Online HorseCollege

Student Workbook

3.H.10 Pregnancy & Foaling

Student Name: ……

Student Number: …….

Email: ……

Phone: ……..

Other Personal Information

www.OnlineHorseCollege.com
(Ausintec Academy P/L ATF Ausintec Academy Trust T/as)
Ausintec Academy

Mailing Address:-
392 Bribie Island Road,
CABOOLTURE QLD 4510
(between Brisbane & Sunshine Coast)
AUSTRALIA

Registered Training Organisation No:31352
Centrelink Approval No: 4P530
CRICOS Provider Code: Pending

Phone within Australia (07) 3102 5498
Outside Australia + 61 7 3102 5498
Request@OnlineHorseCollege.com

Contents

Pregnancy & Foaling 3.H.10 Workbook

Students are to complete Horse Care 3.H.05-08 online assessments prior to attempting Horse Care 3.H.09-12 and to follow all recommended safety considerations.

Practical assessments for Horse Care 3.H.09-12 are as follows:

A) Basic Reproduction

B) Pregnancy & Foaling

C) Skeletal System

D) Muscular-Skeletal System

These assessments incorporate the following unit from the SIS30710 Sport Industry Training Package which include the listed elements

RGRPSH401A Relate anatomical and physiological features to the care and treatment of horses

- Identify basic anatomy and physiology of horses
- Relate anatomy and body systems to the performance of racehorses
- Follow illness and injury management plans

Further information about this assessment is available at www.training.gov.au

Pregnancy & Foaling Introduction

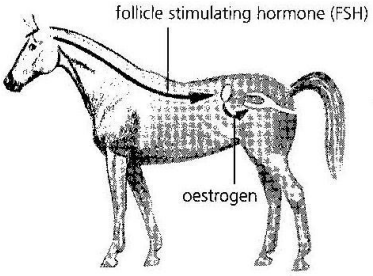
This workbook presents a basic introduction to the pregnancy of mares and the birth of foals. It is designed to improve your knowledge of the processes involved in foaling and provides information with the accompaniment of pictures to assist in the learning process.

Oestrus Cycle

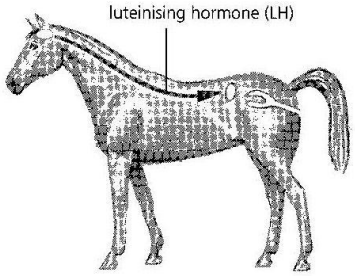
The oestrus cycle is a series of physiological and behavioural changes which occur in mares under the control of hormones. These changes form the basis of sexual activity and conception. The cycle lasts approximately 19 – 22 days and has two components 1) oestrus- in heat, where the mare will be receptive to the stallion and visible signs can be observed such as tail raising, mounting of other mares and vulva swelling and movement, 2) dioestrus- the mare will be unresponsive to the stallion.

Anoestrus is a period of sexual inactivity where the ovaries will not be producing functioning follicles. The period of anoestrus in normal cycling mares is during late Autumn, Winter to early Spring. In the southern hemisphere this is during the months of April, May, June and July. In the northern hemisphere it includes November, December, January and February.

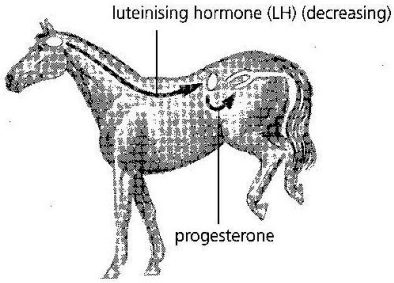
The length of anoestrus can be affected by the breed of the horse, management and health of the mare.



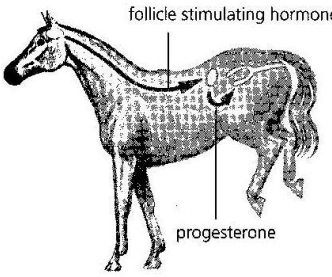
OESTRUS (0–5th day) – tail up, winking, cervix relaxed, tract moist



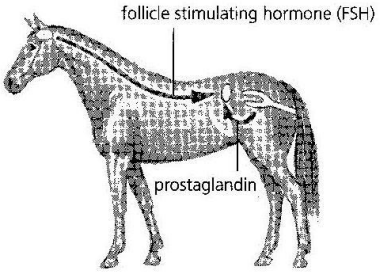
OVULATION (5th day) – tail up, winking, cervix relaxed, tract moist



DIOESTRUS (7th day) – ears back, kicking, cervix closed, tract dry, progesterone dominant



DIOESTRUS (13th day) – mid-cycle surge of follicle stimulating hormone, progesterone dominant



NEW OESTRUS starts (20th day) – follicle stimulating hormone and prostaglandin dominant

Oestrus Cycle (cont.)

