

Getting ready for the breeding season 2021

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KILCASH
EQUINE CLINIC



Barren mares – what to do in January?

General Health

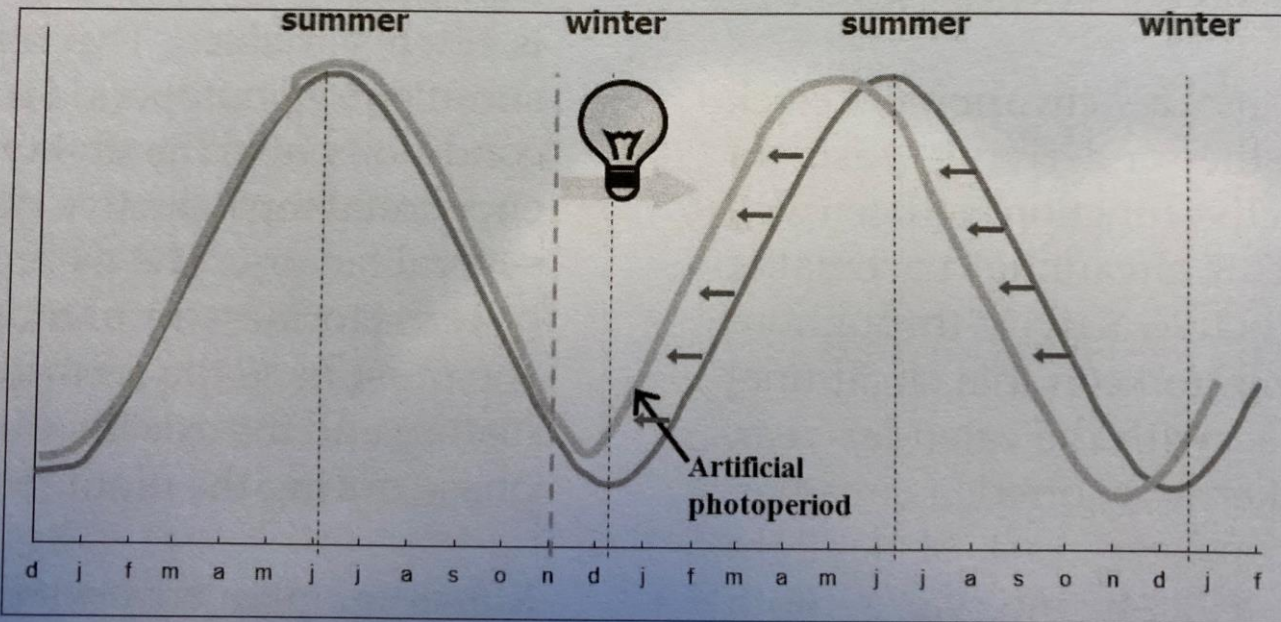
- Feet and teeth: often ignored resulting in shorter reproductive lifespan
- Deworming: worm control especially important in foals and youngstock – careful pasture management critical
- Vaccination: Influenza, Equine Herpes Virus and Rotavirus in pregnant mares.

Transition period

- Mares are seasonal breeders
- Rhythm of reproduction cued by photoperiod changes
 - Increase in daylight, temperature and food triggers cyclic activity
- Natural breeding season April – September in the northern hemisphere

