

Blood pressure and associated factors in a rural Kenyan community.

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Abstract:

Blood pressure (BP) and associated factors were determined in 1737 men in a remote Kenyan agricultural community. Systolic BP showed no significant rise with age until after 54 years; diastolic BP showed a small rise with age. Both systolic and diastolic BP correlated with weight independent of age. Systolic and diastolic BP correlated positively with casual urinary sodium/potassium and negatively with potassium/creatinine ratios. Both systolic and diastolic BP correlated significantly with the number of years of education, as did urinary sodium/potassium and sodium/creatinine ratios. Potassium/creatinine ratios were negatively correlated with the number of years of education. Blood pressure and urinary sodium/creatinine ratios were significantly lower in subsistence farmers compared with those in other occupations, and potassium/creatinine ratios were significantly higher. Two pilot studies of Luo tribesmen showed a strong correlation between casual urinary electrolyte ratios and those derived from 24-hour urine samples and a greater variance of sodium excretion between these people than that found within individuals. These results suggest that a relationship between BP and casual urine electrolyte estimations may be identifiable in communities where there is less day-to-day dietary variation. They also suggest that some of the changes in BP associated with urbanization could be mediated by changes in dietary electrolytes.