



**WorldHorseWelfare**  
*the new name for the ILPH*

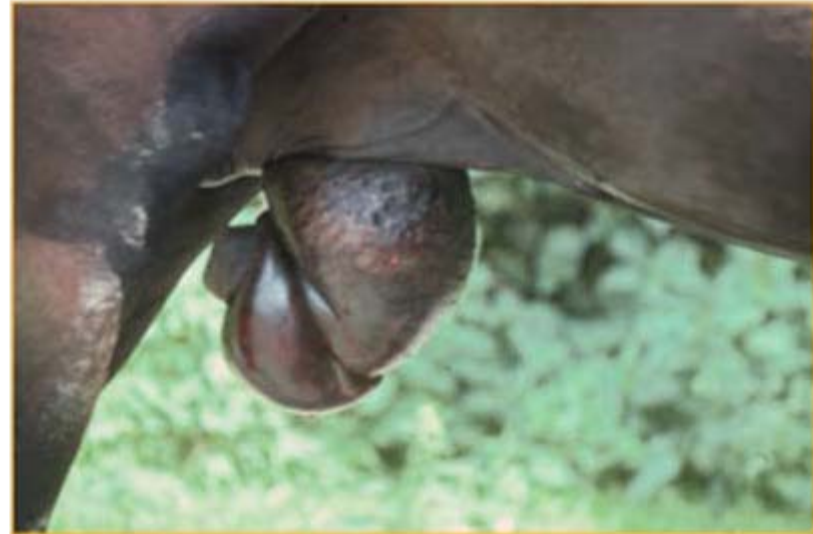
# Reproductive Tract Emergencies

Neil Townsend MSc BVSc Cert ES (Soft Tissue) MRCVS



## Paraphimosis

- Inability to retract prolapsed penis into sheath due to:
  - Preputial oedema due to trauma
  - Gross oedema post castration
  - Paralysis
  - Priapism
  - Debility
  - Cauda Equina Neuritis





## Treatment

- If early, attempt to reduce oedema and return penis to sheath
- **KEEP IT THERE!**
- Usually swelling is too great
- Cold hosing for 10 min.
- Reduce blood flow
- Minimise further oedema
- Cover penis with petroleum jelly
- Support penis to offset gravity effects
- NSAID's





## Penile Neoplasia

- Squamous cell carcinoma
- Papilloma
- Melanoma
- Sarcoid
- Mastocytoma
- Haemangioma





**WorldHorseWelfare**  
*the new name for the ILPH*

## Treatment

- Local Excision
- Segmental Posthectomy
- Partial Phallectomy
- En Bloc Resection





## Castration Complications

- Can occur during, immediately after or days to months post-castration
- Ensure clients monitor patient post-operatively
- Make sure owner knows what to look for and when to call you





## Castration Complications

- Excessive haemorrhage
- Preputial and scrotal oedema
- Prolapse of omentum
- Evisceration
- Infection
- Hydrocoele
- Bacterial peritonitis
- Penile damage
- Anaesthetic accidents
- Continued stallion-like behaviour





## Castration Complications





## Treatment

- Excessive haemorrhage
- Preputial and scrotal oedema
- Prolapse of omentum
- Evisceration
- Infection
- Hydrocoele
- Bacterial peritonitis
- Penile damage
- Anaesthetic accidents
- Continued stallion-like behaviour





## Parturition and Dystocia

### –Gestation Length

- Normal 335-342 days
- Very variable (310-370 days)
- Variation due to:
  - Breed > ponies approx 10 days shorter
  - Seasonal effects > winter / early spring 5-10 d. longer
  - Sex of the foal > colts 1-3 d. longer than fillies
  - Maternal nutrition
  - Environmental stresses
  - Exposure of mare to (artificial) light
  - Ingested toxins (eg. ergot alkaloids in contaminated grass/hay)



## Maturity of the foal

- Abortion < 300 days
- Premature 300-320 days
- Dysmature > full term but immature
- Symptoms of immaturity
  - Low birth weight/ thin body condition
  - Silky hair coat
  - Floppy ears
  - Soft lips
  - Lax flexor tendons
  - Behavioural / neurological problems
  - Biochemical parameters



## The 'overdue' foal

- Individual variation.
- Check if foaling date has been calculated correct.
- Placental lesions or twin pregnancy can cause retardation of development and growth.
- Dead foals are normally aborted by the mare.
- Examine mare per rectum to confirm she is pregnant and foal is alive.
- Owner can be very worried!



