

# A Non-Invasive Approach to the Treatment of Equine White Line Disease Using Poly-Wrap and Manuka Honey Topical

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White line disease (WLD) is a significant pathological condition that commonly affects horses globally, leading to hoof deformity, wall fissures, pedal osteitis and chronic lameness. Lameness causes the largest economic loss within the equine industry. The equine industry creates 1.4 million jobs annually and nationally has a total gross impact of \$112.1 billion (11). Traditional treatments are invasive and compromise hoof structure. They rely on the use of antibiotics and chemicals to control microbial growth. There is growing evidence that antibiotic resistance in humans worldwide is promoted by the overuse of antibiotics in the veterinary medicine and agricultural industry (1). The research goal of this study was to develop a strategy for treating WLD that does not require antibiotics, chemicals, or invasive procedures. Sensitivity experiments of mono-floral honeys revealed that Manuka honey may be a viable natural alternative to antibiotics. The treatment developed uses the application of a polyester wrap to the affected hoof capsule, and Manuka honey-based antimicrobial as a topical adjunct. Hoofprint analysis determined that polyester-wrap effectively redistributed weight off damaged hoof wall. Treatment using poly-wrap alone caused an average 57% decrease in fissure length over 15 weeks, while treatment using poly-wrap with Manuka adjunct showed an average 96% decrease, indicating that Manuka had a highly significant influence on healing fissures associated with WLD ( $P=0.03$ ). Poly-wrap with Manuka adjunct offers an easy to use, inexpensive, alternative treatment for reversing the effects of chronic WLD.

## Awards Won:

Second Award of \$2,000