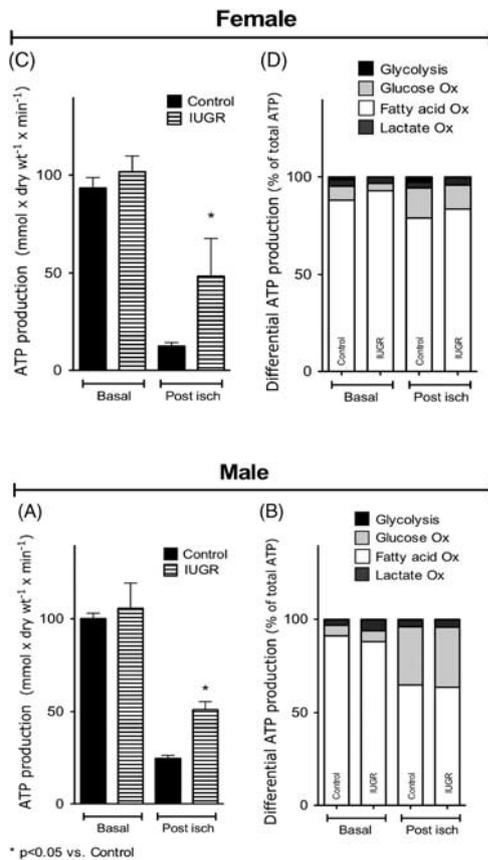


Results: Both male and female IUGR offspring exhibited an increased susceptibility to I/R and an increased post-ischemia production of ATP when compared to controls (Panels A and C of Figure). However, there were no effects of IUGR on cardiac selection of energy substrate (carbohydrates vs. fatty acids) either at baseline or following I/R (Panel B and D of Figure).



Conclusion: Our results suggest that a prenatal insult causing IUGR has long-term effects on cardiac energetic efficiency (produce more ATP but perform less work) after an ischemic insult. These changes in cardiac metabolism and efficiency are independent of the cardiac energetic substrate selection and are comparable in male and female animals. Acknowledgments: Canadian Institute for Health Research, Heart & Stroke Foundation of Canada, Alberta Heritage Foundation for Medical Research and MFN and TORCH Training Programs.

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Leg length and pubertal landmarks in men and women from a developing population: The Guangzhou Biobank Cohort Study

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Leg length is considered to be a reliable marker of pre-pubertal living conditions, because leg growth largely takes place before puberty. Cessation of leg growth is driven by oestrogen, and so occurs at an earlier pubertal stage in women than men.

Objective: We tested the hypothesis that components of height (leg length and sitting height) have sex-specific associations with pubertal landmarks using a large sample of older Chinese.

Methods: We used multivariable linear regression in 10,047 older (≥ 50 years) Chinese from the Guangzhou Biobank Cohort Study (phase 3) to examine the age adjusted associations of pubertal landmarks (age of menarche in women and mean age at voice breaking, first nocturnal emission and emergence of pubic hair in men) with leg length and seated height. We also examined whether the associations varied with sex.

Results: There were sex-specific associations of pubertal landmarks with leg length (p-value for interaction < 0.001) and perhaps sitting height (p-value for interaction 0.18). In women, leg length was shorter by 0.20 centimetres (cm) (95% confidence interval (CI) 0.16 to 0.24) and seated height longer by 0.11 cm (95% CI 0.08 to 0.15) per year earlier in pubertal landmark (menarche). In men leg length was non-significantly longer by 0.05 cm (95% CI -0.05 to 0.15) and seated height longer by 0.14 cm (95% CI 0.05 to 0.24) per year earlier in pubertal landmark.

Conclusions: Apart from providing new evidence concerning the association of male pubertal landmarks with components of height, our study shows that leg length may be a biomarker of different exposures in men and women particularly in developing countries where age at puberty is above its physiological minimum and still environmentally driven. Given that pre-pubertal and pubertal growth have different associations with adult diseases caution should be used in the interpretation of associations with components of height. Supported by The University of Hong Kong (HKSAR), Guangzhou Public Health Bureau (China), Guangzhou Science and Technology Bureau (China), The University of Birmingham (UK).

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Early exposure to infectious disease and human life-histories

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Objective: Exposure to infectious disease in early life has been suggested to have a negative effect on later-life survival^{1,2}, possibly through the induction of inflammatory responses³.