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.

<table>
<thead>
<tr>
<th>Exercise regimen</th>
<th>Warm-up</th>
<th>Run</th>
<th>Cool-down</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time (min)</td>
<td>Speed (M/min)</td>
<td>Time (min)</td>
</tr>
<tr>
<td>Pre-training</td>
<td>5</td>
<td>8</td>
<td>5, 20,</td>
</tr>
<tr>
<td>1-4 days</td>
<td></td>
<td></td>
<td>30, 40</td>
</tr>
<tr>
<td>Week 1</td>
<td>5</td>
<td>8</td>
<td>50</td>
</tr>
<tr>
<td>Week 2-20</td>
<td>5</td>
<td>8</td>
<td>50</td>
</tr>
</tbody>
</table>
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±SEM with dots representing each animal. Repeated measures one-way ANOVA and Tukey’s post-hoc test was used for statistical analysis.
Figure S2. Exercise training did not alter lipid metabolism regulator PPAR expression. PPARα and PPARγ expression were unaltered by HFD or EX. All values expressed as mean±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.