

**BLEMISHES
and
UNSOUNDNESSES**

A blemish is a defect (lump, bump, scar, etc.) that detracts from a horse's appearance, but doesn't affect its soundness or usability. They can be caused by poor conformation, overwork, or injury. They are not desirable in certain types of show horses. They are usually permanent.

An unsoundness is an injury or condition that causes the horse pain or discomfort. Some unsoundnesses can turn into blemishes. An unsoundness can be chronic, which means it never really goes away. Some chronic conditions can be managed with special care and/or shoeing and trimming. The horse can be used with some types of unsoundnesses, but may need to have its workload reduced. Other unsoundnesses will require the horse be rested, either temporarily or permanently, and may require a period of stall rest.

SPLINT

Often starts as an unsoundness and ends up as a blemish.

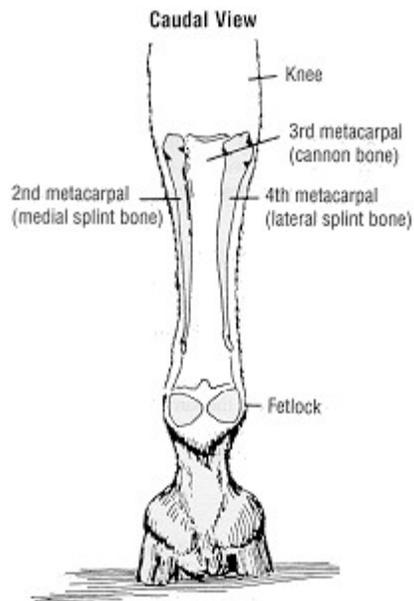


Figure 1

Splints is an ailment of the horse or pony, characterized by a hard, bony swelling, usually on the inside of a front leg, between the splint and cannon bone or on the splint bone itself. It may be "hot," meaning that it occurred recently and is still painful, and usually has a soft swelling; or "cold," meaning that the splint has completely recovered and there is no longer pain associated with it, though the small hard bump usually remains.

The splint bones, (metacarpal or metatarsal II and IV), which are remnants of two of the five toes of prehistoric horses, run down either side of the cannon bone. They narrow as they go from the carpal or tarsal joint down, and end a few inches above the fetlock. Splint bones are attached to the cannon by the interosseous ligament, providing some mobility in the young horse. As the horse ages, the interosseous ligament is typically replaced by bone. In some older horses, the cannon and splint bones may become completely fused.

Blind splints

Because the splint bone does have some mobility independent of the cannon bone, it can cause tension and strain on the periosteum of the splint bone where the interosseous ligament attaches. The horse will then lay down new bone and the area will become inflamed. "Blind splints" are named because the bony reaction happens on the inside border between the splint bone and cannon bone, where it can not be seen, and is usually not palpable. Besides causing pain as any active splint reaction can, the swelling can impinge on the suspensory ligament. This condition is difficult to diagnose, but ultrasound is generally diagnostic. MRI and CT also show these well.

Symptoms

Splints usually cause mild lameness (a grade of 1–2 out of 5). The injured area is hot, painful, and inflamed with a small bony swelling. However, splints do not always cause lameness, especially once "cold". More severe lameness is sometimes associated with a fractured splint bone, or soft tissue injury adjacent to the splints.

"Blind splints" usually produce mild lameness that is difficult to pinpoint because there is no obvious swelling, pain, or bony changes related to the exterior of the splint bone.

The body will eventually absorb some of the bone it placed down in the splint, flattening out the splint over several months and possibly making it completely disappear. A splint involving the cannon alone is more likely to disappear than one involving the splint bone itself.

Treatment

The horse should have a reduced workload for 1–3 weeks. If the workload is not decreased sufficiently, and the splint bone continues to receive concussion, the injury is likely to continue or worsen. Light exercise on soft ground is best for a horse with splints, as work can help encourage the needed bone growth to heal the splint. Those concerned with the cosmetic appearance of the horse usually prefer to hand-walk twice daily and keep the animal stalled until the splint is resolved, eliminating the chance that the splint will accidentally be knocked during work and the swelling increased.

Several days of cold therapy, sweats, and NSAIDs can help a "hot" splint. NSAIDs can help reduce the inflammation and help the bone growth by doing so. However, none of these treatments are incredibly effective. The most important factor is time. Counter-irritants, or blistering, which increase inflammation, only hinder the formation of bone and can actually prolong the healing process.

Surgery to remove the fractured end of the splint bone, particularly in the lower third, is typically successful. However, surgical removal of the bone growth in large splints, performed by chiseling it away, usually does not produce satisfying results. Often, bone growth is stimulated by the surgery, and the size of the splint is increased. Only about a third of the time is surgery at all successful.

Prognosis

Prognosis is excellent in uncomplicated cases. The horse will be able to return to full work once the inflammation and pain ceases. Although the horse usually recovers quite quickly, horses with "blind splints" may take longer because there may be impingement on the suspensory ligament. The calcification of the splint is usually a permanent blemish, though over a period of many years, the excess calcification may be reabsorbed to some degree, occasionally to the point that the splint is no longer visible.

RINGBONE

Ringbone is an unsoundness.



Ringbone is exostosis (bone growth) in the pastern or coffin joint of a horse. In severe cases, the growth can encircle the bones, giving ringbone its name.

