A study of New York State elementary schools finds that school gardens encourage physical activity among children. School gardens have been touted as a strategy to combat childhood obesity, but little research has examined the effects of gardens on children’s physical activity. This is the first true experiment examining the effects of school gardens on children's physical activity.

**The School Garden Study**

Twelve elementary schools in five regions of New York participated in a study to examine whether school gardens influence children’s physical activity. At the beginning of the study, none of the schools had gardens and baseline data were collected. Schools had equal chance of being assigned to receive a garden or to be a comparison school that waited until the end of the study to receive a garden. Therefore, the study design ensured that any changes in physical activity were a result of the school garden. On four occasions over the course of the 2-year project, at both the garden and the no-garden comparison schools, 4th-6th grade children’s physical activity was measured with a questionnaire and, for 3 school days, with accelerometers (similar to pedometers).

**Does Physical Activity Change Among Children Whose Schools Started Gardens?**

**Effects on children’s daily activities.**

Questionnaire findings indicated that over the 2-year study period, children at the schools with gardens, compared to children at schools without gardens, were substantially less sedentary in their usual daily lives – suggesting that they spent less time in sitting behaviors such as watching TV and playing computer games throughout the day, including at school and at home.

**Effects on Physical Activity at School**

Focusing just on physical activity during the school day, accelerometer data indicated that children at the schools with gardens, in comparison to those without gardens, showed a greater increase in time spent in moderate physical activity. School garden children increased their daily moderate physical activity during the school day by 1.6 minutes from baseline to post-garden follow-up, while children at the no-garden (control) schools decreased their moderate physical activity by 28 seconds per day. Similarly, school garden children increased time spent in moderate-to-vigorous physical activity (MVPA) by 6 minutes per day, while children in the no-garden control schools increased MVPA by just 2.4 minutes per day. If we translate these daily MVPA findings to one week, the garden children spend an additional 29 minutes per week engaged in MVPA, while the non-garden group increase MVPA by 12 minutes per week. Also, it is worth noting that children in this study typically spent 1-2 hours per week in the garden. A more robust intervention would likely have a stronger effect on children’s physical activity.

**Children in the Garden Group increased both moderate and moderate-to-vigorous physical activity at school more than children in the Control Group.**

**Children in the Garden Group significantly reduced sedentary behaviors, such as “screen time” activities.**
Conclusions

It is recommended that children spend at least 60 minutes daily in moderate or vigorous physical activity. School gardening can bolster children’s chances of achieving this every day.

School gardens can help to reduce children’s usual time in sedentary behaviors and, during the school day, gardens can help to increase children’s moderate physical activity, as well as MVPA.

This study builds on the larger USDA-funded “Healthy Gardens, Healthy Youth” study examining the effects of school gardens on children's diet and related outcomes.

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