## Preparation of the mare

<b>Physical parameter</b>	<b>Time a.p.</b>
Udder growth	2-4 weeks
Relaxation of pelvic ligaments and abdominal muscles.	1-4 weeks
Relaxation cervix	4 weeks
Change of aspect colostrum	few days
Waxing of teats	1-4 days
Na and K colostrum cross	1-3 days
Distension of teats	1-2 days
Ca conc. colostrum > 10 mmol/L	24 hrs
Relaxation of vulva	24 hrs



## Normal Birth

- Obstetrical equipment
  - Tail bandage
  - Clean ropes or chains and sticks
  - Lubricant (lots!)
  - Scissors
  - Clean bucket with warm water
  - Towels
  - Chlorhexidine / iodine
  - Clamp



## Parturition

- 3 stages:
- First stage > onset of uterine contractions
- Second stage > onset of abdominal contractions
- Third stage > expulsion of the membranes



## Stage 1 = preparatory stage

- 30 min – 4 hrs
- Increased myometrical activity and cervical dilation.
- Foetus from dorsopubic to dorsosacral position with front limbs and head extended.
- Restlessness
- Walking, flank watching, sweating, stretching, raise and swishes tail, urinating, defecating, lie down and get up, rolling
- Activity helps foetus to reposition itself



**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 1 = preparatory stage



- Flank watching



**WorldHorseWelfare**  
the new name for the ILPH

## Stage 1 = preparatory stage



*Lying down > getting up*



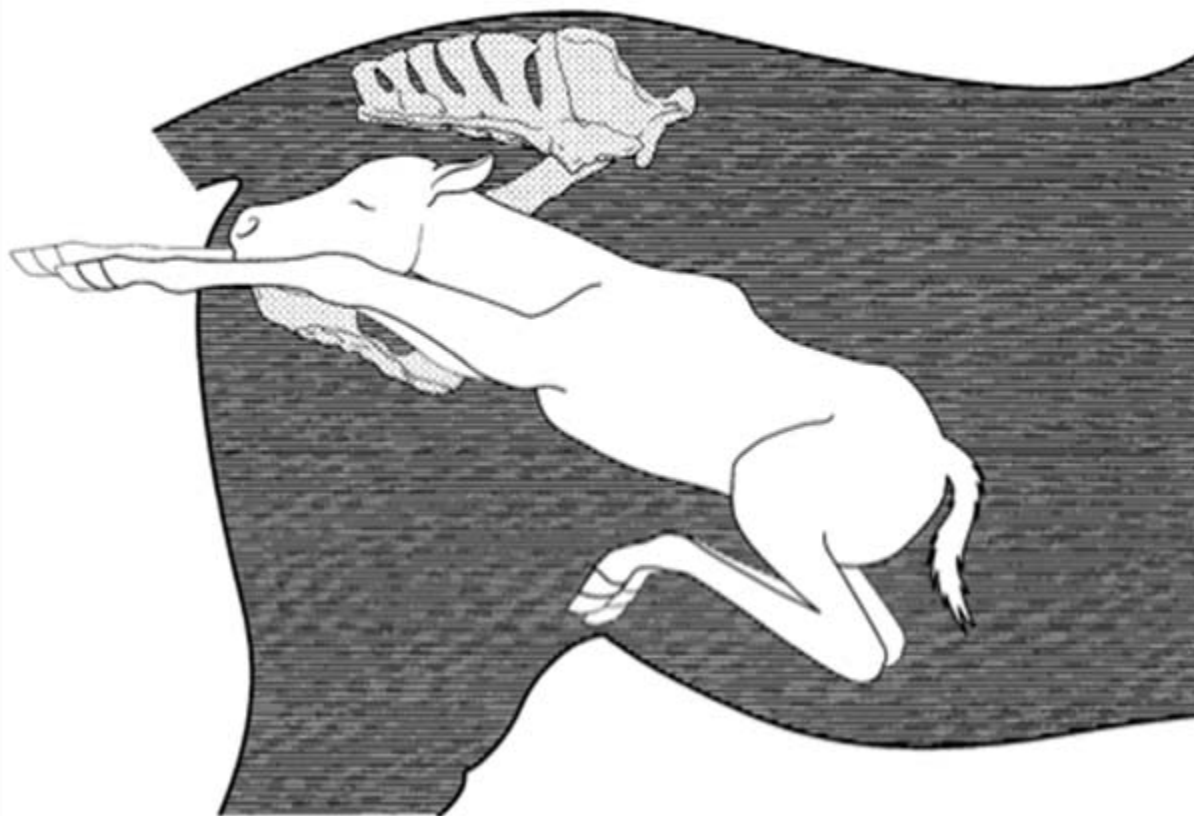
## Stage 2

- 10-30 minutes
- Rupture chorio-allantoic membranes > allantoic fluid released
- Foetus passes into the birth canal.
- Check correct position foal when mare down.
- Stretching pelvic cavity stimulates abdominal/ diaphragm muscle contractions and release oxytocin from neurohypophysis.
- Amnion appears (white).
- Lateral recumbency.
- Most forceful contractions when passing head and shoulders.
- Hind limbs only stretched in last phase.
- Once hips passed straining stops.
- Leave umbilical cord attached for a while.



**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2





**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2



- Amnion Appears



