

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 [beans](#) to the [diet](#) on all or most days of the week was a safe, scalable dietary strategy to modulate the [gut microbiome](#) of high-risk [patients](#), 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).
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