

Table S1. Normalized AUC of TC, HDL-C and LDL-C, and positive iAUC and net iAUC of TG.

Biomarker	Control	ABSG	FBSG
TC negative iAUC (mmol/L \times min)	1657 \pm 282 ^a	1278 \pm 192 ^a	1394 \pm 220 ^a
HDL-C negative iAUC (mmol/L \times min)	731 \pm 108 ^a	671 \pm 78 ^a	664 \pm 65 ^a
LDL-C negative iAUC (mmol/L \times min)	2659 \pm 440 ^a	2445 \pm 371 ^a	2463 \pm 294 ^a
TG positive iAUC (mmol/L \times min)	106 \pm 16 ^a	114 \pm 23 ^a	105 \pm 15 ^a

Values are presented as mean \pm standard error. *P* value was determined by repeated measured one-way ANOVA with post-hoc Bonferroni test. Different alphabet superscripts indicate a significant difference across the comparisons within the same row. Superscript a indicates the highest group across the row. Control: control biscuit; ABSG: autoclaved brewers' spent grain -containing biscuit; FBSG: fermented brewers' spent grain -containing biscuit. TC: total cholesterol; HDL-C: high-density lipoprotein cholesterol; LDL-C: low-density lipoprotein cholesterol; TG: triglyceride; AUC: area under the curve; iAUC: incremental area under the curve.

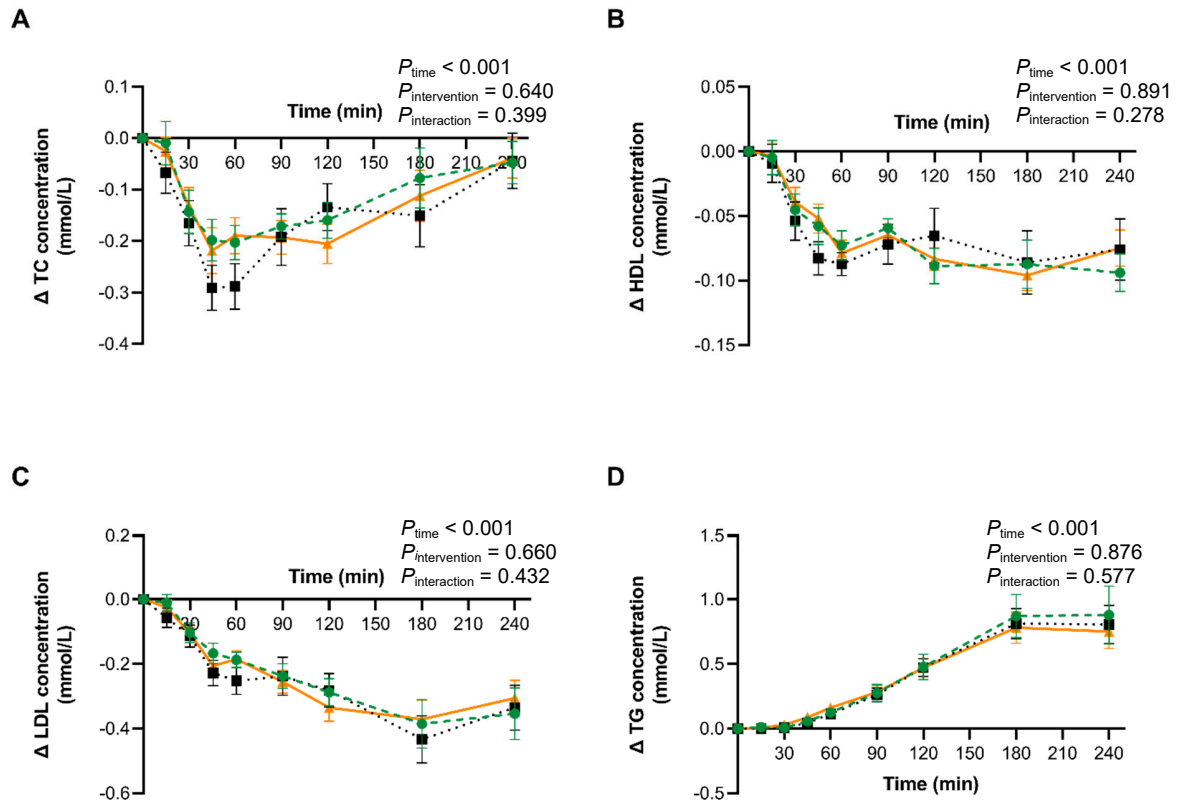


Figure S1. Change from baseline of (A) postprandial TC concentration. (B) postprandial HDL-C concentration. (C) postprandial LDL-C concentration. (D) postprandial TG concentration. Control is in black dotted lines, ABSG is in green dashed lines, FBSG is in orange solid lines. *P* value was determined by two-way repeated measures ANOVA with Wilcoxon test considering Bonferroni correction. Control: control biscuit; ABSG: autoclaved brewers' spent grain - containing biscuit; FBSG: fermented brewers' spent grain - containing biscuit. TC: total cholesterol; HDL: high-density lipoprotein cholesterol; LDL: low-density lipoprotein cholesterol; TG: triglyceride.

