

Brain imaging studies of obesity risk in children

by Dr. Susan Carnell

Tuesday, June 2, 2020 | 11 AM to 1 PM EST (2 hours in duration)

For Remote Participation, please click [HERE](#)

Seminar Abstract: Children today are raised in an environment that promotes overconsumption and excess weight gain. Yet not every child becomes obese. This may be in part due to individual differences in appetite, e.g. the degree to which exposure to environmental food cues triggers overconsumption. Neuroimaging studies have begun to establish the network of subcortical and cortical brain regions playing a role in human appetite. But much is still to be learnt about the specific circuits subserving the different dimensions of appetite observed in behavioral studies of children, and how their structure and function change with development and are impacted by genetic and environmental factors to affect obesity risk. Recent investigations incorporating validated measures of eating behavior, using methods such as the familial risk design, and leveraging data from large longitudinal cohorts beginning in infancy, promise to shed light on these outstanding questions.

Panel Discussion: A multi-disciplinary panel will follow the presentation to advance convergence science on the multiscale mechanisms of dopamine underlying the behavioral response to experience and environmental variations over the lifecourse. Insights for behavioral change and ecosystem transformation at scale for lifelong wellness and resilience will be discussed. The moderator is **Prof. L. Dube**, Chair and Scientific Director, McGill Centre for the Convergence of Health and Economics (MCCHE).



Presenter: Dr. Susan Carnell received her PhD from University College London, and completed postdoctoral training at Columbia University. She is currently Associate Professor in the Department of Psychiatry and Behavioral Sciences at Johns Hopkins University School of Medicine. Her research program combines a range of methods including behavioral tests, questionnaires, genotyping, hormonal assays, and neuroimaging techniques (fMRI, MRI, PET), to investigate biobehavioral influences on eating and obesity in children and adults. Ongoing research projects include investigations of appetite and body weight in infants, children, adolescents, and adults, including studies of bariatric surgery and Anorexia Nervosa.



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