not broken during delivery, it will usually break when the mare or foal gets up. The cord should break at a site approximately one inch from the foal's abdomen, where the cord's diameter is slightly narrower than the remainder of the cord.



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

---

If it is necessary to manually separate the cord, it should be held firmly on either side of the intended break site, then twisted and pulled to separate.

*Never cut the cord!* Twisting and pulling of the cord stimulates closure of the umbilical vessels and reduces the likelihood of hemorrhage from the cord stump. If bleeding persists following cord separation, pressure can be applied to the stump for several minutes by squeezing with a thumb and finger.



# HORSE HEALTH EDUCATION: FOALING

## UNDERSTANDING LABOR & DELIVERY

---



- Encouraging the mare and foal to rest and bond undisturbed allows transfer of a couple pints of blood through the umbilicus of the foal.
- Treat the umbilical cord with an antiseptic solution recommended by your veterinarian soon after the cord breaks and for several days thereafter to prevent bacterial infection. (The preferred antiseptic solution for the foal's umbilicus is diluted chlorhexidine).
- Observe the mare and foal closely for the next 24 hours.





# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF OBSERVATION

---

Following the birth of the foal, the mare and foal should be monitored for the following:

- Foal is breathing normally.
- Foal is bright and alert to its new surroundings. The foal should make attempts to rise within 30 minutes following its birth.



# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF OBSERVATION

---



- Mare is non-aggressive, curious and accepting of her newborn.

*Occasionally a mare will reject her foal. In such a case, the foal should be removed and reintroduced with the mare under restraint. Foal rejection is more common in maiden mares.*

- The foal should stand and nurse within 2 hours of birth. If the foal has not nursed within 3 hours, call your veterinarian. The foal may be weak and in need of assistance or medical attention.



# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF OBSERVATION

---



- Foal should pass meconium (the first sticky, dark stool) after their first enema within hours after birth. If not, a second enema should be given.
- The mare should be bright and alert. Allow her to eat as soon as she is ready and supply plenty of clean, fresh water.
- Once the placenta has been expelled, examine it to make sure it is intact, particularly at the tips of the horns. The afterbirth will be Y-shaped and should only have the hole through which the foal emerged.



# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF OBSERVATION

---

- Many mares may become crampy and lie down to expel the placenta, but this should be a transient and speedy process. Continued pain necessitates immediate veterinary intervention. If you suspect the mare has retained part of the placenta, call your veterinarian. Be sure to save the placenta for your veterinarian to examine.



# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF OBSERVATION

---

- You may wish to check the mare's temperature and other vital signs periodically within the first 24 hours to make sure they are normal. An elevated temperature may indicate infection (normal range is 99.5 to 101.5 F)
- Carefully monitor the mare's manure output and food intake since she can be at high risk for displacement colic in the immediate days following birth.



# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF COLOSTRUM

---



The mare's first milk is extremely rich in antibodies. It provides the foal with passive immunity to help prevent disease until its own immune system kicks in.



# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF COLOSTRUM

---



A foal must receive colostrum within the first 8 to 12 hours of life in order to absorb the antibodies. If a foal is too weak to nurse, it may be necessary to milk the mare and give the colostrum to the foal via stomach tube.

*Consult with your veterinarian if a stomach tube will be needed for feeding the foal.*



# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF COLOSTRUM

---

If a mare appears to be leaking an excessive amount of milk prior to birth, consult your veterinarian. This pre-foaling milk is not typically colostrum-rich. However, depending on your veterinarian's recommendation, the mare may be milked and the colostrum frozen to give to the foal shortly after birth.





# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF COLOSTRUM

---



For orphan foals, or mares without an adequate supply of colostrum, it is important to locate a back-up supply. Without it, the foal is at an increased risk of infections. Your veterinarian can test the colostrum to determine whether it is rich in antibodies.



# HORSE HEALTH EDUCATION: FOALING

## IMPORTANCE OF COLOSTRUM

---



- The foal's serum can be tested at 8 to 12 hours of age to evaluate the IgG antibody levels. If IgG is inadequate, your veterinarian should institute treatment for Failure of Passive Transfer (FPT).
- If the value of antibody levels are low and the foal is young enough, colostrum can be administered. If the foal is older, a plasma transfusion should be administered at the earliest possible time.



