

**American Association  
of Equine Practitioners**

**Horse Health Education**

# **EXPECTANT MARE**

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**Assuring The Health And Well-Being  
of The Pregnant Mare**

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



# HORSE HEALTH EDUCATION: EXPECTANT MARE



Pregnancy is often thought of as a delicate and fragile condition, but when it comes to horses, this perception is perhaps due to the mare's relatively poor reproductive performance in comparison to other domestic animals.



# HORSE HEALTH EDUCATION: EXPECTANT MARE



Proper nutrition, deworming, exercise, dental care and vaccinations will help enable a mare to have the best opportunity for a healthy pregnancy.





# HORSE HEALTH EDUCATION: EXPECTANT MARE

## PRECARIOUS BEGINNINGS

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The earliest days of an embryo's existence are the most precarious.

During the first 30 days, there is a 10 to 15 percent chance that the embryo will be resorbed.

## PRECARIOUS BEGINNINGS

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Factors that have been implicated in early embryonic loss include:

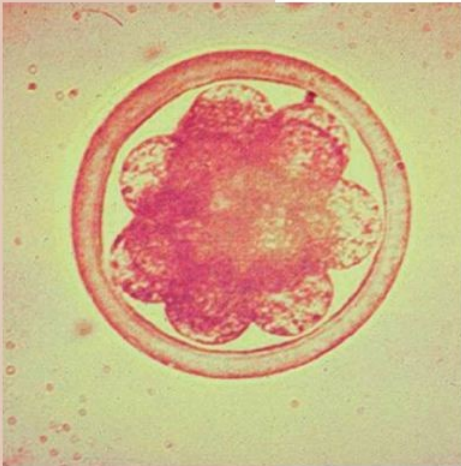
- stress
- illness
- uterine infection
- hormonal abnormalities
- presence of twins
- other undetermined causes
- low progesterone



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## PRECARIOUS BEGINNINGS

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*8-day-old embryo*

Day 6 to 7

The fertilized egg (zygote) travels down the fallopian tube and enters the uterus.

Day 12 to 13

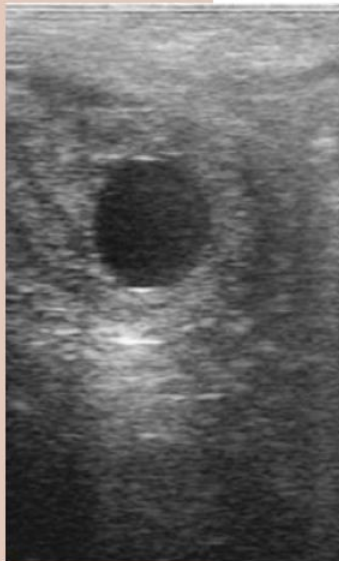
The embryonic vesicle is usually large enough to be detected by ultrasonic examination.



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## PRECARIOUS BEGINNINGS

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*17-day-old vesicle*

Day 16 to 17 The embryonic vesicle migrates throughout the uterus until Day 16 or 17, at which point it typically implants into the uterine wall.

*An ultrasound examination may be recommended by your veterinarian at 14 to 16 days post-ovulation to confirm pregnancy.*

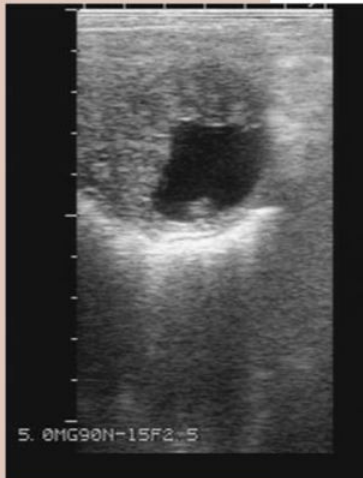




# HORSE HEALTH EDUCATION: EXPECTANT MARE

## PRECARIOUS BEGINNINGS

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*23-day-old vesicle  
with visible embryo*

Owners will often “tease” the mare 14 to 20 days after her last breeding date to determine if she has come back into estrus (heat).

The heartbeat can be confirmed by ultrasound at approximately 26 to 35 days post-breeding.





# HORSE HEALTH EDUCATION: EXPECTANT MARE

## PRECARIOUS BEGINNINGS

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Teasing, palpation and ultrasound examinations have not been shown to harm the developing embryo or endanger the pregnancy.

Because of the embryo's uncertain beginning, it may be recommended to have the pregnancy reconfirmed by rectal and/or ultrasound exam between 45 and 90 days post-ovulation.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## TRoublesome TWINS

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An ultrasound examination may be recommended at 14 to 16 days post-ovulation to detect twins. If one embryo is pinched, the mare is typically examined 2 to 3 days later.

Early detection of twins provides an opportunity to eliminate one embryo, thus allowing the other to develop normally.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## TROUBLESOME TWINS

This procedure is performed since twins can pose a number of risks:

In 95 percent of mares with twin embryos, one or both embryos are resorbed or aborted during the first 60 days. Waiting to see if this occurs naturally could delay or interfere with a subsequent successful pregnancy.





