

Ballerina foals

Treatment options exist for painful condition that compromises future athletic potential

by **Kenneth L. Marcella D.V.M.**

ALMOST as soon as the New Year's foals begin hitting the ground, the calls come in. Some foals will be born with very upright legs, joints that are much too straight and do not bend properly, and even with heels that will not touch the ground. These foals commonly are said to have contracted tendons.

Veterinarians now know it is not really the tendons that have contracted. These problems are due to a shortening of the entire musculotendinous unit, which encompasses the tendon, its associated muscles, and the areas where these structures attach to bones.

This entire unit is shortened in relation to the surrounding bones, and the joints involved are therefore held

in a somewhat closed or flexed position. The proper term for this condition in the horse is flexure deformity.

Ballerina foals

Flexure deformities are either congenital (present at birth) or acquired (foals born normally but begin to show this condition as they grow and develop).

Congenital flexure deformities have been suggested to occur because of uterine malpositioning (an abnormal positioning of the fetus while in utero that does not allow it to move its limbs and results in cramped, flexed joints at birth), nutritional mismanagement of the broodmare during gestation (allowing too-rapid fetal growth or inappropriate growth of bones versus tendons

and ligaments because of dietary imbalances relating to protein, calories, and minerals), exposure to some viruses (an influenza effect has been postulated), or a possible genetic factor.

These foals have been described as "ballerinas" because they walk on their toes and their heels do not touch the ground. Usually only the front feet are affected.

Within a very short time the toes of these foals become painful and the stretch of the deep digital flexor tendon attached to the back of the heel adds to that pain. The deep digital flexor tendon is the musculotendinous unit most commonly involved in these toe-touching foals.

The young foals become reluctant to bear weight and they do not move and exercise.

If the congenital deformity is in the fetlocks or carpi (knees), these joints tend to buckle forward even though the hooves are flat on the ground. Exercise and movement usually stretch out these tight tendons, and a large number of congenital flexure deformity cases resolve themselves within a few days with simple turnout and exercise. Slightly more severe cases quickly can become worse because deformities can be self-perpetuating problems. Exercise helps, but the foal's toes are so sore that it will not stand and exercise.

Acquired flexure deformities usually reflect problems with abnormally rapid growth of bone compared with slower tendon and ligament development.

These periods of rapid growth are related to developmental patterns, so flexure problems of the deep digital flexor tendon affecting the coffin joint tend to occur between six weeks and six months.

The development of the radial bone and the superficial digital flexor tendon tend to show problems in the fetlock joints around ten months to one year.

Flexure deformity involving the knee can occur from one to six months, though growth of all foals is unique and these time sequences can vary.

Multiple causes

Acquired deformities are influenced by genetics as large, rapidly growing foals tend to have more problems, and by nutrition as over-feeding or excess nutrients are implicated in growth imbalances.

Pain from injury or trauma also can cause imbalanced use of one limb over another, leading to a flexure deformity as well. These foals with acquired deformities may exhibit clinical signs ranging from mild stiffness or lameness at certain gaits, reluctance to trot or canter, inability to stand and graze normally, to a square or boxy-looking foot, upright legs, or even joints that buckle forward. Early recognition of these flexure deformity conditions is the key to the success of the many treatment options available.

Many foals respond to the exercise.

Physiotherapy—manually stretching the legs two to three times daily—can be helpful. Some clinicians



Stretch Beyond Your Expectations.®

Equine Dynasplint® Systems The Gentle Solution To Correct Orthopedic Problems

Dynasplint® Systems aid in restoring physical function to equine patients with limited joint range of motion, congenital and acquired contractures, and angular deformities.

The key to its effectiveness is the low-load, prolonged-duration stretch (LLPS) technology that delivers a biomechanically correct stimulus to create a permanent length change in shortened connective tissue.

