

Retired US Navy Veteran Comments on Military Microbiome Study

Now a Doctor of Natural Medicine, Dr. Gerda Edwards, PhD, sees hope in new research



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HARRISBURG, Pa., May 1, 2017 /PRNewswire/ -- Gerda Edwards, Retired US Navy Captain, who served in the Navy for 27 years, six of them in back-to-back tours in the Gulf, knows first-hand that military members are under siege from a multitude of physical and mental stressors that come with the profession. She shares her insights on the impact of stressors on the microbiome in a new guest blog post on the Prebiotin website at <https://www.prebiotin.com/military-gut-microbiome-unique-universal/>.

Now a Doctor of Natural Medicine (DNM), Board Certified in Integrative Health by the American Association of Integrative Medicine (AAIM), Dr. Edwards, PhD, DNM, FDN-P, sees the recent study published by the [American Journal of Physiology-Gastrointestinal and Liver Physiology](#) as a "great first step in recognizing the effects of stress on service members' health, as it relates to intestinal permeability, sometimes referred to as 'leaky gut.'"

The study, headed by J. Phillip Karl, PhD, RD, of the US Army Research Institute of Environmental Medicine Military Nutrition Division, used a systems biology approach and multiple-stressor military training environment to determine the effects of physiologic stress on intestinal microbiota composition and metabolic activity and intestinal permeability (IP). Seventy-three soldiers received three rations with or without protein- or carbohydrate-based supplements during a four-day cross-country ski march.

According to the published abstract: "*Findings demonstrate that a multiple-stressor military training environment induced increases in intestinal permeability (IP) that were associated with alterations in markers of inflammation, and with intestinal microbiota composition and metabolism. Observed associations between IP, the pre-stress microbiota, and microbiota metabolites suggest targeting the intestinal microbiota could provide novel strategies for preserving IP during physiologic stress.*"

Noting that intestinal permeability increased by an astounding 62% after the experiment, Dr. Edwards states, "Finding ways to preserve the pre-stress microbiota is an important goal in order to keep inflammation to a minimum. Equally important is the management of increased cortisol and catecholamines in the stress response cycle that keep the inflammatory cycle going," she emphasizes.

"The last or third important part of this cycle is the elimination of toxins or other unwanted pathogens once they have accessed the bloodstream via intestinal permeability," she adds.

According to Dr. Gerda (as she is often called), "This three-pronged approach addresses all of the factors involved with intestinal permeability and can help the military member control inflammation and even possibly prevent illness and disease."

Additionally, moving from an emphasis on disease treatment to prevention could save the Military Health System (MHS) budget worries as well. The MHS supports a total of 9.2 million beneficiaries with a 2016 fiscal year budget of \$47.8 billion dollars.

The study may be the first to use humans in the military to find out how our all-important microbiome is especially stressed due to intense training or "during multiple deployments with exposure to different elements, while enduring long days trying to stay at peak performance with little sleep and limited nutritional support," says Dr. Edwards.

With 80% of our immune system dependent on our gut health, this study contributes to increased understanding of the importance of the microbiome. Prebiotin is involved in two National Institutes of Health (NIH) studies and several more with other major research institutions.

For more commentary on the Military Microbiome, visit her guest blog at <https://www.prebiotin.com/military-gut-microbiome-unique-universal/>.

Jackson GI Medical/Prebiotin Prebiotic was founded by visionary prebiotic pioneer, Dr. Frank Jackson in 2008, and is dedicated to the responsible development and marketing of medically credible nutritional supplements backed by third-party scientific research. Located in Harrisburg, Pa., the company can be reached at 855-466-3488 or online at www.prebiotin.com.

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