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Crooked Legs in Foals

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As springtime approaches many horse breeders are waiting, with fingers crossed, hoping for foals with nice straight legs.

Angular Limb Deformity (ALD) is the term used to describe legs that appear crooked when viewed from the front or back. The term "valgus" is used when the lower part of the leg is angled outwards, and "varus" when the lower part of the leg is angled inwards (see Figure 1).

There are a couple of reasons why a foal's legs may be crooked, which will be discussed herein.

Laxity of Periarticular Structures
This is the reason for the classic appearance of a "windswept" newborn foal. Newborn foals may have laxity in the collateral ligaments and joint capsules during the first few days of life, and thus they look crooked in multiple joints and multiple legs.

There is some evidence that this may be due to hormonal imbalance or intrauterine positioning. The good news is that generally these crooked legs improve within days without specific treatment.

Asymmetrical growth of the growth plate
There are growth plates in the end of the long bones in the radius (just above the carpus) and the cannon bone (just above the fetlock) that can grow asymmetrically. Sometimes the bone can correct itself overtime, especially with supportive care.

However, in some cases surgical intervention is required to correct the assymmetry. Surgery most commonly consists of placement of a screw across the growth plate to stop growth of the one side, and allow the other side to catch up (Figure 2).

The growth plate above the fetlock is closed by roughly 3 months of age, so if the foal is still crooked from the fetlock region at roughly 1 month of age, surgery is recommended to surgically correct. The growth plate above the carpus is open longer, therefore if the foal is still crooked from the carpus region at roughly 4-5 months of age surgery is recommended.

If they are quite severely crooked surgery may be recommended earlier.

Incomplete Ossification of the carpal or tarsal bones
The small bones in the carpus and tarsus start out as cartilage templates and by the time the foal is born they should be fully turned into bone. In certain scenarios (ie. premature foals, hypothyroid foals, placentitis), the bones have not matured properly and are susceptible to becoming "crushed". As they can crush asymmetrically, this can cause the leg to become crooked. Incomplete ossification is a very severe problem, but fortunately is not very common!

With all type of crooked legs veterinarians may recommend rasping the foot and/or applying a shoe with an extension to help hold the foot straighter and to prevent uneven wear of the foot.

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Additionally, it is very important to keep crooked leg foals confined to a small area to decrease risk of the damaging asymmetrical loads on their joints. Don't hesitate to contact your local veterinarian if you have any questions about your foal's legs.

The good news is that the majority of foals with crooked legs are treatable when the managed correctly within the appropriate time line!

Figure 1: (Left) – Foal with tarsal valgus in both hind legs. (Right)- Foal with fetlock varus in the left hind leg.
Figure 2: Radiograph of a carpus showing a transphyseal screw placed across the growth plate to stop growth on one side, and allow the other side to catch up. Screw is removed when the leg is straight.

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