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Affiliation(s) Liverpool John Moores University					

Names of additional author(s) and their affiliations	1. Jones, H. Liverpool John Moores University
	2. Low, D. Liverpool John Moores University
	3. Holder, S. Liverpool John Moores University
	4. Hopkins, N.D. Liverpool John Moores University

Title	Regular moderate intensity aerobic exercise does not affect vascular outcomes during pregnancy: A pilot study

Abstract. (Maximum of 250 words)

Introduction: Cardiovascular diseases (CVD) are the leading cause of morbidity and mortality during pregnancy attributed to progressive vascular impairments. Regular exercise has been shown to improve vascular outcomes. The aim of this pilot study was to determine the impact of a 6-month exercise intervention on vascular outcomes in previously inactive pregnant women.

Methods: Ten healthy pregnant women were recruited to a control (CONT; N=6 33±0.5 years, BMI 22.4kg/m^2) or exercise group (EX; N=4 31.5± 0.6 years, BMI 23.8±2.1kg/m^2) at 13-15 weeks gestation. Ultrasound was used to assess brachial and femoral flow mediated dilation (bFMD; fFMD respectively) at the end of trimester 1(T1), 2(T2) and 3(T3). Aerobic capacity was estimated using the Astrand submaximal cycling protocol. Physical activity (PA) was measured over 7 days using accelerometry. The exercise intervention consisted of 3x15 minute weekly exercise sessions in trimester-2 (T2), progressing to 4x30 minutes in trimester-3 (T3). Data were analyzed for main effects of group and time using repeated measures ANOVA.

Results: There were no time, group or interaction effects for BFMD (T1: 9.2±2.1%, T2:6.7±0.9%, T3: 9±5%, P=0.76), FFMD (T1, 6.5±3.4%, T2, 6.2±2%, T3, 2.4±1.9%, P=0.18). No differences in aerobic capacity were evident (T1, 47.4±5ml/kg, T2, 43.4±3.3ml/kg, T3, 39.1±3.5ml/kg, p=0.22). No differences were observed for physical activity (T1, 330±87mins/d; T2, 296±52mins/d; T3, 271±16mins/d. **Conclusion:** Our findings suggest that vascular outcomes are not impacted upon exercising during trimesters 2 and 3 of pregnancy. It is plausible that the hormonally induced hemodynamic adaptations which occur during pregnancy cannot be overridden by moderate intensity exercise.

References (maximum of 3)	
IHR Interest Group	Cardiovascular Health and Care

The deadline for submitting abstracts is **5pm Friday 23rd March 2018.**

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