PulseVet®
Shock Wave Therapy

Equine Shock Wave Therapy

PulseVet shock wave therapy is a **non-invasive treatment** involving delivery of shock waves to injured tissue **to reduce pain and promote healing**.

Shock waves are **high energy sound waves** commonly used in veterinary medicine. There are different type of shock waves with key differences, these types are electrohydraulic, electromagnetic and piezoelectric. The electrohydraulic technology in PulseVet creates **true shockwaves at all settings**, it is a powerful shock wave affecting large volumes of tissues and it has **deep penetration up to 110 mm**.

Clinical evidence has shown that Shock Wave Therapy performed with the PulseVet system is effective in a wide variety of indications. PulseVet is a **user friendly**, **low maintenance system**.

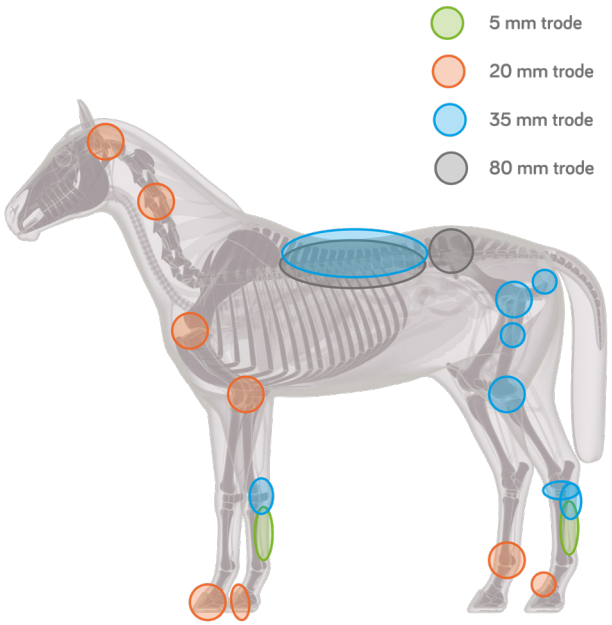
Key treatment areas for the use of PulseVet Shock Wave therapy

As mentioned previously, the PulseVet system can be used in a variety of conditions [1]. These include:

- Tendon, ligament and muscle injuries
- Osteoarthritis
- Navicular pain
- Bone healing
- Back/neck pain
- Wound healing

In 20 years of clinical research, effectiveness has been proven for these indications. The following results have been reported:

- Pain modulation in horses with thoracolumbar pain [2]
- 81% improvement in horses with navicular syndrome [3]
- Suspensory ligament desmitis treated with shock wave resulted in significantly faster and better quality healing [4]
- Significant shorter healing time for shock wave treated wounds compared to non-treated [5]
- In horses with OA in carpal joints, lameness in treated horses improved significantly [6]



Treatment areas and trode recommendations

The technical monograph with summaries of articles and a review article are available on request.

How PulseVet Shock Wave Technology works

The PulseVet system creates true shock waves for medical purposes. During the treatment **cells are exposed to significant pressure an tensile stresses**, which mechanically stimulates the cells and causes release of proteins, growth factors and inflammatory cytokines. This response results in **pain reduction**, **improved blood flow**, **modulation of the inflammatory response**, **cell proliferation** and **cell differentiation** [1].

As the aim of the treatment is to recruit cells into a healing response, the volume of tissue that is reached is crucial. The large focal volume of PulseVet assures a large volume of tissue surrounding the injured area is stimulated. The focal volume of the Electrohydraulic PulseVet system is larger than that of other types of shock waves.

Utilizing the 4 different 'trode' handpieces, the PulseVet system offers different penetration depths to provide **optimal treatment for the affected tissue**.

Directly after treatment there is a significant reduction in pain that lasts for 3 - 4 days, however the healing response that is initiated during the treatment takes place over time. **Noticeable results are achieved in 1 - 3 treatments, these results last for a prolonged period of time up to > 6 months**.

How to use PulseVet

The average PulseVet shock wave treatment takes less than 10 minutes. Within the system pre-sets are available for treatment of different conditions in horses, dogs and cats.

These pre-sets for treatment of bone conditions, tendons/ ligaments, chronic pain and wounds are customizable to meet your own preferences. It is also possible to use the manual settings, with this function a tailored treatment protocol can be created.
To support the practitioner, proposed protocols have been developed that are provided with the purchase of the machine.
The PulseVet system is easy to operate with FLIC-button.
The FLIC-button can be strapped around the trode and is used to start or stop the treatment.

Each trode comes with a standard of **50.000 pulses**, with this amount of pulses, **an average of 41 treatments can be performed**. When purchasing the new machine, new trodes must be purchased, when these trodes have less than 5000 pulses left, a message will be displayed on the device's screen. You can then order refurbished trodes, which also include 50,500 pulses.

The soft case allows for easy transport of the portable system, an additional soft case for the trodes is also available. Hard travel cases for transport via airplanes can be purchased at Grovet as well.

Product information

Brand:	Zomedica
Target species:	Equine
Storage conditions:	Do not store below 1 °C
Article code:	PulseVet ESWT System: ZM00-000 PulseVet Trode New: ZM001

References

[1] Johnson SA, Richards RB, Frisbie DD, Esselman AM, McClure SR. Equine shock wave therapy - where are we now?. Equine Vet J. 2023;55(4):593-606. doi:10.1111/evj.13890

[2] Trager LR, Funk RA, Clapp KS, Dahlgren LA, Were SR, Hodgson DR, et al. Extracorporeal shockwave therapy raises mechanical nociceptive threshold in horses with thoracolumbar pain. Equine Vet J. 2020; 52(2):250–7. https://doi.org/10.1111/evj.13159

[3] McClure SE, Evans RB, Miles KG, Reinertson EL, Hawkins JF, Honnas CM. Extracorporeal shockwave therapy for treatment of navicular syndrome. Proc Am Assoc Equine Practnrs. 2004;50:316–9.

[4] McClure, S R et al. "The effects of extracorporeal shock-wave therapy on the ultrasonographic and histologic appearance of collagenase-induced equine forelimb suspensory ligament desmitis." Ultrasound Med Biol. vol. 30,4 (2004): 461-7. doi:10.1016/j.ultrasmedbio.2003.12.00

[5] Morgan DD, McClure S, Yaeger MJ, Schumacher J, Evans RB. Effects of extracorporeal shock wave therapy on wounds of the distal portion of the limbs in horses. J Am Vet Med Assoc. 2009;234(9):1154–61. https://doi.org/10.2460/javma.234.9.1154

[6] Frisbie DD, Kawcak CE, McIlwraith CW. Evaluation of the effect of extracorporeal shock wave treatment on experimentally induced osteoarthritis in middle carpal joints of horses. Am J Vet Res. 2009; 70(4):449–54. https://doi.org/10.2460/ajvr.70.4.449