Early Life Stress and Age at Death from Skeletal Evidence

by

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Abstract

In recent years numerous studies have found that signs of early childhood biological stress, such as low birth weight, impair the health of older adults. Overwhelmingly these studies are based on modern data when health conditions were quite good by historical standards. Potentially much can be learned by examining the survival of populations that lived under enormous pressure, enduring life expectancies less than one-half of those found in industrial countries of the late twentieth century. This paper uses the skeletal remains of over 3,000 individuals who lived in the Western Hemisphere as long as 6,000 BP to probe the connection between several markers of early childhood stress and adult survival. Liner enamel hypoplasias, stunting, and signs of anemia substantially reduced the chances of survival beyond age 30. In a logit model with explanatory variables that control for sex and ethnicity, the probability of survival was systematically 7.6% less for those with 2 or more hypoplasias, 7.2% less for those with cribra orbitalita or porotic hyperostosis that was severe, and 36% less for those stunted by 10 centimeters in height.