Results 28 randomised and non-randomised controlled trials were identified that reported daily fruit and/or vegetable intake. A median intake of 0.4 portions more fruit and vegetables was consumed in the intervention group compared to the control group. The qualitative review of 7 studies reporting lunchtime intake, either in addition to daily intake or independently in studies concentrating solely on lunchtime intake, revealed a median difference of 0.2 portions more fruit and vegetables in the intervention group at lunchtime. The meta-analysis of daily intake included 13 studies classified into one of two groups: behavioural change studies with a school and/or home component that relied on families improving eating behaviour; and free school fruit and vegetable scheme where fruit and vegetables are distributed to children. The short term impact of both type of programme was determined using the follow up data collected within 3 months of the end of the intervention. This was the longest follow-up period in most cases. The pooled estimates (95% CI) for behavioural change studies and free fruit and vegetable schemes were 0.45 (0.21 to 0.65) and 0.44 (0.20 to 0.67) portions respectively. The pooled estimate (95% CI) for all studies was 0.42 (95% CI 0.27 to 0.58) portions more in the intervention group. The majority of the difference was due to fruit not vegetables. Heterogeneity was high for the meta-analysis with lunchtime intake but reasonable for daily intake. Conclusion School-based interventions have the potential to moderately improve fruit and vegetable intake in children, with approximately half of the increase attributable to improvements in lunchtime intake.

Physical activity

**069 LONGITUDINAL ASSOCIATION BETWEEN EARLY LIFE ADVERSITY AND PHYSICAL ACTIVITY AT AGE 36 YEARS**

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**Background**

Periods early in life, between birth and adolescence, could be especially important for the establishment of health behaviours. Early adversity may influence the level and types of physical activity in adulthood.

**Objectives**

To investigate the associations between early adversity and adult physical activity, and the role of depression and education as potential mediators of these associations. Structural equation models were used to 1) identify five latent factors of early adversity: socio-economic conditions (father’s unskilled job, lack of home amenities and overcrowding), parental health (parental poor heath, maternal neuroticism); family structure during childhood (death of parents, divorce), chronic illness (hospitalisation for > 1 month); and social isolation; 2) model the effect of depression/anxiety (at ages 15 and 36 years) and education level (at age 26 years) on the relationships between early adversity and physical activity.

**Design**

Prospective cohort study.

**Setting**

England, Scotland and Wales.

**Participants**

Approximately 3500 men and women from the MRC National Survey of Health and Development, followed up since birth in March 1946.

**Main outcome measures**

Four physical activity types measured at age 36 years—cycling/walking, heavy gardening, sports/recreational activities, and activity during the working day—with three levels of intensity (most active, less active, inactive).

**Results**

There was no evidence of direct paths between early adversity and adult physical activity (p > 0.05). There was a strong indirect effect of socio-economic adversity on activity at work (0.24) and on sports/recreational activity (−0.10) via education. The significant indirect effects of adolescent emotional problem on activity at work day (−0.01) and on sports/recreational activity (−0.01) via adult depression/anxiety were of smaller