

Title: Supplementary Data 1.

Description: Cohort metadata and moderators.

Title: Supplementary Data 2.

Description: Full curated acute exercise transcriptome dataset annotations.

Title: Supplementary Data 3.

Description: Full curated long-term training transcriptome dataset annotations.

Title: Supplementary Data 4.

Description: GSEA results. Each row represents an enriched pathway in one of the four meta-analyses, enriched at 10% FDR.

Title: Supplementary Data 5.

Description: Model selection results. Each row represents a significant (meta-analysis, gene, moderator) triplet. The model's AICc difference and significance are shown. In addition, the gene clustering results are presented.

Title: Supplementary Data 6.

Description: Model selection results in acute muscle: full models. Each row represents a (gene, moderator/intercept) pair. The effect size and p-value are shown for each pair.

Title: Supplementary Data 7.

Description: Model selection results in acute blood: full models. Each row represents a (gene, moderator/intercept) pair. The effect size and p-value are shown for each pair.

Title: Supplementary Data 8.

Description: Model selection results in long-term muscle: full models. Each row represents a (gene, moderator/intercept) pair. The effect size and p-value are shown for each pair.

Title: Supplementary Data 9.

Description: Model selection results in long-term, blood: full models. Each row represents a (gene, moderator/intercept) pair. The effect size and p-value are shown for each pair.

Title: Supplementary Data 10.

Description: GO enrichment analysis results.

Title: Supplementary Data 11.

Description: Reactome pathway enrichment analysis results.