Artificial Photoperiod Treatment

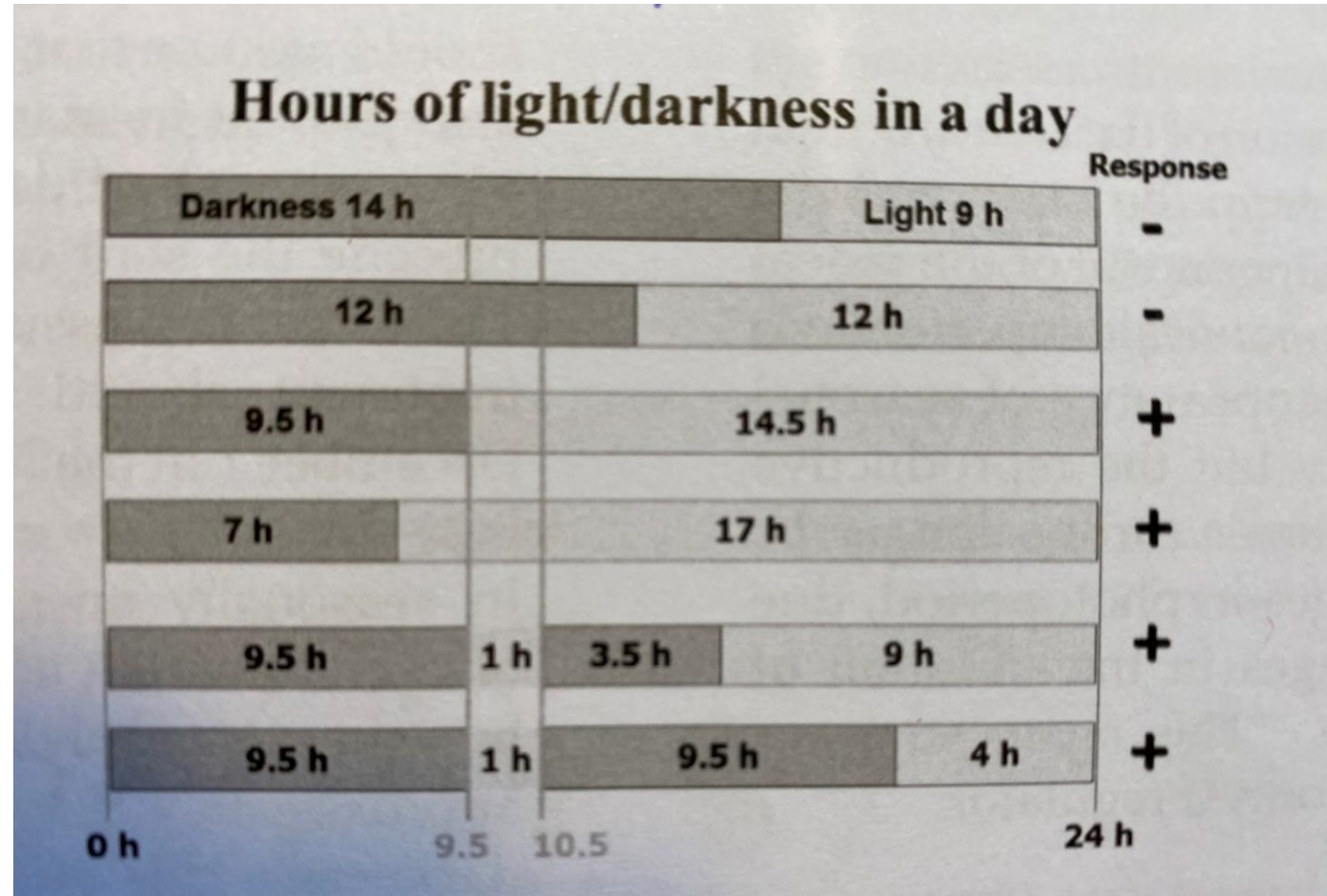
Artificial photoperiod will shift the circannual cycle to the left



- Photoperiod - dominant factor influencing circannual reproductive rhythm
- Other factors (temperature, nutrition, presence of a male) do not shift the circannual cycle but may change the threshold at which first ovulation occurs...shorten the transition period.
- Different lighting regimes available as well as Equilume light mask

Artificial Lighting - influence early season cycling.

- Less than 10 hours of darkness is necessary. Minimum duration of darkness also necessary, so continuous lighting does **not** work.
- Can use 1h light flash 9h after beginning of darkness.
- Need to start in December if want mares cycling by 15th February
- Lights need to stay on until 11pm unless coming on early in the morning
- Must have horses in before dark.
- Equilume masks work as well as lights, but consider cost?



Hormone treatments to advance ovulation

- Can be used for mares not under lights or in mares where light therapy was incorrectly used or started late
- Varying levels of success
- Other factors important including nutrition, stress. Mares too thin/too fat are slower to resume cyclic activity
- Works best when some ovarian activity (vernal transition). Less reliable if mare in deep anoestrus
- *Time works if nothing else will!!*

- ❖ **Progesterone supplementation** (*Regumate*): works best in mid-late transition. 10 -14 days. Decreasing dose after 7 days to mimic PRID (*was more effective but no longer available in formulation suitable for equine use*). Avoid CIDR.
- ❖ **Dopamine antagonists** (*Dolmatil or Motilium*): Works by depleting dopamine levels. Takes 2-3 weeks to take effect. Oral absorption questionable, so variable success rate.
- ❖ **GnRH agonists**: Goserelin (*Zoladex*) most effective in refractory cases. Buserelin (*Receptal*) twice daily by injection. Mare must be in transition. Deslorelin (*Ovuplant*) useful to induce ovulation early in the season. Do not use after *Receptal* or *Zoladex* due to a risk of downregulation of the ovaries due to negative feedback.

It's mid-March and my mare is cycling – what next?

- Scan uterus & ovaries; Check cervix
- Perineal conformation – need 'caslicks'?
- Cervical swab – when mare in oestrus
- Consider biopsy in difficult mares if not done previous autumn. Gold standard to identify mares with persistent mating induced endometritis (PMIE)
- CEM/ EVA



Pregnant mare – what to do in January?

