

for PWV measurements. All analyses were adjusted for age, gender and allowed for clustering at school level.

**Results** In all, 939 children (67% response) had cIMT measurements and 631 children (70% response) had PWV measurements. Mean cIMT was 0.475 mm (SD 0.035 mm); mean PWV was 5.2 m/s (SD 0.7 m/s). Compared with white European children, black African-Caribbeans had higher cIMT (mean difference 0.014 mm, 95% CI 0.008 to 0.021 mm) and PWV (% difference 3.3, 95% CI 0.4 to 6.2); South Asian children had similar cIMT to white Europeans but slightly higher PWV (% difference 2.7, 95% CI -0.1 to 5.5%). cIMT was positively associated with systolic and diastolic blood pressure but not with other cardiovascular risk markers. In contrast, PWV was positively associated with adiposity, diastolic blood pressure and insulin resistance. Black African-Caribbean children had lower LDL-cholesterol levels and higher insulin and HbA1c levels than white Europeans; South Asian children had higher insulin, HbA1c and triglyceride levels. However, adjustment for these risk factors had little effect on the observed ethnic differences in cIMT and PWV.

**Conclusions** Ethnic differences in cIMT and PWV, adult predictors of cardiovascular risk, are apparent in childhood. These differences are not fully explained by the ethnic differences in established cardiovascular risk markers observed. There may be important opportunities for prevention of cardiovascular disease before adult life in ethnic minority groups at high risk of adult cardiovascular disease.

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#### ETHNIC DIFFERENCES IN CAROTID INTIMA MEDIA THICKNESS AND CAROTID-FEMORAL PULSE WAVE VELOCITY ARE PRESENT IN UK CHILDREN

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**Background** There are marked ethnic differences in cardiovascular risk in UK adults; South Asians have high coronary heart disease (CHD) and stroke risks while black African-Caribbeans have high stroke risks and low CHD risks when compared with white Europeans. Ethnic differences in cardiovascular risk factors are apparent in childhood, but ethnic differences in vascular structure and function during childhood have been little studied. We measured common carotid intima-media thickness (cIMT) and carotid-femoral pulse wave velocity (PWV) in UK children from different ethnic groups.

**Methods** School-based study examining the cardiovascular risk profiles of 9–10 year-old UK children, including similar numbers of South Asian, black African-Caribbean and white European participants. Following a baseline cardiovascular risk survey with measurements of body build, blood pressure, fasting blood lipids, insulin and glycated haemoglobin (HbA1c), 1400 children were invited to have ultrasound measurements of cIMT. A subgroup of these children (n = 900) was invited