**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2





**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2



- Sole directed downwards



**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2





**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2





**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2





**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2





**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2





## Stage 2





**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 2





## Stage 3

- Placenta expelled 30 minutes to 3 hrs after foaling.
- Apex of chorio-allantoic sac becomes inverted “rolls down” uterine horn.
- Mare can show “colic” signs.
- Placenta can be tied to itself.
- If necessary towel clips on vulva to prevent aspiration of air.
- Avoid unnecessary disturbances.
- Cleanse or not?



## Stage 3

- Knot in placenta





**WorldHorseWelfare**  
*the new name for the ILPH*

## Stage 3



## Stage 3

- Cleansing



**WorldHorseWelfare**  
*the new name for the ILPH*



**WorldHorseWelfare**  
the new name for the ILPH

## Stage 3





# Dystocia

- Any problem which interferes with normal birth.

**Life threatening risks for dam and foetus.**

**Relatively low incidence**

Thoroughbreds  $\pm$  4%

Drafhorses  $\pm$  10% (*hindlimb muscle hypertrophy*)

Shetland ponies  $\pm$  8% (*oversized skull, hydrocephalus*)

**Slightly higher incidence in maiden mares.**

**Duration has negative effect on survival.**

Preferably < 30 min after onset of stage 2

> 90 min very low survival rate.



## Dystocia

- Foetal causes

**Maldisposition**

**Developmental defects**

*Contracted flexor tendons, scoliosis, torticollis,  
hydrocephalus*

**Dead foal**

**Foetal oversize**



# Foetal Maldisposition

- Presentation

**Direction foal is facing relative to mare's long axis**

**Anterior / posterior longitudinal, transverse**

## **Position**

**Relation foals back to mare's spine**

**Sacrum, left-/right ileum, pubis**

## **Posture**

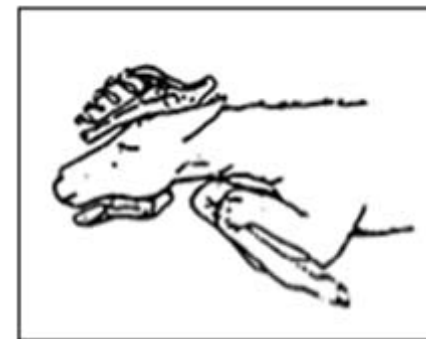
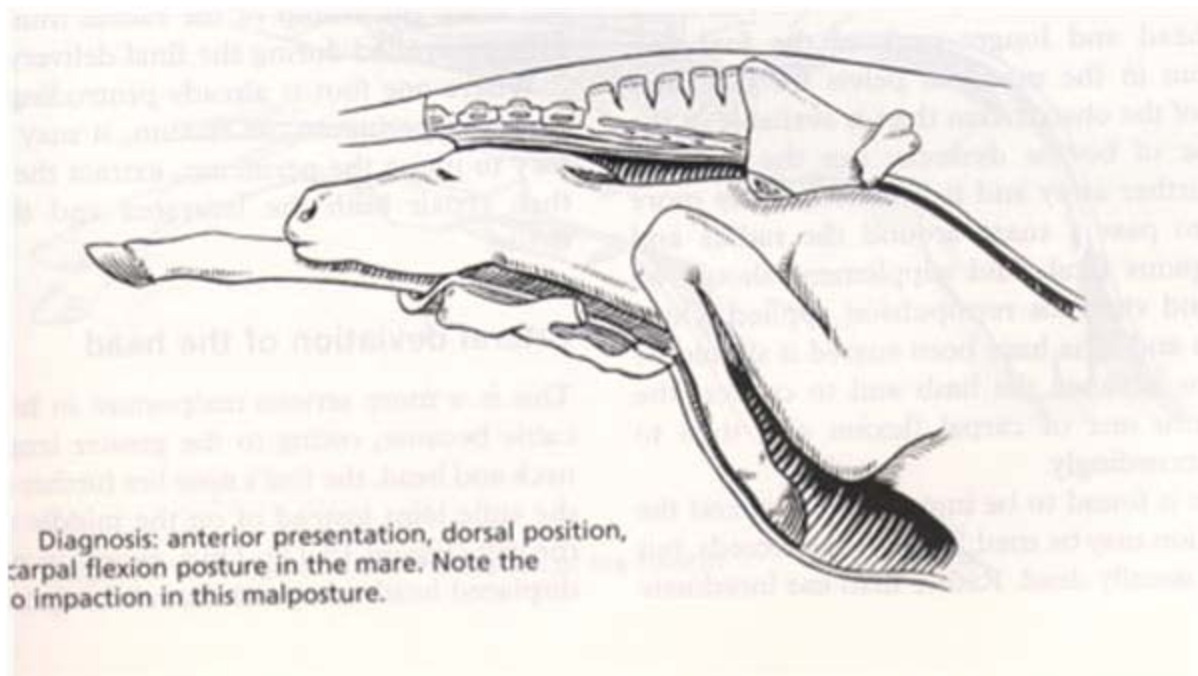
**Disposition of the extremities relative to the body**