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## TROUBLESOME TWINS



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, they may be small and weak.





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## TROUBLESOME TWINS



Most twins surviving past 50 days will spontaneously abort at 6 to 8 months.

Mares carrying twins are more likely to give birth prematurely (before 300 to 320 days). Premature foals may have serious medical problems and are less likely to survive.



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## FETAL SEXING

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All equine embryos have the same appearance until day 58. At this time, the genital tubercle will migrate toward the tail in the female or toward the belly in the male.





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## FETAL SEXING

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- Beginning at day 60 to 70 or 110 to 140 days, determination of fetal sex is possible by transrectal ultrasound.
- Fetal sexing is difficult to impossible to determine between days 80 to 90 and after day 140.

*Fetal sexing is a very specialized procedure and may not be available in your area. Consult with your local equine veterinarian for availability.*







# HORSE HEALTH EDUCATION: EXPECTANT MARE

## HELPING NATURE TAKE ITS COURSE



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





# HORSE HEALTH EDUCATION: EXPECTANT MARE

## HELPING NATURE TAKE ITS COURSE

- 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.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## HELPING NATURE TAKE ITS COURSE

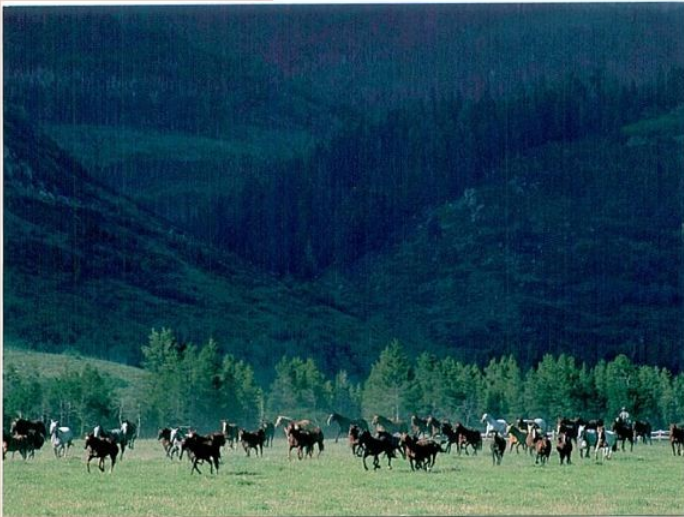
- Avoid stressing the mare as much as possible since stress can cause a drop in progesterone, a hormone that helps maintain pregnancy.
- Illness and/or fever can cause the mare's system to produce prostaglandins, a hormone that can cause abortion.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## USE GOOD JUDGMENT

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- Transport your mare only if necessary.
- Use caution when exposing your mare to other horses and avoid any undue risk of injury or disease transmission by isolating broodmares from transient horse populations.
- Provide nutritious forage while avoiding overfeeding. Supplementing with vitamins and minerals is not necessary in mares being fed a balanced diet.





# HORSE HEALTH EDUCATION: EXPECTANT MARE

## USE GOOD JUDGMENT



- The mare should be current on vaccinations and deworming (*your veterinarian may have recommendations regarding specific vaccinations and deworming intervals during pregnancy*).
- DO NOT administer hormones or other drugs unless specifically prescribed by your equine veterinarian.
- Evaluate the mare and consult with your veterinarian before deciding to breed on the first estrous cycle “foal heat.”





# HORSE HEALTH EDUCATION: EXPECTANT MARE

## COASTING THROUGH MIDDLE PREGNANCY

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Unless under special circumstances, treat your mare as you would a non-pregnant mare during the first seven months. She will benefit from moderate riding or exercise.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## COASTING THROUGH MIDDLE PREGNANCY

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- Rations should be composed primarily of high quality forage in the same as pre-pregnancy amounts.
- Extremes in weather can alter the mare's nutritional requirements and should be taken into account when formulating the ration.





# HORSE HEALTH EDUCATION: EXPECTANT MARE



## COASTING THROUGH MIDDLE PREGNANCY

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- The mare should always have access to plenty of fresh, clean water.
- The mare will also benefit from routine hoof and dental care, standard vaccinations and regular deworming.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## VACCINES

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- Vaccinations should be current since infectious diseases can trigger abortion.
- Vaccination for EEE, WEE, influenza and tetanus is recommended at the beginning of pregnancy.
- A booster should be given one month prior to foaling to increase antibody levels in the colostrum.





# HORSE HEALTH EDUCATION: EXPECTANT MARE

## VACCINES

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- The mare should also be vaccinated for equine rhinopneumonitis at 5, 7 and 9 months of gestation.

*Your equine veterinarian may recommend other vaccines that may be advisable in your area, such as rabies, rotavirus, botulism, WNV, etc.*



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## DEWORMING

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Most deworming agents available today are relatively safe for pregnant mares.

