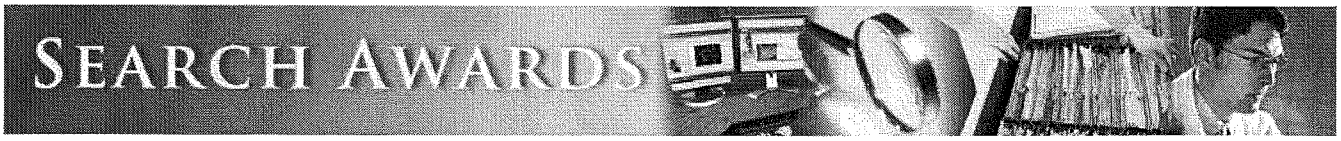

Back to Search Results | Modify Search | New Search

Intranasal Insulin: A Novel Treatment for Gulf War Multisymptom Illness

Principal Investigator: GOLIER, JULIA A
Institution Receiving Award: BRONX VETERANS MEDICAL RESEARCH FOUNDATION, INC.
Program: GWIRP
Proposal Number: GW110054
Funding Mechanism: Clinical Trial Award
Partnering Awards:
Award Amount: $1,492,571.00

View Technical Abstract

PUBLIC ABSTRACT

Many Veterans who served in the 1991 Gulf War (GW) continue to be affected by chronic multisymptom illness (CMI), a condition that is marked by symptoms such as attention and memory difficulties, fatigue, joint pain, headaches, gastrointestinal complaints, and mood and sleep problems. There is accumulating evidence that these Veterans are experiencing a slowing of response speed, which, in turn, affects their mental capacity across multiple cognitive dimensions such as memory, attention, and executive functions. To date, there are no treatments that have been shown to improve the health or cognitive difficulties of GW Veterans; thus, there is an urgent need to establish effective, safe, and tolerable treatments for GW CMI. Previous studies in other cognitive disorders have found that intranasal insulin improves memory, attention, and mood, reduces neuroinflammation, and modulates cortisol levels; it has also been identified as a treatment that has the capacity to alter many of the leading problems of GW CMI.

This project can make an important contribution to the understanding of CMI because it seeks to evaluate the effects of two different doses of daily intranasal insulin administered over the duration of 8 weeks on memory and attention, overall physical health and mood, and symptoms characteristic of CMI such as fatigue, pain, sleep quality, and subjective cognitive functioning. We predict that intranasal insulin will improve memory, attention, overall physical health, mood, and other symptoms associated with GW CMI. During this study there are two treatment groups and a placebo group that will last for 8 weeks. The treatment groups will self-administer their designated dosage of insulin through a nasal pump twice a day, while the placebo group will administer saline through a nasal pump twice a day. These doses have been shown to be effective and safe in cognitively impaired older adults and normal subjects.

During the course of this study there are several tests that measure the effects of intranasal insulin. The primary outcome measure will assess improvements in verbal delayed memory using a specific list learning task and on a measure of selective attention. We will assess improvements in overall physical health and mood by asking the participants to complete self report questionnaires. Neuroendocrine measures will also be obtained in order to evaluate changes in glucose, insulin, and cortisol levels and examine their impact on GW CMI. We are ultimately assessing the efficacy of two different doses of daily intranasal insulin on memory and attention, overall physical health and mood, other symptoms that are characteristic of CMI, as well as the safety of two different doses of self-administered intranasal insulin in GW Veterans with CMI. Since there are few effective treatments for GW CMI, identifying an effective treatment would be highly beneficial. Intranasal insulin has the advantage of direct access to the brain and avoids problems associated with orally administered medications, making it a potentially effective and safe treatment option. Intranasal insulin has shown great promise in improving memory, attention, and mood in both older adults with cognitive impairment as well as normal subjects. Thus, this proposal could prove intranasal insulin to be an effective, safe, and affordable therapy for these ailing Veterans.