

**Table S3.** Characteristics of the individuals according to quartiles of plasma levels of lipopolysaccharide.

	Quartiles of plasma levels of LPS										p-value	
	Q1 (0.14-0.35 EU/mL) n=19		Q2 (0.36-0.50 EU/mL) n=23		Q3 (0.50-1.22 EU/mL) n=22		Q4 (1.35-5.45 EU/mL) n=21					
Age (years)	22	± 2		22	± 2		22	± 2		22	± 3	0.95
Sex, N												0.24
Men	3			5			7			9		
Women	16			18			15			12		
Body composition parameters												
BMI (kg/m <sup>2</sup> )	23.5 4	± 5.34		24.0 8	± 4.27		25.7 3	± 5.11		26.4 5	± 4.14	0.05
FMI (kg/m <sup>2</sup> )	8.29	± 3.89		8.69	± 2.83		9.03	± 3.07		9.80	± 2.75	0.33
LMI (kg/m <sup>2</sup> )	13.9 4	± 1.89		13.9 0	± 2.03		15.1 3	± 2.60		14.7 9	± 2.51	0.25
Plasma levels of endocannabinoids and their analogues (peak area ratio)												
AEA and related N-acylethanolamines												
AEA	0.15	± 0.09		0.13	± 0.05		0.14	± 0.04		0.14	± 0.05	0.69
AA	69.3 0	± 19.65		64.2 4	± 21.8 8		67.5 3	± 27.45		66.6 2	± 19.62	0.95
DHEA	0.07	± 0.03		0.12	± 0.31		0.06	± 0.02		0.07	± 0.03	0.62
DGLEA	0.02	± 0.01		0.02	± 0.01		0.02	± 0.01		0.03	± 0.01	0.35
LEA	0.25	± 0.15		0.20	± 0.06		0.22	± 0.07		0.21	± 0.07	0.77
alpha LEA	0.00 9	± 0.007		0.00 8	± 0.00 4		0.00 7	± 0.003		0.00 6	± 0.001	0.75
PEA	1.76	± 0.32		1.71	± 0.21		1.81	± 0.28		1.76	± 0.22	0.64
PDEA	0.02 4	± 0.009		0.02 4	± 0.00 7		0.02 5	± 0.009		0.02 4	± 0.007	0.99
POEA	0.33	± 0.36		0.24	± 0.16		0.28	± 0.19		0.25	± 0.16	0.84
OEA	0.74	± 0.25		0.62	± 0.16		0.70	± 0.21		0.69	± 0.18	0.43
SEA	1.36	± 0.29		1.23	± 0.17 *		1.42	± 0.23*		1.27	± 0.22	<b>0.04</b>
2-AG and acylglycerols												
2-AG	0.00 8	± 0.007 *		0.04 8	± 0.18 0		0.02 8	± 0.032* †		0.00 8	± 0.006 †	<b>0.01</b>
2-LG	0.03	± 0.05		0.62	± 2.73		0.18	± 0.44		0.01	± 0.02	0.07
2-OG	0.00 2	± 0.006		0.02 5	± 0.10 6		0.01 2	± 0.034		0.00 1	± 0.001	0.06
Fecal microbiota composition (genera, %)												
Bilophila	0.41	± 0.25		0.51	± 0.54		0.53	± 0.36		0.51	± 0.42	0.80
Akkermansia	3.20	± 4.67		2.75	± 5.56		1.64	± 2.72		1.18	± 2.95	0.30
Faecalibacterium	5.71	± 3.15		6.68	± 4.69		6.11	± 4.06		5.42	± 2.62	0.90
Parasutterella	0.72	± 1.16		2.18	± 3.20		1.28	± 2.46		0.46	± 0.70	0.35

<i>Odoribacter</i>	0.72	±	0.46	0.79	±	0.58	1.14	±	0.70	0.62	±	0.28	<b>0.04</b>
<i>Prevotella</i>	5.17	±	6.60	3.01	±	8.00	4.25	±	7.81	8.11	±	9.87	0.23

Data are presented as means ± standard deviations. Symbols \* and † indicate significant differences after correcting for multiple comparisons FDR. 2-AG: 2-arachidonylglycerol; 2-LG: 2-linoleoylglycerol; 2-OG: 2-oleoylglycerol; alpha LEA: alpha-Linolenoyl ethanolamide; AA: arachidonic acid; AEA: anandamide; BMI: body mass index; DGLEA: dihomo-gamma-linolenoyl ethanolamide; DHEA: docosahexaenoyl ethanolamide; EU: endotoxins units; FMI: fat mass index; HDL-C: high-density lipoprotein cholesterol; LDL-C: low-density lipoprotein cholesterol; LEA: linoleoyl ethanolamide; LMI: Lean mass index; LPS: lipopolysaccharide; OEA: oleoyl ethanolamine; PEA: palmitoyl ethanolamide; PDEA: pentadecanoyl ethanolamide; POEA: palmitoleoyl ethanolamide; Q: quartiles; SEA: stearoyl ethanolamide.