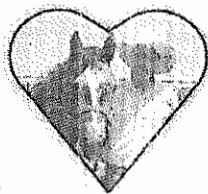


Hey Neighbor



For The Love Of Horses

By Frank J. Buchman

Bone Density Key To Shin Bucks In Horses

Shin bucks are an often preventable and usually curable problem in young, high-speed performance horses.

Although not occurring in the majority of horses, bucked shins, or shin bucks, synonymous terminology, are common in the race horse industry, and can be an ailment in some other horses, according to Mark Kulow, Colorado State animal science graduate and professional race horse trainer.

"Basically when the membrane on the front of the cannon bone in the front legs shears away from the bone itself, we call that a bucked shin," explained Kulow.

In young horses, the anterior surface of the cannon bone is softer and less dense than in older horses. "Therefore, it is more likely that the connective tissue will tear away from the bone under the pressure involved in high speed workouts," Kulow related.

Many factors can affect bone density. "Proper nutrition is critical to bone development in young horses," continued Kulow, who's been training Arabian and Thoroughbred race horses

"In a more serious shin buck, the tearing process may produce a tiny micro-fracture on the surface of the bone at the individual points of attachment," the trainer noted.

Shin bucks typically occur in horses from two to five years of age. There is usually not a problem in older horses, but it can occur in younger horses put into stressful training too early.

The natural process is for the bone to increase in density in the area of stress. "The key is to provide a certain amount of time for the bone to heal and strengthen itself," Kulow commented.

"Too much rest will allow the new bone growth to be reabsorbed, negating the opposite effect of stress. Insufficient rest can cause these micro-fractures to spiderweb into a larger and more serious stress fracture."

"Once this occurs, the horse will need a significant amount of time off to allow the fracture to heal," the trainer said. An x-ray is necessary to determine the degree of damage, for treatment to be started.

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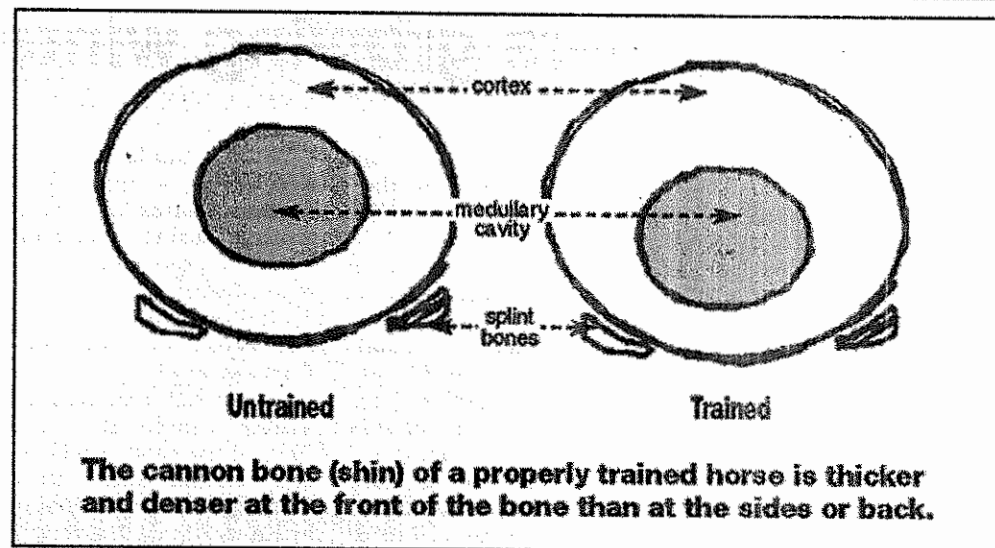
prevent shin bucks. "Rations for developing horses must contain adequate calcium, potassium and protein for good bone building," Kulow emphasized.

Studies have shown that the slow speed jog will not produce the right bone density, due to the fact that the principle strain direction is different than it is for the faster working gait.

