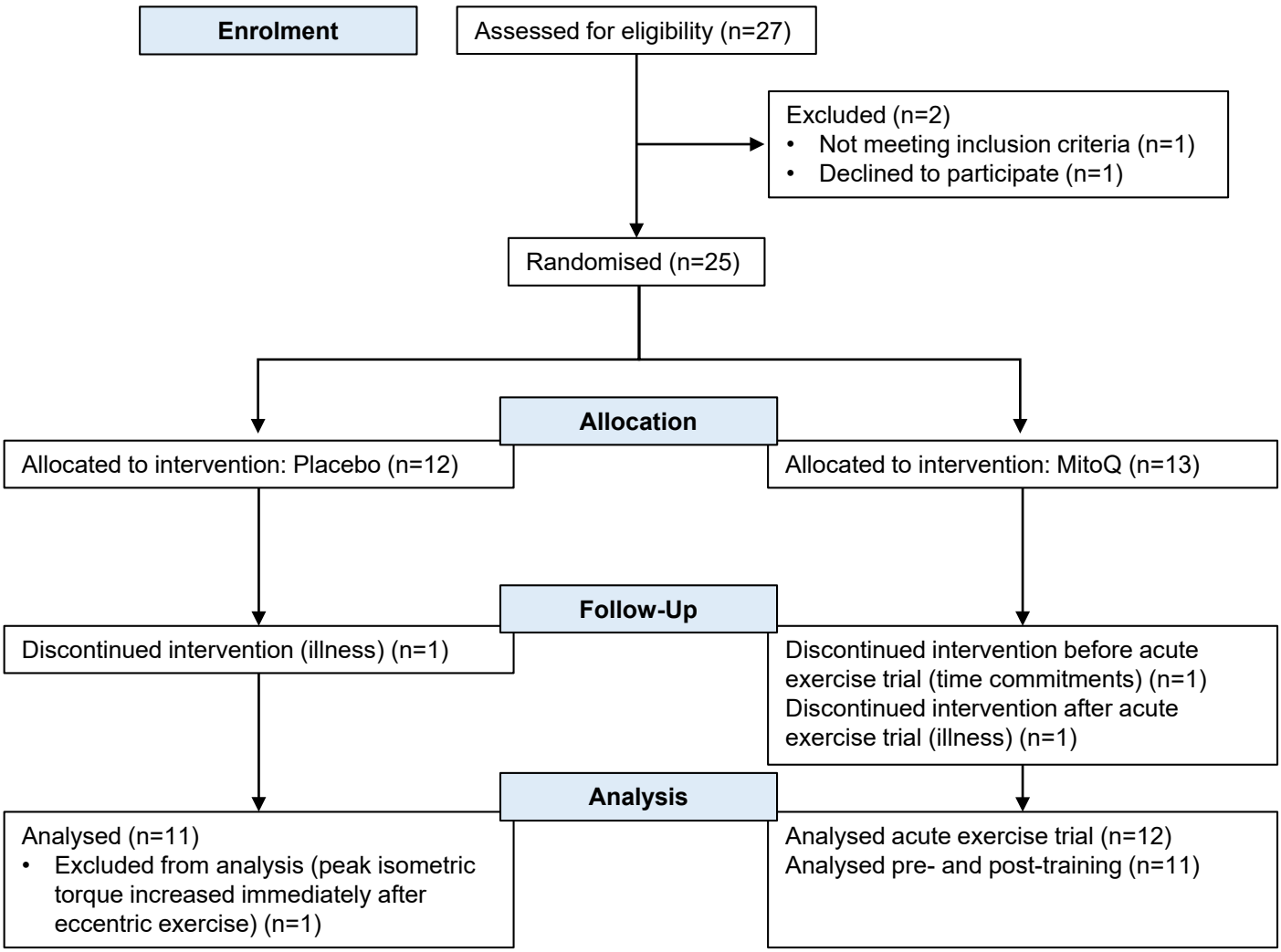
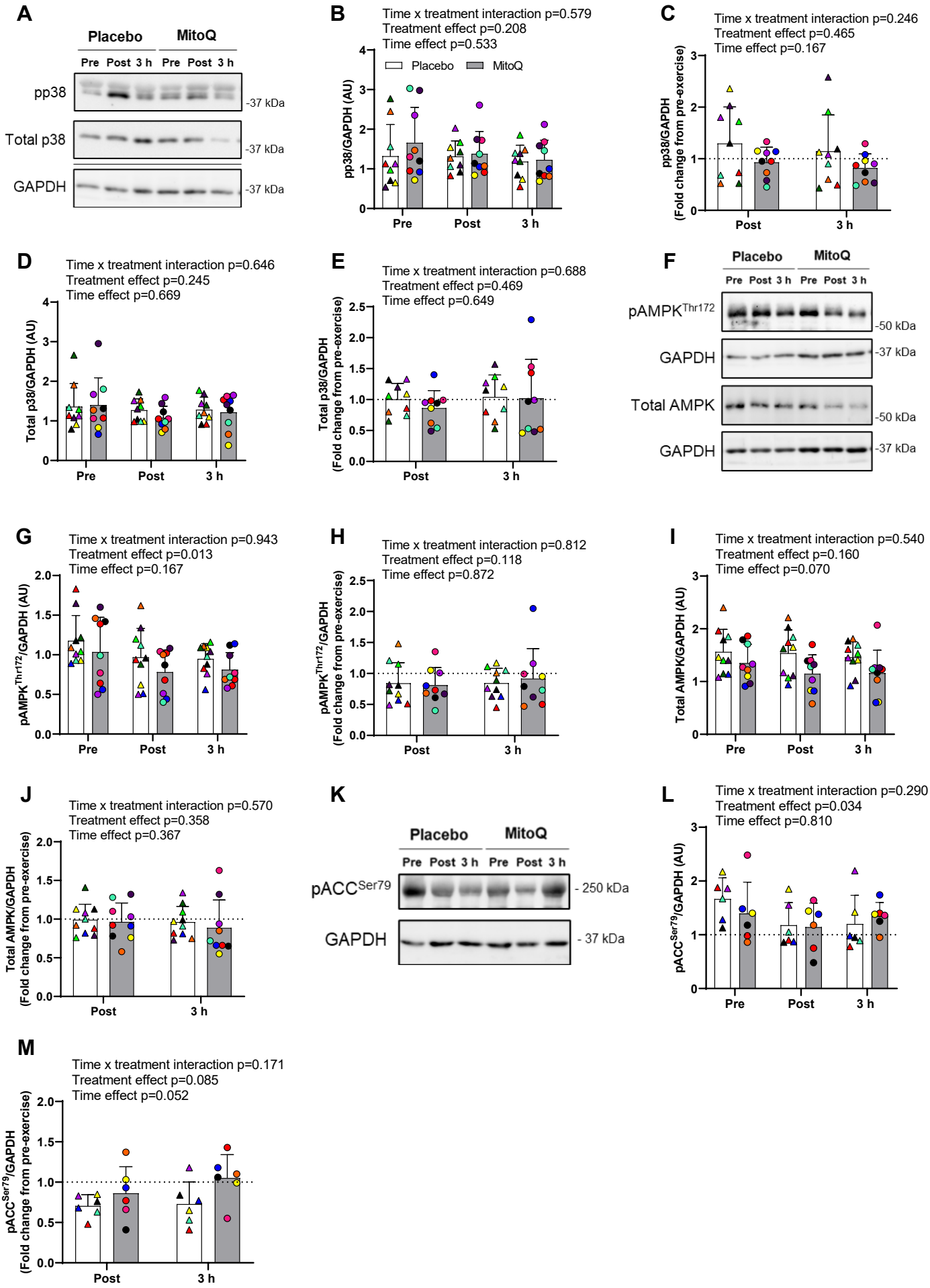
Supplementary Figure 1



