

Table 3 Changes in body composition before and after fasting

	NFG/NGT				Pre-DM				T2DM				<i>P</i> value
	Pre-fasting	Post-fasting	Difference	<i>P</i> value	Pre-fasting	Post-fasting	Difference	<i>P</i> value	Pre-fasting	Post-fasting	Difference	<i>P</i> value	(between groups)
Whole body													
Fat ratio	36.34 ± 7.57	35.09 ± 7.45	-1.24 ± 1.18	<0.001	37.04 ± 8.77	35.61 ± 8.44	-1.43 ± 1.46	<0.001	33.97 ± 8.61	32.76 ± 8.02	-1.21 ± 1.22	<0.001	0.33
Fat mass	29.06 ± 10.67	26.89 ± 9.93	-2.17 ± 1.52	<0.001	30.38 ± 11.05	27.89 ± 9.97	-2.49 ± 1.67	<0.001	28.08 ± 10.80	25.85 ± 9.67	-2.23 ± 1.60	<0.001	0.15
Fat free mass	50.08 ± 11.14	48.94 ± 10.84	-1.14 ± 0.95	<0.001	50.48 ± 9.90	49.38 ± 9.50	-1.11 ± 1.33	<0.001	53.68 ± 11.22	52.28 ± 10.72	-1.40 ± 1.11	<0.001	0.07
Muscle mass	47.27 ± 10.70	46.21 ± 10.40	-1.07 ± 0.89	<0.001	47.65 ± 9.53	46.61 ± 9.13	-1.03 ± 1.28	<0.001	50.77 ± 10.76	49.45 ± 10.27	-1.32 ± 1.05	<0.001	0.06
Bone mass	2.81 ± 0.47	2.73 ± 0.47	-0.08 ± 0.07	<0.001	2.84 ± 0.40	2.77 ± 0.41	-0.07 ± 0.07	<0.001	2.91 ± 0.48	2.83 ± 0.47	-0.08 ± 0.08	<0.001	0.81
Total body water	35.45 ± 6.37	33.82 ± 6.05	-1.63 ± 1.34	<0.001	36.12 ± 5.87	34.45 ± 5.46	-1.68 ± 1.53	<0.001	37.64 ± 6.56	35.76 ± 6.04	-1.88 ± 1.50	<0.001	0.27
Total body water ratio	45.32 ± 4.45	45.12 ± 4.40	-0.20 ± 1.41	0.004	45.09 ± 4.65	44.96 ± 4.29	-0.13 ± 1.66	0.41	46.48 ± 4.75	46.19 ± 4.30	-0.29 ± 1.56	0.07	0.72
Intracellular water	20.48 ± 4.24	19.29 ± 3.93	-1.20 ± 1.09	<0.001	20.85 ± 4.01	19.59 ± 3.60	-1.26 ± 1.19	<0.001	21.95 ± 4.53	20.56 ± 4.06	-1.39 ± 1.18	<0.001	0.31
Extracellular water	14.86 ± 2.18	14.40 ± 2.18	-0.45 ± 0.34	<0.001	15.27 ± 2.00	14.86 ± 2.03	-0.41 ± 0.44	<0.001	15.69 ± 2.19	15.20 ± 2.15	-0.49 ± 0.40	<0.001	0.28
Fatness	32.47 ± 20.34	26.92 ± 19.55	-5.55 ± 2.48	<0.001	37.04 ± 20.23	30.95 ± 19.15	-6.09 ± 2.26	<0.001	36.51 ± 22.02	30.43 ± 21.1	-6.08 ± 2.29	<0.001	0.03
Visceral fat index	11.68 ± 4.66	11.00 ± 4.53	-0.68 ± 0.68	<0.001	12.92 ± 4.34	12.22 ± 4.17	-0.70 ± 1.00	<0.001	13.67 ± 4.73	12.93 ± 4.57	-0.74 ± 0.53	<0.001	0.79
Basal energy expenditure	1510 ± 316.6	1467 ± 308.4	-42.7 ± 26.9	<0.001	1514 ± 261.7	1471 ± 253.2	-43.16 ± 27.92	<0.001	1571 ± 297.3	1521 ± 286.3	-50.54 ± 29.07^	<0.001	0.04
Right leg													
fat ratio	34.72 ± 6.84	33.85 ± 6.88	-0.86 ± 0.90	<0.001	34.96 ± 7.67	33.93 ± 7.54	-1.04 ± 1.55	<0.001	32.24 ± 7.63	31.32 ± 7.36	-0.92 ± 0.86	<0.001	0.29
fat mass	5.07 ± 1.84	4.57 ± 1.56	-0.50 ± 0.44	<0.001	5.20 ± 1.79	4.63 ± 1.48	-0.56 ± 0.45	<0.001	4.82 ± 1.73	4.31 ± 1.42	-0.50 ± 0.43	<0.001	0.36
fat free mass	9.54 ± 2.70	8.98 ± 2.50	-0.56 ± 0.46	<0.001	9.59 ± 2.30	9.00 ± 2.10	-0.59 ± 0.53	<0.001	10.14 ± 2.58	9.54 ± 2.43	-0.60 ± 0.42	<0.001	0.64

