

We often think of pregnancy as a delicate and fragile condition. When it comes to horses, this perception is perhaps due to the mare's relatively poor reproductive performance in comparison to other domestic animals. However, in a natural setting, the mare does comparatively well reproductively. Therefore, this seemingly poor performance is due as much to improper management as to any reproductive deficiency. Fortunately, management is something we can control.

As a conscientious owner, you probably have many questions about caring for your expectant mare. In truth, you may be a little worried. Relax. With a little TLC, your mare should progress through her pregnancy without mishap. Proper nutrition, deworming, exercise and vaccinations will help ensure a healthy pregnancy, and you can look forward to the birth of your foal with greater confidence.

Precarious Beginnings

The earliest days of an embryo's existence are perhaps the most precarious. Estimates for embryonic death rates in the horse vary from 5%–24% from conception to day 40 of gestation in fertile mares. In older, less fertile mares, the incidence of early embryonic death loss increases. Stress, illness, uterine infection, hormonal abnormalities, the presence of twins and other factors have been implicated in early embryonic loss. Often, the cause remains undetermined.

When the mare conceives, the fertilized egg (zygote) travels down the fallopian tubes and enters the uterus around days 6–7. It migrates throughout the uterus until about day 16 and typically sticks onto the uterine wall at 16–17 days. By day 12–13, the embryonic vesicle is usually large enough to be detected by ultrasonic examinations, during which an image is produced by bouncing sound waves off tissues. For practical reasons, some breeding farms simply tease the mare 14–20 days after her last breeding date to see if she comes back into estrus (heat). If she does not return to estrus, the pregnancy can be confirmed by ultrasound evaluation. Fetal heartbeat can be detected on ultrasound by 24–26 days. Transrectal palpation, at approximately 30–35 days post-breeding, can usually confirm pregnancy. Ultrasound examination at 14–16 days post-ovulation can confirm pregnancy and detect the presence of multiple embryos (twins). Teasing, palpation or ultrasound has not been shown to harm the developing embryo or endanger the pregnancy. However, because of the embryo's uncertain beginning, it may be wise to have the pregnancy reconfirmed at 45–90

days post-ovulation since this is the time period when resorption is most likely. A mare confirmed in foal by ultrasonography at 14 days and/or 30 days will not necessarily still have a fetus 10 months later. The ability of your mare to maintain a pregnancy through the first 90 days needs to be confirmed by your veterinarian.

Troublesome Twins

Some reproductive specialists recommend an ultrasound exam at 14–16 days post-ovulation to detect twins. Early detection of twins provides an opportunity to eliminate one embryo, thus allowing the other to develop normally. This is commonly done because twins pose a number of risks.

- In 95% of mares with twin embryos, one or both embryos are resorbed or aborted during the first 60 days. However, waiting to see if this occurs naturally could delay or interfere with a subsequent successful pregnancy.
- Of the small percentage of twins that survive in utero past 50 days, it is highly unlikely that two healthy foals will be born. If either survives, it may be small and weak.
- Most twins surviving past 50 days will spontaneously abort at 6–8 months.
- Mares carrying twins are more likely to give birth prematurely (before 300–320 days). Premature foals may have serious medical problems and are less likely to survive.

Helping Nature Take Its Course

Good broodmare management is the best aid for helping the mare make it through the critical first 30–60 days of pregnancy.

The mare should go into the breeding season fit and perhaps gaining weight. Severely underweight mares will have more trouble conceiving than will mares of appropriate weight. Avoid stressing the mare as much as possible. Stress can cause a drop in progesterone, a hormone that helps maintain pregnancy. Illness and/or fever can cause the mare's system to secrete prostaglandins, which may cause abortion.

Use Good Judgement

- Transport your mare only if necessary.
- Use caution when exposing your mare to other horses. You should avoid any undue risk of injury or disease transmission by isolating broodmares from transient horse populations.
- Provide nutritious forage, but don't overfeed.

Supplementing with vitamins and minerals is unnecessary in mares being fed a balanced diet.

- Make sure the mare is current on vaccinations and deworming. Consult your veterinarian for recommendations regarding specific vaccinations and deworming intervals during pregnancy.
- Do not administer hormones or other drugs unless specifically prescribed by your equine practitioner.
- Carefully evaluate the mare before deciding whether to breed on foal heat. Consult your veterinarian.

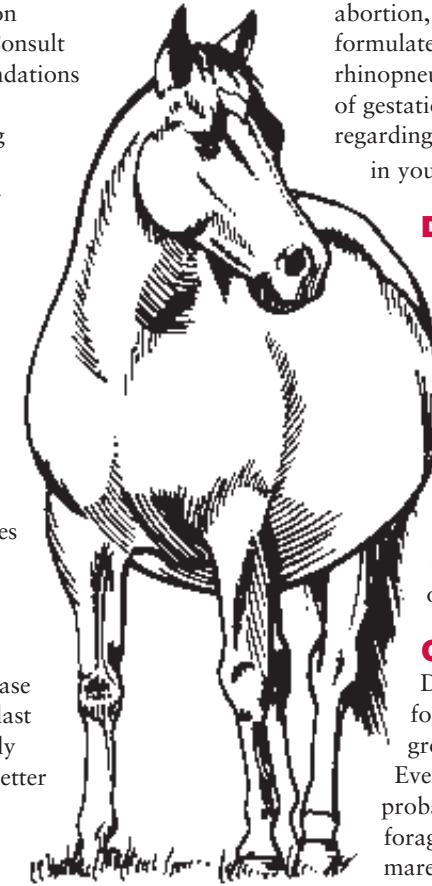
Coasting through Middle Pregnancy

Unless there are special circumstances during the first seven months of pregnancy, treat your mare as you would a non-pregnant one. She will benefit from moderate riding or exercise. There is no reason to increase your mare's caloric intake until the last 3–4 months of pregnancy. Constantly evaluating her body condition is a better way of altering her diet rather than feeding her more because you "think" she needs it.