Ringbone can be classified by its location, with "high ringbone" occurring on the lower part of the large pastern bone or the upper part of the small pastern bone. "Low ringbone" occurs on the lower part of the small pastern bone or the upper part of the coffin bone. High ringbone is easier seen than low ringbone, as low ringbone occurs in the hoof of the horse. However, low ringbone may be seen if it becomes serious, as it creates a bony bump on the coronet of the horse.

Causes of Ringbone

Excessive tension on the tendons, ligaments, and joint capsules of the pastern area can strain the periosteum. The body compensates by growing bone at the stresspoint. Strain on the extensor tendon, the superficial digital flexor tendon branches, the collateral ligaments, and the distal sesamoidean ligaments are all common factors. If these tissues are stretched or torn, and the joint is unstabilized by the injury, new bone is produced to help to stabilize the joint.

Osteoarthritis of the pastern or coffin joint is a very common cause of articular ringbone. Bone is then produced to try to immobilize the joint and to relieve the chronic inflammation of the joint capsule. This process may take years, and lameness will continue until the joint is completely immobilized.

Trauma to the periosteum can cause bone growth on the pastern bone. However, this is usually not progressive unless nearby soft tissue was also harmed and thus the joint instability was affected.

Poor shoeing and conformation, such as long, sloping pasterns, upright pasterns, long-toes with low heels, pigeon toes, splay foot, or unbalanced feet may predispose the horse to ringbone, as they create uneven stress on the pastern and coffin joint, unequal tension on the soft tissues, or worsen the concussion that is absorbed by the pastern area.

Signs of Ringbone

Ringbone usually occurs in the front legs but can also be in the hind legs, and is usually worse in one leg than the other. Ringbone is most often found in mature horses, especially those in intensive training.

High ringbone: The horse will have a bony growth around the pastern area, and the pastern will have less mobility. The horse will show pain when the pastern joint is moved or rotated. Early cases will have a lameness score of 1-2 out of 5, with little or no bony swelling seen, although possibly felt when compared to the opposite pastern. Lameness will worsen to a grade 2-3 on a scale of 5 as the ringbone worsens.

Low ringbone: The horse will have moderate lameness (grade 2-3), even in early cases, because of the closeness of the ringbone to the other structures in the hoof. When severe or very advanced, the bony growth will be able to be seen on the coronet.

Treatment of Ringbone

Ringbone is degenerative (unless it is caused by direct trauma). Treatment works to slow down the progress of the bony changes and alleviate the horse's pain, rather than working to cure it.

Shoeing: The farrier should balance the hoof and apply a shoe that supports the heels and allows for an easy breakover. Closely followed-up corrective trimming by a qualified barefoot trimmer can also help to alleviate the pain.

NSAIDs: or non-steroidal anti-inflammatory drugs help to alleviate the pain and reduce inflammation within and around the joints. Often NSAIDs make the horse comfortable enough to continue ridden work, which is good for the horse's overall health.

Joint injections: The pastern joint can be injected directly, typically with a form of corticosteroid and hyaluronic acid.

Extracorporeal Shockwave Therapy: A high intensity specialized percussion device can help to remodel new bone tissue and decrease pain.

Arthrodesis: the fusion of the two bones of the pastern joints eliminates the instability of the joint, and thus the inflammation. This procedure may then eliminate the horse's lameness as well. However, surgical alteration of the joint can promote the growth of bone in the area, which is cosmetically displeasing. Arthrodesis of the coffin joint is usually not performed due to the location of the joint (within the hoof) and because the coffin joint needs some mobility for the horse to move correctly (unlike the pastern joint, which is very still).

Prognosis for Ringbone

If the ringbone is close to a joint, the prognosis for the horse's continued athletic use is not as good as if the ringbone is not near a joint. Ringbone that is progressing rapidly has a poorer prognosis as well.

Horses that are not performing strenuous work, such as jumping or working at speed, will probably be usable for years to come. However, horses competing in intense sports may not be able to continue at their previous level, as their pastern joints are constantly stressed.

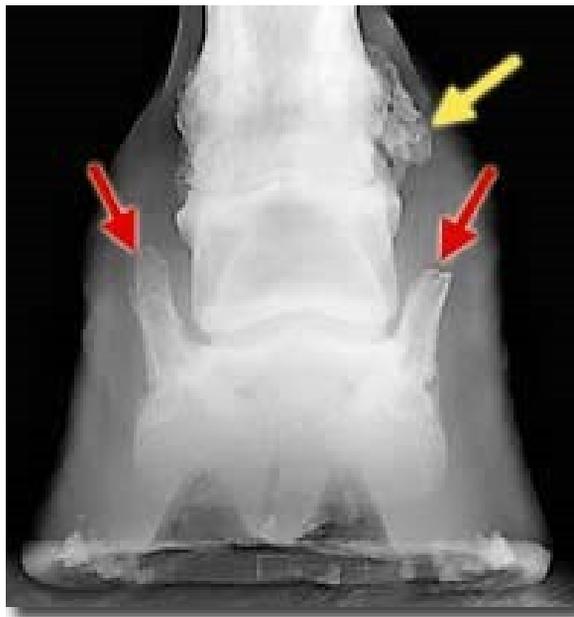
OSSELETS

Osselets start as an unsoundness, and may become a blemish.