muscle mass	8.99 ± 2.57	8.47 ± 2.38	-0.52 ± 0.44	<0.001	9.04 ± 2.19	8.48 ± 2.00	-0.55 ± 0.50	<0.001	9.57 ± 2.45	9.01 ± 2.31	-0.56 ± 0.39	<0.001	0.67
Left leg													
fat ratio	34.65 ± 6.84	33.75 ± 6.7	-0.90 ± 0.92	<0.001	34.93 ± 7.71	33.86 ± 7.57	-1.07 ± 1.52	<0.001	32.12 ± 7.60	31.19 ± 7.31	-0.94 ± 0.92	<0.001	0.31
fat mass	4.98 ± 1.79	4.47 ± 1.52	-0.50 ± 0.44	<0.001	5.09 ± 1.74	4.53 ± 1.43	-0.57 ± 0.46	<0.001	4.73 ± 1.68	4.23 ± 1.37	-0.50 ± 0.43	<0.001	0.37
fat free mass	9.40 ± 2.70	8.85 ± 2.52	-0.56 ± 0.47	<0.001	9.43 ± 2.28	8.84 ± 2.11	-0.59 ± 0.53	<0.001	10.01 ± 2.57	9.42 ± 2.42	-0.59 ± 0.41	<0.001	0.72
muscle mass	8.87 ± 2.56	8.35 ± 2.39	-0.52 ± 0.44	<0.001	8.89 ± 2.17	8.33 ± 2.01	-0.55 ± 0.51	<0.001	9.45 ± 2.44	8.90 ± 2.29	-0.55 ± 0.39	<0.001	0.72
Right arm													
fat ratio	31.50 ± 9.28	29.79 ± 8.91	-1.71 ± 1.37	<0.001	32.39 ± 11.17	30.48 ± 10.46	-1.92 ± 2.34	<0.001	28.41 ± 10.65	26.81 ± 9.77	-1.60 ± 1.46	<0.001	0.32
fat mass	1.22 ± 0.61	1.05 ± 0.52	-0.16 ± 0.14	<0.001	1.37 ± 0.82	1.16 ± 0.63	-0.22 ± 0.24*	<0.001	1.17 ± 0.73	1.00 ± 0.56	-0.17 ± 0.20	<0.001	0.02
fat free mass	2.58 ± 0.63	2.44 ± 0.60	-0.14 ± 0.12	<0.001	2.68 ± 0.58	2.52 ± 0.55	-0.17 ± 0.12	<0.001	2.83 ± 0.65	2.67 ± 0.61	-0.16 ± 0.14	<0.001	0.13
muscle mass	2.42 ± 0.59	2.29 ± 0.56	-0.13 ± 0.12	<0.001	2.51 ± 0.55	2.36 ± 0.57	-0.16 ± 0.12	<0.001	2.66 ± 0.61	2.50 ± 0.57	-0.16 ± 0.14	<0.001	0.09
Left arm													
fat ratio	32.78 ± 9.36	30.99 ± 9.08	-1.79 ± 1.52	<0.001	33.64 ± 11.15	31.67 ± 10.57	-1.97 ± 2.37	<0.001	29.68 ± 10.60	27.99 ± 9.80	-1.69 ± 1.54	<0.001	0.48
fat mass	1.25 ± 0.65	1.08 ± 0.55	-0.17 ± 0.17	<0.001	1.40 ± 0.82	1.18 ± 0.64	-0.22 ± 0.24*	<0.001	1.21 ± 0.76	1.03 ± 0.59	-0.18 ± 0.21	<0.001	0.04
fat free mass	2.49 ± 0.60	2.34 ± 0.56	-0.14 ± 0.13	<0.001	2.58 ± 0.55	2.42 ± 0.51	-0.16 ± 0.13	<0.001	2.72 ± 0.61	2.56 ± 0.57	-0.16 ± 0.14	<0.001	0.34
muscle mass	2.34 ± 0.55	2.20 ± 0.52	-0.14 ± 0.13	<0.001	2.42 ± 0.51	2.27 ± 0.47	-0.15 ± 0.12	<0.001	2.55 ± 0.57	2.40 ± 0.53	-0.16 ± 0.14	<0.001	0.32
Trunk													
fat ratio	38.23 ± 8.15	36.70 ± 7.93	-1.53 ± 1.52	<0.001	39.20 ± 9.36	37.46 ± 8.85	-1.74 ± 1.56	<0.001	36.07 ± 9.21	34.61 ± 8.41	-1.46 ± 1.59	<0.001	0.34
fat mass	16.55 ± 6.08	15.71 ± 6.05	-0.84 ± 0.82	<0.001	17.32 ± 6.06	16.40 ± 5.94	-0.92 ± 0.75	<0.001	16.16 ± 6.12	15.28 ± 5.92	-0.88 ± 0.68	<0.001	0.55
fat free mass	26.07 ± 5.02	26.33 ± 5.02	0.26 ± 1.19	<0.001	26.20 ± 4.77	26.60 ± 4.61	0.40 ± 1.33	0.001	27.97 ± 5.28	28.09 ± 5.01	0.11 ± 1.30	0.4	0.23
muscle mass	24.66 ± 4.90	24.91 ± 4.90	0.25 ± 1.12	<0.001	24.80 ± 4.66	25.17 ± 4.50	0.38 ± 1.25	0.001	26.54 ± 5.14	26.65 ± 4.87	0.10 ± 1.21	0.4	0.23

“*”, “#”, “^” means $P < 0.05$ between NFG group and Pre-DM group, Pre-DM group and T2DM group NFG group and T2DM group, respectively.