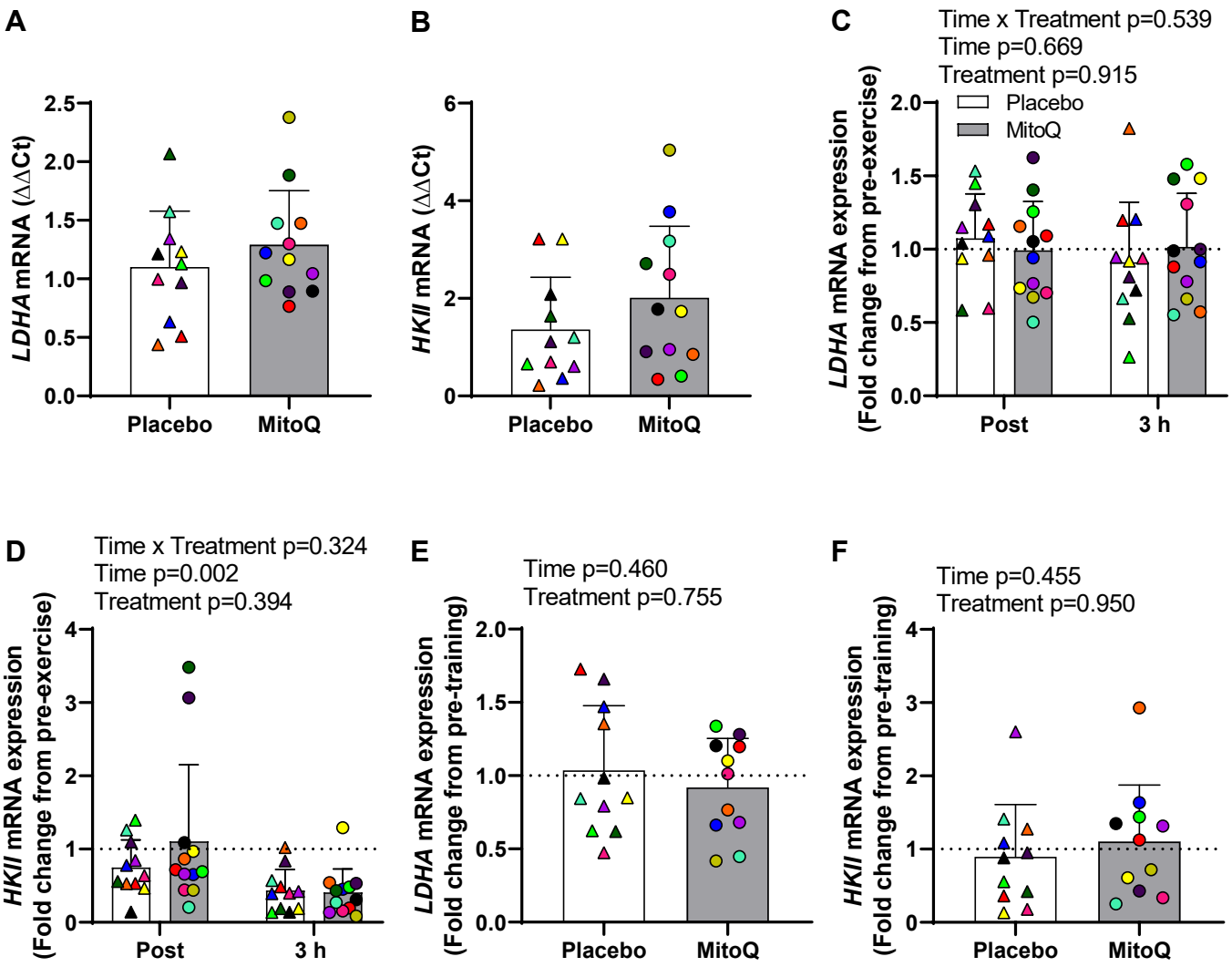
Supplementary Figure 1. CONSORT flow chart. This figure shows the flow of patients through the trial according to the criteria recommended in the CONSORT Guidelines.

