

**Additional file 5: Table S4.** Covariate-Adjustment of Dietary Fiber Treatment Effects by ANCOVA.

	Within AX Group (Baseline vs Week 6; <i>n</i> =15)						Within MCC Group (Baseline vs Week 6; <i>n</i> =16)						Between Group (AX vs MCC)					
	M1	M2	M3	M4	M5	M6	M1	M2	M3	M4	M5	M6	M1	M2	M3	M4	M5	M6
Satiety after a meal <sup>a</sup>	--	--	--	--	--	--	--	--	--	--	--	--	<b>0.03</b>	<b>0.04</b>	<b>0.03</b>	<b>0.03</b>	<b>0.04</b>	<b>0.04</b>
HOMA-IR <sup>b</sup>	<b>0.04</b>	<b>0.04</b>	0.33	0.18	0.11	<b>0.03</b>	0.23	0.23	0.06	0.57	0.21	0.22	<b>0.02</b>	<b>0.005</b>	<b>0.02</b>	<b>0.01</b>	<b>0.03</b>	<b>0.03</b>
QUICKI <sup>b</sup>	0.07	0.06	0.50	0.29	0.13	0.05	0.06	0.06	<b>0.01</b>	0.20	0.06	0.06	<b>0.005</b>	<b>0.005</b>	<b>0.01</b>	<b>0.005</b>	<b>0.006</b>	<b>0.01</b>
Fecal calprotectin <sup>b</sup>	0.85	0.85	0.18	0.96	0.85	0.94	<b>0.002</b>	<b>0.004</b>	0.98	<b>0.007</b>	<b>0.006</b>	<b>0.005</b>	<b>0.01</b>	<b>0.01</b>	<b>0.007</b>	<b>0.007</b>	<b>0.005</b>	<b>0.005</b>
Tumor necrosis factor- $\alpha$ <sup>b</sup>	0.37	0.36	0.06	0.21	0.38	0.18	<b>0.006</b>	<b>0.005</b>	<b>&lt;0.001</b>	<b>0.007</b>	<b>0.03</b>	<b>0.006</b>	0.51	0.32	0.24	0.47	0.42	0.20

**M1**: model adjusted for age. **M2**: model adjusted for sex. **M3**: model adjusted for changes in total dietary fiber intake, which considers the amount of supplemental fiber. **M4**: model adjusted for changes in total dietary sugar intake. **M5**: model adjusted for differences in stool consistency. **M6**: model adjusted for differences in bowel movement frequency. Statistical significances of changes within-group were determined by repeated measures permutational ANCOVA models, while between-group differences of either (a) area under the curve or (b) percent change from baseline (during intervention – baseline/baseline\*100) were determined by unpaired permutational ANCOVA. Data presented as *p* values with significance set at *p*<0.05 (bolded *p* values).

Abbreviations: AX, arabinoxylan; ANCOVA, analysis of covariance; HOMA-IR, homeostatic model assessment of insulin resistance; MCC, microcrystalline cellulose; QUICKI, quantitative insulin sensitivity check index.