

Supplementary File

Exercise promotes cardiac hydrogen sulfide biosynthesis and mitigates pyroptosis to prevent high-fat diet induced diabetic cardiomyopathy

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Table S1. Exercise training protocol: Regimen for the exercise pre-training and training.

Exercise regimen	<u>Warm-up</u>		<u>Run</u>		<u>Cool-down</u>	
	Time	Speed	Time	Speed	Time	Speed
	(min)	(M/min)	(min)	(M/min)	(min)	(M/min)
Pre-training	5	8	5, 20,	10, 10	5	8
1-4 days			30, 40	12, 12	5	8
Week 1	5	8	50	12	5	8
Week 2-20	5	8	50	15	5	8

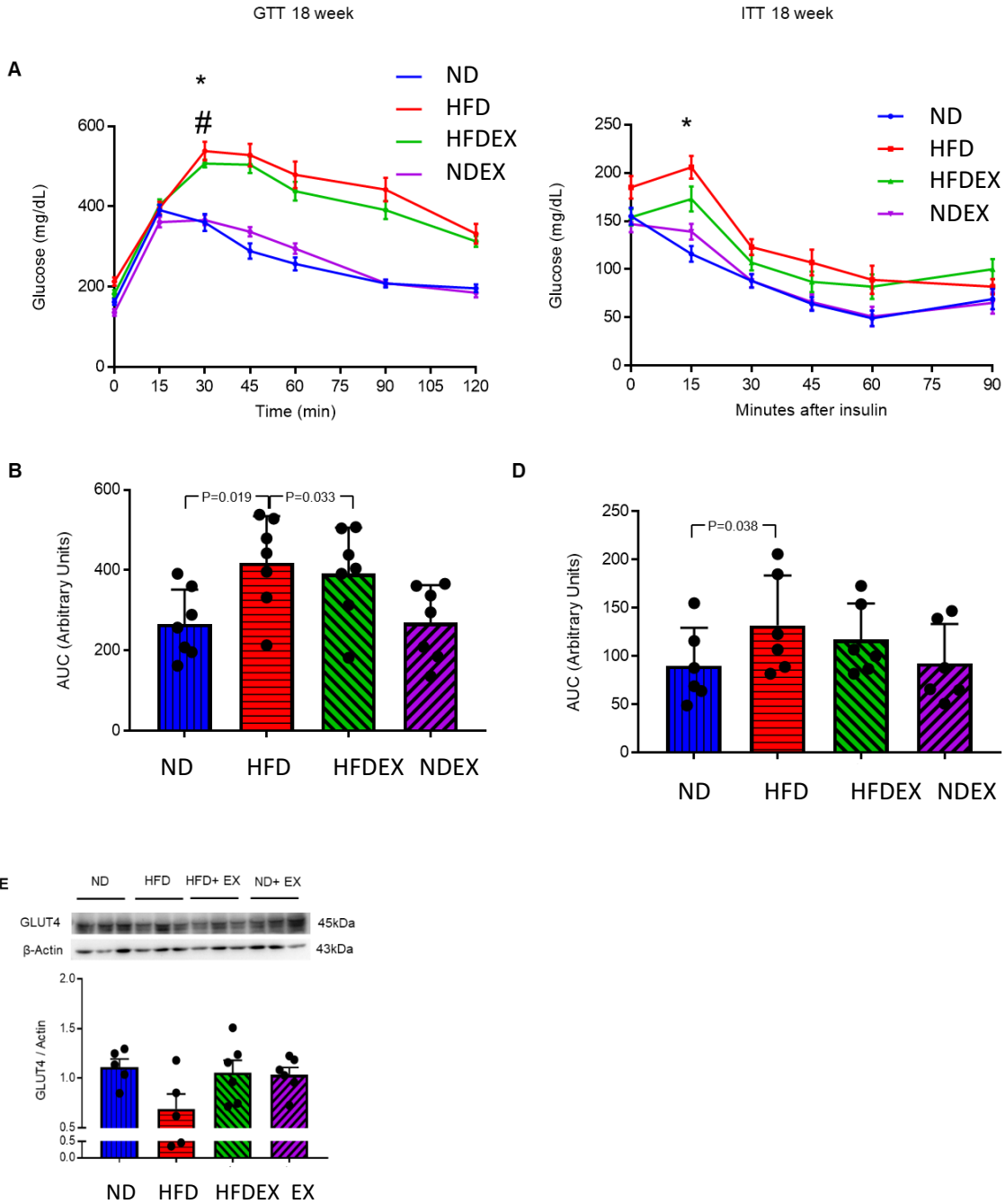


Figure S1. 18 weeks treatment of high-fat diet induces a diabetic phenotype in mice. A, B. Intraperitoneal glucose tolerance test (GTT) at 18-week treatment in the four groups of mice: normal diet (ND), high-fat diet (HFD), HFD mice on exercise training (HFDEX) and ND mice on exercise training (NDEX). Glucose clearance was decreased in HFD but improved with EX. **C, D.** Intraperitoneal insulin tolerance test (ITT) at 18-week treatment. Insulin resistance was higher in HFD as compared to ND group which was also improved with EX. **E.** Glucose transporter type 4 (GLUT-4) expression in the heart was slight reduced with HFD treatment but not statistically significant. *, $P < 0.05$ between ND and HFD. #, $P < 0.05$ between HFDEX and HFD. All values expressed as mean \pm SEM with dots representing each animal. Repeated measures one-way ANOVA and Tukey's post-hoc test was used for statistical analysis.