SIDEBONE

Can be an unsoundness, and is rarely a blemish.



Osselets –yellow

Sidebone -red

Osselets

Osselets begin with chronic stress injury to the capsule of the front fetlock joint from repeated concussive forces . Horses with long or upright pasterns are predisposed to osselets.

During high speed work, the fetlock joints extend so much that the pasterns sink almost to ground level and a callous or osselet forms on the joint's front face where the top of the pastern bone strikes against the lower end of the cannon bone. The horse becomes lame, with a short, choppy gait.

As the condition worsens, the interior structures of the joints become more irritated, the fibrous joint capsule starts to thicken, and extra bone begins to form. Ulcerated cartilage leads to recurring inflammation and the horse's performance deteriorates quickly if rest and treatment are not provided.

Symptoms

Soreness in the front fetlock joint of one or both front feet

Visual presence of swelling and new bone growth on outside front of the fetlock joint

Arthritic symptoms

Short, choppy gait

Increasing lameness

Noticeably thickened joint capsule

Causes

Osselets are caused by repeated pounding of the long pastern bone against the lower end of the cannon bone while a horse is moving. Stretching and tearing of the fetlock joint capsule leads to acute arthritis.

If not treated, swelling and new bone growth on the outside front of the fetlock causes the horse to become extremely lame as the interior structures of the joints become more irritated.

Extra bone forms on the lower end of the cannon bone and the high end of the long pastern bone. As bone growth progresses and the area degenerates, the amount of flexion in the fetlock joint causes additional problems. Once the joint attachment becomes degraded, chronic lameness occurs.

Prevention

Prevention of osselets is best achieved through careful attention to the condition of a horse's front limbs, especially if engaged in hard training. Horses with long pasterns should be checked on a regular basis. .

In the initial stages, osselets can be sore, but given a period of rest, the pain subsides. Known as "green" osselets, the outlook is favorable if the horse is rested until inflammation is gone.

Treatment

Any indication of swelling or inflammation on the front of the fetlock joint should be treated promptly by resting the horse until all signs of inflammation are gone. Rest combined with treatment may cause the osselets to resolve to the point that the horse can resume normal work.

A veterinarian should be called in to x-ray the bone and joint. Acute, serious arthritis is treated like a sprain. Rest, along with cold and alternating temperature therapy, will help reduce swelling and inflammation.

Treatments may include injections of polysulfated glycosaminoglycan (Adequan) or sodium hyaluronate. In some cases, a veterinarian may recommend topical application of DMSO with or without steroids. .

In any case, a veterinarian's attention is required to prevent serious consequences from osselets.

SIDEBONE

Sidebone is a common condition of horses, characterized by the ossification of the collateral cartilages of the coffin bone. These are found on either side of the foot protruding above the level of the coronary band. The lateral cartilages support the hoof wall and provide an important role in the support and cushioning provided to the heel. The front feet are most commonly affected.

Causes

Repeated concussion of the foot is probably the cause in many cases. Such concussion could be produced when a horse is always worked on a hard surface. There also appears to be a hereditary component to sidebone but this may be because bad conformation is hereditary and bad conformation appears to predispose to sidebone. Bad conformation would include those with narrow, upright feet, those with unbalanced feet, especially if they have toe-in or toe-out conformation. Draft horses, or horses with a heavy build, are more likely to develop sidebone than light horses or ponies.

Symptoms

Sidebone may be associated with lameness but many horses with sidebone are not lame. Sidebone often gets blamed for being the cause of lameness when there is actually another cause.

Diagnosis

Careful examination of the collateral cartilages by palpation can give a good indication that they are solid and bony rather than firm, springy cartilage. Usually, however, sidebone is found accidentally when the foot is radiographed, as sidebone has few outward signs in most cases. In mild cases, there are small areas of calcification; more advanced cases will have ossification of the entire cartilage. Rarely, severe lameness can be caused by fracture of an ossified cartilage, or by ossification which deviates enough to impinge on the short pastern bone.

Treatment

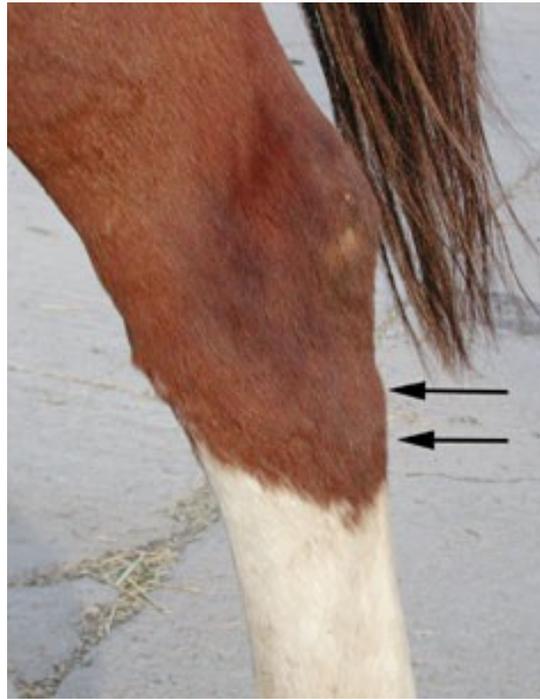
Sidebone usually does not cause any problems, but when it does it is difficult to treat. Box rest and Non-steroidal anti-inflammatory drugs such as bute may be useful. In some cases the only useful treatment is a neurectomy of the palmar digital nerves.

