

**National Institute for Health and Clinical Excellence**  
**Centre for Public Health Excellence**

*Review decision*

**Review of the public health guidance (PH17):**

**Promoting physical activity, active play and sport for pre-school and school-age children and young people in family, pre-school, school and community settings**

**1 Background information**

Guidance issued: January 2009  
Review decision: April 2012

**2 Process for updating guidance**

Public health guidance is reviewed 3 years after publication to determine whether all or part of it should be updated.

The process for updating NICE public health guidance is as follows:

- NICE convenes an expert group to consider whether any new evidence or significant changes in policy and practice would be likely to lead to substantively different recommendations. The expert group consists of selected members (including cooptees) of the original committee that developed the guidance, the review team that produced the original evidence reviews, and representatives of relevant government departments.

- NICE consults with stakeholders on its proposal for updating the guidance.
- NICE may amend its proposal, in light of feedback from stakeholder consultation.
- NICE determines where any guidance update fits within its work programme, alongside other priorities.

### **3 Consideration of the evidence and practice**

The expert group discussed published and ongoing research of relevance to the current recommendations, informed by several literature searches (see below). The expert group also discussed changes to policy, legislation and organisations that might affect the recommendations.

#### **Literature searches**

Literature searches were conducted for papers published between April 2007 and October 2011. The original search strategies for the four effectiveness evidence reviews (active travel, children under eight, adolescent girls and family and community) were re-run in *Medline*, *Medline in process* and *Transport* database. The following new searches were also conducted:

- *Social Policy and Practice*: general search for (i) Physical Activity and Young People, and (ii) Olympics,
- *ASSIA*: searched for physical activity papers,
- *ERIC* and *Medline*: searched for papers on physical activity curricula,
- *The Cochrane database*: searched for physical activity reviews,

In addition, a grey literature search was conducted for papers related to the Olympic legacy. Separate searches for cost–effectiveness were not conducted but health economics papers were identified during the screening process.

The results of the literature searches and feedback from the expert group have been assessed to inform the proposed review decision and are summarised below. All references identified through the searches can be viewed in [Appendix 1](#).

Please note that the new pieces of public health guidance in development referred to below are listed in section 5, along with other related published NICE guidance.

### **Active travel**

#### **Recommendations 5 and 12**

Three systematic reviews of active school travel interventions, one systematic review of organisational travel plans and one systematic review of interventions to promote cycling were identified<sup>(1-4)</sup>. Three trials of active travel interventions<sup>(5-7)</sup> and two papers reporting interventions to promote cycling<sup>(8;9)</sup> were identified. The papers covered walking buses, walk to school days, cycle trains and multi-faceted travel active travel initiatives. One cost effectiveness study of a school travel programme was also found<sup>(10)</sup>.

One systematic review<sup>(11)</sup> and three trials of pedometers<sup>(12-14)</sup> were identified. The systematic review concluded that pedometers were a useful tool to increase physical activity. The three studies all found positive short-term<sup>1</sup> effects.

The expert panel noted that the Department of Health has recently asked NICE to produce guidance on 'Local measures to promote walking and cycling as forms of travel or recreation.' In addition, the Government's sustainability agenda includes the Smarter Choices programme which aims to change travel modes and the Travelling to School initiative<sup>2</sup>.

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<sup>1</sup> Six months and under

<sup>2</sup> <http://www.dft.gov.uk/topics/sustainable/smarter-choices/>

The expert panel noted the policy change relating to the end of funding for 'Bikeability' and discussed the lack of evaluation about the impact of cycle training on physical activity outcomes. They noted that the evidence base was still limited to travel to and from school, with active travel initiatives to other venues receiving little evaluation.

The expert panel concluded that the new evidence was consistent with the existing recommendations, however the evidence was insufficient to add further details.

### **Children under eight years of age**

#### **Recommendations 6 and 13**

The searches identified an increase in the amount of literature focusing on younger children. One systematic review of papers objectively measuring physical activity in preschool children in child care reported low levels of activity<sup>(15)</sup>.

Positive effects on physical activity outcomes were reported by three systematic reviews, the first focused on the effect of structured programmes effect on PA and motor skills<sup>(16)</sup>, the second on childcare policy, playground density, availability and quality of portable play equipment<sup>(17)</sup> and the third on physically active lessons<sup>(18)</sup>. One systematic review of effectiveness and cost-effectiveness of weight management schemes for the under 5's, which included physical activity interventions, found no cost effectiveness reports<sup>(19)</sup>.

One systematic review<sup>(16)</sup> and seven studies were found which evaluated interventions to improve core motor skills in young children<sup>(20-26)</sup>. The review reported that 'all five studies measuring motor skills and eight assessing physical activity-related outcomes demonstrated generally positive findings'<sup>(16)</sup>. The findings across the seven studies were not consistent<sup>(20-26)</sup>.

A large proportion of studies were focused on the prevention of overweight/obesity, many of these studies had a physical activity component but did not report physical activity outcomes. Of the 17 studies aiming to increase physical activity interventions and settings were varied and outcomes mixed<sup>(27-42)</sup>.

