Champion Performance

Studies demonstrate higher vitamin D levels increase muscle function, increase both force and power and testosterone, each of which increases athletic performance.[1] Vitamin D has been proven to boost energy from within the cells. The benefit of Vitamin D to bone health, mood and immune function are well documented.[2] Optimal Vitamin D also reduces inflammation, pain and disease of the muscle tissue – it increases muscle protein synthesis, ATP concentration, strength, jump velocity and power, exercise capacity and physical performance.[3]

Similar to human athletes, horses suffer from low Vitamin D.[4] According to nutrition experts; horses need 5-8 hours of direct sunlight to produce enough Vitamin D. Not only doesn't the sun shine every day, but north of Atlanta, the sun's power is not sufficient to increase Vitamin D to adequate levels. Stabling or blanketing horses puts them at the highest risk for Vitamin D deficiency.[5] Breeders of performance horses should pay particular attention, as low vitamin D has been associated with disease severity and mortality of foals.[6] Vitamin D is fat soluble and oral absorption is often not optimal.

A confirmatory study of a revolutionary new bimodal delivery technology (TransEpi®) that mimics the natural solar delivery of Vitamin D through the skin was conducted at the Thorncroft Equestrian Center in collaboration with the Diagnostic Center for Population and Animal Health. Thorncroft is one of the oldest therapeutic equestrian centers in the US and home to 34 horses of varying breeds (thoroughbred, percheron, appaloosa, etc). The TransEpi® technology is a proven delivery that avoids the gastrointestinal tract which impairs the delivery of Vitamin D and delivers Vitamin D even when accompanied by sun-protecting ingredients.

The study assessed Vitamin D increases, energy, mood/demeanor, appetite and safety/tolerability. The horses were screened to determine their Vitamin D levels. Of the 15 horses screened, all but one had low Vitamin D. A subset was selected to test the TransEpi® powered Vitamin D cream following 35 days application. Vitamin D was retested one week following product discontinuation. All of the horses had numerically significant increases in Vitamin D levels after only 35 days. Energy increased and mood improved as Vitamin D improved with no change in appetite and the cream was well tolerated. A full report is in progress for publication.

The TransEpi® delivery is the first bimodal topical/transdermal technology delivering ingredients at the cellular level (stem cells) while keeping protective ingredients on the top of the skin. This revolutionary patented delivery provides a cutting-edge platform to enhance performance. Avidas Pharmaceuticals, a privately held company, is seeking strategic partners in the veterinary industry to commercialize the TransEpi® technology and exploit its continued development.

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[2] Vitamin Nutrition Compendium, DSM in Animal Nutrition and Health, web access Feb 16, 2016.
[3] Shuler, F.D., Wingate, M.K., Moore, G.H. and Giangarra, C.E, "Sports Health Benefits of Vitamin D." Sports Health: A Multidisciplinary Approach, November 2012 vol 4 no. 6, 496-501, web sph.sagepub.com Feb 16, 2016.
[4] Thompson, J.P., "Your horse needs vitamin D!" Listen to your horse, Dec 22, 2014, Holistic Horsemanship, Horse Health, web access Feb 10, 2016.
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