*Consult with your equine veterinarian to establish an effective and safe deworming schedule for your mare.*





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## DEWORMING

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It is especially important to deworm the mare within several weeks of foaling, since the mare will be the primary source for infecting her foal with parasites.

*Reminder: Manure should always be disposed of properly.*







# HORSE HEALTH EDUCATION: EXPECTANT MARE

## CHANGING NEEDS

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In the last four months of pregnancy, the foal will grow rapidly. To accommodate this growth, the mare's energy needs will increase.

- Good quality hay and forage should remain the bulk of the expectant mare's diet.
- Concentrated feeds may be added to the ration to bolster energy intake without adding excess bulk.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## CHANGING NEEDS

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- Adjust the mare's ration accordingly by using her body condition as your guide to how she's faring. Pregnant mares typically do not require an increased plane of nutrition until the last 90 days of pregnancy.
- The mare should not become obese.
- Foaling is an "athletic activity." The mare should be in good physical shape to perform this activity.

*Your equine veterinarian can advise you regarding a proper nutritional program for your expectant mare.*



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## CHANGING NEEDS

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Exercise during the last four months of the mare's pregnancy should be light to moderate. Vigorous exercise is NOT recommended.

*Note: A pastured mare will get as much exercise as she needs by just grazing.*





# HORSE HEALTH EDUCATION: EXPECTANT MARE

## HOMESTRETCH

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- The average length of pregnancy in the mare is 338 to 343 days. Normal gestation can range from 320 to 380 days.
- If your mare's pregnancy extends much past 340 days, ask your veterinarian to examine the mare to determine if she is still pregnant and confirm that all is well.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## HOMESTRETCH

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- If your mare has had a Caslicks procedure (common procedure that prevents infection and is performed under a local anesthetic), talk to your veterinarian about having it opened before foaling
- Talk to your veterinarian about screening the mare for neonatal isoerythrolysis (NI). This condition causes jaundice in foals and occurs when the blood type of the foal is incompatible with the mare's, which produces antibodies that fight against the foal's red blood cells.

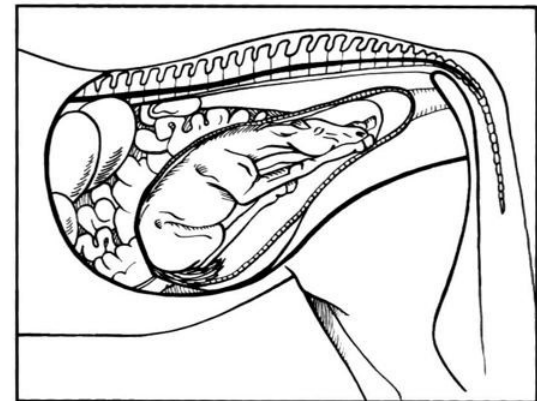


# HORSE HEALTH EDUCATION: EXPECTANT MARE

## HOMESTRETCH

- Prolonged gestation is not generally associated with problems or extra-large foals unless the mare is grazing on endophyte-infected fescue grass.
- Often times with fescue poisoning, a decrease in udder development may be noticed.

*Consult with your veterinarian for treatment of this condition.*







# HORSE HEALTH EDUCATION: EXPECTANT MARE

## SUSPECTED ABORTION

- If you notice a vaginal discharge or dripping milk during pregnancy, contact your veterinarian.
- If remains of a placenta or fetus are found, save it for your veterinarian to examine.
- Placental remains can help determine the cause of abortion and proper treatment of the mare.
- Abortion in late gestation can be caused by EHV-1, placentitis or the presence of twins.



# HORSE HEALTH EDUCATION: EXPECTANT MARE

## SUSPECTED ABORTION

Mares can and do abort without ill effects.

It is always a good idea to have your mare examined by your veterinarian, as some complications of abortion, such as a retained placenta, can be life-threatening to your horse.



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## IMPENDING BIRTH



The most obvious signs of impending birth (varies from mare to mare) can be:

- Filling of the udder (2 to 4 weeks pre-foaling)
- Distention of the teats (4 to 6 days pre-foaling)
- Waxing of the teats (1 to 4 days pre-foaling)





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## IMPENDING BIRTH

- Obvious dripping of milk
- An increase in milk calcium 1 to 3 days pre-foaling (detected by using a stall-side test kit)



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## IMPENDING BIRTH

More subtle signs include:

- Softening and flattening of the muscles in the croup
- Relaxation of the vulva
- Visible changes in the position of the foal



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*Picture Courtesy of Louise Reinagel*

Your 11-month waiting game will be over before you know it. Your equine veterinarian will be able to answer any further questions you may have about caring for your expectant mare.





# HORSE HEALTH EDUCATION: EXPECTANT MARE

*Photos courtesy of*

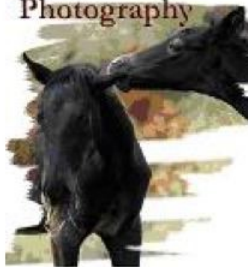
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# HORSE HEALTH EDUCATION: EXPECTANT MARE

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