

RECOGNIZING AND PREVENTING Failure of Passive Transfer

BROUGHT TO YOU BY THE **HORSE**

YOUR GUIDE TO EQUINE HEALTH CARE

What is Failure of Passive Transfer?

Foals are born without any immune protection against infectious disease organisms.

All foals receive infection-fighting proteins called antibodies from their dam's colostrum within the first 24 hours of life, a process known as passive transfer.

If a foal does not obtain an adequate amount of antibodies from quality colostrum, then he will not be protected from disease-causing organisms such as viruses and bacteria. This is referred to as failure of passive transfer (FPT).

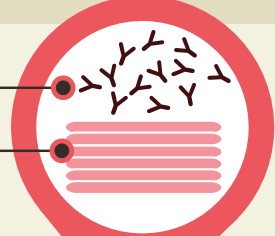
A FEW DAYS before foaling



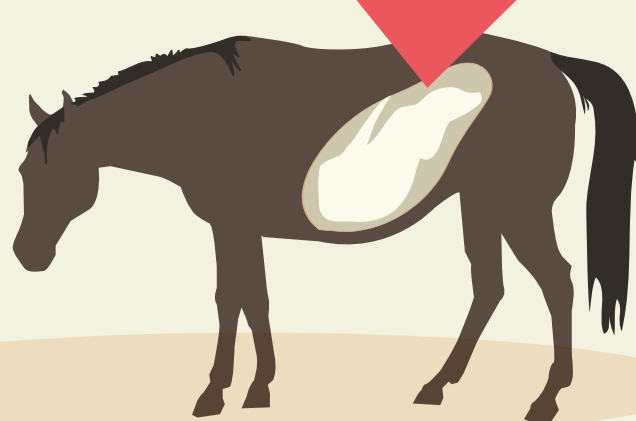
Mare's mammary gland produces her first milk, called colostrum, which is full of antibodies.

antibodies

placenta



A mare's placenta prevents transfer of maternal antibodies to the foal.



FOAL IS BORN

Evaluate mare's colostrum quality using a colostrometer or a Brix refractometer and confirm that foal stands and nurses.



