



NUTRIFAX

Nutrition News and Information Update



Bone Chips

A Common Cause of Lameness and Poor Performance in Standardbred Racehorses.

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Bone Chips, or chip fractures of horses' joints are correctly termed "osteochondral fragments" and are commonly found in Standardbred racehorses. Small chips of bone from the fetlock can cause a variety of symptoms from very low grade lameness to poor racing performance. Although this condition can occur in all performance horses, it is most common in Standardbred Trotters and Pacers. Two-Year Olds in training are particularly susceptible, due to the rigors of training, and may be more prone to develop various types of bone chips and fractures at this early age.

What is the Cause?

Chips, or fragments, occur for two main reasons: First, defective development of the bone (called osteochondrosis) whereby the bone fragments under normal loads, or secondly, uneven loading or trauma to normal bone where the bone fragments are under uneven pressure.

Chip fractures can range in size from miniscule to as large as the tip of a human finger. However, the size of the debris is of less significance than the amount of fragments shed. Chip fractures can happen in all joints, but are most commonly found in the fetlock (ankles) and the carpus (knees). There is a 20% chance, to estimates as high as 50%, that a horse will experience some type of bone chip trauma sometime in its life. Furthermore, it has been estimated that about 15% of horses have some type of chip that will occur during adolescent play long before they begin training.

If the chip fractures occur when a horse is still growing, or during a short period of rest, the joint will try to isolate the fragment by surrounding it with scar tissue. This renders the chip smooth and non-irritating. The bone chips that cause problems are those that are shed within a joint and result in various levels of irritation.

How do Bone Chips affect Athletic Ability?

One study involving 176 Standardbred horses that underwent arthroscopic surgery for chip fractures indicated that 74% of horses made at least one start following surgery - and pacers were significantly more likely to have at least one start after surgery than were trotters. While it is concluded that the majority of Standardbreds will resume racing following surgery for bone chips, it is also true that most earn less money per start and many race in a lower class.

Another study of 119 horses, of which 92% were Standardbreds that had undergone similar surgery to remove bone chips revealed that most horses were young, with 78% being less than three years of age. 95% of the bone chips were found in the hind fetlock, and nearly 20% of the horses had chips in both hind fetlock joints. In 63% of the cases, surgery returned the horses to perform at preoperative levels.

What are the Treatment Options?

The amount of trouble the chip is causing the horse is the determining factor regarding the type of treatment required.

Arthroscopic surgery, discussed earlier, is a procedure designed to remove fragment debris and should be followed by a period of rest and recovery. This action is normally taken in cases whereby performance activity is severely restricted. On the other hand, chips that are mildly irritating to the joint causing increased watery fluid, but no indication of lameness, can usually be controlled by joint fluid supplementation and anti-inflammatories. Chip fractures that are in innocuous locations and are surrounded by scar tissue and not causing joint irritation are usually best left undisturbed.

Conclusions

Bone chips are a common problem, particularly among younger Standardbred horses, although any performance horse may suffer from this condition. The symptoms range from mild irritation to lameness. Mild cases of single fragments may be rendered innocuous by scar tissue, similar to how an oyster makes a pearl. In more severe cases, many horses are successfully treated arthroscopically and return to various degrees of presurgical performance levels.

Proper nutrition is critical, particularly in the early years, to provide all of the Mineral and Vitamins necessary for optimal growth and development of the growing horse. EQUILINE Foal Ration and EQUILINE Yearling Conditioner Ration from Shur-Gain have been developed to address these issues.

Care should be taken not to over exert during training sessions in the early stages of development to reduce the possibility of trauma to normal bone.

Bone chips may cause a horse to become unbalanced, or favour a limb to avoid discomfort, and the cause of this discomfort may not be immediately evident to the owner or trainer without Veterinary consultation.

Note – the information contained within this Nutrifax has been gathered from numerous articles on the subject. Special thanks to the following contributors:

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