Proestrus is the first phase of the oestrus cycle lasting about 3 to 5 days. During this time the ovaries will be developing a follicle which contains the egg and hormones. This phase is designed to facilitate mating in preparing the mare's system to facilitate the transport of sperm with the secretion of mucous.

Oestrus, often referred to as 'on heat' or 'in season' is when the mare will become receptive to a stallion and lasts between 4 to 7 days but this can vary at the extremes.

Metoestrus or the 'luteal phase' continues for approximately 4 to 5 days and is the phase where the uterus prepares to receive the fertilised egg.

Dioestrus is about 5 to 9 days in length. This phase prepares the embryo for implantation to the uterus wall by producing nourishment for the embryo.

Interoestrus is the interval between the phases of dioestrus and proestrus. Lasting approximately 14 to 16 days this is a period where the mare will not be receptive to a stallion.

Signs of Foaling

Gestation is the period of development of a foetus from conception to birth; pregnancy. The average level of a gestation period (pregnancy) is 330 to 345 days or 11 months. However pregnancy lengths are variable with 310 days to 370 days being recorded and healthy foals produced. A foal born within the period of 300 to 320 days is considered to be premature.

Male foals have a longer pregnancy period than females by at least one day.

Foaling (also known as parturition) is the birth of the foal. Signs of foaling are indications that a mare may give prior to giving birth, however some mares, especially maiden mares (those which are having their first foal) may show little or no signs of foaling.

Signs of foaling:-

Udder development

During the last month of pregnancy the udder will usually start to distend. As the mare gets closer to foaling the teats will enlarge and may be pushed outwards from the pressure in the udder.

Relaxation of the vulva

Close to foaling the vulva will relax and swell in preparation for stretching to allow for the size of the foal. Relaxation of the pelvic muscle may also be seen in some mares although it may be harder to distinguish. This relaxing of the pelvic muscle may be seen as a hollow developing on either side of the root of the tail.

Signs of Foaling (cont.)

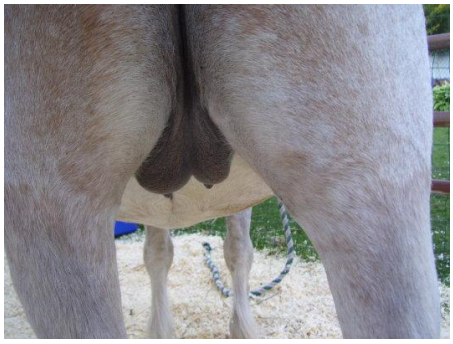
Signs of foaling (cont.):-

Waxing

This is when small beads of wax appear at the end of each teat. They are not a reliable indication of imminent foaling because they can appear anywhere from 12 to 36 hours before foaling to one to two weeks before foaling.

Secretion of milk

Some mares may drip or leak milk before foaling. This can occur several days prior to birth.



Restlessness

A mares behaviour may change in the last few weeks before foaling. She may become restless upon entering the first stage of labour. A mare may walk or pace the environment, swish the tail, exhibit colicky behaviour such as kicking at her belly and looking at her sides. Sweating over the body may also occur as the mare enters labour.

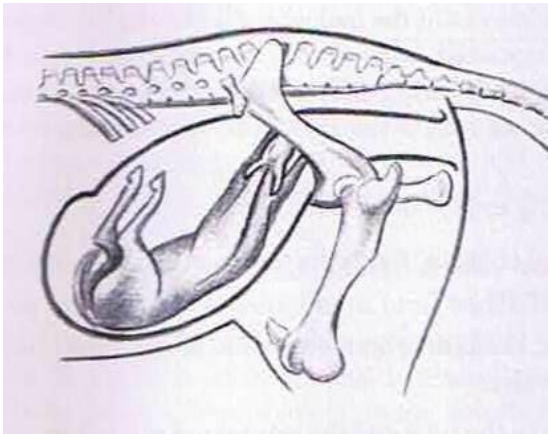
Stages of Labour

There are three stages of labour in the process of delivering a foal.

