

Contribution of primary school physical education class to daily moderate-vigorous physical activity

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Introduction:

The link between regular physical activity (PA) in childhood and good health is firmly established. However the majority of children do not perform enough PA to maintain good health. There is limited data on the degree to which primary school physical education class (PE) allows children to accumulate moderate-vigorous physical activity. The purpose of the study was to assess the contribution of primary school PE to daily MVPA in 9-year old Irish children.

Methods:

112 (70 F) children had their PA assessed on two school-days using a tri-axial accelerometer. On one day the children had PE, while on the other they did not. The order of the PE day and non-PE day was randomised. Accelerometer PA data was converted to minutes MVPA using the methods of Mattocks et al. (2007). Written informed consent was obtained from the parent/ guardian of each child. The study was approved by the relevant institutional review board. T-tests were used to identify differences between PE and non-PE days.

Results:

All results are mean, 95% CI. There was a significant difference in minutes of MVPA on PE days (31.1, 29.2–33.1) compared to non-PE days (20.8, 18.9–22.8) ($P < 0.05$). Boys accumulated significantly more minutes MVPA than girls on PE days (33.7, 31.1–36.3, versus 29.6, 26.9–32.3) ($P < 0.05$) but not on non-PE days (21.9, 17.8–26.1, versus 20.2, 18.1–22.3) ($P > 0.05$). The difference in MVPA on PE days compared to non-PE days was greater for boys than girls (11.7, 7.0–16.4, versus 9.4, 7.0–11.8) though not significant ($P > 0.05$). None of the children studied fulfilled current PA recommendations of 60 minutes MVPA per day.

Discussion:

Participation in PE class significantly increased the amount of MVPA accumulated by the children in this sample. However the children did not undertake sufficient MVPA to meet current recommended levels for health and therefore warrant intervention.

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