De-worming

- Routine treatment of mares before foaling not necessary if mares are well managed – (Equine de-worming: a consensus on current best practice. *Rendal et al 2019*). Treat mares - encysted larval stages of redworm and tapeworm in late autumn/winter. Good pasture management. Treat new mares and isolate on arrival.

Feeding

- Feed good quality hay/haylage and a suitable hard feed especially in last 3 months of pregnancy when there is maximal foetal growth.

Vaccination

- EHV 1,4 @ 5, 7, 9 months
- Rotavirus @ 8, 9, 10 months
- Influenza – annual booster

Teeth and feet

- Routine dental exam and rasp once yearly especially in older mares. Watch for quidding as a sign of advanced dental disease
- Feet – keep good shape as tend to split and crack in heavily pregnant mares.....”no foot, no horse”

Plan Before Birth

- Identify 'high risk' mares – previous abortion, previous dystocia, concurrent illness, placentitis, laminitis, hydrops – and provide appropriate care.
- Where is mare going to foal? – E.coli most common infection in new-born foals. Clean stable is important. Straw, not shavings/sawdust.
- Colostrum supply ? – mare running milk, Neonatal Isoerythrolysis mares. Frozen colostrum bank or pre arrangement with another farm. Refractrometer - test colostrum.
- Before delivery, if possible, wash down mares hindquarters using warm water and soap. Remove smegma from between mammary glands - can be source of clostridia.
- Have foaling kit and contact details of vet on call.

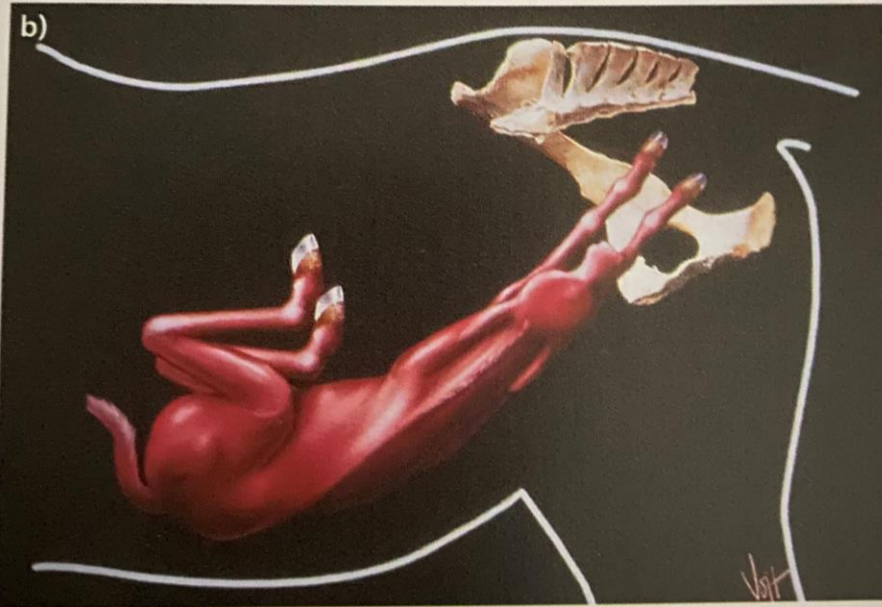
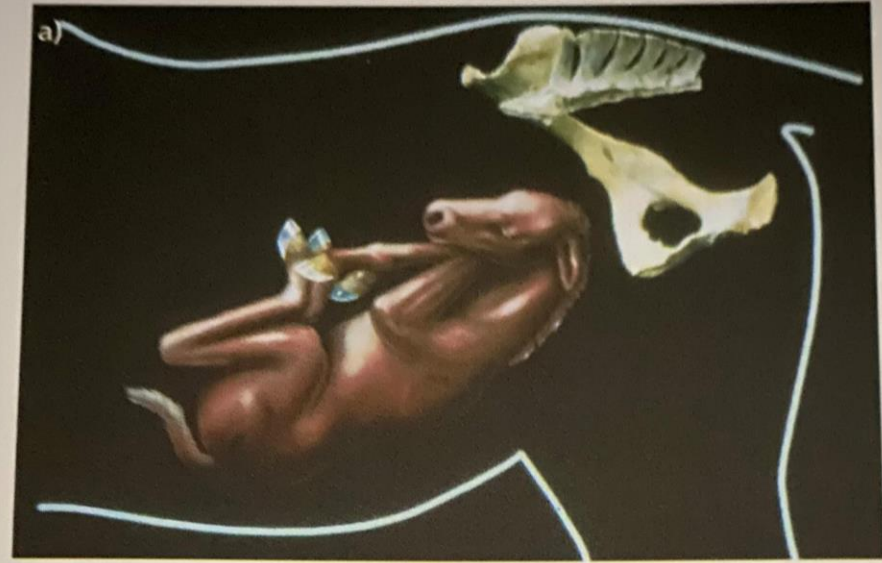


Fig 1: a) The full-term equine fetus is initially lying in a dorsopubic position with the head, neck and forelimbs flexed. b) As parturition ensues, the fetus makes purposeful movements and rotates through a dorso-iliac position, extending its head and forelimbs up into the birth canal.

