

## Online supplemental data

**Table S1.** Composition of the intervention beverage

<b>Components*</b>	<b>Cranberry beverage</b>	<b>Placebo beverage</b>
Energy,kcal	35	35
Carbohydrates,g	9	9
—Sugars,g	6	7
Protein,g	0	0
Total fat,g	0	0
Sodium,mg	50	45
Total Anthocyanins <sup>b</sup> , mg	2.23± 0.66	N/D <sup>a</sup>
Proanthocyanidins <sup>c</sup> , mg	42.56± 2.06	N/D
Total phenolics <sup>d</sup> , mg	157.55± 5.08	N/D
Total phenolic acids <sup>b</sup> , mg	12.09± 1.5	N/D
Total flavonols <sup>b</sup> , mg	6.86± 0.92	N/D
Total organic acids <sup>b</sup> , mg	1925±73	1748± 44

\* Non-polyphenol mandatory label information (energy, carbohydrate, sugar, protein, fat, sodium) were tested only at the time of production. Allowable variation range was +/- 20% as defined in National Food Safety Standard GB 28050 Nutrition Labeling of Prepackaged Foods. Polyphenols and organic acids were measured at the time of production and every 3 months thereafter (mean ± SD; N = 9). Values are expressed based on one serving of 240mL.

<sup>a</sup>N/D: not detectable.

<sup>b</sup>Measured by HPLC method.

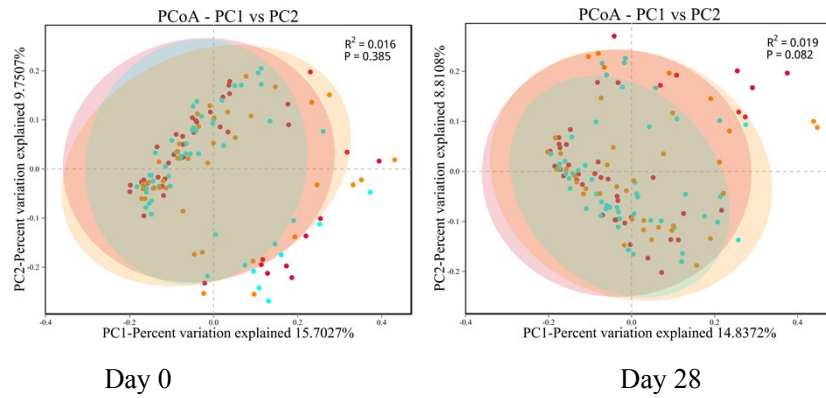
<sup>c</sup>Measured by BL-DMAC method.

<sup>d</sup>Measured by Folin-Ciocalteu method.

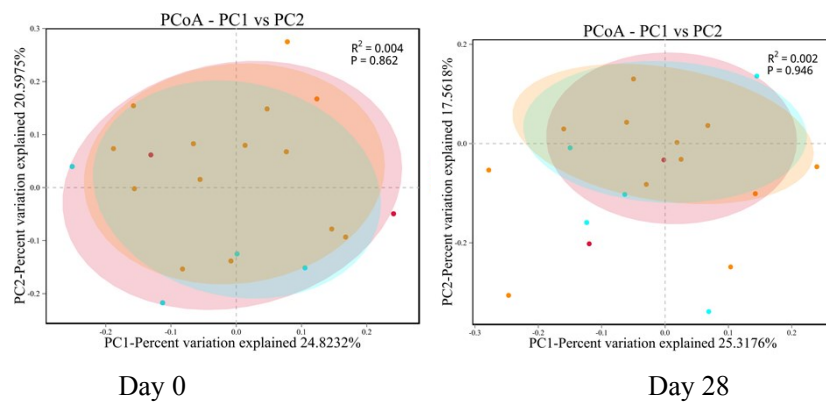
**Table S2.** Alpha diversity indices of the three groups at baseline and after intervention

Group	Time	OTU	ACE	Chao1	Simpson	Shannon
High-dose (n=43)	Day 0	216.7±46. 7	251.3±47. 5	257.4±54. 6	0.1±0.1	3.1±0.5
	Day 28	209.3±44. 2	245.4±44. 1	244.4±46. 5	0.1±0.1	3.1±0.4
Low-dose (n=51)	Day 0	220±38.3	251.7±41. 2	254.0±40. 3	0.1±0.1	3.1±0.5
	Day 28	212.0±36. 5	251.2±37. 2	254.1±41. 7	0.1±0.1	3.1±0.4
Placebo (n=38)	Day 0	210.1±47. 8	247.1±42. 5	250.6±54. 1	0.1±0.1	3.1±0.5
	Day 28	203.8±47. 9	240.6±45. 3	238.1±50. 6	0.1±0.1	3.0±0.5

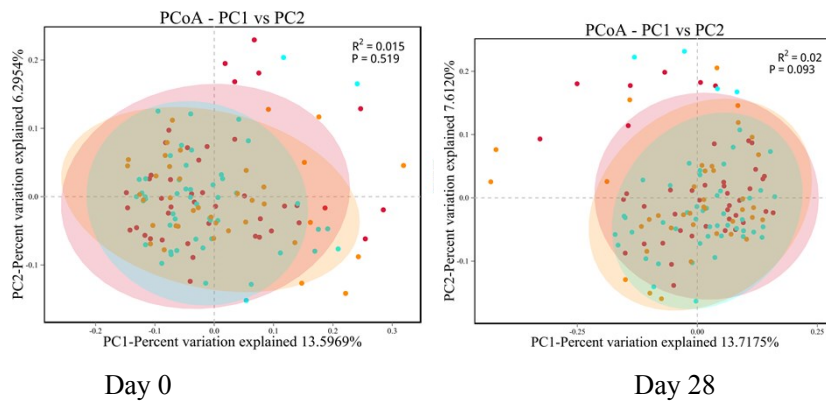
A OTU level



B Phylum level



C Genus level



**Figure S1** PCoA score plots based on Binary-jaccard distance at baseline and Day 28 among the three groups at the OTU (A), phylum (B) and genus (C) level. PCoA, principal coordinate analysis; OTU, operational taxonomic unit. Red: High-dose group; blue: low-dose group; yellow: placebo group. High-dose: n=43, low-dose: n=51, placebo: n=38.