Outcome	Model	Ferritin (per 10 μg/L)		Transferrin (per 0.1 g/L)		Serum iron (per μmol/L)		NTBI (per μmol/L)	
		β	95% CI	β	95% CI	β	95% CI	β	95% CI
Adipocyte IR									
(% change)	1	1.26	0.88–1.64‡	4.58	2.99–6.19‡	−0.01	−0.93 to 0.93	1.08	−2.92 to 5.26
	2	1.38	1.01–1.76‡	5.26	3.77–6.78‡	0.08	−0.78 to 0.95	2.06	−1.68 to 5.94
	3	1.29	0.92–1.67‡	5.23	3.78–6.71‡	0.53	−0.32 to 1.39	2.77	−0.86 to 6.53
	4	1.03	0.69–1.37‡	4.08	2.78–5.42‡	1.08	0.32–1.84†	4.01	0.74–7.38*
	5	1.00	0.66–1.34‡	4.18	2.88–5.50‡	1.36	0.61–2.12‡	5.14	1.88–8.52†
NEFAs									
(μmol/L change)	1	1.95	0.83–3.06†	6.65	2.12–11.2†	2.32	−0.36 to 4.99	9.77	−1.87 to 21.4
	2	2.72	1.52–3.91‡	7.28	2.70–11.9†	3.35	0.75–5.96*	14.6	3.33–25.9*
	3	2.06	0.85–3.27†	6.26	1.70–10.8†	3.18	0.59–5.78*	13.1	2.12–24.1*
	4	1.98	0.76–3.20†	5.92	1.29–10.5*	3.49	0.89–6.10†	13.8	2.75–24.8*
	5	1.94	0.71–3.16†	6.07	1.46–10.7†	3.99	1.36–6.61†	15.7	4.60–26.8†
Adiponectin									
(% change)	1	−1.19	−1.48 to −0.90‡	−0.94	−2.19 to 0.33	−0.55	−1.29 to 0.19	−2.95	−6.05 to 0.24
	2	−0.66	−0.95 to −0.37‡	−1.63	−2.72 to −0.52†	0.23	−0.41 to 0.87	−0.55	−3.26 to 2.24
	3	−0.65	−0.94 to −0.35‡	−1.66	−2.75 to −0.56†	−0.03	−0.66 to 0.62	−1.05	−3.71 to 1.68
	4	−0.63	−0.93 to −0.33‡	−1.59	−2.70 to −0.48†	−0.09	−0.73 to 0.56	−1.20	−3.85 to 1.53
	5	−0.63	−0.92 to −0.33‡	−1.62	−2.72 to −0.50†	−0.15	−0.80 to 0.50	−1.46	−4.13 to 1.29
HOMA2-IR									
(% change)	1	1.04	0.75–1.34‡	3.19	1.95–4.44‡	−0.48	−1.21 to 0.24	−0.76	−3.86 to 2.43
	2	0.95	0.66–1.25‡	3.76	2.60–4.94‡	−0.62	−1.28 to 0.05	−0.78	−3.62 to 2.15
	3	0.99	0.71–1.27‡	3.93	2.83–5.03‡	−0.18	−0.82 to 0.47	0.10	−2.61 to 2.89
	4	0.75	0.50–0.99‡	2.87	1.93–3.83‡	0.30	−0.25 to 0.85	1.18	−1.14 to 3.54
	5	0.73	0.49–0.97‡	2.94	2.01–3.88 ‡	0.48	−0.07 to 1.03	1.89	−0.42 to 4.26

β Values are unstandardized regression coefficients and represent the change in adipocyte IR, adiponectin, and HOMA2-IR according to increases in ferritin, transferrin, serum iron, and NTBI, respectively. Model 1: crude associations. Model 2: Model 1 + adjusted for age, sex, and glucose metabolism status, and ferritin and transferrin adjusted for each other. Model 3: Model 2 + adjusted for prior CVD, eGFR, smoking status, alcohol consumption, dietary energy intake, physical activity, family history of T2DM, and use of medication. Model 4: Model 3 + adjusted for waist circumference. Model 5: Model 4 + adjusted for low-grade inflammation score. *$P < 0.05$; †$P < 0.01$; ‡$P < 0.001$.