Supplementary Figure 2



Supplementary Figure 2. The effect of exercise and MitoQ supplementation on skeletal muscle p38 MAPK, AMPK, and ACC phosphorylation. A) Representative blot of phosphorylated p38 MAPK (pp38) and total p38 MAPK protein expression B) pp38 protein expression before exercise (Pre) and immediately (Post) and 3 hours after exercise (3 h). C) pp38 protein expression represented as fold change from pre-exercise. D) Total p38 protein expression. E) Total p38 protein expression presented as fold change from pre-exercise. F) Representative blot of phosphorylated AMPK^{Thr172} (pAMPK^{Thr172}) and total AMPK protein expression. G) pAMPK^{Thr172} protein expression. H) pAMPK^{Thr172} protein expression represented as fold change from pre-exercise. I) Total AMPK protein expression. J) Total AMPK protein expression presented as fold change from pre-exercise. K) Representative blot of phosphorylated ACC^{Ser79} (pACC^{Ser79}) and total ACC protein expression. L) pACC^{Ser79} protein expression. M) pACC^{Ser79} protein expression represented as fold change from pre-exercise. N) Total ACC protein expression. O) Total ACC protein expression presented as fold change from pre-exercise. Skeletal muscle biopsies were taken following 10 days of MitoQ supplementation. Triangles and circles represent individual values. Main two-way repeated-measures ANOVA effects are given in figures. Values are presented as means ± SD.

Supplementary Figure 3



Supplementary Figure 3. The effect of MitoQ supplementation on mRNA expression of genes involved in anaerobic metabolism. Baseline skeletal muscle A) *LDHA* and B) *HKII* mRNA expression following 10 days of MitoQ or placebo supplementation. Skeletal muscle C) *LDHA* and D) *HKII* mRNA expression immediately (Post) and 3 hours (3 h) after exercise presented as fold change from pre-exercise. Skeletal muscle E) *LDHA* and F) *HKII* mRNA expression after 3 weeks of training presented as fold change from pre-training. Triangles and circles represent individual values. Differences in skeletal muscle *LDHA* and *HKII* mRNA expression at baseline were analysed using unpaired Student's t-test. Main two-way repeated measures ANOVA effects are shown in figures C-F. Data are presented as mean ± SD. *LDHA*; Lactate Dehydrogenase A, *HKII*; Hexokinase II.