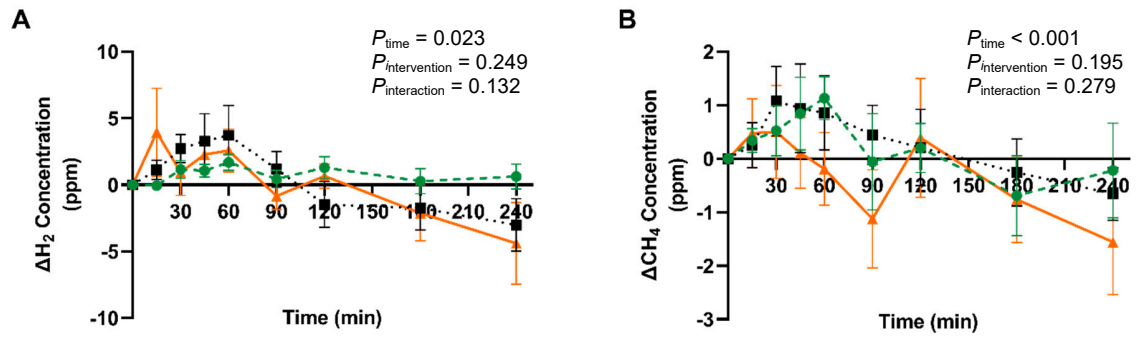


Figure S2. Change from baseline of **(A)** H_2 concentration. **(B)** CH_4 concentration. Control is in black dotted lines, ABSG is in green dashed lines, FBSG is in orange solid lines. P value was determined by two-way repeated measures ANOVA with Wilcoxon test considering Bonferroni correction. Control: control biscuit; ABSG: autoclaved brewers' spent grain -containing biscuit; FBSG: fermented brewers' spent grain -containing biscuit.

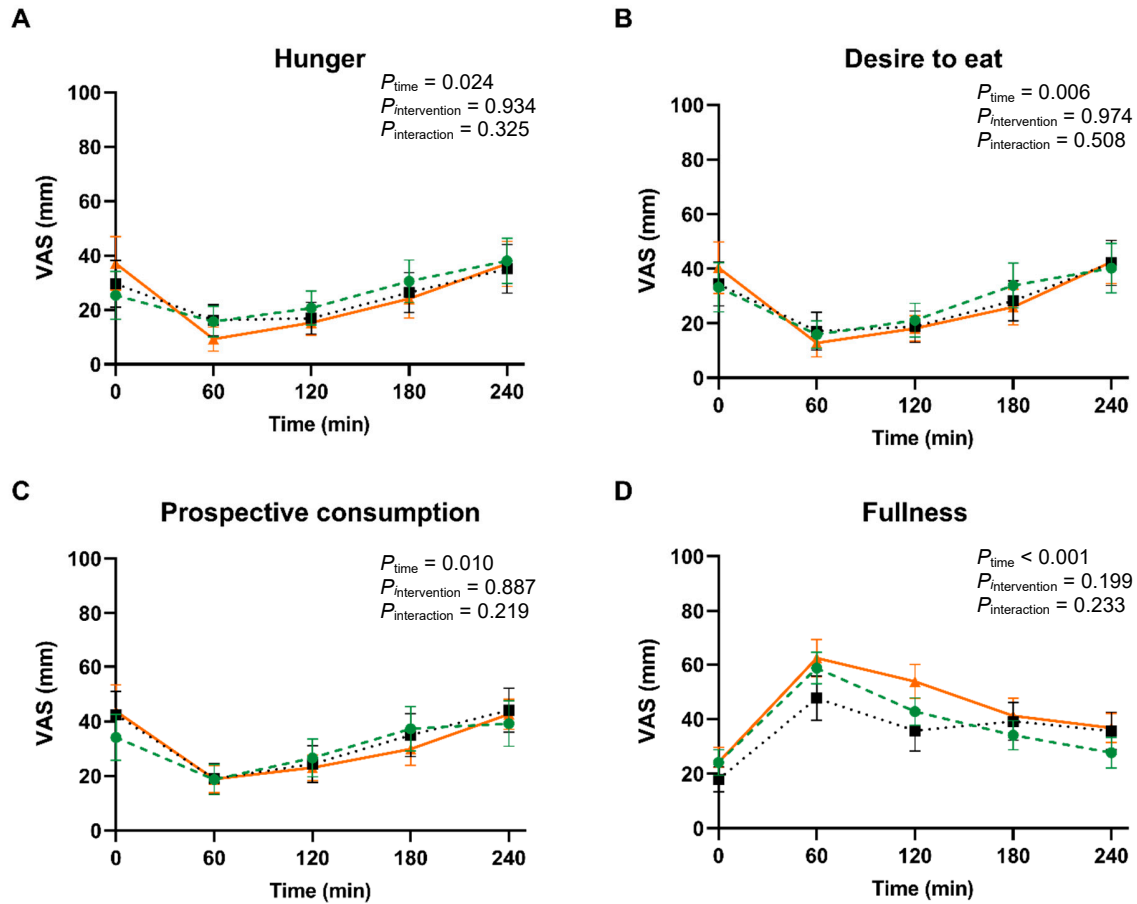


Figure S3. VAS score of subjective satiety assessment: **(A)** Hunger. **(B)** Desire to eat. **(C)** Prospective consumption. **(D)** Fullness. Control is in black dotted lines, ABSG is in green dashed lines, FBSG is in orange solid lines. P value was determined by two-way repeated measures ANOVA with Wilcoxon test considering Bonferroni correction. VAS: visual analogue scale; Control: control biscuit; ABSG: autoclaved brewers' spent grain -containing biscuit; FBSG: fermented brewers' spent grain -containing biscuit.