First stage labour

This includes visible signs (as discussed in the previous section) of discomfort or change in the mare, such as restlessness, sinking of the croup or hindquarter muscles and waxing up on the ends of teats.

During the first stage of labour powerful contractions of uterus push the placenta (and the amniotic fluid contained within it) against the dilating cervix.



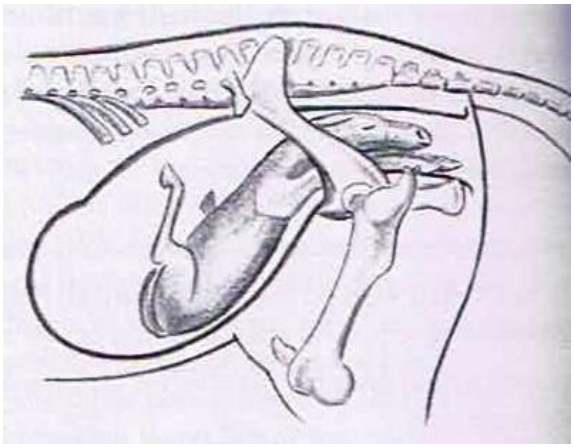
Second stage labour

Following on from the first stage of labour, the pressure of the contractions pushing the placenta against the cervix causes the placenta to break releasing the amniotic fluid which surrounds the foal (the mare's water has broken). Once the cervix is fully dilated the delivery of the foal will begin as the contractions of uterine muscles and straining of abdominals & diaphragm now push the foetus through the open cervix and the hole in the placenta.

In deliveries that are presented normally (a foal is considered in a normal position for birth when the front hooves, then the muzzle are presented in the vulva) the amnion will become visible which is a shiny white membrane in the vulva, followed by the hooves and muzzle. This is referred to as the anterior position and should occur within five to ten minutes of breaking water.

Stages of Labour (cont.)

It is common for the mare to lie down in second stage labour and she may roll or change sides. Once the foal's chest has been delivered it is important that delivery is completed quickly as the umbilical cord is compressed between the foal and pelvic floor of the mare, preventing circulation. Once the chest is freed it will be able to carry out respiratory movements.



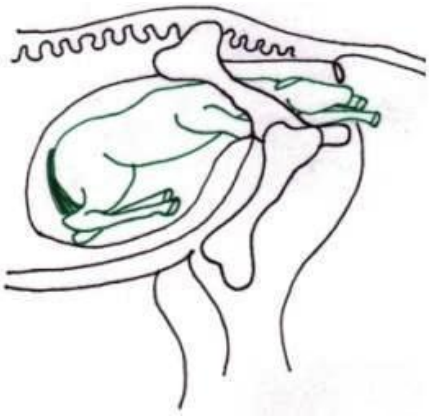
Third stage labour

This stage involves dispelling of he afterbirth/placenta and usually occurs within half hour of the birth.

Presentations of Foals

The presentation of a foal refers to the position it is presented in during the birthing process. Abnormal or mal-presentation of a foal can have serious implications for both the foal and the mare. Mal-presentations may occur due to foetal abnormalities such as a normal foetus developing in the wrong position or due to problems with the mare such as abnormal pelvis conformation and uterine torsion or inertia.

A normal foal presentation is where two hooves (soles facing down towards the mare's hocks) and the muzzle are visible in the vulva, with the hind legs eventually being delivered in an extended position.

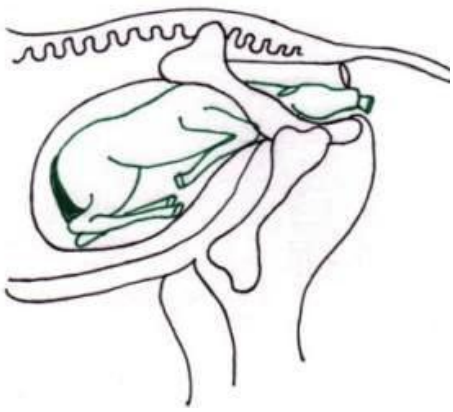


It is difficult to determine the position of the foal before the second stage of labour at which time the foal will become visible in the vulva however some indications may become evident if the mare returns to her feet and changes the side she lays on, rolling or if the mare appears to be straining (pushing) but without result.