A number of ongoing trials<sup>(43-51)</sup> were noted (publication date unknown) suggesting that future updates may be better informed.

There was a paucity of evidence relating to babies and toddlers.

The expert panel noted the updated Chief Medical Officer's national recommendations for physical activity<sup>3</sup> now include a section for under 5's. Of particular note are the recommendations that children should have three hours of physical activity which is spread throughout the day, as well as reducing time spent being restrained or sitting for extended periods (except when sleeping). The PH17 recommendations currently target early years providers and recommend opportunities for activity throughout the day, a range of activities is recommended on a daily basis, including unstructured spontaneous play.

The expert panel concluded that there was an increased focus on interventions for younger age groups. However, they were uncertain whether very much further specificity could be added to the existing NICE recommendation, given the heterogeneity of the evaluated interventions and settings. They recommended that there should be another search for evidence in this area before the next scheduled 3 year update to ascertain whether there is sufficient evidence to warrant an update. Nevertheless, the expert group recommended that the NICE guidance and related resources (eg *Pathways*) should be amended to refer to the updated CMO

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[http://www.dh.gov.uk/prod\\_consum\\_dh/groups/dh\\_digitalassets/documents/digitalasset/dh\\_128210.pdf](http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_128210.pdf)

recommendations.

## **Adolescent girls**

### **Recommendations 11 and 14**

Searches found a limited number of papers which focused only on adolescent girls. One systematic review focusing on girl-only interventions was found, which was published after the update searching. Positive outcomes were demonstrated in five of the ten studies which recruited high school girls<sup>(52)</sup>. Multi-factorial interventions were found to be effective and peer strategies were considered to be a promising component.

There were a limited number of papers reporting girl-only interventions. Four new intervention papers from two initiatives (GEMS and TAAG) reported in the original review<sup>(53-58)</sup> and two papers reporting new interventions (Scouting Nutrition & Activity Program (SNAP) and BOUNCE) were identified<sup>(59;60)</sup>. These studies had mixed results.

Three papers reported sport focused interventions which addressed self-efficacy and body image as well as participation. These also had mixed results<sup>(61-63)</sup>.

The expert panel considered that there was insufficient intervention evidence to add further detail to the recommendation.

## **Multi-component school and community programmes**

### **Recommendation 9**

Positive effects of multi-component school and community programmes were reported by seven systematic reviews of multi-component interventions<sup>(64-70)</sup>. Eight papers investigating multi-component programmes were also found most of which reported positive effects. Programme components varied between studies, but may have included physical activity information, social

support, environmental changes, physical education, sport, physical activity across the curriculum, after school activities, parental involvement, general health education and obesity prevention<sup>(13;71-78)</sup>.

The expert panel considered that there was insufficient evidence to add further detail to the existing recommendation, although there might be some new evidence about after-school clubs and activities.

## **Family and community**

### **Recommendation 15**

Searches found six systematic reviews of family and/or community interventions which support the inclusion of parents<sup>(79-84)</sup>. Ten studies of diverse interventions targeting parents were also found which had mixed outcomes<sup>(29;39;85-92)</sup>.

Two systematic reviews focusing on sporting interventions and sport policy, found no papers of sufficient quality to include<sup>(93;94)</sup>.

Limited evidence was found about computer and web-based interventions. One systematic review found small short lived increases in physical activity<sup>(95)</sup> and in one RCT outcomes were variable for different groups based on gender and age<sup>(96)</sup>.

Very little was found on interventions promoting activities such as dance and yoga<sup>(56;59;97)</sup>. Papers on dance and yoga rarely focused on increasing physical activity<sup>(98-104)</sup>.

Three papers were found which reported positive motor skills outcomes and a link between motor skills and energy expenditure<sup>(71;105;106)</sup>.

The expert panel considered that there was insufficient evidence to add further detail to the recommendation but that what evidence there was supported the recommendation.

Active video/DVD games to increase physical activity were discussed as a recent intervention. A small body of literature was identified by the searches. Two reviews reported outcomes in energy expenditure which were considered variable<sup>(107)</sup> and equivalent to mild to moderate physical activity<sup>(108)</sup>. Nine papers were identified, these were mainly exploratory investigating energy expenditure and feasibility of the intervention<sup>(109-116)</sup>. The expert committee decided there was insufficient evidence and they were also of the opinion that the rate of technological change meant that there was a high risk of obsolescence.

The expert group discussed the increased emphasis in the Chief Medical Officer's national minimum physical activity recommendations on the reduction in sedentary behaviours and the development of an evidence base in this area. Two reviews reported small significant effects<sup>(117;118)</sup> and 10 papers were identified in the searches outcomes were mixed<sup>(13;39;92;119-127)</sup>. The expert group agreed that the evidence base was not yet sufficiently developed to warrant an update in this area. Particular concerns were that studies have focused on reducing screen time alone, with other sedentary behaviours receiving little attention. In particular, the lack of clarity about what replaces screen time, physical activity or another sedentary pastime, makes it unclear whether there is a real benefit.

