

# Routine and Emergency Care of the Newborn Foal

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## Overview

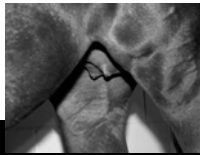
- The post-partum mare
- Newborn Foal normals
- Care for the newborn foal
- Signs of a Problem
- Time to Intervene



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## Before Foaling

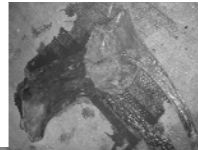
- 30 Days Prior to Foaling
  - Vaccinate/ Deworm
  - Remove fescue pasture/hay from diet
- 14 Days Prior to Foaling
  - Open caslicks



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## Warning Signs Prior to Delivery

- Dripping milk
- Vaginal discharge



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## Warning Signs

- Premature mammary (udder) development
- Premature lactation
- Maternal malnutrition
- Prolonged gestation



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## Monitoring Foal Delivery

- Foaling Attendant
- Foal Alert, Inc \$1000 - 2000
- Birth Alarm \$1400
- Milk Predictor Kits



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## Foaling Kit

- Scissors
- Umbilical tape
- Umbilical dip
- Towels
- Bulb syringe
- Foal Resuscitator
- Oxygen
- Enema
- Thermometer
- Stethoscope
- Foal blanket
- OB gloves
- Lubricating Jelly
- Digital Clock

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## Foal Delivery

- Once you see membranes, the foal should be delivered in

20-30 min!



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## The 1-2-3 Rule

- **One** hour to stand
- **Two** hours to nurse
- **Three** hours to pass the placenta



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## The Mare

Red Bag

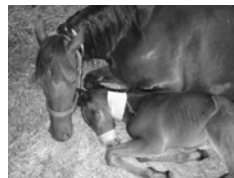


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## The Post-partum Mare

### MARE CHECK LIST:

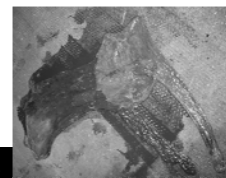
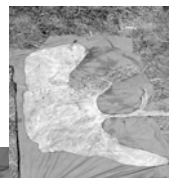
- Check placenta
- Check udder for milk
- Check vulva for trauma
- Monitor appetite, temperature, manure output



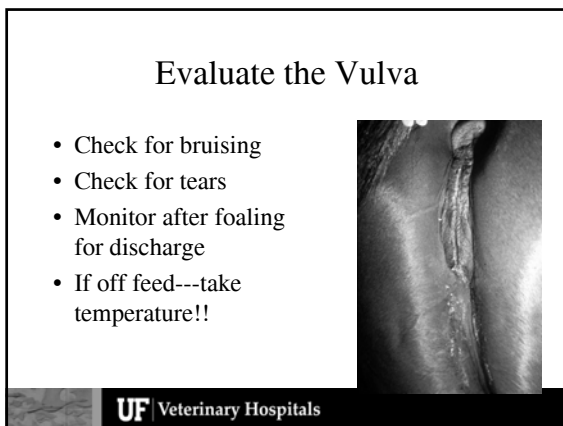
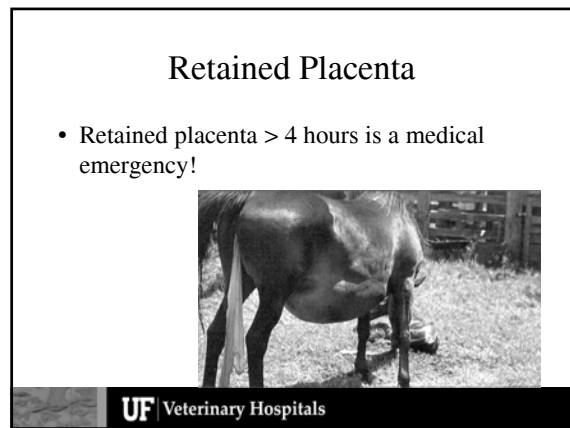
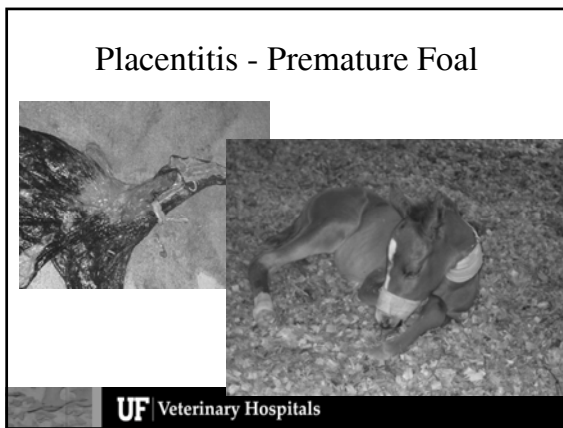
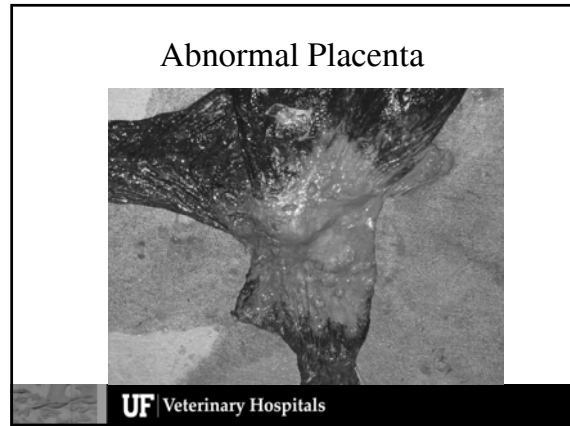
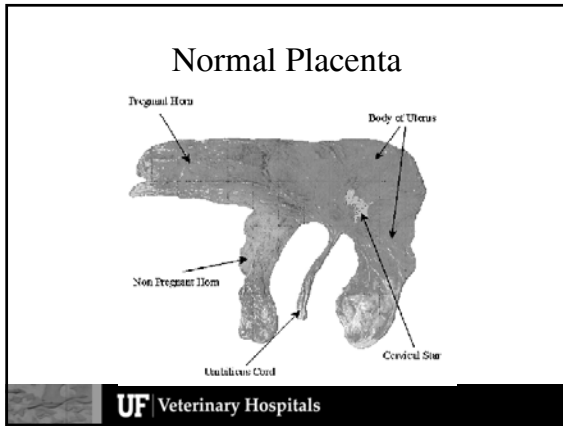
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## Evaluation of the Placenta

