**Title:** Tailored Dietary Approach to Manage Irritable Bowel Syndrome Symptoms and Quality of Life

Susan Linke, MBA MS RDN LD CLT, Jan Patenaude, RDN CLT, Gustavo Zarini, PhD RD & Michael McLean, PhD

**Background:** Irritable Bowel Syndrome (IBS) is more prevalent in women than men, and IBS symptoms negatively affect their Quality of Life (QoL).

**Objective:** We investigated the effectiveness of a tailored dietary approach to managing IBS symptomatology and QoL among women.

**Methods:** The retrospective study included women (n=21) with a physician diagnosis of IBS. Blood was collected, and the Leukocyte Activation Assay-MRT (LAA-MRT) was performed using Flow Cytometry Systems by Oxford Biomedical Technologies, Inc. White blood cells reactivity was analyzed using a LAA-MRT software to scale the degree of an adverse immune response to 150 food and food-chemical antigens. The Lifestyle Eating and Performance (LEAP) program is an oligoantigenic dietary approach based on the LAA-MRT results, which was administered by a dietitian. A symptom survey was used to evaluate the severity and frequency of gastrointestinal (GI) symptoms and were quantified from a scale of 0 (low) - 4 (high) with a possible score of 0 to 36. Quality of life was measured by the Short Form-36 (SF-36) Health Survey. Scores from the eight SF-36 domains range from 0 to 100, with a greater score signifying a more desirable health state.

**Results:** The patients’ mean age was 42.6 years and had a BMI of 25.8 kg/m2. Mean follow-up time from the first to the second visit was 19.9 days. Adjusted linear mixed models showed a significant reduction in GI symptoms associated with IBS (16.6 vs. 6.7, P<0.001) and increase in QoL [physical functioning (81.1 vs. 90.6, P=0.003), role physical (27.0 vs. 78.3, P<0.001), vitality (30.2 vs. 57.9, P<0.001), bodily pain (47.4 vs. 73.1, P=0.003), and emotional well-being (61.6 vs. 77.8, P=0.003).

**Conclusion:** Findings from the study support using the LEAP program as an adjunctive treatment option for women with IBS. Tailored dietary approaches are needed to advance the care of IBS patients.

**Keywords:** Irritable bowel syndrome, diet, quality of life

Institutional Review Board (IRB) approval has been received to conduct research.