**Uni-/bilateral**

**Most common**



## Foetal Maldisposition



- Carpal Flexion



## Foetal Maldisposition

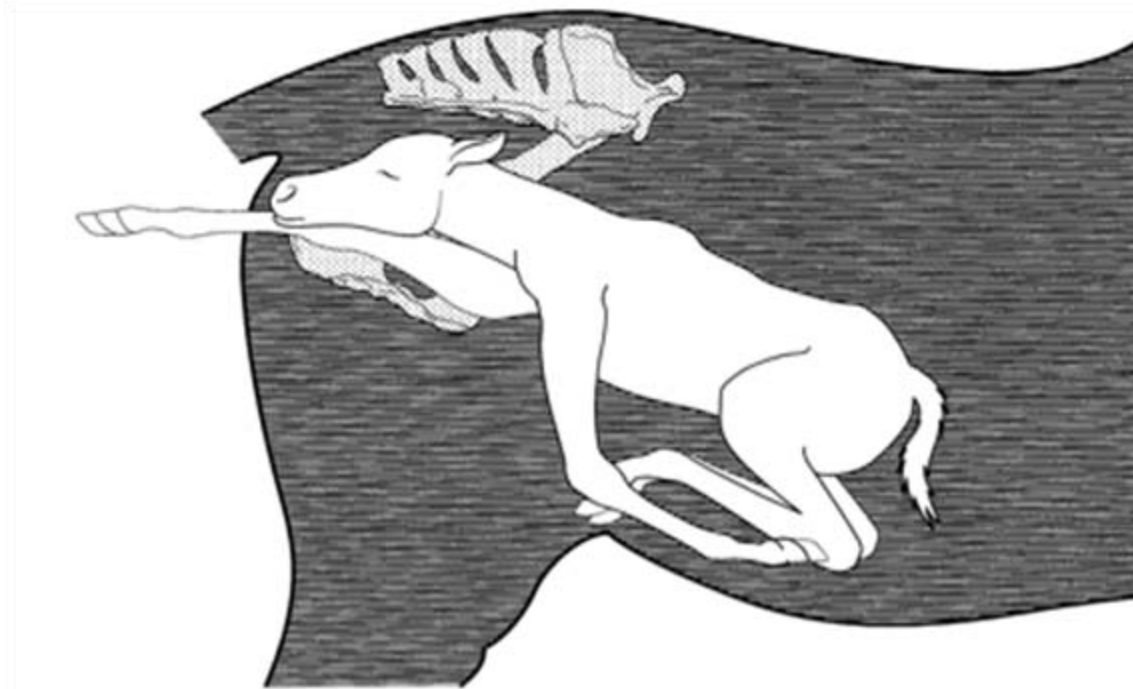
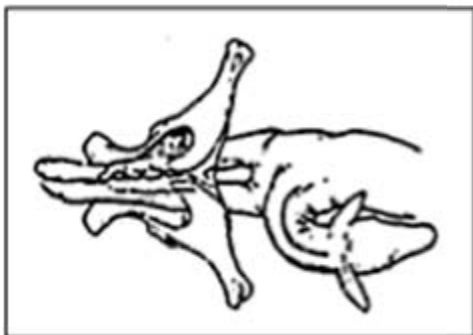
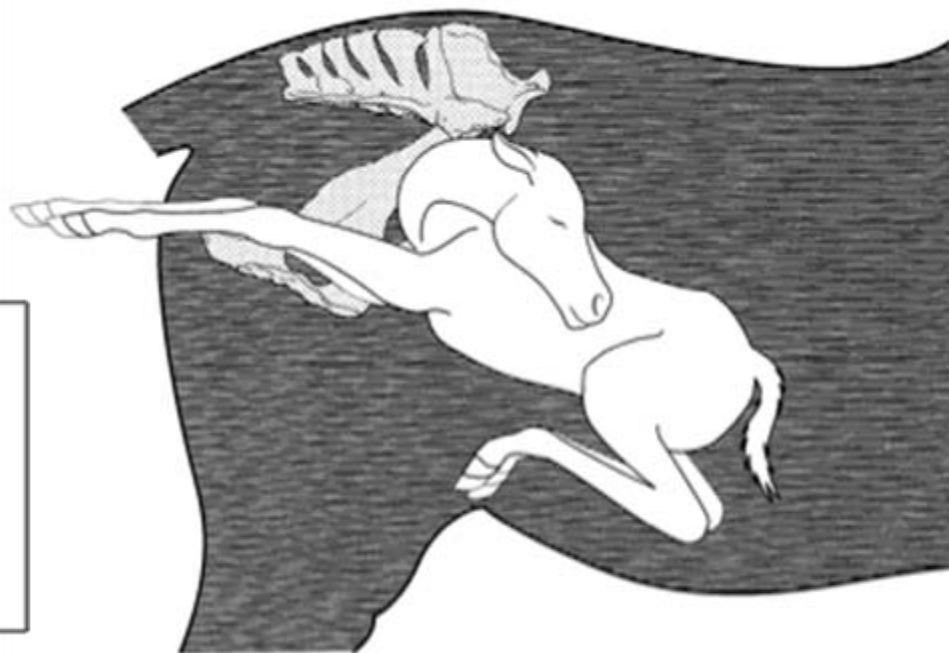


