Facial, Hearing, and Visual Injuries

Phase III Clinical Trials: D-Methionine to Reduce Noise-Induced Hearing Loss

Hearing loss can render a Service Member less able to detect and identify the enemy, less able to understand commands, particularly in background noise typical on the battlefield, and may permanently reduce quality of life. In some cases, hearing loss may preclude redeployment or result in less optimal job assignment. Currently, no FDA-approved pharmacologic prevention exists for noise-induced hearing loss. D-methionine is one of the more advanced pharmaceutical candidates to offer oto-protective ability after hazardous noise exposure. Investigators from Southern Illinois University have documented in animal studies that administration of D-methionine can reduce or prevent noise-induced hearing loss. The primary objective of the study was to determine the efficacy of D-methionine in preventing or reducing noise-induced hearing loss and tinnitus in a military population. The study population was a cohort of drill sergeant instructor trainees during, and 12 days after, their two-week weapons training that consisted of a minimum exposure to 1,100 rounds of M-16 weapons fire over a two-week period. By the end of 2015, 200 subjects will have completed the phase II trials at Fort Jackson, South Carolina. Preliminary results show a decrease in hearing loss from the trial participants. Further research and materiel development plans are being developed to achieve FDA approval.