

**Supplemental Table S1.** Metabolic Parameters and Cardiac Function at Baseline (Week 12) versus Follow-up (Week 28)

Parameter	ND week 12	ND week 28	P value	HFD week 12	HFD week 28	P value
Anthropometry						
Body weight, g	417.49±5.90	574.48±7.62	0.0003	596.30±14.72	824.09±27.86	<0.0001
Whole-body substrate oxidation during vigorous exercise						
FAO, mg/kg/min	23.90±0.31	17.96±1.27	0.0097	15.84±0.83	11.96±0.85	0.0299
CHOO, mg/kg/min	24.44±2.29	18.79±1.86	NS	12.64±0.84	6.21±0.36	0.0241
Metabolic parameters						
Glucose, mg/dL	153.61±5.69	175.96±5.43	0.0048	188.66±8.38	185.36±5.24	NS
Insulin, mU/mL	4.65±0.57	7.28±1.34	0.0193	7.03±0.91	11.64±1.27	0.0126
HOMA-IR	1.58±0.30	3.29±0.63	0.0033	3.03±0.45	5.36±0.56	0.0019
Triglyceride, mg/dL	62.57±7.37	86.59±13.99	NS	64.13±3.11	135.00±10.26	0.0039
Total cholesterol, mg/dL	59.79±4.01	87.13±3.39	0.0185	92.07±6.51	117.65±2.69	0.0027
HDL, mg/dL	31.28±0.95	34.08±1.46	0.0234	20.48±2.04	24.02±2.29	0.0122
Calculated LDL, mg/dL	31.36±3.04	30.89±2.84	0.0210	57.67±5.56	67.80±4.66	0.0315
HDL/non-HDL ratio	0.84±0.07	0.61±0.03	0.0212	0.38±0.05	0.27±0.03	0.0458
Cardiac function						
LVEF, %	84.67±0.88	86.48±1.57	NS	79.20±2.03	80.60±1.55	NS
%FS	49.2±1.18	51.83±1.86	NS	42.50±1.65	45.77±1.53	NS
E/A ratio	1.34±0.10	1.21±0.03	NS	1.31±0.05	1.33±0.03	NS
LF/HF ratio	0.15±0.02	0.14±0.03	NS	0.16±0.03	0.26±0.04	0.0380

Values are expressed as mean±standard error of the mean (n=8 per group).

ND, normal diet-fed rats; HFD, high-fat diet-fed rats; FAO, fatty acid oxidation rate; CHOO, carbohydrate oxidation rate; NS, no significance; HOMA-IR, homeostatic model assessment for insulin resistance; HDL, high density lipoprotein; LDL, low density lipoprotein; LVEF, left ventricular ejection fraction; FS, fractional shortening; E/A, early to late ventricular filling velocity; LF/HF, lower frequency/high frequency.