

Increasing the quality of life from womb to grave: the importance of pregnancy and birth cohorts

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Abstract

Epigenetics is revealing how “nature is nurtured”, with environmental factors such as nutrition, environmental neurotoxicants, and psychological stress influencing DNA expression. In this current opinion paper, we argue that understanding the dynamic interplay between the genome acquired at conception and environmental exposures throughout life requires pregnancy and birth cohorts, and that greater Canadian national commitment to the infrastructure needed for sustaining such cohorts is warranted. We present a framework that is now being implemented in Alberta.

Key words: longitudinal studies, epigenetics, cohort studies, maternal health, child health.