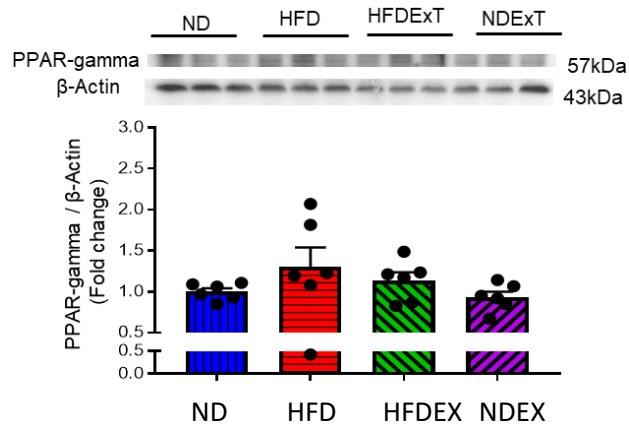
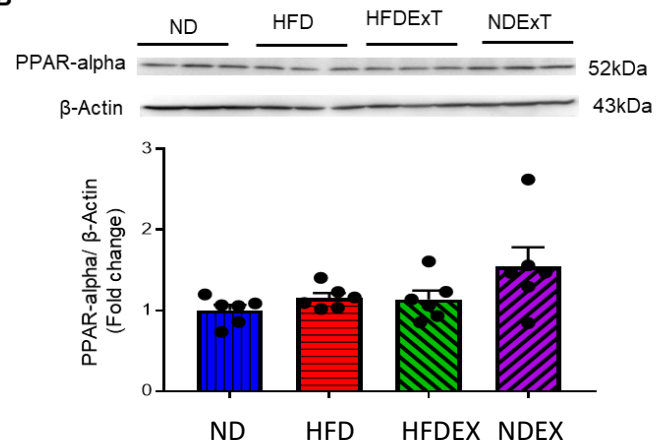
A**B**

Figure S2. Exercise training did not alter lipid metabolism regulator PPAR expression. PPAR α and PPAR γ expression were unaltered by HFD or EX. All values expressed as mean \pm SEM with dots representing each animal. Repeated measures one-way ANOVA and Tukey's post-hoc test was used for statistical analysis.

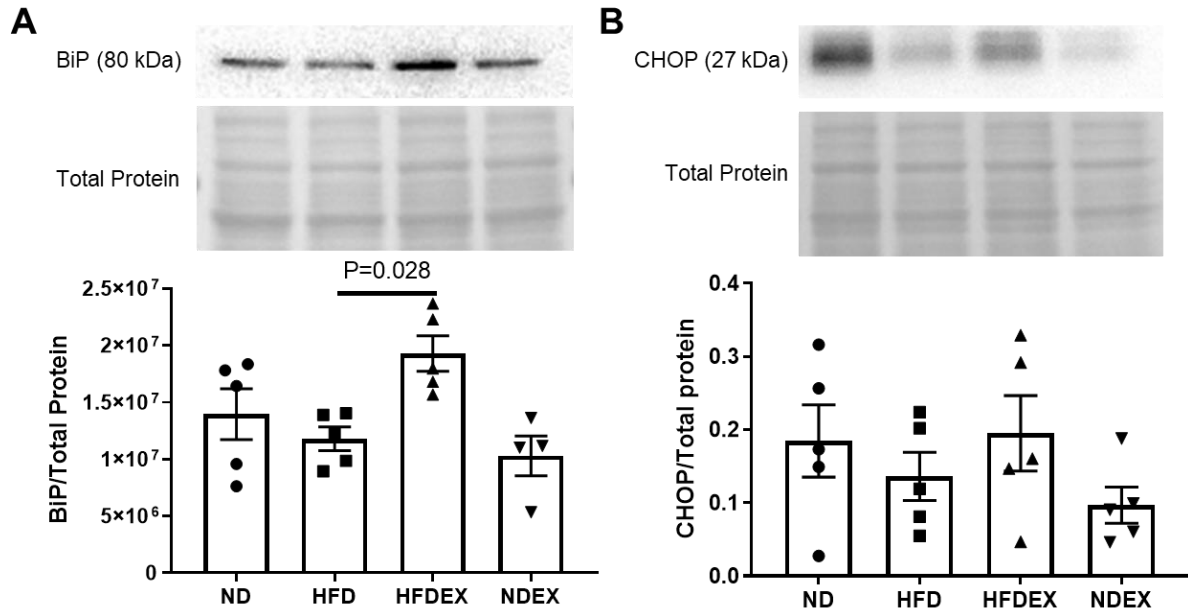


Figure S3. Expression of endoplasmic reticulum stress markers BiP and CHOP in obese mice with exercise training. All values expressed as mean±SEM with dots representing each animal. One-way ANOVA and Tukey's post-hoc test was used for statistical analysis.