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Title

Exploratory Pilot Studies to Demonstrate Mechanisms of Preventing Antibiotic-Associated Diarrhea and the Role for Probiotics;

Priority 1 (Research Category)

Acute respiratory infections

Presenters

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Abstract

Context: Probiotics are live microorganisms that, when administered in adequate amounts, confer a health benefit on the host. One of the most common indications for probiotic treatment is the prevention of antibiotic-associated diarrhea (AAD). Unfortunately, many probiotic products used for AAD are not supported by rigorous independent research, and often results in non-evidence-based usage. Additionally, it is not clear when is the most appropriate time to take a probiotic when on an antibiotic course. Objectives: The primary aim is to determine the ability of BB-12 to impact antibiotic-induced reduction in short chain fatty acid concentration (SCFA), as reflected by the levels of acetate on day 14. Secondarily to determine the ability of BB-12 to impact antibiotic-induced disruption of the gut microbiota with 16S rDNA profiling, with the addition of the time variable of probiotic consumption. Study Design and Interventions: A five group randomized controlled trial, finished in December 2022, we are currently analyzing all the data, but will be finished much prior to NAPCRG. All participants were given a 7-day prescription for amoxicillin-clavulanic acid 875mg taken twice daily. One group received no other interventions. While the other participants were broken into 4 groups. Two groups consumed the yogurt intervention (either yogurt+probiotic or control yogurt) four hours after the antibiotic and two groups consumed the yogurt intervention (either yogurt+probiotic or control yogurt) concomitantly with antibiotics. This timing question is important, as it is unknown if the optimal time for patients to administer probiotics is concurrently with, or after four hours following antibiotic consumption. Setting: Capital Areal Primary Care Practice Based Research Network. Population Studied: 118 participants, ages 18-65 years, generally healthy. Outcome Measures: Change in SCFA among the five groups, microbiome reduced disruption and clinically diagnosed diarrhea. Results: Study is complete and analysis is underway. Should have full results by end of July 2023, much before NAPCRG.