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*A Tradition of Leadership and Excellence in Equine Medicine*

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## **Transphyseal bridging**

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We are seeing quite a number of yearlings with subtle to moderate carpal angular deformities. Some are knock-kneed, but most are bow-legged. Many of these also have bench-kneed conformation. The bench-kneed conformation cannot be corrected, but the angular limb deformity can be corrected by some form of transphyseal bridging which can be accomplished either with screws and wire or a staple. It seems that the use of staples has seen a resurgence in popularity after being out of favor for 15-20 years. Both procedures are based on the fact that compression on one side of a growth plate (physis) will slow the growth on that side. These procedures absolutely do work. If the implants are not removed when the leg is straight, overcorrection will occur as long as the bone is still growing. Some have said that staples cause less blemish. This is very debatable. It has also been said that staples will correct the deformity faster. This is not true. When screws and wire are placed, the growth plate is put under immediate compression, while compression of the growth plate with a staple only occurs as the radius grows against the two arms of the staple. Speed of correction is important, especially in yearlings, as either procedure requires that the radius continue to grow. Growth in length of the radius slows dramatically after horses reach 12 months of age.

Having said all that, we do have staples and will be happy to use them for you if you desire. We do encourage you to continually observe your young growing horses as angular limb deformities most commonly occur at birth, which we believe will usually correct without surgery, but the less common developmental deformities can occur at any age until they stop growing. The latter almost always require surgery. The younger we can catch these; the easier (quicker) they can be corrected with surgery. From a management stand point that may mean close observation of the weanlings. It seems that many of these short yearlings we are doing now were found when they were inspected for sale.

If you have any questions about these procedures please give me, or any of us, a call.