- Gentle, safe, and non-invasive
- Simple, adjustable, and reproducible bi-lateral tensioning system
- Conveniently labeled and easy to use
- Trained representative, where available, can assist with custom fittings and follow-ups
- Comfortable fit
- Affordable rental programs

Experience, Reliability, Knowledge, Service, Support—Results.
Stretch Beyond Your Expectations.®

Used to treat:

- Varus/Valgus deviations of the Carpus, Tarsus, and Fetlock
- Laxity of the Carpus and Fetlock
- Contractures of the Carpus, Fetlock, and Distal Interphalangeal Joint
- Post-Surgical Support
- Support of dominant, weight-bearing limbs
- ...and much more

**TO ORDER
EQUINE DYNASPLINT®
SYSTEMS CALL**

Veterinary Division:

800.638.6771 x2222 toll-free
800 DynaMet for
vet@dynamplint.com

www.dynamplint.com





Photos by Kenneth L. Marcella, D.V.M.

OFF THE GROUND

A foal suffering from congenital flexure deformities of both front feet displays the typical "ballerina" stance up on its toes, a problem that can be corrected by a farrier who shapes and attaches a piece of PVC pipe to the hoof (inset)



advocate hopping or holding up one leg and encouraging the foal to hop forward on the other to stretch tendons.

Many veterinarians utilize intravenous administration of relatively large doses of oxytetracycline, which has been postulated to affect calcium utilization in the tendon and to affect cross-linking within the fibers, resulting in softening and stretching.

Various types of bandages and splints have been used for flexure deformity conditions to help place the joints in correct position and encourage stretching of the tendons.

The Dynasplint, a jointed, stainless steel tubing brace that allows normal limb movement while still providing tendon stretch, has been very successful in treating many cases of flexure limb deformities ("Veterinary Topics," November 12, 2005).

Treatment options

Some horse owners do not have the time for intense physiology; they are aware of the potential for adverse reactions with oxytetracycline use, and they worry about bandage pressure sores and splint rubs with those methods of treatment.

For this large number of owners, the most commonly utilized means of treating flexure deformities still involves some method of trimming the hooves and providing for toe extension.

Farriers generally will attempt to slowly lower the heels to provide stretch to the flexure tendons. An extended toe is applied to act as a level and allow the foal's own weight to

slowly stretch the tendons. These toe extensions are commonly built out of aluminum plates, fiberglass and resin, or various epoxy-like materials that bind to the hoof and can be ground

down and shaped into the correct angle and amount of extension.

A novel method of flexure tendon deformity treatment utilizes standard hoof trimming with specially cut PVC pipe pieces attached with

"Despite the recent advances in breeding, nutrition, and farm management, flexure deformities continue to be seen at an alarmingly high rate."

Steven O'Grady, D.V.M.,
veterinarian and master farrier

epoxy. The pipe pieces are inexpensive and can be easily sized and cut. They attach to the hoof wall quickly and provide good, strong support for extension. They are well tolerated by the foal, and improvement is generally noted within days. Overall results will vary depending on the severity of the condition and the amount of time prior to initiating treatment. Most foals require a few applications to completely resolve the condition.

A small percentage of foals will not respond to conservative treatments and will require surgical intervention. In these cases, the inferior check ligament (a very dense, tight supporting ligament branch in the mid-cannon area) is severed, resulting in

tension release and stretching of the musculotendinous unit. Follow-up on these surgical cases still usually involves correct trimming and some type of toe extension.

"Despite the recent advances in breeding, nutrition, and farm management, flexure deformities continue to be seen at an alarmingly high rate," said veterinarian and master farrier Steven O'Grady, D.V.M., of Northern Virginia Equine. "Interaction between veterinarian and farrier is necessary for a successful outcome when treating flexure deformities, regardless of whether treatment is conservative or surgical."

Early recognition of these conditions by horse men and quick utilization of one of the many techniques for treatment also can make a difference in the long-term conformation, health, and athletic potential of that foal. Owners seeking an easy, effective, conservative treatment might consider PVC pipe extensions as one such method of treatment. *



Kenneth L. Marcella, D.V.M., is a practicing veterinarian in Canton, Georgia.

Mares Bred/Live Foals Less Than 80%?