- Save placenta
  - Keep away from animals
  - All parts must be present
  - Look for abnormalities



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## The Foal's First Day

- Sternal 1-5 mins
- Standing in 1-2 hours
- Nursing within 2-3 hours
- Meconium passage – 4-6 hours
- Urinates within 9-10 hours



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## Newborn Foal Behavior

- Most foals nurse twice by 2½ hours of age
- Sleep by 1½-4 hours of age (mean 3 hours)
- First “play” by 2 hours of age
- Galloping observed by 6 hours of age

- Foals spend 33% of their life recumbent
  - Adults 5-10%



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## Newborn Foal Normals

- Temperature 99-102°F
- HR 80-120
- RR 20-40
- Pink gums
- Nursing 4-6 times per hour
- Fecal output 2-5 piles per day, pasty



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## Colostrum “First Milk”

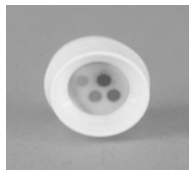
- Critical for foal to receive to provide antibodies
- Foals need about 2 liters in the first 24 hours
- The first 2 hours of life are most critical
- Gut Closure



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## Got milk? Had Enough?

- Blood test
- Measures IgG (antibody)
  - Normal is  $\geq$  800 mg/dl
- Sample at 8-24 hrs of age
- CBC also



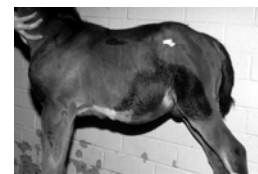
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## Foal Restraint

- Do Not pick the foal up by the belly- can rupture the bladder



Correct restraint



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## Foal Nutrition

- Consume 21-25% of their body weight in milk daily (2.5 gallons day-/100 lb foal)



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## Feeding Foals

- Methods
  - Bottle or bucket
  - Feeding tube
- Don't overheat milk
- Do not force feed a foal!!