# HORSE HEALTH EDUCATION: FOALING

## OTHER FOALING CAVEATS

---



- If a mare appears to require assistance during foaling, call your veterinarian.
- If you suspect a problem during the foaling process (such as a foal not in the normal birth position), call your veterinarian immediately. If caught early enough in labor, your veterinarian may be able to reposition the foal for a normal delivery.

*Note: A prompt delivery is crucial to the health of the newborn foal. Also, a retained placenta should be considered an emergency if it has not passed within 3 hours from the mare.*



# HORSE HEALTH EDUCATION: FOALING

## OTHER FOALING CAVEATS

---



Unless a dire emergency, **DO NOT** try to pull a foal. An exception to this rule might include backwards presentation, or as earlier mentioned, “red bag delivery,” since the foal can suffocate unless delivered promptly. Under no circumstances should you pull with anything more than your own muscle power, and pull only during a contraction (when the mare is straining). Improper pulling risks damage to the mare’s reproductive tract, injury to the foal and premature separation of the umbilical cord, which will deprive the foal of oxygen.



# HORSE HEALTH EDUCATION: FOALING

## OTHER FOALING CAVEATS

---



Many foals begin life with weak legs. Do not be overly concerned if the baby is down in the pasterns and fetlocks for the first day or two of life. They will generally straighten up. However, if you see extreme deviations of limbs or note other physical problems or the condition persists, consult your veterinarian.



# HORSE HEALTH EDUCATION: FOALING

## OTHER FOALING CAVEATS

---



It is always a good idea to have your veterinarian do a post-partum examination on both the mare and foal, as well as the placenta.



# HORSE HEALTH EDUCATION: FOALING

## A FINAL NOTE

---



Nature has provided an efficient system for the mare to deliver and care for her young. Be a prepared and informed owner so you can enjoy the miracle of birth, keep your anxiety in check and help the new mother and foal get off to a great start.



# HORSE HEALTH EDUCATION: FOALING

*Photos courtesy of*

Nancy Loving, DVM • Boulder, Colorado

Sharene Reed • Denver, Colorado

Ben Espy, DVM, DACT • San Antonio, Texas

Harry Werner, VMD • North Granby, CT

Robin Stanback, Triple Try Farm • Versailles, Kentucky

Dana Zimmel, DVM, DACVIM, DABVP,

University of Florida • Gainesville, Florida



Equine Photography by Lourie Zipf

[www.louriezipf.com](http://www.louriezipf.com)

[louzieann@aol.com](mailto:louzieann@aol.com)

• specializing in equine portraits and sports images

• also available for editorial work

Loveland, CO

970.663.4322



PURINA®



MERCK

Animal Health

*the* **HORSE**  
YOUR GUIDE TO EQUINE HEALTH CARE





# HORSE HEALTH EDUCATION: FOALING

*The AAEP would like to thank our partners for their support of the AAEP's Owner Education Programs.*



Boehringer  
Ingelheim



MERCK  
Animal Health



PURINA



the **HORSE**  
YOUR GUIDE TO EQUINE HEALTH CARE

EQUUS



# MAKE AN IMPACT ON THE WELFARE OF HORSES EVERYWHERE

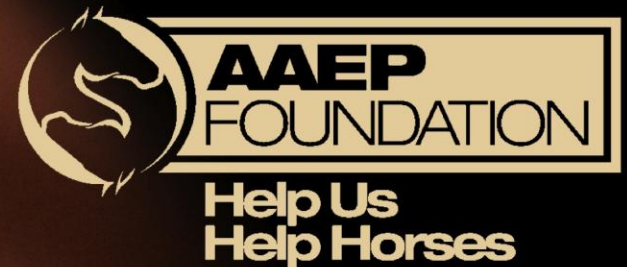
---

Join your veterinarian in support of the AAEP Foundation to Help Us Help Horses.

The AAEP Foundation's mission is to improve the health and welfare of the horse through the support of:

- Equine Research
- Education
- Benevolence
- The Equine Community

To make a donation or learn more about the AAEP Foundation, visit [www.aaepfoundation.org](http://www.aaepfoundation.org)





For more horse health information,  
visit our Web site:

[www.aaep.org/horseowner](http://www.aaep.org/horseowner)