



Lipid metabolism (turnover) is correlated to concentrations of FFA in the blood. Plasma FFA concentrations increase during and immediately following exercise. Research reported that Diamond V supplemented horses had a slower rise in plasma FFA rates during an exercise period indicating a more efficient uptake of FFA by the working muscles. In another study, scientists reported that FFA levels in animals following exercise remained elevated, suggesting that dietary supplements of Diamond V Product may enhance the oxidation of free fatty acids, especially during the recovery period. This indicates a possible conversion of energy usage from muscle glycogen to fat utilization.

A research result confirmed in a standardized exercise test that Diamond V supplementation in horses increased blood FFA concentrations significantly at every STEP and during REST periods before and after exercise (Figure 1). The results indicate increased fat utilization and a sparing of blood glucose in the exercised horse.

Blood plasma lactate levels are proportional to the rate of intramuscular production of lactic acid from exercise intensity and duration in horses. In essence, lactate is produced throughout the exercise. Blood lactate is an assessment of muscle metabolism and is related to fatigue.

Diamond V exhibited significantly smaller and slower increases in plasma lactate concentration (Figure 2). This effect was more remarkable and became statistically significant as the length of exercise increased from 20 minutes or longer. Researchers reported a numerical reduction in blood lactate levels during the exercise portion of a standardized exercise test in horses. Any treatment that decreases the lactic acid production in the muscle would potentially increase the athletic capacity of the animal.

