

Equine Hoof Balancing

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EQUINE-HOOF-BALANCING

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Picture provided by A/S Equine Hospital



Photo showing heels that have not been filed equally back to the widest part of the frog. Filing the heels back to the widest part of the frog is of major importance if the goal is to not have under run heels.

strong and balanced foot. Some of the fastest and most talented horses in the world cannot perform to the best of their ability because for some reason their feet are out of balance. They may have the long toe under run heel syndrome which is the most common result of an out of balance foot or the foot may be unbalanced from medial to lateral. Either way, an out of balance foot will someday be an unhealthy and painful foot. It is easy to become confused on what is a balanced "normal" foot or an unbalanced "abnormal" foot. There are probably more abnormal feet out there versus normal healthy feet so it is easy to start thinking that since abnormal may be average that it is also normal.

Veterinary medicine has a tool that can be used to help farriers and veterinarians work together to give your horse a better balanced foot. It is called "Hoof Balancing". Whether your goal is to have your horse's joints stay healthy as long as possible or it is to balance a horse's feet with visible problems, hoof balancing can help your horse. Hoof balancing is really nothing more than making sure the joints and structures that make up the hoof are in proper alignment and balance. To achieve maximum benefit, it requires the blended skills of your farrier and equine veterinarian.

A horse's legs are comparable to the tires on your car. If the tires are out of balance, one side will wear out before the other and instead of getting 40,000 miles out of your tires you will get 30,000. With hoof balancing digital x-rays are taken of the foot, pastern, and fetlock. The x-rays are put with a program that allows the veterinarian and farrier to visualize what you cannot always detect with the naked eye. The hoof balancing program can measure precisely the angles between the coffin, pastern, and fetlock joints. These measurements check for front to rear or anterior/posterior balance. If any of these joints are out of balance with the other, the degree of change that needs to be made is measured. Side to side or medial/lateral balance is also visualized and precisely

Balance seems to be a common theme in most health related issues. The entire medical theory of Chinese acupuncture is based on the body's Chi or energy being in balance. Another facet of medicine that is not often thought of in medical terms is the foot and it is very important for the foot to be in balance. Just like a house needs a strong and balanced foundation, a horse needs a

measured. If there is a medial/lateral imbalance your horse's joints just like a car's tires will wear out faster.

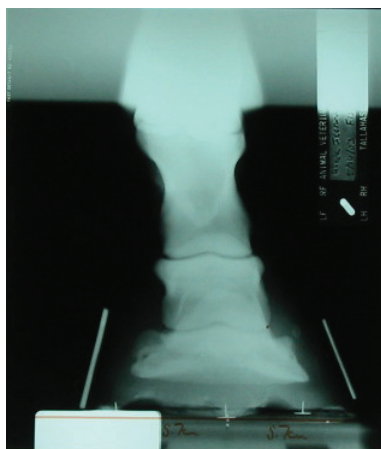
Hoof balancing will help decrease the amount of joint injection treatments that a horse needs because with his joints in balance they have less reason to become inflamed. The inflammation in a joint is many times secondary to a joint wearing unevenly. There have been horses that were constantly having their coffin joints injected with medications to keep them sound. The horses normally respond well to the injections but a few months later the lameness shows up again. If the reason for the lameness is unbalanced feet then these horses may never have to be injected again or they can, at a minimum, go for longer intervals between injections.

Many performance people who have horses in speed events think that a long toe increases stride length and therefore speed. Long toes cause an increase in break over time and therefore cause a decrease in speed. In all horses a long toe increases the stress on the suspensory ligament and on the flexor tendons and collateral ligaments of the foot. It does this by causing the heel to become under run. The lower heels stretch all the aforementioned structures. The long toe also acts as a fulcrum on the front of the foot and so the hoof wall is set up to break away or pull away from the white line. This can also be a structural predisposing cause of white line disease.



This photo shows a heel that even though it looks fairly average, close examination reveals that the hoof tubules are curving under the heel as they are being crushed. Left uncorrected by regular trimming of the heel to the widest part of the frog, this foot can develop into a case of under run heels

Some people get a little obsessed with the angle of the hoof. Each hoof is different but one thing is constant with all feet and that is that they should all be in balance. This is done by having the bones of the pastern and hoof in alignment. A broken back



X-ray demonstrating a medial to lateral imbalance of P3. This condition causes abnormal wear and tear on the coffin joint and its supporting structures.



X-ray demonstrating the proper alignment of P1 P2 and P3 (coffin bone)

pastern hoof axis usually goes along with a horse that has long toes and under run heels. A broken forward pastern hoof axis goes along with a clubbed foot. Having the pastern and hoof bones in alignment is not possible unless the foot is trimmed or shod in a balanced manner. The heels should be trimmed even with the widest part of the frog. Few horses are timed this way. It gives the horses a larger foot print which distributes his weight over more area. If his feet are not trimmed this way, he will feel like a

person walking on a flip flop that is too small with their heel hanging off the back. The heels and toes follow each other. If he has under run heels, the toe will usually be long and he will feel like he is walking in long clown shoes. The feet also need to be balanced form side to side. If the foot is low on one side and high on the other, his foot will be like

a tire out of balance. One side of his coffin joint will be under more stress than the opposite side. It also stresses the collateral ligaments of the foot.

Hoof balancing has been performed on horses for many reasons with good results. There are progressive knowledgeable horse trainers who are looking out for their horses' career longevity who have had hoof balancing performed on their horses as "preventive medicine". This kind of mentality gets 50,000 miles out of the 40,000 mile warranty joint. Other horse owners have horses with chronic problems. Hoof balancing has improved all of these horses and to quote one horse owner "It has given me a new horse after years of chronic problems".

Hoof balancing provides farriers and veterinarians a tool to treat and prevent problems that cannot be seen with naked eye. The precise measurements of the digital x-ray program allow the visualization of narrowed joint spaces that are difficult to pick up with plain x-rays and the naked eye. Sometimes the difference between the joint space on one side of a joint and the other is very minimal but it makes a difference. Veterinarians and farriers can benefit from each other's knowledge as a team. Keeping your horse's feet balanced helps them help your horse have that extra edge that is often the difference between winning and 2nd place or getting 50,000 miles vs. 30,000 out of your horse.

Picture provided by AVS Equine Hospital

Ask The Vet

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We would like to help you get your horse health questions answered by a knowledgeable equine veterinarian. If you'll submit your questions to us via email, we will present them to a qualified veterinarian that specialize in equine health and then publish the question along with the vet's response in a future issue of The Horse Resource. Ask away.....

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