Prognosis

Many horses compete actively in demanding sports with sidebone, and are not hindered in any way. If the ossification is severe and associated with lameness then the prognosis is more guarded. Discovery of sidebone on an equine prepurchase exam without signs of lameness or local sensitivity should not affect the purchaser's opinion of the horse.

CURB

Starts as an unsoundness, usually ends up a blemish



CAPPED HOCK



Curb

Curb used to be defined as thickening of the long plantar ligament. However, with the widespread use of diagnostic ultrasonography in equine medicine, curb has been redefined as a collection of soft tissue injuries of the distal plantar hock region. Curb is a useful descriptive term when describing swelling in this area.

Sickle-hocked conformation is a predisposing risk factor for the development of curb.

Diagnosis

Curb as a visible blemish is an easy diagnosis, as swelling in the distal lateral hock region is, by definition, curb. However, ultrasound is an essential tool in the diagnosis and in establishing a treatment plan. Diagnostic anesthesia (local or nerve blocks) can be helpful, but is not perfectly specific in this area.

Treatment

Treatment generally consists of rest, followed by a controlled exercise program, based on clinical and ultrasound findings. Many other treatments related to tendon and ligament injuries have been tried. (See tendinitis)

A **capped hock** refers to the presence of a swelling which forms over the point of the horse's hock due to the accumulation of inflammatory fluid in a membrane lined cavity called a bursa. The wall of the bursa may thicken with the formation of fibrous tissue due to the low-grade inflammatory reaction present .

CAUSES

Capped hocks occur most often when a horse or pony bangs its hocks against a stall wall, or while traveling in a trailer. They can also be caused by an injury such as a kick to the horse's hock.

HOW DOES A CAPPED HOCK AFFECT A HORSE'S PERFORMANCE?

When these swellings first appear they can be hot and tender and the horse may be lame. With time, the capped hocks cool and invariably remain cold and painless and do not interfere with the function of the hock joint. Horses are rarely permanently lame as a result of the swelling. Neither does the swelling represent any appreciable weakness in the hock joint. Most of the time, once healing of the capped hock is complete they are a cosmetic flaw, not a soundness issue.

PREVENTION

Deep banks of bedding in the horse's stall can help to keep your horse from banging his hocks against the wall.

Use hock boots, or shipping boots when you transport your horse.

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Deep banks of bedding in the horse's stable or stall can help to prevent your horse banging his hocks against the wall.

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TREATMENT OF A HORSE OR PONY WITH CAPPED HOCKS

The first thing to do is to eliminate the cause of the trauma - build up the banks of the horse's bed and move to another stall if he is kicking at walls due to being upset by a neighboring horse.

Cold hydrotherapy, or cold hosing, can help to limit inflammation and reduce the swelling in the early stages.

When the swelling in the capped hock settles down and becomes cold your vet may try to drain the swelling or inject steroids to reduce the swelling in the capped hock.

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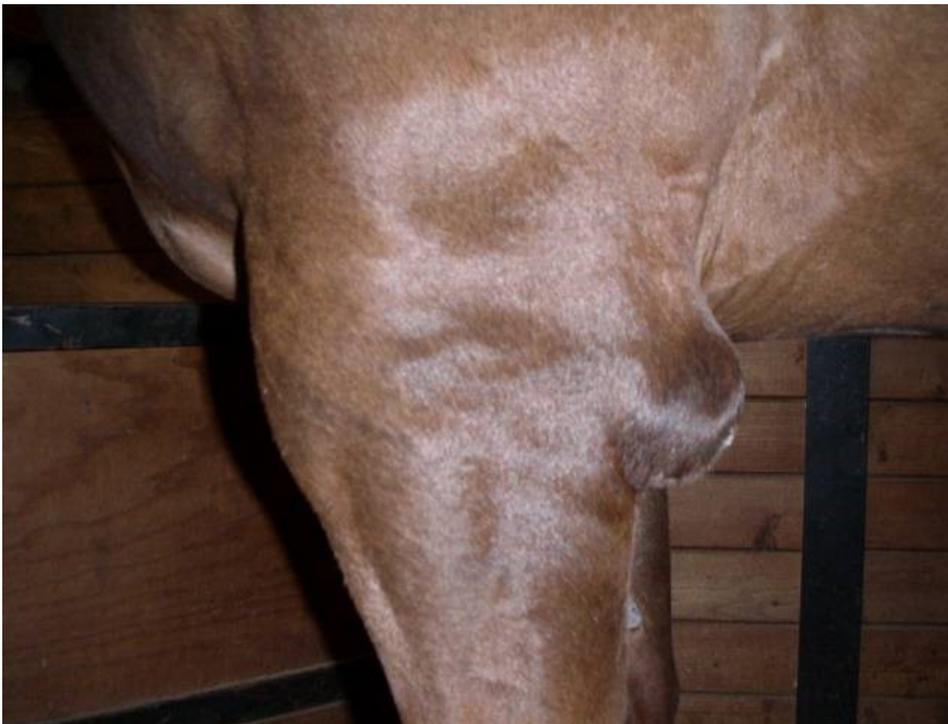
SHOE BOIL

It is an unsoundness



CAPPED ELBOW

This is a blemish that a shoe boil turns into.



