

Migration-induced changes in blood pressure: a controlled longitudinal study.

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Abstract:

A longitudinal study of the effects of migration on blood pressure and related factors is being carried out in members of a black Kenyan population who migrate from a traditional rural community to an urban environment. Data on the first 139 migrants (78 male, 61 female) and 204 control non-migrants (126 male, 78 female) who have been followed up for a period of 6 months are presented. Blood pressure changes rapidly on migration (within the first 2 months); thereafter trends between migrants and controls differ. Significant differences in systolic pressure between migrants and controls are found at all examinations during the 6 month follow-up in both sexes. Diastolic pressure falls in controls but rises in migrants, the greatest difference being seen at the 6 month examination. Migration is associated with a marked increase in dietary sodium and a fall in potassium demonstrated by measurements of urinary electrolyte excretion in 3 X 12 h or 3 X 24 h urine collections. Analysis of covariance shows that the blood pressure differences between migrants and controls are partly explained by urinary sodium/potassium ratios and in some instances by body weight.