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## Is pregnancy the right time to intervene? Maternal exercise improves insulin sensitivity in rodent offspring

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The Developmental Origins of Health and Disease Hypothesis suggest that stimuli received in the intrauterine environment can result in long-term changes in an organism that can predispose it to later life diseases. It is well known that drug abuse during pregnancy (for example tobacco and alcohol use) can negatively impact fetal development and result in physical and mental dysfunction in offspring that last a lifetime. Less studied is how physical activity can positively affect offspring health. This talk will briefly introduce the field of developmental programming before moving on to detailed findings from our laboratory on the benefits of maternal exercise during pregnancy on long-term offspring insulin sensitivity. While our studies have been completed in mice and rats, we are planning to extend our work to humans in the near future. Our findings highlight pregnancy as a sensitive period when positive lifestyle interventions could have significant and long-lasting beneficial effects on offspring metabolism and disease risk.

### Biography

Kevin J Pearson is an Associate Professor in the Department of Pharmacology and Nutritional Sciences at the University of Kentucky (UK). He earned his PhD in Pathobiology and Molecular Medicine in 2005 at the University of Cincinnati. From 2005-2009, he was a Postdoctoral Fellow at the National Institute on Aging. He accepted an Assistant Professor position at UK in 2009, and was recently promoted to Associate Professor. The twenty-year goal of his laboratory is to improve normal physiology and prevent disease (obesity, Diabetes, and cancer) in the next generation by using maternal exercise or nutraceuticals as pregnancy interventions.

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