Design: Determinants of Adolescent Social well-being and Health (DASH) study: A cohort observational study.

Setting: Schools in ten London boroughs with high proportions of the main ethnic minority groups, UK.

Participants: White British (692), Black Caribbeans (670), Black Africans (772), Indians (384), and Pakistanis and Bangladeshis (402) children were surveyed in 2003/2004 (11–13 years) and followed up in 2005/2006 (14–16 years).

Main outcome measures: Longitudinal measures of systolic (sBP) and diastolic BP (dBP). Predicted age, gender and ethnic specific mean BP, adjusted for anthropometry (Body mass index (BMI), height, weight, leg length (LL)), smoking, socio-economic circumstances (SEC) and psychological well-being were derived using mixed models.

Results: Among boys, sBP did not differ by ethnicity at 12 y but the greater increase among Black Africans than Whites led to higher sBP at 16 y (+2.9 mm Hg). The age trends for dBP suggest earlier divergences and increasing disparities with significantly higher dBP than Whites from 12 y for Indians, 14 y for Pakistanis-Bangladeshis and from 15 y for Black Africans. Among girls, ethnic differences in mean sBP were not significant at any age but larger increases were observed for Black Caribbeans and Black Africans than for Whites. At 12 y, dBP was lower among Black Caribbean and African girls than White girls but the faster rise led to similar levels by 14 y. Indians had significantly higher dBP from 13 y and Pakistanis/Bangladeshis from 15 y. Body mass index, height and leg length were independent predictors of BP, with few ethnic specific effects. Socio-economic disadvantage had a disproportional effect on BP for girls in minority groups.

Conclusions: The findings suggest that ethnic divergences in BP begin in adolescence, particularly striking for boys. They signal the need for early prevention of adverse CVD risks in later life.

059 NUTRITIONAL COMPOSITION OF THE DIETS OF SOUTH ASIAN, BLACK AFRICAN CARIBBEAN AND WHITE EUROPEAN CHILDREN IN THE UK: THE CHILD HEART AND HEALTH STUDY IN ENGLAND

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Background: Compared with UK white Europeans, South Asian adults have increased risks of obesity, type 2 diabetes, stroke and coronary heart disease (CHD); black African-Caribbean adults have increased risks of obesity, type 2 diabetes and stroke with lower CHD risk. Dietary differences could be important in explaining these ethnic differences, which appear to emerge in early life. However, few systematic attempts have been made to define the extent of ethnic differences in diet, particularly in children.

Objective: To examine ethnic variations in nutritional composition of the diets of children of South Asian and black African-Caribbean and white European origin in the UK.

Design: 24 hour recalls of dietary intake were carried out during a cross-sectional survey of children attending 85 Primary Schools in London, Birmingham and Leicester.

Participants: 2210 children aged 9–10 years, including 567 of South Asian, 595 of black African-Caribbean and 601 of white European origins.

Results: Compared to white Europeans, South Asian children reported higher mean total energy intake (mean difference 96 kcal, 95% CI 35 157 kcal), fat % energy (mean difference 1.3%, 95% CI 0.5 to 2.1%) and protein % energy (mean difference 0.9%, 95% CI 0.5 to 1.3%). Their intakes of carbohydrate as a proportion of energy (particularly sugars), vitamin C and D, calcium and haem iron intakes were lower. These differences were especially marked for Bangladeshi children. Black African Caribbean children had lower intakes of total fat % energy (mean difference −1.3%, 95% CI −2.0 to −0.5) and saturated fat % energy (mean difference −1.2%, 95% CI −1.6 to −0.8). They also consumed less non-starch polysaccharide, vitamin D and calcium; whilst intakes of haem iron were higher. The lower intakes of fat (including saturated fat) were particularly marked among black African children.

Conclusions: Appreciable ethnic differences exist in the nutritional composition of children’s diets. These patterns could influence early emerging differences in disease risk and, if maintained, could contribute to continuing ethnic differences in disease risk in the next generation.