PROBLEM BROODMARES?

"We have been using Body Builder™ for years with very good results. This year we have 162 babies. We treat 80 mares and born a problem broodmare last year with us just on Body Builder™ ALL 80 got in foal first cover!" —Pete Robertson, Emerald Grove Farms

"She is 21 and hasn't conceived for three years. She is now near 22 months pregnant, and she and the foal are very happy!"

"This mare had 6 previous foals and never caught on foal heat. We put her on Body Builder™ for her last 2 pregnancies. She got the foal on foal heat, conceived and had 2 perfect babies."

"Last year her foals were born one month premature. This year we put the mare on Body Builder™ and she had full term and produced a big, strong stallion!"

"The Vet said it was a case of Ectopic which means the mare had less than a 50% chance of ever producing a live foal. We decided to try Body Builder™ for the last 4 months of pregnancy. She carried to term and had a colic-free foal at birth. Since then she has had 2 more perfect pregnancies and babies on Body Builder™. The mare got the foal each year on foal heat."

Rice Bran Oil Extract[®] contain the natural compound GAMMA ORYZANOL. Rice Bran Oil Extract is known to naturally increase production of testosterone in males and estrogen in the females, creating increased fertility, easier conception, and healthier pregnancies. Body Builder™ is a unique, specially formulated emulsified liquid concentrate, which means that the absorption of the compound is greatly enhanced and effective. If a product isn't absorbed it has no positive effect. Body Builder™ gets absorbed! That is WHY Body Builder™ works, and others don't.

"For the past few years I have been using your product, Body Builder™ on my broodmares and have found a significant improvement in their overall condition during gestation."

E.H., DVM

"We use Body Builder™ for maintaining optimal body condition and helping mares cope with stress."

Perfect HorseMag, J.L.

"We've been using Body Builder™ for sales prep for yearlings and yearlings with great success. We began using it on older mares that needed better condition. We had some problem mares which would not stay in foal. After baby on Body Builder™, all of them conceived and had healthy foals. Last year we had 22 pregnancies. Some were old mares and some were maidens. It's total 11 on Body Builder™. The veterinarian commented on how thick the mares were seen to be pregnancy on all of the mares. They all calved within 60 days and were all bred during the first two weeks of breeding season, and all 11 got in foal on one cover!"

J.H., Versailles KY.

"17 years of ~~success~~ and satisfied customers, we use only the best rice bran oil extract in our supplements. We use nothing but the most expensive and best ingredients in our proprietary blend. That is why we've been the best in the industry."

SATISFACTION GUARANTEED!

10% off if you order online. With a promotional code.

Natural Alternative to Anabolic Steroids

STALLION MANAGERS STUD PROBLEMS?



"I have had my stallion on Body Builder™ for several years now, and I can tell you that they are more relaxed, more docile and I had more than 50% conception rate. Especially if the mares are also on Body Builder™ M.P."

"I was called upon a World Champion national and went to stall. He could only service just a handful of mares. Everything was tried. He went on an extensive program with Body Builder™. That year he serviced his full book, and continued on. It would of been a disaster otherwise, as he turned out to be a world class sire" A.E.

Call to order direct: **EQUIADE, INC.**

Available through KV VET, Big Deal's, Dover, Jeffers, K&G Int'l, Stammons, Lakeland Vet, Heartland Vet Supply, Dressage, Run For Fun Stables, Maryland Equine Medical Institute, Pinkston's, Farmveterian, etc. or talk shops, your veterinarian, or call today direct: **800-413-3702 • 201-368-5551 or fax 201-368-0084 • www.Equide.com**

Have a question for a veterinarian?

We invite you to submit questions relating to your horse's health, care, and training for consideration as a topic for the THOROUGHBRED TIMES Veterinary Topics column. If you need an immediate answer or have an emergency, contact your local veterinarian. Please send your question to:

THOROUGHBRED TIMES
P.O. Box 8237
Lexington, KY 40533-8237
Fax: (859) 260-9812
Or e-mail us at:
letters@thoroughbredtimes.com