

Title: Early Life Stress and Adolescent Sleep

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Abstract: Much of the architecture of the developing brain is established in the first few years of life, laying the foundation for the more complex cognitive and emotional abilities that develop later. Early adverse experiences increase the risk for maladaptive outcomes including increased rates of psychiatric disorders and risky behaviors. Neglect is the most common and insidious form of child abuse (USDHHS, 2013). Severe forms of neglect such as institutionalized care have lasting effects on functional connectivity of the frontal cortex. Childhood roots of sleep difficulties in adolescence may be particularly important for this later period of rapidly emerging behavioral and emotional functioning and self-regulation. Children exposed to early life stress (ELS) are at-risk for a wide range of negative mental and physical health problems, including sleep disturbances. Here, we focus on retrospective reports of adverse ELS (neglect) as potentially robust predictors of mis-regulated sleep homeostasis in adolescence. In addition, mechanistic studies are made possible in rodent models experiencing fragmented care and /or loss of molecular factors that might bestow sleep resilience. Our pilot study explores the impact of ELS on adolescent sleep in both humans and mice to generate adequate preliminary data for funding a larger powered cohort study to clarify a true causal relationship (versus simple comorbidity) following ELS.