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## 52 – An evaluation of a 5-week, school-based, exergaming intervention using the Gamercize Power Stepper on BMI and physical activity during school lunch breaks in British primary-school children

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**Introduction:** As active video games are prevalent in modern society, the present study aimed to evaluate the impact of a school-based exergaming intervention on BMI and physical activity (PA) during school lunch breaks in British schoolchildren.

**Method:** Thirty-eight, 10–11-year-old children (20 boys, 18 girls, 5.3% overweight, 15.8% obese) were randomly allocated to intervention ( $n$  19) or control ( $n$  19) groups. The intervention group undertook twice weekly exergaming sessions during school lunch breaks using the Gamercize power stepper. The control group took part in 'regular' lunch break physical activity. BMI was assessed before and after intervention. PA was assessed each week using pedometry (expressed as steps/min).

**Results:** Repeated measures ANOVA (2 (group)  $\times$  5 (weeks)) indicated a significant group by weeks interac-

tion ( $F$  (4, 128) = 2.72,  $P$  = 0.03). Steps/min for the exergaming group were not significantly different across the intervention period ( $P$  = 0.237) but was higher in weeks 4 ( $P$  = 0.008) and 5 ( $P$  = 0.01) compared with week 1 for the control group. Exergaming activity contributed 13–16% and regular lunch break 11.5–16% of the recommended daily step counts for maintaining healthy weight (Tudor-Locke *et al.* 2004). BMI was not significantly different across time or group ( $P$  > 0.05).

**Conclusions:** Exergaming using the Gamercize power stepper offers an alternative mode for school-based physical activity that is comparable to regular lunch break activity in the short term (over 3 weeks). This mode of exercise contributed a similar proportion of the recommended steps/day for maintaining healthy weight compared with regular lunch break activity.

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## 53 – Intervention of a health network REPPOP 69 for treating obesity and overweight in children

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**Introduction:** Child and adolescent overweight and obesity are increasingly prevalent. An health network REPPOP 69 (Reseau de Prevention et de Prise en charge de l'Obesite Pediatrique) has been created in 2004 in Lyon (France). The aim is to offer to overweight children and adolescents, a multidisciplinary intervention with a medical, nutritional and psychological follow-up associated with physical activity.

**Method:** Overweight, 1–17-year-old children have a monthly medical follow-up and can be addressed to a dietitian or a psychologist. Specific physical activities are proposed by the network to improve lifestyle. Moreover, a dietitian and a psychologist have a monthly phone call with the family.

The evaluation is made from measurements of height and weight of children followed at least 12 months. To account for sex- and age-related changes over time, we chose BMI standard deviation score (BMI Z-score) as evaluation criteria.

**Results:** A total of 305 children had the evaluation of BMI Z-score before and after at least a one-year follow-up.

**Conclusion:** The reduction of BMI Z-score is better in overweight children but its stabilization rate is higher in obese children; this is linked to the number of follow-up visits by any professional health worker and improved when there is a psychological follow-up.

**Table** BMI Z-score evolution after at least a 1-year follow-up

Overweight ( <i>n</i> 147)	Obesity ( <i>n</i> 158)		Overweight + obesity ( <i>n</i> 305)			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
BMI Z-score evolution						
Reduction	6	58	69	44	155	51
Stabilization	49	33	74	47	123	40
Increase	12	8	15	9	27	9

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## 54 – Family – family intervention in obesity

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*Introduction:* Few studies have focused on the effect of including obese children and parents to follow-up in primary health care after an initial treatment phase in special health care. Family is a multicenter randomized clinical trial comparing two ways of cooperation across health-care levels. The project starts in 2010, but preliminary results from two pilot summer camps in 2008 and 2009 will be presented.

*Method:* Families with at least one obese parent (BMI > 30 kg/m<sup>2</sup>; *n* 100) and one obese child (BMI > iso-BMI 30 kg/m<sup>2</sup>; age 7–12 years; *n* 100) are randomized to group A/B. The intensive group A attend a family summer camp (2 weeks) and four repetition weekends at a rehabilitation centre (group A), whereas the less intensive group B participate in a lifestyle school (2 + 2 d) in paediatric departments. Group sessions, elements from motivational interviewing and parent management training – Oregon will be used to improve family interplay towards more active lifestyle. The families are followed monthly over 2 years by a community coordinator, who will join lectures and network groups about obesity

treatment during the follow-up period. The primary end point is children change in BMI SDS after 2 years.

*Results:* Data at inclusion and change in BMI SDS after one-year follow-up of eighteen children attending the pilot summer camps:

	Mean	SD
Age (years)	9.8	–1.4
BMI SDS (kg/m <sup>2</sup> )	2.38	–0.28
Change in BMI SDS (kg/m <sup>2</sup> )	–0.11	–0.22
Change in lean mass (kg)	4.22	–2.31
Change in fat (%)	–1.44	–4.66

*Conclusions:* The present study will add new knowledge about the effect of including the obese family in 2-year follow-up after an initial family summer camp.

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## 55 – The pitfall of restraint eating and cognitive control

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*Introduction:* Normally therapy in obese patients is inevitably associated with dieting or restraint eating. Not

eating certain food would necessarily require successful suppression of unwanted food-related thoughts.