At Birth



- Avoid routine use of assisted foaling. Where possible let mare foal naturally.
- Observe for 'red bag' and be ready to act
- Have an intervention plan if required – stage two normally 20-40 min
- Hygiene – perineum and vagina carefully cleaned before vaginal exam to determine position
- 'Allow foal enough time in the birth canal for normal transition of consciousness' – John Madigan

Immediately after the birth – The Foal

- Time to stand – up to 1 hour
- Time to first effective suckle – up to 2 hours
- May feed colostrum once strong suck reflex but has not drank from mare
- Delayed nursing – risk for sepsis even if mares' colostrum is good. Gut wall open in newborn foals - bacteria pass across as easily as colostrum antibodies. Hygiene of utmost importance first 24 hours after birth.
- Mares udder and hind quarters main source of infection. Clean mare well and tie placenta out of the way
- Disinfect umbilicus – 2.5% iodine/0.5% Hibiscrub



First few days

– what to
watch out for

The Foal

Neonatal Maladjustment syndrome (NMS)

- Most commonly caused by abnormal transition of consciousness at birth. Elevated levels of neurosteroids (pregnanes) relative to normal foals. If no concurrent sepsis or hypoxic injury to the brain, many foals recover following strong tactile stimulation (*Aleman and Madigan 2017*) – Madigan Squeeze. **Must** be done by vet or experienced clinician.
- Hypoxic injury causing NMS (PPAS)– won't respond to squeeze. Usually have ischaemic injury to brain and/or other organs such as gastrointestinal tract or kidney. Serious condition, usually requiring intensive care, with guarded prognosis in severely affected foals.



First few days – what to watch out for The Foal

Sepsis

- Can be difficult to differentiate from NMS. Foals often sleepy and not nursing similarly to NMS. Brick red mucous membranes and blood work useful in the differential diagnosis. Early aggressive treatment required, often in a hospital setting. Risk factors include placentitis, colostrum deprivation, foaling in a dirty environment, dystocia (difficult foaling).

Retained meconium

- More common in colts. Often associated with colic. Phosphate enemas work in mild cases but do not use more than two due to risk of hyperphosphatemia. Retention enema with Acetylcysteine is useful in refractory cases as well as fluid administration. Rarely, surgery is required.



First few days

– what to watch
out for

The Foal

Ruptured bladder

- Usually foal does not present with clinical signs until about 72 hours but handler may notice that the foal has not passed any urine or just very small amounts. Most common in colt foals. Surgical correction required and cases can be a medical emergency. Early intervention before foal becomes sick helps outcome. Diagnosed using abdominal scan and /or abdominocentesis.

Neonatal Isoerythrolysis

- Usually occurs in foals of multiparous mares. Foal absorbs maternally derived antibodies to its own Red Blood Cells from it's mothers colostrum. In mares where this has happened before, colostrum from the mare must be withheld until below 16 on refractometer and another source of colostrum given. Clinical signs include sleepiness, jaundice, exercise intolerance and depression. May have sudden or slow onset. Treatment involves fluid therapy to flush out breakdown products and in severe cases blood transfusion with dams washed Red Blood Cells.



Postpartum mare – routine care

Post foaling clinical exam

- Cardiovascular status – heart rate and hydration status
- Examination of vulva and vestibule
- Examination of the placenta – should be passed within 2 hours

What to watch out for:

- **Metritis** – usually caused by traumatic birth or Retained Foetal Membranes (RFM). Typically presents 2-4 days after foaling. Mare is depressed, off feed and fever in severe cases. Aggressive treatment with antibiotics, anti-inflammatories, oxytocin and repeated uterine lavage. Guarded prognosis if laminitis occurs. Checking placenta has been fully passed helps with early identification of RFM.
- **Post partum haemorrhage** – can occur before or during foaling. Bleeding may be into the broad ligament, uterus or abdomen with different presenting signs. Clinical signs depend on location. Broad ligament hematoma is very painful; bleeding into abdomen may be associated with shock and rapid death. Therapy depends on location. No agreement on which treatments, if any, work best