"My recommendation for a week of training is two days on the jogging wheel, three days of a mile gallop with one speed work at the end of a gallop and two days off," Kulow said.

Treatment of shin bucks should be a combination of hot and cold.

"I suggest using a cold water or ice treatment on the first day, and then alter-



The cannon bone (shin) of a properly trained horse is thicker and denser at the front of the bone than at the sides or back.

A cross-section of an untrained horse's cannon bone shows that the bone is of equal thickness all around. This same horse, after six months of training, would have a cannon bone with more thickness of bone on the front.

nate with a mild blistering agent that will create a minor injury to draw healing agents in the body back into the area," the trainer recommended.

Exercise is a necessary part of the healing process. "I think the lame horse should be exercised every other day on the jogging wheel at an extended trot until there are signs that it is too painful to continue.

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for over a decade. Exercise is critical to bone maturation, although it is an often overlooked factor. "Immature horses should be on an exercise program. This can be competitive playing in a large pasture or on a jogging wheel that will increase bone density through consistent pressure, while moving at an extended trot," the trainer described. "Bones will increase in density and strength when they are put under stress," Kulow emphasized.

When a horse goes lame in race training, shin bucks should be considered as a possible ailment. "A hematoma forms just under the surface on the front of the cannon bone below the knee and above the ankle. It feels like a small bump, and there will be a slight amount of heat in the area," Kulow pointed out.

Running a finger quickly in a downward motion over the affected area will cause an immediate reaction due to the painful nature of this condition. Shin bucks typically occur in both front legs, but occasionally, it can only be a problem in one leg.

the day using cold treatment, which can be applied after the exercise. Once the pain does not appear to be a problem, it is safe to begin the higher level of training in a moderate fashion," Kulow confirmed.

Rest is the final part of the treatment process. "There is a fine balance from the time the injury occurs, treatment begins and an exercise program initiated. It's important to prevent additional injury and yet not lose bone growth that began when the bone was stressed."

It typically requires four to six weeks to get a shin-bucked horse back into training.

Shin bucks are not usually a lifelong problem in horses. However, in a few instances permanent damage can occur when there is lack of appropriate treatment.

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Too much rest will allow the new bone growth to be reabsorbed, negating the opposite effect of stress. Insufficient rest can cause these micro fractures to spider-web into a larger and more serious stress fracture.

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Studies have shown that the slow speed jog will not produce the right bone density, due to the fact that the principle strain direction is different than it is for the faster working gait. "The extended trot produces a strain in the bone that is more in line with the high speed gaits," the trainer confirmed.

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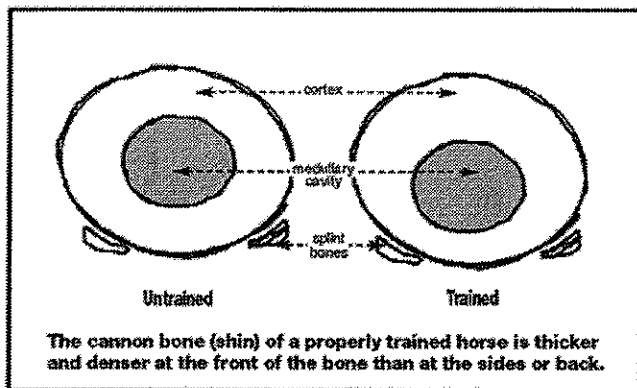
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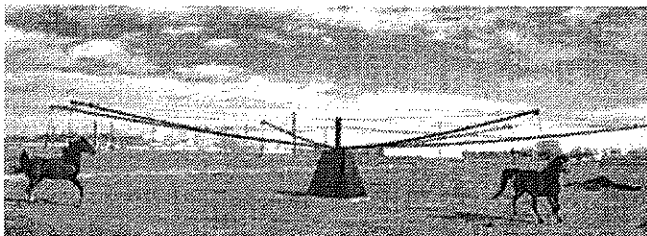
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A recommended training regime for race horses is two days on the jogging wheel, three days of a mile gallop with one speed work at the end of a gallop and two days off.