Shoe boil, capped elbow

Shoe boil, capped elbow, and olecranon bursitis are all terms that describe a movable swelling that can occur at the point of the elbow in the horse. It usually occurs as a result of trauma caused by the heel of the shoe hitting the point of the elbow while the horse is lying down. In gaited horses, occasionally the foot strikes the elbow while the horse is in motion.

When the point of the elbow is traumatized a fluid filled swelling may occur, sometimes quite suddenly. In the acute stage the swelling may be mildly painful and there usually is little or no lameness. In the chronic stages the swelling becomes rather firm and is composed primarily of fibrous (scar) tissue. The resulting fibrous mass is painless and does not interfere with function. However, a shoe boil can be quite disfiguring and cause a significant cosmetic problem. Occasionally, the shoe boil (bursa) will become infected. The infected shoe boil usually forms a painful abscess and ruptures. The lesion is then characterized by a draining tract and develops of a mass of granulating tissue.

Treatment

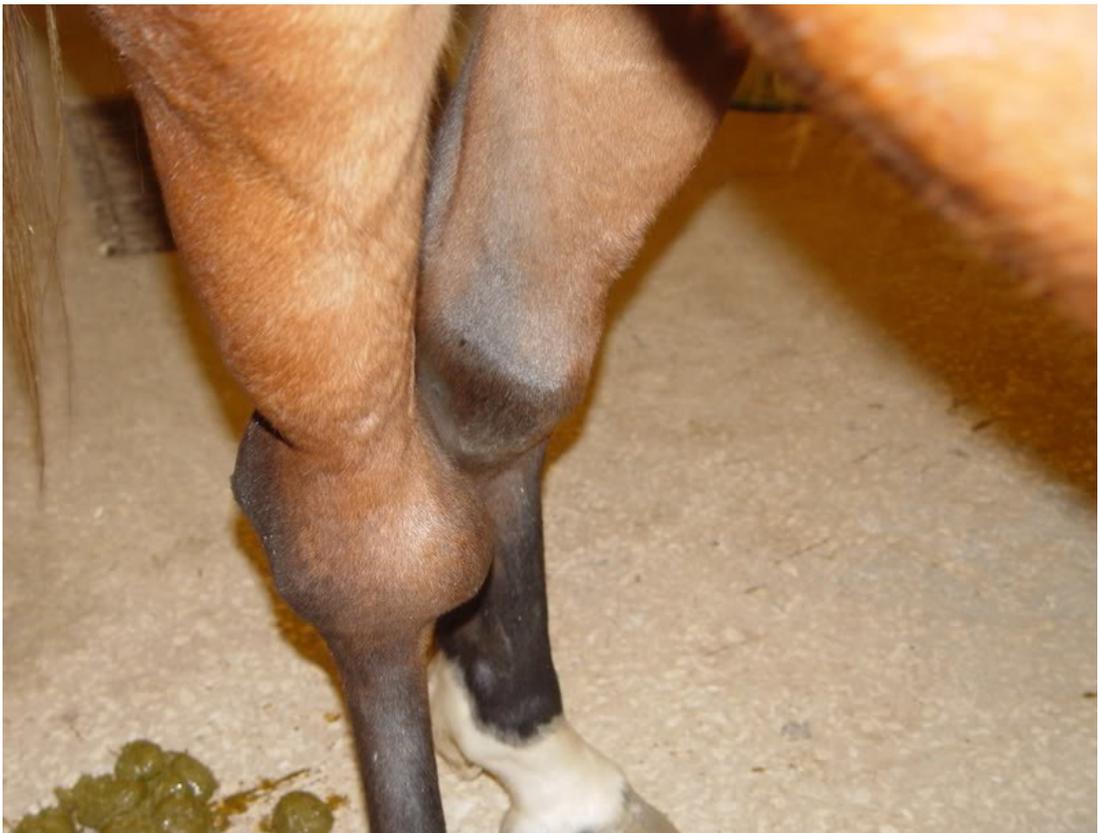
The first principle of treatment of shoe boil is prevention of further trauma to the elbow. Deeply bedding the stall, apply a shoe boil boot to the pastern of the injured limb or cross-tying the horse are all means to prevent further trauma to the region of the elbow. Sometimes, early recognition and prevention of further injury to the point of the elbow will allow the lesion to resolve.

An acute shoe boil can be injected with a corticosteroid two or three times on a weekly basis. If the cause can be removed and the bursa has not developed scar tissue the result will be a cosmetically acceptable small nodule of fibrous tissue at the point of the elbow.

THOROUGHPIN



BOG SPAVIN



Thoroughpin is a cosmetic blemish of the hock area that is similar to windpuffs of the ankles (fetlocks). Specifically, thoroughpin is swelling of the tendon sheath around the deep digital flexor tendon as it passes over the hock. This swelling is not accompanied by heat or pain, and it does not usually cause lameness.

Causes

Any horse with poor conformation in the hock region may be at risk for developing thoroughpin. In addition, a young horse just starting work as well as a horse in heavy work may also be at risk due to the added stress on the horse's legs.

