

South Carolina Researchers Publish Findings on the Impact of a 12-month Inflammation Management Intervention

Researchers from the [Arnold School of Public Health's](#) departments of [Health Promotion, Education, and Behavior](#), [Epidemiology and Biostatistics](#), and [Exercise Science](#) as well as the [Cancer Prevention and Control Program](#)—all at the University of South Carolina—have completed a study examining the impact of a 12-month inflammation management intervention on the Dietary Inflammatory Index (DII®), inflammation and lipids. The study was led by associate professor [Brie Turner-McGrievy](#), funded by a grant from the National Institute of Diabetes and Digestive Disorders and Kidney Diseases to [James Hébert](#), [Michael Wirth](#), and [Nitin Shivappa](#), and published in [Clinical Nutrition ESPEN](#).

With this study, the authors aimed to assess the feasibility (ability to recruit participants and develop the 12-month intervention), acceptability (retention of participants in the intervention), and impact on systemic inflammation and DII scores over a 12-month DII-based intervention.

The researchers recruited adults to participate in a self-selection trial (intervention: n = 61, in-person classes; control: n = 34, newsletters). Classes included participatory cooking and dietary recommendations focused on consuming a plant-based diet rich in anti-inflammatory foods (spices, vegetables, etc.). They analyzed changes in markers of inflammation, lipids, and DII using general linear models with repeated measurements.

The authors found that at 3 months, intervention participants had significantly lower DII scores compared to controls; but not at 12 months. The only biomarker to approach a significant group effect or group-by-time interaction was c-reactive protein (CRP), a marker for inflammation in the body. CRP decreased by -0.65 mg/L at 12 months in the intervention group; no significant decrease was seen for the control group. With both groups combined at 3 months, those with the greatest decrease/improvement in DII score compared with those whose scores increased had greater reductions in CRP, total cholesterol, and LDL cholesterol.

Although the intervention group had reductions in DII and CRP, main inflammation and lipid outcomes did not differ between groups. Overall, those participants with the largest reduction in DII scores had the largest reductions in CRP and LDL and total cholesterol. Dr. Turner-McGrievy and her team note that future interventions may need to have more components in place to support maintenance and continued reductions in the DII.