

# active ingredients

## Dr Geraldine Hutchinson

samples from the ever-growing menu of obesity programmes in place in the nation's schools to discover what's improving children's health and what's not...

**T**he higher the profile and intensity of concern for obesity among children, the greater the pressure on schools. After all, isn't it at school that children learn about the world and themselves, where they gain an understanding of discipline? This attitude and an acceptance of a degree of responsibility has been translated into a raft of school-based obesity programmes over recent years, but how effective are they and why?

Answering these questions was the task of a recent study published by CfBT Education Trust, which reviewed the range of programmes undertaken, assessed their impact and identified the issues relating to why they have and haven't worked. The findings make interesting reading.

### Getting physical

In general, there are two types of school-based interventions, those focused on physical activity and those on nutrition. These may be run individually or combined, but regardless the majority target the primary school age group, as it's at this age that dietary and physical activity behaviours are formed.

Examples of schools providing the opportunity, equipment and 'breaks' ideal for exercise aren't hard to identify. Some have simply lengthened the time available to PE as one way of addressing the obesity issue – but the competition for curriculum time can mean this is impossible. What's more, research has also shown that a 40-minute PE lesson can involve a remarkably small amount of



actual moderate or vigorous physical activity – an average of just eight minutes according to one study.

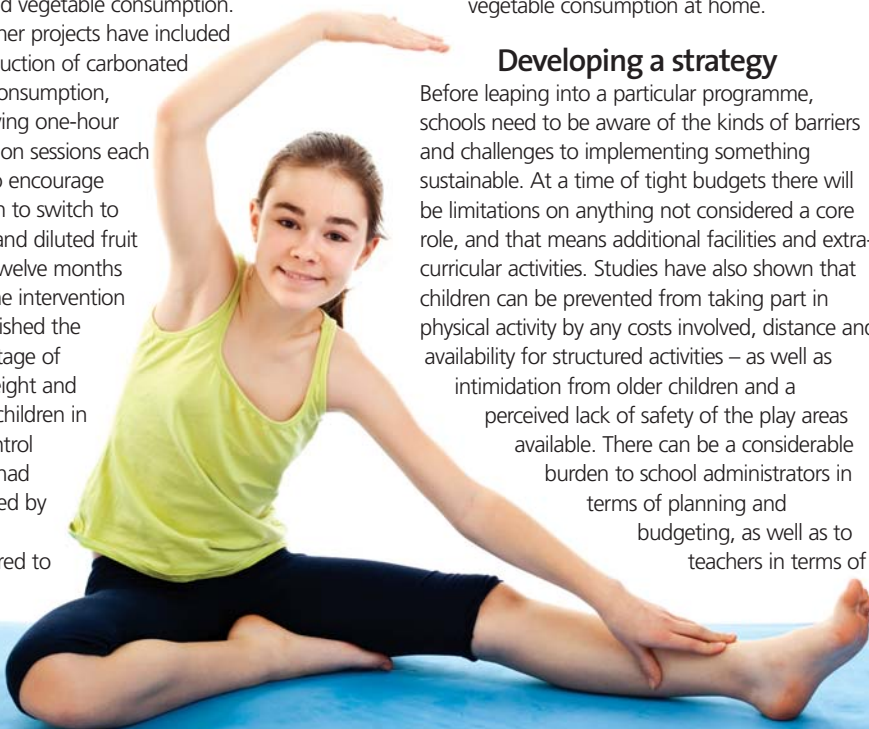
However, changing playground markings and giving access to balls and skipping ropes have all been seen to increase activity levels of 5–7-year-olds during breaktimes. Walking school buses – where chaperoned groups of children that walk to and from school – have also been shown to have a real impact. Children can join the route at various points and those living off the route can be brought by parents to join the ‘bus’ as it passes.

## You are what you eat

Play-based methods have been shown to be a useful vehicle for nutrition education, as opposed to just warnings or advice about what children shouldn't eat. However, whilst they increase knowledge, it's less clear whether they're effective at actually promoting behaviour change.

