

EARLY LIFE RISK FACTORS FOR ADULT PRE-HYPERTENSION AND HYPERTENSION

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Background & aims: It has been demonstrated in the last years that chronic diseases (CD) are associated not only with adult risk factors (RF), but also with predictors that occurred decades before the onset of disease. The pathway through which these early RF influence adult outcomes is not clear. Among the CD hypertension (HT) is the most prevalent one. Recently it has been suggested that systolic pressure between 120-140 of mm Hg and a diastolic pressure between 80-90 mm Hg - pre-hypertension (PHT) - are linked to a higher health risk. The objective of this study is to assess the independent association of early life and adult risk factors for PHT and HT.

Methods: A birth cohort in Ribeirão Preto, Brazil, was assessed at birth (1978/79), school-age (1987/88) and adulthood (2002/04). Data on neonatal variables, socioeconomic position and anthropometry of all three moments as well as adult RF for HT were present for 1143 of the 6484 eligible subjects. Conditional weight analysis was performed to assess the risk of repeated-in-time measurements.

Results: The lower the ponderal index (PI) at birth the higher the prevalence of PHT and HT in adulthood. Adult RF for HT were associated with the outcome in the univariate analysis, but in the adjusted analysis PI at birth was more significantly linked with adult diastolic pressure (lower PI RR=2,06 for PHT and RR=4,72 for HT).

Conclusion: Early life nutrition status has a greater role in predicting adult diastolic PHT and HT than adult RF.