



## **The Basics of Extracorporeal Shockwave Therapy in the Horse**

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Extracorporeal shockwave therapy, better known simply as shockwave, is a noninvasive treatment modality that has seen a surge in popularity over recent years in the equine industry. Extracorporeal refers to “outside of the body,” which is where the therapeutic sound waves are created. These sound waves are transmitted from a transducer probe through a special gel onto the cleansed skin of the treatment area. As the sound waves travel through the underlying tissues, they create an increase in pressure. What happens as the sound waves impact various tissues is still not completely understood, but current scientific studies show the energy released as the sound wave contacts different tissue densities (bone versus tendon versus muscle) causes generation and release of various growth factors and proteins. These in turn has been shown to increase blood flow, as well as the growth of new vessels, and increase production of natural healing factors in the treated area. This combination results in improved speed and quality of healing. There is also evidence of mild, short term pain relief.

As we continue to learn more through research about how shockwave works and its specific effect on different tissues, treatment protocols change. For example, it seems bone responds more quickly to treatment than ligaments, thus calling for fewer treatment sessions. There is, however, no magic number for each type of injury; duration and total number of treatments depend on the horse’s clinical response, which may be affected by severity of the injury, concurrent medical issues, and general health status. In addition, the number of impulses and level of energy used changes based on the size of the area being treated, as well as injury depth and tissue density. The number of impulses tends to be around 1,500-2,000, with deeper, denser tissue requiring more impulses at a higher energy level. Each treatment session takes less than 30 minutes, and is separated from the next session by one to three weeks. Some horses will stand quietly for the shockwave treatment, while others will require light sedation for the session; this is dependent both on physical treatment location and individual horse temperament.

Shockwave is currently in use for numerous musculoskeletal issues including, but not limited to: suspensory ligament injury, disease in the superficial and deep digital flexor tendons, navicular syndrome, neck or back pain, kissing spines, ring bone, splints, and bucked shins. In many cases, a significant improvement can be achieved, but there is no guarantee that the issue will completely resolve. The horse will need to be rested a variable amount of time after treatment to allow healing to take place. Improvement may take days to weeks to become evident based on the underlying condition. It is important to remember that shockwave alone is not a “cure-all” for lameness issues. However, your veterinarian may find that it could be of benefit in the healing process depending on the origin of the injury and how long the injury has been present. Shockwave is often used concurrently with PRP and/or Stem Cell Injections, synovial structure injections, controlled exercise, therapeutic shoeing and perhaps acupuncture and chiropractic manipulation. An in-depth discussion with your veterinarian can determine whether shockwave is a viable option for your horse’s condition.

Contact Brandon Equine Medical Center at 813-643-7177 or email [info@brandonequine.com](mailto:info@brandonequine.com) with any questions regarding this topic.

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