Resource Newsletter

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Infrared-wave therapy as treatment for horses

Research into influences of IR-therapy on the equine muscle tone

Alternative therapy treatments and physiotherapists already entered the equine market but do suffer from a lack of scientific evidence. A bachelor thesis by Saskia Ehlen investigates how infrared wave therapy influences the equine muscle tone.

In line with finishing her bachelor degree in Animal Husbandry with the specialisation "Equine, Leisure and Sports" at the University of Applied Sciences Van Hall Larenstein, Saskia Ehlen investigated the influence of infrared-wave therapy on the equine muscle tone. Commissioned by hhp-home health products, an andullation-therapy producing company in Germany, the research was conducted between February and June 2014.

Next to examining the influence of infrared-wave therapy (IRWT) on the equine muscle tone, the study also tested the practicalness of common measurement tools to evaluate pain pressure thresholds in horses. The study aim was to gain scientifically significant results concerning the effect of IRWT on horses` muscle tone. As already known from former studies, an increased muscle tone in horses could lead to stiffness, blockades and even a loss of performance and welfare. Therefore, the application of IRWT on horses got tested on lowering the animals` muscle tone.

Her interest of equine physics and alternative treatments motivated Saskia to execute her bachelor thesis on this topic.

24 horses, split into two groups, placebo and treated, got examined on their current muscle tone before and after applying the IRWT. The IRWT got applied for each 15 minutes, using the program "massage" on medium level. The placebo group was only covered with the therapy blanket without switching it on. The muscle tone was evaluated by using a pressure algometer and the evaluation of an equine physiotherapist. Both measurement tools where applied on the trigger points of 4 different muscle groups, respectively on the left and right side of the equine body. Pressure got applied until the animals showed a reaction such as pinned back ears or a movement away from the pressure. When releasing the pressure, the outcome of the algometer and the evaluation of the physiotherapist got recorded.

The results showed significant changes of the muscle tone between before and after applying the therapy. All treated horses had a decreased muscle tone within all muscle groups after IRWT. This result was underpinned by the results of the placebo group, which, in turn, did not have a lowered muscle tone. Some horses of the placebo group did even indicate an increased tension after being covered with the therapy blanket.

Furthermore, the research found out that the IRWT does not influence the balance between left and right of the horses` body. The muscles on both sides get treated evenly. The research did indicate that the use of IRWT does have an impact on the equine muscle tone and further, that the used measurement tools create appropriate methods to evaluate the equine muscle tone.

The outcome of the placebo group, more precisely, an increased muscle tone leads to assumptions for optimisation of the therapy blanket. That the placebo group reacted with higher tensioned muscles could be sign of insufficient wearing comfort or a too high weight of the blanket which causes a qualm in horses. . Further studies concerning the optimisation of the wearing comfort of horse rugs in general and especially the therapy blanket as well as the long-term effect of the IRWT are recommended. The endorsement of the IRWT`s positive effect on the equine muscle tone might generate new marketing and sales strategies for hhp. The proof of the positive effect of the product might attract new customers for hhp and enables a boost of the market of alternative therapy methods.

Saskia Ehlen