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## Umbilical Care

- Betadine solution- light "tea" color (2%)
  - Do NOT use 7% iodine ---Burns the skin
- Nolvasan solution- use 0.5% solution
  - 1 part Nolvasan, 3 parts water
- Dip Navel 2-3 times the first day of life
- Check umbilical stalk for discharge daily

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## Umbilical Problems

- Excessive Bleeding
- Infection
- Patent urachus- Urine

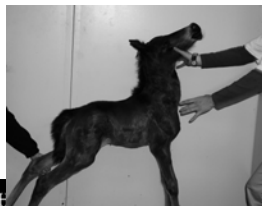


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## Care of the Foal

Tetanus antitoxin

- Give tetanus antitoxin if the mare has **NOT** been vaccinated 30 days prior to foaling



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## Foal Care - Enemas

- May give in first few hours of life
- Fleet enemas
- Do not give repetitive enemas



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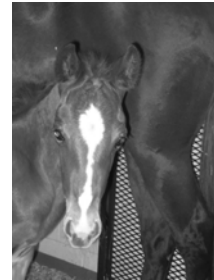
## Signs of a Problem – Meconium Impactions



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## Foal Check List

- 1-2-3 Rule
- Dip the navel
- Administer enema
- Blood test 8-24 hrs of age-IgG



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## Not Enough Colostrum

- Foal becomes “septic” when bacteria enter bloodstream
- Clinical Signs
  - Weak, cold
  - Not suckling
  - Swollen joints
  - Diarrhea



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## Neonatal Diseases

- Neonatal Isoerythrolysis
- Sepsis
  - Pneumonia
  - Diarrhea
  - Joint infection
- Diarrhea
- HIE “Dummy Foal”
- Prematurity



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## What is Neonatal Isoerythrolysis (NI)?

- An acquired form of hemolytic anemia
- Most common alloimmune disease in foals 7 hours-12 days (median 2.5 days)
- The foal inherits a rbc antigen from the sire that is not possessed by the mare. The mare becomes sensitized (transplacental hemorrhage) to the incompatible alloantigen and produces antibodies to it.
- Antibody acquired by foal ingestion of colostrum



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## Clinical Signs of NI

- Dull and lethargic
- Pale yellow mucous membranes
- Tachycardia
- Tachypnea\*\*
- Cardiac murmur
- Dark yellow urine, hemoglobinuria in some
- Can be fatal in some
  - 3-7 days
  - Kern icterus



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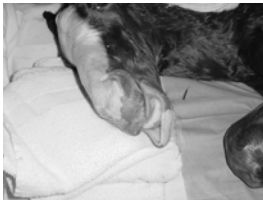
## Prevention of NI

- Screen mares within 30 days of foaling
  - Alloantibody
- Jaundiced Foal Test at birth
- Blood test mares – breed negative mares to negative stallions
- Separation at birth
  - Until milk is clear; usually 24 -36 hours
  - MILK OUT MARE
- Provide passive protection
  - Colostrum\*\*
  - Plasma

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## Warning Signs of a Problem

- Any discharge from nose



Meconium

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## Warning Signs - Behavior

Strange Behavior or Not Nursing



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## Warning Signs – Check the Gums



Yellow



Blue/grey



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## Check the Eyes



Dehydration : sunken eyes



Entropion

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## Check the Legs



Contracted tendons



Relaxed tendons

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## Severe Deformities



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## Warning Signs – Joint Infection

- Any swollen joint or lame foal should be considered infected until proven otherwise!!



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## Sepsis Prevention

- Maternal health
- Environmental factors
- Adequate colostrum intake
- Assessment of IgG
- Careful neonatal monitoring



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## Foal Diarrhea

- Noninfectious
  - Foal heat
  - Nutritional
- Infectious
  - Rotavirus
  - Parasites
  - Bacterial
- Any diarrhea is an emergency in the first few days of life!!



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## Neonatal Encephalopathy

- Other terms
  - HIE
  - Neonatal Maladjustment Syndrome (NMS)
  - Dummy foal
- Most common non-infectious medical condition of foals



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### Time to Intervene IF... Foal is Born and Not Moving

- Call your vet
- Rub foal vigorously with towel
- Clear the nostrils of fluid
- Use foal resuscitator if not breathing
  - 20 breaths/min
- Chest compressions
  - 80-120 compressions/min

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### Foal Resuscitation



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### Time to Intervene

- 1-2-3 rule is Broken
- IgG Low
- Diarrhea in first few days of life
- Fever
- Behavior abnormal
- Colic
- Lameness, swollen joint
- Call if doubts or questions!

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### Thank You

- Mark Shuffitt
- Marion County



UF UNIVERSITY of FLORIDA  
IFAS Extension



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### PLEASE JOIN US!

- 2011 HEALTHY HORSES CONFERENCE
- Saturday, April 9, 2011 AT UF LA Hospital
- Lectures and demonstrations – poisonous plants, lameness evaluation, infectious disease, colic, non-sweating and more!
- Register online at:  
<http://conferences.dce.ufl.edu/equine/>
- Includes continental breakfast and hot lunch!

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### ANY QUESTIONS?



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