Figure 14.5 Arabian presentation, dorsal position with the

- Shoulder Flexion



## Foetal Maldisposition



**Figure 14-6.** Left lateral deviation of head and neck with extended forelimbs and fetus in anterior longitudinal presentation with dorsosa-

- Deviation of the Head



## Foetal Maldisposition

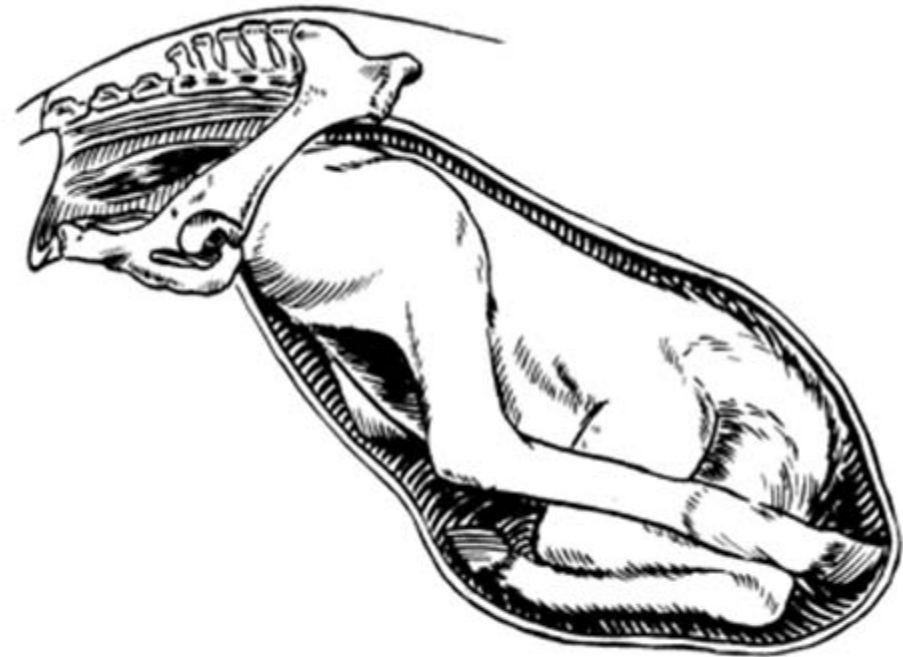
- Posterior position

**Greater risk of foal death**

**Hip / hock flexion**

**Umbilicus compressed**

**Weak abd. straining**



**Fig. 15.20** Diagnosis: bilateral hip flexion posture in the mare (breech presentation).



## Foetal Maldisposition

- Others
- Incomplete extension of elbows
- Foot-nape posture
- “Dog-sit” posture





