Introduction: Children's motor coordination may affect their activity pattern and thereby influence their bodyfatness. The aim of the present study was to analyse the relationship between motor coordination and total body fat percentage, in a Portuguese sample of schoolchildren aged 9–12 years.

Method: The sample comprised 596 urban schoolchildren (girls 46·9%), aged 9–12 years (mean 9·61 (SD 0·55) years) from North of Portugal. Total body fat percentage was calculated with Tetrapolar Bioelectrical Impedance Analysis, model Tanita TBF-300. Age- and sex-adjusted *Z*-scores computed total body fat percentage. Motor coordination levels were assessed with the Körperkoordination Test für Kinder (KTK) and children were classified according to age and sex KTK criteria (Schiling 1974). Date of birth, gender and school socio-economic status (eligible for benefit A, B or not eligible) were extracted from the school administrations records systems. School socio-economic status was used as a proxy measure of family socio-economic status.

Results: In motor coordination, 22·4% girls showed disturbance of coordination; 37·7% insufficiencies of coordination; 39·5% normal coordination and 0·4% good coordination. Corresponding figures for boys were 7·3%; 36·5%; 54·3% and 1·9%, respectively. Linear regression analysis showed that *Z*-scores total body fat percentage (unstandardized $B = -0{\cdot}258$, SE 0·021, $P < 0{\cdot}001$) were negatively associated with motor coordination, after adjustment for socio-economic status.

Conclusions: Low motor coordination levels are negatively associated with total body fat percentage *Z*-scores. The early identification of children with poor motor coordination and/or high body fat percentage is crucial in order to implement and develop health-related behaviours.

Funding: Research relating to this abstract was funded by FCT-MCTES Grant (BD/43808/2008).

Reference: Schiling, F (1974) *Korperkoordination Test fur Kinder, KTK.* Beltz Test Gmbh, Weinheim.

doi:10.1017/S1368980012002182

44 – Relations between resting blood pressure (RBP), weight status and physical activity (PA) in British schoolchildren

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Introduction: The present study aimed to assess the relations between resting blood pressure (RBP), physical activity (PA) and weight status in a multiethnic sample of British children.

Method: 790, 10–14-year-old schoolchildren (444 boys, 346 girls) underwent assessment of RBP, height, body mass (from which BMI was calculated and classified according to International Obesity Task Force criteria) and completed the physical activity questionnaire for adolescents (PAQ-A) as a measure of PA following ethics approval and informed consent. Children were classified as being from 'white' (*n* 553), 'black' (*n* 51) and 'Asian' (*n* 186) backgrounds based on census classifications.

Results: Pearson's correlations indicated significant relations between BMI and systolic BP (SBP) ($r = 0{\cdot}424$, $P = 0{\cdot}0001$), diastolic BP (DBP) ($r = 0{\cdot}224$, $P = 0{\cdot}0001$) and PA ($r = -0{\cdot}255$, $P = 0{\cdot}0001$). PA was significantly but weakly related to SBP ($r = -0{\cdot}103$, $P = 0{\cdot}02$) but not DBP ($P > 0{\cdot}05$). A series of 2 (gender) by 2 (weight status) by 3 (ethnic groups) ANCOVA controlling for age found that SBP was significantly higher in overweight/obese children compared with normal weight children ($P = 0{\cdot}0001$). This pattern was evident for DBP ($P = 0{\cdot}0001$) and PA ($P = 0{\cdot}001$). PA score was higher in boys than girls ($P = 0{\cdot}01$). There were no ethnic differences in any variables (all $P > 0{\cdot}05$).

Conclusions: RBP is higher and PA lower in overweight/obese children compared with normal weight children when controlling for age. Ethnic groups did not appear to influence RBP or PA in this sample.

doi:10.1017/S1368980012002194

45 – Prevalence of cardiometabolic risk factors in overweight and obese adolescents

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