Treatment

Generally no treatment is necessary or recommended for routine cases of thoroughpin.

Prevention

While thoroughpin is not the same as arthritis, many of the same activities and conformation flaws that lead to thoroughpin may also lead to arthritis, tendinitis, and other lameness. For this reason, you may want to reevaluate certain aspects of your horse's management, including trimming/shoeing, arena footing, conditioning program, and work schedule to help keep your horse healthy and happy and avoid problems in the future.

Bog spavin is a condition where a soft swelling occurs on the medial surface of the hock joint resulting from excessive fluid within the joint capsule. It is usually seen as two distinct swellings, one on the back and the other on the front of the hock joint. Joint fluid in the top joint increases in the sac and pushes out so it is visible.

When a horse develops bog spavin, it is usually lame only if the condition is caused by stress. If caused by accidental trauma, the horse will be sound again as soon as the joint heals. Most bog spavins heal without treatment. Occasionally a more serious joint problem known as osteochondritis dissecans (OCD) occurs. Osteochondritis dissecans requires a veterinarian's attention to prevent further damage to the joint.

Symptoms

Soft swelling on the inside front of the hock with a smaller swelling on the outside

Lameness, although not always

Heat and pain if caused by stress

Causes

Bog spavin often occurs in horses with poor conformation. If the hocks are too straight, the bog spavin may be due to stress resulting from the poor conformation.

Bog spavin can also be caused by severe injury to the hock or from strain caused by quick stops and turns when the weight is suddenly put on the hock. This often happens with stallions that are into playing and rearing as they interact with other horses or with handlers.

If the big hinge joint in the hock is injured, the joint capsule works overtime to produce extra lubricating fluid. This results in soft swellings on the front inside part of the hock and sometimes two smaller swellings on each side of the hock. Once stretched, the joint capsule stays that way, leaving the horse with a permanent enlargement.

Nutritional deficiencies may also cause bog spavin.

Prevention

Minimizing stress or injury to the hock joints is the best prevention. If the condition is the result of conformation, not much can be done beyond careful exercising and using anti-inflammatory drugs to decrease inflammation and prevent fluid build-up. A pressure bandage may help minimize the swelling.

If the problem is more than a slight strain on the joint capsule with mild inflammation and swelling, it may indicate a more serious joint problem known as osteochondritis dissecans. An x-ray examination will help determine if osteochondritis dissecans exists in the hock joint.

If nutritional deficiencies cause the bog spavin, a careful analysis of the horse's diet is necessary to determine what is missing from the diet and provide the necessary supplements to insure that the condition does not re-occur.

Treatment

Most bog spavins heal on their own, and the horse is left with a small, painless swelling. In a young horse, the swelling may disappear altogether if the strain that caused it was a one-time injury and not due to poor conformation.

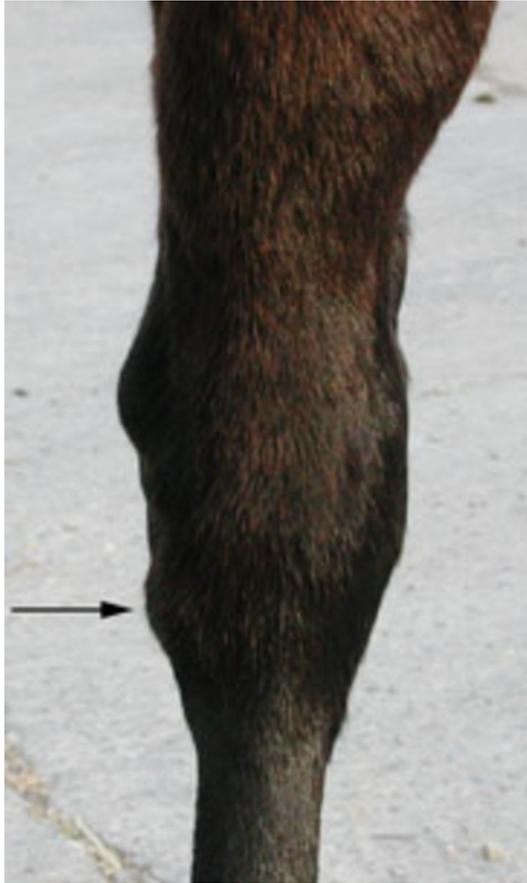
If the joint stays inflamed and the swelling is hard and tense, arthritis may develop in the joint, causing lameness, in which case, anti-inflammatory injections will help with the swelling and a veterinarian may prescribe corticosteroids in combination with other treatments to improve cartilage health and reduce substances that degrade the cartilage.

Two or three injections of anti-inflammatory drugs may be prescribed to decrease inflammation and prevent swelling of the joint capsule. The horse may need to be rested for four to six weeks. In some cases, applying a pressure bandage is helpful.

Adding vitamins and minerals to the diet may relieve bog spavin if it is caused by a nutritional deficiency. A veterinarian's advice as to which supplements will work best for a particular horse is recommended.

If osteochondritis dissecans is a factor, surgery may be needed to correct the problem. An X-ray examination will allow the veterinarian to see the bone and any bone proliferation that is causing the arthritic condition. If serious enough, fragments should be removed by arthroscopy followed by rest, a healthy diet, and a gradual return to exercise.