Rations should be composed primarily of high-quality forage in approximately the same as pre-pregnancy amounts. Extremes in weather can alter her nutritional requirements and should be taken into account when formulating the ration. She should always have plenty of clean, fresh water. The mare will also benefit from routine hoof and dental care, standard vaccinations and regular deworming.

Vaccines

Vaccinations should be current for AAEP "core" vaccines, which include Eastern and Western encephalomyelitis, West Nile virus, influenza, rabies and tetanus, since infectious diseases can trigger abortions. A booster should be given four to eight weeks prior to foaling to increase the antibody level in the mare's colostrums (first milk) and help protect the newborn foal from disease. Pregnant mares are



especially sensitive to certain strains of rhinopneumonitis that have been shown to cause abortion, and should receive a product specifically formulated to protect pregnant mares against rhinopneumonitis at five, seven and nine months of gestation. Consult with your local veterinarian regarding other vaccines that may be advisable in your area, such as rotavirus and botulism.

Deworming

Most deworming agents available today are relatively safe for pregnant mares. Consult your veterinarian to establish an effective and safe deworming schedule for your mare.

It is especially important to deworm the mare within several weeks of foaling, because the mare will be the primary source for infecting her foal with parasites. Of course, manure should always be disposed of properly.

Changing Needs

During the last four months of pregnancy, the foal will grow rapidly. To accommodate this growth, the mare's energy needs will increase. Even so, special nutritional supplements are probably unnecessary. Good-quality hay and forage should remain the bulk of the expectant mare's diet. Concentrated feeds, such as grains, may be added to the ration to bolster energy intake without adding excess bulk.

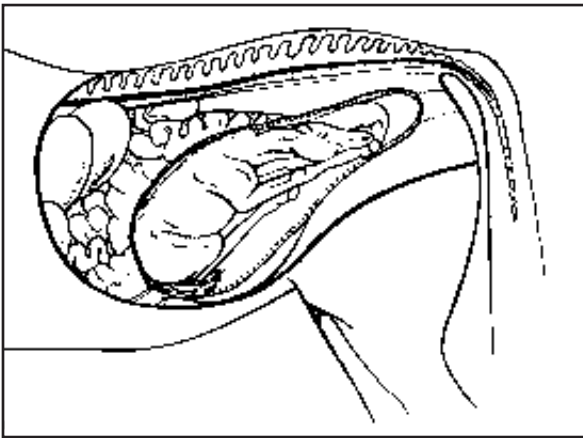
Use the mare's body condition as your guide to how she's faring. Adjust the ration accordingly. The mare should not become obese. Your veterinarian can advise you regarding a proper nutritional program for your mare.

Exercise during the last four months of the mare's pregnancy should be light to moderate. In fact, a pastured mare will get as much exercise as she needs just grazing. Vigorous exercise is not recommended.

Assuring the Health and Well-Being of The Pregnant Mare

Home Stretch

The average length of pregnancy in the mare is 338–343 days. However, normal gestation can range from 320–380 days. You needn't become overly concerned if your mare is past due. Prolonged gestation is not generally associated with problems or extra-large foals unless the mare is grazing endophyte-infected fescue grass. In some areas of the country, fescue pastures and hay may be infected with an endophyte (fungus) that may cause the mare to have problems delivering the foal or to have decreased milk production. Consult your veterinarian regarding identification and management of this problem. If your mare's pregnancy extends much past 340 days or if you're concerned, ask your veterinarian to examine her to determine if she is still pregnant and to confirm that all is well.



Suspected Abortion

Mares do occasionally abort. If you notice a vaginal discharge or dripping milk during pregnancy, contact your veterinarian. If you find the remains of a placenta or fetus, save it for your veterinarian to examine. It may be possible to ascertain the cause of abortion and treat the mare accordingly. Mares can and do abort without ill effects. However, it's always a good idea to have her checked by your veterinarian, because some complications of abortion, such as a retained placenta, can be life-threatening to your horse.

Impending Birth

There are obvious as well as subtle signs of impending birth. The time frame during which they occur varies from mare to mare. The most obvious and reliable are:

- Filling of the udder (two to four weeks pre-foaling)
- Distension of the teats (four to six days pre-foaling)
- Waxing of the teats (one to four days pre-foaling)
- Obvious dripping of milk
- An increase in milk calcium one to three days pre-foaling (detected by using a stall-side test kit)

More subtle signs include:

- Softening and flattening of the muscles in the croup
- Relaxation of the vulva
- Visible changes in the shape of the mare's abdomen

Preparing for Birth

Your 11-month waiting game will be over before you know it. To prepare, brush up on your foaling knowledge with the companion AAEP educational brochure, *Foaling Mare & Newborn*. Your veterinarian will be happy to supply it and will also be able to answer any further questions you may have about caring for your expectant mare.

Visit aaep.org/horseowner or the Bayer equine web site at bayequineconnection.com

For more information regarding Expectant Mare, contact your veterinarian.



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