Once the foal has become visible in the vulva mal-presentation will become obvious if the following are visible:-

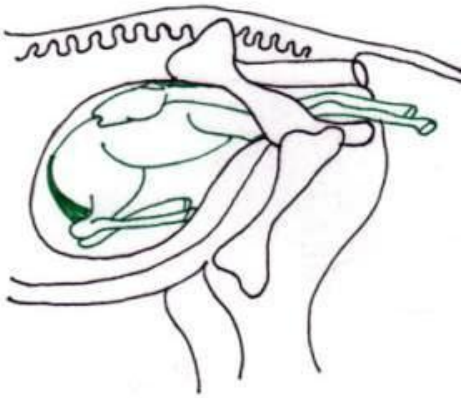
- one hoof and the muzzle
- two hooves but no muzzle
- two hooves with the soles facing up towards the mare's tail
- only the muzzle
- three hooves but no muzzle
- the tail

One hoof and the muzzle are presented, one leg displaced.

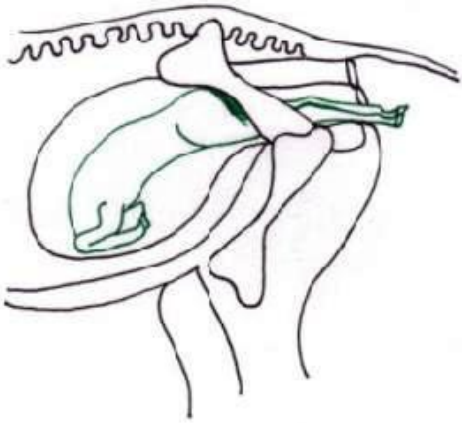


Presentations of Foals (cont.)

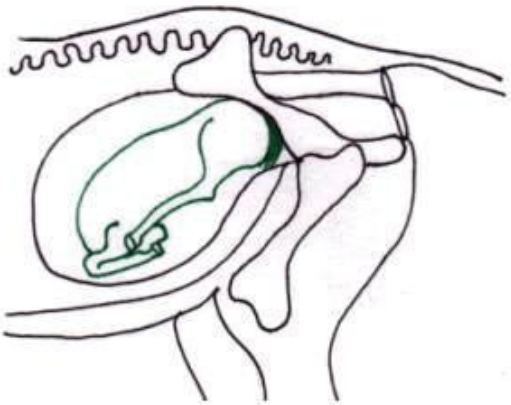
Two hooves are presented with the head displaced.



A breach position with the hind legs presented first. Note the soles of the hooves are facing upwards towards the mare's tail.



A breach position where the tail may become visible first.



If at any time during labour you suspect that a foal will be presented abnormally of if after twenty minutes into second stage labour the forelegs of the foal have not become visible veterinary attention should be sought immediately.

Extension Lesson

Observe a mare ‘in season’. How does her behaviour change at this time in the oestrous cycle?

…….

…….

…….

…….

Recommended Reading

Publication:-	Author:-
Practical Horse Breeding	Robert Kerrigan

Websites:-

http://www.uaex.edu/other_areas/publications/pdf/fsa-3039.pdf

http://www.thehorse.com/ViewArticle.aspx?ID=765

http://en.wikipedia.org/wiki/Equine_anatomy#Reproductive_system

http://www.thehorse.com/ViewArticle.aspx?ID=354

http://www.thehorse.com/pdf/anatomy/anatomy12.pdf

http://www.horsetalk.co.nz/breeding/as-foaling.shtml

References

Publication:-	Author:-
Veterinary notes for horse owners	Captain M. Horace Hayes
The BHS veterinary manual	P. Stewart Hastie
Practical Horse Breeding	Robert Kerrigan

Websites & Images:-

http://www.uaex.edu

http://www.thehorse.com

http://en.wikipedia.org

http://www.thehorse.com

http://www.thehorse.com

http://www.horsetalk.co.nz

http://www.vetstream.com

http://cal.vet.upenn.edu