BONE SPAVIN



Bone spavin is a bony growth within the lower hock joint. It is caused by osteoarthritis, and the degree of lameness that results can be serious enough to end a horse's competitive career.

Description

Bone spavin is osteoarthritis, or the final phase of degenerative joint disease (DJD), in the lower three hock joints. It usually affects the two lowest joints of the hock, with the third joint, the proximal intertarsal, being the least likely to develop bone spavin. This condition has various types: jack spavin when lesion on the tarsal and carpal bones is large, and high spavin when it occurs higher in the joint than is typical.

Causes

Cartilage compression

Excessive compression can cause, over time, the cartilage between the upper and lower surfaces of the lower tarsal bones to become compressed and eroded. The joint spaces then become smaller, and new bone growth may occur in the area.

Uneven loading

Uneven loading causes excessive compression of the cartilage and bone on one side, and strain in the joint capsule and supporting ligaments on the other side. When the joint is repeatedly overloaded on the edge of its surface, exostoses, or "bone spurs," occur. Strain of the supporting ligaments can cause exostosis around the joint as well.

Contributing factors

There are several conformational defects that contribute to bone spavin. Those that cause uneven loading of the hocks, such as sickle hocks and cow hocks, are especially noteworthy. Poor trimming or shoeing can also contribute to bone spavin in any horse, no matter what their conformation.

Certain types of activities may also contribute to uneven or repeated loading of the lower hock joints, and thus bone spavin. These include sports that require a great deal of hock flexion (dressage), stress (jumping), sudden stops or turns (western events, such as reining), or a great deal of concussion (Standardbred racing).

Typical signs of bone spavin

Initially, signs of bone spavin may include sporadic and vague hindlimb lameness. Some horses may become uncomfortable in one lead, or may demonstrate stiffness walking downhill.

In many cases lameness worsens, becoming more obvious and consistent. Advanced cases may have a bony swelling on the hock, typically on the inside of the joint. Lameness, although usually worse in one leg, is commonly bilateral.

The affected limb usually lands toe-first, wearing down that foot faster than the other. The affected limb usually has a shorter, lower arc than the other foot, as the horse is trying to reduce the painful flexion of the joint, so the leg appears to drag.

A flexion test of an affected limb often produces a temporary worsening of the lameness. Such a response to a flexion test would support the diagnosis of bone spavin.

Diagnosis of bone spavin

An initial diagnosis of bone spavin should usually be supported by further investigation in order to confirm the diagnosis.

X-ray

Typical radiographic changes include spurs, new bone, bone destruction and/or joint narrowing or loss.

Intra-articular local anaesthesia

Anaesthesia of an affected joint is a more definitive way of confirming the presence of pain arising from that joint. Introduction of local anaesthetic into a joint should abolish or at least significantly lessen the lameness. This technique is not absolutely specific, because anaesthetic in the tarsometatarsal joint can occasionally desensitize pain arising from suspensory ligament, giving the false impression that joint pain has been abolished.

Scintigraphy

Scintigraphy (bone scan) can help to differentiate between suspensory origin desmitis and bone spavin.

Treatment of bone spavin

Bony changes of the lower hock joint are irreversible. It is possible, however, to manage the problem and thereby slow the progression of the bone spavin, ease the pain, and control the lameness. Surgery is an option for horses that do not respond to conventional treatments.

Medications

NSAIDs, or non-steroidal anti-inflammatory drugs, may help improve the lameness in the horse.

Corticosteroid injections into the lower hock joints may solve the lameness of the horse for several weeks or months. Unlike other joints, the drugs can be repeatedly injected into the lower tarsal joints as needed.

Tiludronic acid, a bisphosphonate, tradenames Tildren and Equidronate(UK) has demonstrated to be beneficial in the treatment of bone spavin. It is administered by slow infusion (30 mn) mixed with saline.

Other joint medications, like hyaluronic acid and Adequan, may help alleviate the pain if the horse has mild bone spavin. However, they are less useful for treating moderate or severe cases. MSM may also help horses with moderate bone spavin.

Shoeing

Proper shoeing is critical in the management of a horse with bone spavin. Shoes most helpful for these horses include shoes that assist in breakover (like a square or rolled toe, or shoes with wedge pads). Shoes with heel support may also help horses with bone spavin, such as egg bar shoes. A set toe can be applied to protect the toe from increased wear, as lack of flexion in the hock will cause the horse to drag its toe. A trailer or lateral extension can be fitted to prevent an axial swing developed by the horse, allowing the horse to make contact with the ground earlier and prevent rotation within the hock. Each case of bone spavin should be shod independently depending on the severity of the case and the horse's needs, there is not a specific shoe to be applied.

Exercise and work

It is best for a horse with bone spavin to be exercised daily. Preferably, this should be ridden or driven work, as round pen or longeing exercise places uneven stress on the joint. Pasture turnout may not be beneficial if the horse does not move much.

It is best to decrease the intensity of the workload for a horse with bone spavin. However, even with careful management, bone spavin will progressively get worse, and the animal may not be able to continue at the level of competition it was first used for once the lameness is consistent. Many horses can still be successful in a less-strenuous career. Light exercise is better than no exercise at all, and a change of career may prolong the horse's useful life.