Games incorporating behaviour change techniques have shown that dietary behaviour changes can occur whilst eating at school, but there's no sense of whether they have an impact on habits at home. For instance, a board game used in schools in Naples, Italy, asked players to match differences between total energy intake (with nutrition cards) and total energy output (with activity cards). At the end of the 24-week study, ‘intervention children’ showed a significant increase in their nutritional knowledge compared to ‘control children’. But no significant differences were seen in BMI (Body Mass Index) in either the control or intervention groups, and no difference was reported between the groups. Another scheme employed Squire's Quest – a 10-session multimedia game, aimed at 9–10-year-olds, which incorporated behaviour change techniques as well as nutritional knowledge. Its organisers reported encouraging dietary behaviour changes in intervention children at lunchtimes and snack times when in school, including increased fruit and vegetable consumption.

Other projects have included the reduction of carbonated drink consumption, employing one-hour education sessions each term to encourage children to switch to water and diluted fruit juice. Twelve months after the intervention had finished the percentage of overweight and obese children in the control group had increased by 7.5% compared to



# An apple a day

## THE OLD ADAGE MEETS PRIMARY SCHOOL REALITY...

**A study of the effect of fruit tuck shops on 9–11-year-old children's fruit consumption shows how novelty ideas can quickly wear thin. After an increase in fruit sales in the autumn and spring terms there was a decline by the summer. With only low levels of trade at these kinds of schemes, there's also the issue of how schools find the revenue to support them. The 'National Fruit Scheme', which aimed to ensure every primary school child in the UK received a piece of free fruit daily, had an obvious impact on levels of fruit consumption in school – but there are doubts as to whether this simply meant children ate less fruit at home. There were other benefits of the scheme, however, such as creating more social time and a time for learning about healthy eating.**



intervention children where a decrease of 0.2% was reported. However, this difference did not remain after an additional two years follow-up, indicating that the intervention had no longer-term effects and suggesting that such interventions need to be maintained for long periods.

training to deliver and implement the programme. Finally, raising awareness of obesity can have detrimental effects for some children – programmes can end up stigmatising overweight children, encouraging fear of food and negative body image.

## Evidence suggests that prejudiced viewpoints about obese children do exist amongst teachers – to what extent is unknown – but teachers' attitudes towards obesity will be transferred to the children they teach.

Elsewhere, the Food Dude Programme (fooddudes.co.uk), designed for 4–11-year-olds, used peer influence to encourage children to eat more fruit and vegetables. ‘Food Dudes’ are role models who gain superpowers when they eat fruit and vegetables. Evaluations of this programme showed that fruit and vegetable eating increased, with effects lasting at least 15 months after the programme ended, including increased fruit and vegetable consumption at home.

### Developing a strategy

Before leaping into a particular programme, schools need to be aware of the kinds of barriers and challenges to implementing something sustainable. At a time of tight budgets there will be limitations on anything not considered a core role, and that means additional facilities and extra-curricular activities. Studies have also shown that children can be prevented from taking part in physical activity by any costs involved, distance and availability for structured activities – as well as intimidation from older children and a perceived lack of safety of the play areas available. There can be a considerable burden to school administrators in terms of planning and budgeting, as well as to teachers in terms of

School-based programmes have clearly been successful in improving children's dietary and physical activity behaviours whilst they're in the controlled environment of a school. The issue is whether this translates into genuine behaviour and attitude change outside of school. It's unrealistic to expect schools to bring about long-lasting changes in children's behaviours without support from families. Very few schemes so far have included the involvement of wider communities, so it's still unclear whether this would make a difference to effectiveness. But with limited time and resources it would make sense for future projects to involve more community links to encourage increased physical activity and improved dietary habits out of school.

Schemes need to be targeted. Specific ideas and approaches are needed for those young people who are already overweight and obese which support and help rather than stigmatise these groups. Whole-population approaches might not always be suitable – particularly where there are children who are generally underweight, not at risk of becoming overweight, or where there are risks of making food a problem.

## Find out more

**Dr Geraldine Hutchinson is Assistant Director, UK Services Group at the CfBT Education Trust. The full report, Tackling childhood obesity within schools: A review of interventions, produced by Janet Wordley and Professor Rachael Dixey of Leeds Metropolitan University on behalf of CfBT Education Trust, is available from [cfbt.com](http://cfbt.com)**