

Restricting kids' video time reduces obesity, randomized trial shows

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Entrenched sedentary behavior such as watching television and playing computer video games has been the bane for years of parents of overweight children and physicians trying to help those children lose pounds.

There has been little scientifically based research on the effect of limiting those activities, however.

University at Buffalo researchers now have shown in a randomized trial that by using a device that automatically restricted video-viewing time, parents reduced their children's video time by an average of 17.5 hours a week and lowered their body-mass index (BMI) significantly by the end of the 2-year study.

In contrast, children in the control group, whose video time was monitored, but not restricted, reduced their viewing time by only 5 hours per week.

Results of the study appear in the current issue (March 2008) of the *Archives of Pediatric & Adolescent Medicine*.

"Our controlled experiment provided a test of whether reducing access to television and computer time led to a reduction in BMI," said Leonard Epstein, UB Distinguished Professor in the departments of Pediatrics, Health Behavior and Social and Preventive Medicine and first author on the study.



"Results showed that watching television and playing computer games can lead to obesity by reducing the amount of time that children are physically active, or by increasing the amount of food they consume as they as engaged in these sedentary behaviors."

The study involved 70 boys and girls between the ages of 4 and 7 whose BMI -- the ratio of weight to height -- was at or above the 75 percentile for age and sex. Eighty percent of the children were above the 85th percentile and nearly half were above the 95th percentile.

The children were assigned randomly to a control group or an intervention group. Each family received a device called TV Allowance for all video outlets in the home. All participants regularly watched television or played computer video games for at least 14 hours per week, as determined during a 3-week pre-study period.

Each family member had a private individual code to activate the electronic devices. Devices in "intervention" homes, but not "control" homes, had a set weekly time limit, which was reduced by 10 percent per week until viewing time was reduced by 50 percent. Children had to decide how to "spend" their allotted viewing hours.

Body mass index, caloric intake and physical activity were monitored every six months. Data were collected on socioeconomic status and characteristics of the neighborhood, including distance to parks, neighborhood activities and perceived neighborhood safety.

Changes in BMI between groups were statistically significant at 6 months and 12 months, but became more modest over time, results showed. The intervention group showed a steady decline in BMI over the two years, while the control group showed an increase followed by a steady decline.



"Although the changes overall were modest," commented Epstein, "a small effect of using this simple and inexpensive intervention [the device costs approximately \$100], magnified across the population, may produce important reductions in obesity and obesity-related health problems."

Source: University at Buffalo

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