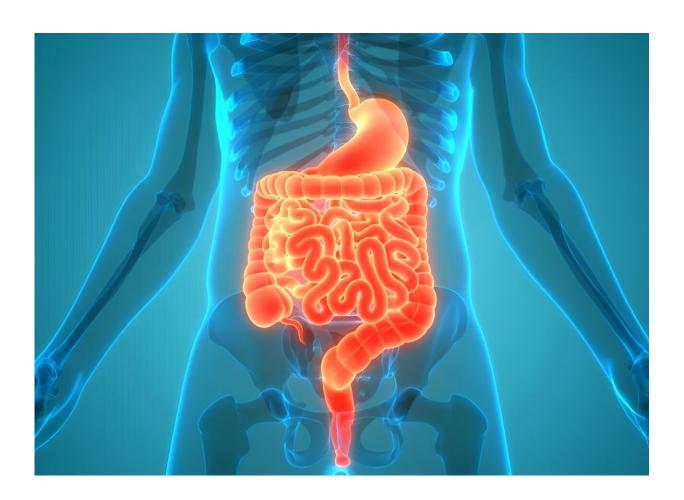


Beans beneficial for patients with history of colorectal neoplasia

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Adding a cup of beans to the usual diet enhances the gut microbiome and regulates host markers associated with metabolic obesity and



colorectal cancer, according to a study published in the December issue of *eBioMedicine*.

Xiaotao Zhang, M.D., Ph.D., from The University of Texas MD Anderson Cancer Center in Houston, and colleagues conducted a low-risk, noninvasive dietary intervention targeting the gut microbiota of obese surveillance patients with a history of colorectal neoplasia. After a four-week equilibrium, 55 patients were randomly assigned to continue their usual diet without beans or to add a daily cup of study beans to their usual diet, with immediate crossover at eight weeks.

The researchers found that 87 percent of patients completed the 16-week trial, which demonstrated an increase in diversity and shifts in multiple bacteria indicative of prebiotic efficacy on intervention, including increased Faecalibacterium, Eubacterium, and Bifidobacterium.

Parallel shifts were seen in nutrient and microbiome-derived metabolites in the circulating metabolome, including increased pipecolic acid and decreased indole; upon returning to the usual diet, these shifts regressed. Within eight weeks, there were no significant changes seen in circulating lipoproteins; however, there were increases observed in proteomic biomarkers of intestinal and systemic inflammatory response and fibroblast-growth factor-19 and a decrease in interleukin-10 receptor- α .

"Adding one cup of navy <u>beans</u> to the <u>diet</u> on all or most days of the week was a safe, scalable dietary strategy to modulate the <u>gut</u> <u>microbiome</u> of high-risk <u>patients</u>, who may be unwilling or unable to sustain more dramatic changes to their usual dietary pattern without substantial support," the authors write.

More information: Xiaotao Zhang et al, Modulating a prebiotic food source influences inflammation and immune-regulating gut microbes



and metabolites: insights from the BE GONE trial, *eBioMedicine* (2023). DOI: 10.1016/j.ebiom.2023.104873

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