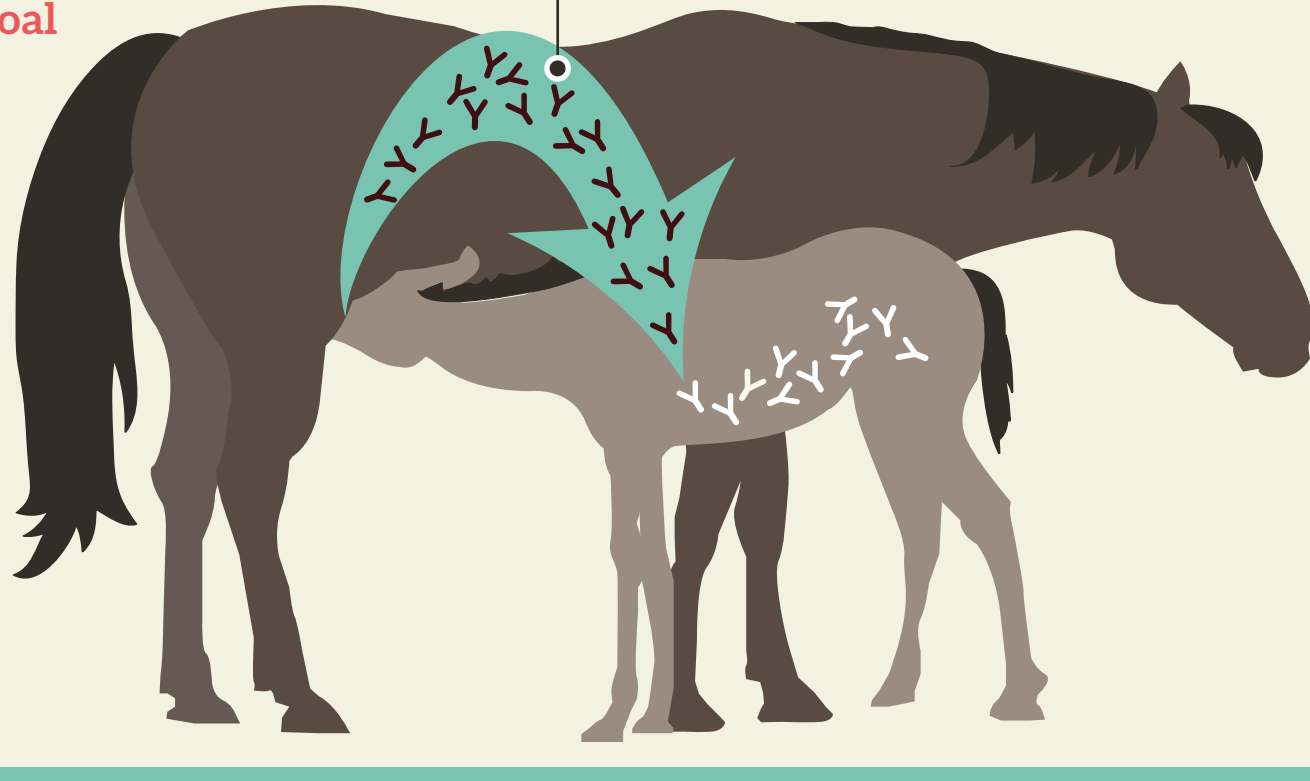
FOAL STANDS



FOAL NURSES

5-8 HOURS after birth

antibodies being passed from mare to foal



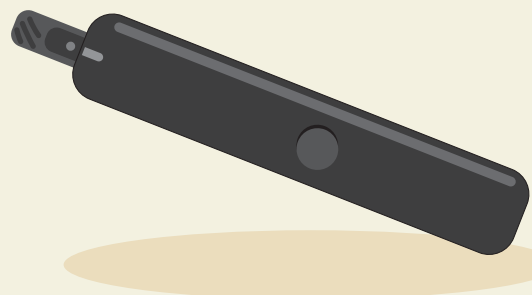
This is the period for maximal colostrum absorption. The foal must consume at least 1-3 liters.



1-3 LITERS

Measure the foal's immunoglobulin G (IgG) levels to determine if antibody levels are sufficient. A test such as a hand-held horse-side diagnostic can:

- be used easily right at the foal's side.
- determine if the foal has received an adequate amount of antibodies from its mother's colostrum
- allow for immediate intervention: enables rapid response and ongoing IgG monitoring.



A foal's antibody content ranges:

<200 mg/dL of plasma antibodies = **total FPT**

200-800 mg/dL = **partial FPT**

>800 mg/dL = **successful passive transfer**

12 HOURS after birth

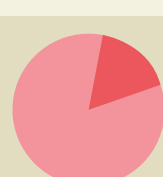
24 HOURS after birth



Colostrum absorption begins to decline.



The foal's small intestine can no longer absorb antibodies.



5-20% OF FOALS FAIL TO ACHIEVE PASSIVE TRANSFER.

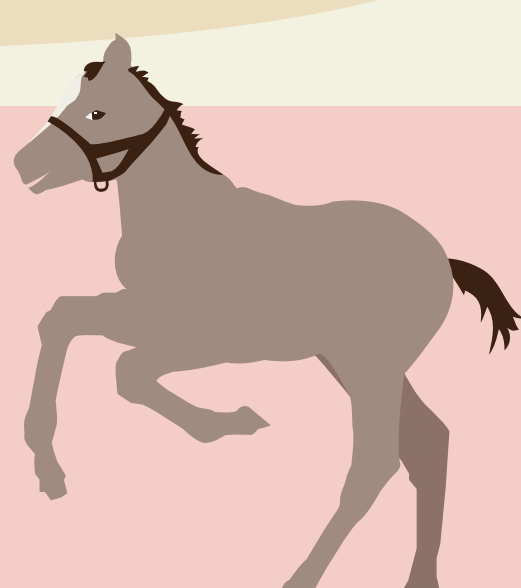
CAUSES of FPT:

early lactation
placental infections
poor-quality colostrum
unable to stand and suckle
premature birth
fescue toxicosis

Foals with FPT need supplemental antibodies via fresh or frozen colostrum (very young foal, less than 18-24 hours old), commercial products, or intravenous plasma.



Remember: Not all foals with FPT develop life-threatening infections, and not all foals achieving passive transfer of immunity are guaranteed to be healthy. Work with your veterinarian to prepare for foaling and ensure your newborn foal receives quality colostrum.



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