

Promoting gastrointestinal health and reducing subclinical inflammation in overweight and obese individuals through intake of whole grain products in comparison with fruits and vegetables

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The importance of fruits and vegetables (FV) in a healthy diet is well accepted; however, the importance of whole grains (WG) is less recognized. The purpose of this trial was to determine the impact of either a FV or a WG intervention on markers of inflammation and gut microbiota composition in overweight or obese individuals that have low intakes of these food groups. Forty-nine overweight or obese subjects with low intake of FV (<2 servings/d) and WG (<1 serving/d) were randomized into three groups: WG (3 servings/d), FV (5 servings/d), and refined grains (RG) (3 servings/d) for 6 weeks. The WG diet resulted in a significant decrease in TNF- α , a pro-inflammatory cytokine, whereas no significant effects were found on the other diets. There was a significant decrease in LBP on both the WG and FV diets, with no change on the RG diet. A decrease in LBP is a marker of improved gut barrier function. The FV diet had a significant change in IL-6, but no significant change in the other treatments.

The FV intervention induced a significant increase in alpha diversity. The WG intervention did not result in any significant differences in microbiota composition. These data support the positive impact that WG and FV intake can have on metabolic health in overweight or obese individuals with normally low intake of WG and FV.

Speaker Biography

Julianne Kopf completed her master's in Food Science and Technology at the University of Nebraska. Her research has one publication and received 1st in the 2017 IFT Nutrition Poster Competition. During her master's she also ran Bug eater Foods, an edible insect company for human consumption. This was a food start up that sells cricket-based protein shakes and pasta. In 2016 she was awarded an USDA SBIR Phase 1 Grant for research in extrusion of edible insects. Currently she is running Bug eater Foods and works at Natures Variety as a Quality Lead and Practitioner.

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