### **Planning for physical activity**

#### **Recommendations 1, 2, 3, 4, 7, 8 and 10**

Six studies were found that evaluated methods of promoting physical activity in this area. Positive outcomes from mass media campaigns were reported by two papers<sup>(128;129)</sup>, but another paper showed no effect<sup>(120)</sup>. Positive outcomes

from an initiative raising awareness of the benefits of physical activity were reported by one paper<sup>(130)</sup>. Mixed outcomes from a social marketing intervention (an increase in participation but not in the amount of physical activity) were reported by one paper<sup>(131)</sup>. A study of text messaging interventions showed positive outcomes for affective messages<sup>(132)</sup>.

The expert panel considered that there was limited new evidence but that it was likely to support the existing recommendations.

### **Research recommendations**

The evidence suggests that the quality of the research is improving and that objective measures of physical activity are being used more frequently both to map current activity levels and to evaluate interventions. The expert panel considered that the research recommendations are still relevant.

## **4 Implementation and post publication feedback**

No new evidence was identified through post publication enquiries or implementation feedback that would indicate a need to update the guidance at this time.

## 5 Related NICE guidance

The following NICE guidance is related to PH17:

Community engagement. NICE public health guidance 9 (2008).

Available from [www.nice.org.uk/PH9](http://www.nice.org.uk/PH9)

Physical activity and the environment. NICE public health guidance 8 (2008). Available from [www.nice.org.uk/PH8](http://www.nice.org.uk/PH8)

Promoting physical activity in the workplace. NICE public health guidance 13 (2008). Available from [www.nice.org.uk/PH13](http://www.nice.org.uk/PH13)

Social and emotional wellbeing in primary education. NICE public health guidance 12 (2008). Available from [www.nice.org.uk/PH12](http://www.nice.org.uk/PH12)

Behaviour change. NICE public health guidance 6 (2007). Available from [www.nice.org.uk/PH6](http://www.nice.org.uk/PH6)

Four commonly used methods to increase physical activity: brief interventions in primary care, exercise referral schemes, pedometers and community-based exercise programmes for walking and cycling. NICE public health guidance 2 (2006). Available from [www.nice.org.uk/PH2](http://www.nice.org.uk/PH2)

Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. NICE clinical guideline 43 (2006). Available from [www.nice.org.uk/CG43](http://www.nice.org.uk/CG43)

Depression in children and young people. NICE clinical guideline 28 (2005). Available from [www.nice.org.uk/CG28](http://www.nice.org.uk/CG28)

Preventing unintentional injuries among under-15s in the home. NICE public health guidance 30 (2010). Available from <http://guidance.nice.org.uk/PH30>

Preventing unintentional road injuries among under-15s: road design. NICE public health guidance 31 (2010). Available from <http://guidance.nice.org.uk/PH31>

Strategies to prevent unintentional injuries in the under-15s. NICE public health guidance 29 (2010). Available from <http://guidance.nice.org.uk/PH29>

Walking and cycling. NICE public health guidance in development (due Oct 2012). Available from <http://guidance.nice.org.uk/PHG/Wave20/84>

Physical activity advice in primary care. NICE public health guidance in development (due May 2013). Available from <http://guidance.nice.org.uk/PHG/Wave11/26>

## **6 Stakeholder consultation**

In January 2012, the proposal was made to stakeholders that the guidance should not be updated at this time and that it would be reviewed again in 3 years time.

Twelve organisations commented on the proposal during the two week consultation period. Four stakeholders agreed with the proposal not to update the guidance at this time (one of whom supported an interim update), none disagreed and eight were ambivalent or did not say.

Stakeholders raised the following main points:

- The importance of physical literacy
- The importance of physical activity in obesity prevention
- Proposed changes to the NHS, the draft National Planning Policy Framework, and to planning and local authority structures.

During consultation, areas to consider for review in an update were:

- Reducing sedentary behaviour
- Evidence from the Change4Life campaign.

Several areas were suggested that were out of scope, including:

- Making public transport safer and more accessible to children and young people
- Air pollution
- Nutritional advice.

## **7 Equality and diversity considerations**

There has been no evidence to indicate that the guidance does not comply with anti-discrimination and equalities legislation.

## **8 Conclusion**

In conclusion, no new evidence has been identified which appears to contradict the existing recommendations. Although some new evidence is available that could add nuance to some of the recommendations, it is highly unlikely that this would invalidate or change the direction of the current recommendations.

While the expert group concluded that it may be worth taking another look at the evidence on younger children in one or two year's time – with a view to a partial update of the guidance – NICE was not convinced that this was justified given the resource implications. Therefore, the proposal put to stakeholders was that the guidance should not be updated and should be reviewed again in 3 years time.

Given the feedback from stakeholders, NICE has decided it is not necessary to update the guidance at this time.

However, NICE will make a technical amendment to the guidance so that it refers to the latest CMO recommendations.

## **9 Review decision**

The guidance will not be updated at this time.

The guidance will be reviewed again in 3 years time, according to current processes.

*Centre for Public Health Excellence, April 2012*

# Appendix 1

## Reference List

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