# Maternal Causes of Dystocia

- Birth canal defects

<b>Pelvis</b>	-	<b>immaturity</b>
<b>Uterus</b>	-	<b>torsion, pre-term mares</b>
<b>Cervix</b>	-	<b>fibrosis</b>
<b>Vagina</b>	-	<b>lesions, rare</b>

## Expulsion defects

Extra-uterine

Uterine

Premature placenta separation



## Premature placenta separation

- Allanto-chorion does not rupture at cervical star
- Mare attempts to deliver whole foetal-placental unit
- Velvet-red surface presented in vulva
- “Red-bag” delivery
- Oxygenation poor - foal in serious danger
- Chorion must be cut or torn ASAP
- Quick delivery
- Treat foal as hypoxic
- Ddx eversion of bladder



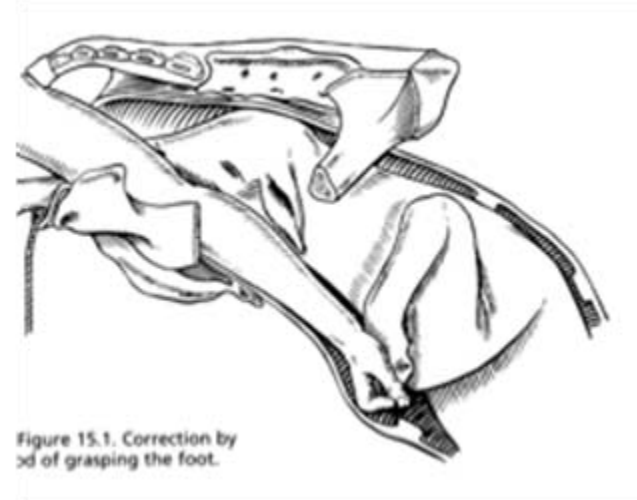
## Examination of the mare

- First take history
- Adequate space and equipment to work?
- Examine mare standing
- Examination needs to be done quick but thoroughly
- If straining walk / tongue outside mouth
- Sedation



## Methods to correct dystocia

- Manipulation
- Assisted vaginal delivery
- Controlled vaginal delivery
- Fetotomy
- Caesarian section





## Manipulation

- Altering position foal in order to allow normal delivery.

- Repulsion

- Rotation

- Lots of lubrication

- May require epidural/GA





## Assisted vaginal delivery

- Encourage mare to lie down
- Lubrication!
- Ropes/chains above fetlocks
- Pull towards udder
- Pull only when mare strains



## Post partum care, the foal

- Remove mucus from nose
- Check and disinfect umbilicus
- Move foal near mare's head
- Enema (phosphate)





## Post partum care, the foal

Behaviour	Time From Birth
Lift and shake head	1/2 - 3 mins
Foal in sternal position	1-10 mins
Attempt to stand	< 30mins
Ability to stand unassisted	1-2 hrs
Nurses from udder	1-3 hrs
Meconium passed	1-3 hrs
First urinated	3-15 hrs



## Post partum care, the mare

- Check the mare for possible vaginal / cervical tears or excessive bleeding.
- Check if placenta has passed < 3 hrs after birth.
- Check if placenta is intact.
- Consider antibiotic therapy
- Check tetanus vaccination state



## The placenta

- Epitheliochorial
- Diffuse placentation > micro-cotyledons
- Spread placenta on clean surface
- Identify amnion, allantochorion, cervical star, body, pregnant- and non-pregnant horn
- Check both sides.
- Tip non pregnant horn!
- Weight of placenta (average 6-7 kg)



## The placenta





## The placenta





## Perineal lacerations and recto-vaginal fistulae

- Do not attempt primary repair
- Allow to mature for at least 8-12 weeks
- Place on laxative diet
- Attempt primary repair
  - May need two attempts