Surgery

Fusion of the joint with bone may end the lameness, as the joint has then become stable. However, this may take several years, or never occur. In these cases, surgery may be an option.

Some of the joint cartilage is destroyed with a drill bit or a laser, and the holes are sometimes filled with bone grafts.

The veterinarian may also inject a caustic agent into the joint to destroy the cartilage, as opposed to drilling the joint. After the procedure, the horse will be lame for weeks or months, until the joint has fused.

Exercise can help accelerate the fusion of the bones, so the horse may be hand-walked after the injection. NSAIDs are usually given to ease the pain.

Prognosis for bone spavin

The prognosis for bone spavin varies, depending on several factors including:

the number of joints involved

the severity of the bony changes within these joints

how quickly the horse's condition is worsening

what the horse is used for

Most horses cannot continue at a high-level of competition for long. However, many horses can continue happily for use as a trail or pleasure horse, or for light work

BOWED TENDON



Bowed tendon is the common name for superficial or deep digital flexor tendonitis. The superficial digital flexor tendon (SDFT) runs down the back of the leg and attaches to the long and short pastern bones. The deep digital flexor tendon (DDFT) runs to the SDFT and attaches to the coffin bone. Together, these tendons aid in flexion of the lower limb.

When either of these tendons becomes inflamed, it swells, causing it to look "bowed." The bow can appear anywhere from the carpus/tarsus (knee/hock) to the pastern region. The SDFT is much more commonly affected than the DDFT.

CAUSES

Bowed tendons can occur as a result of chronic stresses on the flexor tendons or as a result of a single traumatic incident. Racehorses, polo ponies, and jumpers are at higher risk than other equine athletes for developing this condition. Placing bandages on the lower leg that put uneven pressure on the tendons can also lead to inflammation.

TREATMENT

Bowed tendons can vary in severity, but because of the type of tissue involved in the injury, complete healing takes a long time. Clinical signs may resolve within days if the horse is rested and given anti-inflammatory drugs (i.e. Bute), but generally return when the horse is returned to work. It can take 8 to 11 months for the tendon to repair itself completely.

Treatment primarily consists of complete rest followed by a controlled, gradual return to exercise, anti-inflammatory drugs, and occasionally, surgery. Prognosis for return to athletic work depends on the severity of the original injury, and the condition can recur, particularly if stresses are added to the leg prematurely. Repeat ultrasound examinations are used to monitor healing and allow return to exercise as fast as possible without re-injury.

There are many new treatment options for bowed tendons on the market, including injecting the tendon with cells taken from fat or specially treated blood, and shockwave therapy. These, and a variety of other treatments, have become popular over the past decade but unfortunately, most are eventually shown to be useless or even damaging.

Shockwave therapy has been shown to assist with arthritis pain and newer treatments are still being tested. Currently, research is being conducted on stem cells, special antibodies, and platelet rich plasma along with specialized rehabilitation programs.

If you decide to pursue a treatment, take time to become informed on the pros and cons and count on a prolonged rehabilitation period.

PROGNOSIS

Depending on your type of horse and its use, after a period of rest, your horse should be introduced to a gradually increasing program of exercise which should eventually include trotting and very steady cantering for those type horses. You may not be able to return to as high a level of competition as before the injury but most horses can lead a useful life as a hack or even hunter after tendon injury. Some breeds of horses such as a Standard Bred can often continue racing (after rest and healing) very successfully. Thoroughbred Race Horses can return to racing. However, the success rate is usually less for the Thoroughbred versus the Standard Bred. Eventing and other high performance show horses have, with care, returned to at or near the same level prior to their tendon injuries in my practice.

PINFIRING MARKS



Pinfiring

Pin firing is a therapy that uses a small, red-hot probe to cause cauterization (burning) of tissue in horses with chronic injuries to produce an abundant, serous inflammatory process. As opposed to other inflammatory processes, such as infections or bruising, serum has little or no fibrin (clotting material) or cellular content and does not coagulate. Firing causes maximal exudation, or oozing, and minimal tissue degeneration. Firing is done more often in racehorses than in other performance horses, and has been used for more than a century in conditions of recurring injuries such as a splints, curbs, or chronic bowed tendons. The driving idea behind firing is that it makes chronic inflammations acute and allows them to heal. The procedure is performed under sedation and local anesthesia, and the pain inflicted is fairly short-lived and usually well-tolerated by the patient.



WINDPUFFS OR WINDGALLS

Windpuffs is a term that denotes extra synovial fluid within the fetlock joint and/or digital flexor sheath. It can occur in the front or hind legs, or both. Extra fluid results in a soft swelling behind and just above the fetlock joint. It is more common in older horses, but can occur at any age.

The swelling can occur for various reasons, such as flexor tendonitis, trauma to the synovial membrane, infection, etc. In most cases, however, the source of the inflammation is undetermined.

Lameness is rare except in severe cases (e.g. infection or tendon damage). Therefore, the problem is considered primarily cosmetic in nature. Consequently, most horses are left untreated.

Treatment options include intrasynovial injection (steroids/hyalronan) or surgical debridement. Injection usually dramatically reduces the size of the swelling, although recurrence is very common and usually expected. Surgical manipulation can result in the formation of scar tissue within the sheath, which in turn can cause adhesion formation and lameness. Therefore, this strategy is reserved for only the most severe of cases.