

# HORSE AROUND

New Mexico

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FREE



# Examination of the

# Foal

by Stacie Boswell, DVM, DACVPS

Spring is the time of new life, and this time of year brings our new equine prospects into the world. When everything goes well, the hope and joy experienced with our foals is wonderful! Here are a few pointers on what a veterinarian will evaluate when examining your new foal. Additionally, you should know what observations warrant a call to a veterinarian during the birthing process, and with the subsequent foal.

**Parturition:** From the time the “water breaks” (chorioallantois ruptures), to the time the foal is expelled should be 30 minutes or less. The foal should be positioned as a diver, with both front limbs and the head extended. The placenta should pass within 1-4 hours, and should be intact (see Figure 2). The foal should stand within an hour, and suckle within 2 hours.

If the mare has not made significant progress in 20 minutes, call a veterinarian immediately. Other reasons to call for assistance include observing an abnormal position (anything other than the “diver” position), seeing a “Red Bag” (premature placental separation), or a delay in passage of the placenta.

**Examination of the Foal:** It is generally recommended to have your new foal examined within 12-24 hours of birth to ensure that he is off to a great start.

## Basic Physical Examination of the Foal

The initial assessment of the foal includes the temperature, pulse, and respiration of the foal. A fever may indicate infection, which may be identified during the remainder of the examination. If a foal acquires pneumonia, it will have a marked change in respiratory rate and effort. As I listen to the foal’s lungs with my stethoscope, excessive or abnormal respiratory noise will be cause for



Figure 2: A mare nuzzles her foal just after birth. The placenta has already been passed and is visible in the background.

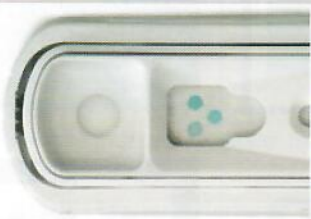


Figure 3: A normal result on the commercial kit testing for IgG antibody levels to ensure that adequate passive transfer has occurred.

## Foal examination includes:

- Evaluation of the placenta.
- Basic physical examination.
- Testing of passive transfer of immunity.
- Evaluation of the limbs.
- Special attention to ribs, palate, and umbilicus.



Figure 4: A foal with mildly contracted forelimbs. The foal buckles slightly at the knees, and typical extensor tendon prominence can be seen on the front of the left leg.



Figure 1 A normal foal about an hour after birth.

concern and further treatment. The pulse is important, although on a foal I am evaluating the quality of the heart beat as well. A heart murmur may be present as the foal’s body changes from specialized fetal circulation to normal physiological circulation. The murmur should resolve in 1-2 days. In my experience, a robust and full-term foal will only very rarely be born with this murmur.

## Evaluation of Passive Transfer of Immunity

It is very important that horses (and other equine species) get passive transfer of immunity from their dam through the colostrum. The colostrum is the first milk the mare produces, which is rich in IgG antibodies. It is more yellow, thick, and sticky than the milk she will produce for the remainder of the pregnancy. The foal must ingest enough IgG through the colostrum in the first 24 hours of life. All foals should have their IgG levels evaluated. There is a commercially available test kit (see Figure 3). If the foal does not adequately absorb IgG, the immune system will fail and the foal will be susceptible to pneumonia and “joint ill” (infected joints), to name a few of the common infections that occur without this critical protein.

## Examination of the Limbs

Early identification and treatment of limbs is critical to a foal’s athletic prospects. Young foals may have tendon laxity or tendon contracture. In mild cases, each of these problems may be treated with exercise restriction and both typically improve over time. Laxity manifests

with dropped fetlocks, and the toes often don't touch the ground. In severe cases, the fetlocks may touch the ground as the foal walks, and the skin may be rubbed raw. In these cases, medical treatment is necessary. On the other end of the spectrum, the contracted foal buckles at the knees, and may walk on his "tippy toes" with the heel barely touching or not touching the ground. The extensor tendon on the front of the limb will appear tight and prominent (see Figure 4). Administration of oxytetracycline (an antibiotic) helps relax the contracture, but the scientific explanation for the mechanism of action is poorly understood. Again, the most severe cases need the most medical attention. Foals can be so contracted that they will walk on their fetlock joint, in which case the skin quickly is rubbed raw, and can become so damaged that bone is exposed. As mentioned in the previous section, the joints of a foal may become infected. Early identification and treatment of this problem is key for successful resolution of the infection and restoration of normal joint function.

As the foal ages, growth abnormalities can result in crooked legs. At the right age, the growth can be surgically corrected so that the foal will develop proper conformation with athletic abilities. The age at which these growth abnormalities are treatable depends on which joint is affected (see Figures 5 and 6).

### Special Examination

Several additional and important areas on foals should be evaluated. This includes the ribs, palate, umbilicus. Foals on intensively managed farms (for example, the racehorse industry) are often born with a foaling attendant observing them and assisted delivery. It turns out that this management practice must be used with caution as improper pulling commonly results in rib fractures. A difficult birth (even though it may appear normal) can also result in fractured ribs. Each and



Figure 5: (Left) A foal with abnormal joint angles; these can be due to growth discrepancies.



Figure 6: (Right) The same foal as Figure 5 showing the abnormalities in the hind limbs.



Figure 7: A normal foal will suckle many times in an hour.

**A foal should be suckling at least 3-5 times per hour during its first week of life (Figure 7). You know they are getting enough to eat when they lie down and sleep comfortably.**



Figure 8: A congenital umbilical hernia, in which intestines may become entrapped.

every rib should be palpated on the foaling examination to ensure they are all intact.

The horse's palate is unique from other species in that a cleft palate will be at the back of the mouth, rather than visible from the front. It is difficult to visualize this area, and palpation of the roof of the mouth is the best way to identify this abnormality. Foals with a cleft palate may drip milk from their nostrils as they drink. Because the mouth and the respiratory tract have an abnormal communication, aspiration of milk will ultimately result in pneumonia. These foals need intensive management for survival.

The umbilicus can have several problems, including infection (often related to failure of passive transfer), and umbilical hernias. A hernia is a defect in the body wall (see Figure 8). This defect can result in intestinal entrapment, which is an emergency.

### Other Abnormalities that Warrant Veterinary Care

If your foal appears depressed, has a fever (over 102oF), has difficulty breathing, or is straining to urinate or defecate he should definitely be examined. A foal should be suckling at least 3-5 times per hour during its first week of life (Figure 7). You know they are getting enough to eat when they lie down and sleep comfortably. If a foal is constantly seeking the udder, the mare's milk production should be evaluated. However, if they are weak and appear to have trouble standing or moving, they should be examined.

Although I have discussed many problems here, the majority of births are uneventful and result in a healthy and vigorous foal. However, should a problem arise, early medical attention is critical to foal survival.

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