

# Loughborough University Institutional Repository

---

## *Association for Physical Education Health Position Paper [2015]*

This item was submitted to Loughborough University's Institutional Repository by the/an author.

**Citation:** HARRIS, J., 2015. Association for Physical Education Health Position Paper [2015]

**Additional Information:**

- This Association for Physical Education Health Position Paper was written by Jo Harris on behalf of the Association for Physical Education. It replaces the version published in 2013. The definitive published version is available at [http://www.afpe.org.uk/physical-education/wp-content/uploads/afPE\\_Health\\_Position\\_Paper\\_Web\\_Version.pdf](http://www.afpe.org.uk/physical-education/wp-content/uploads/afPE_Health_Position_Paper_Web_Version.pdf)

**Metadata Record:** <https://dspace.lboro.ac.uk/2134/24152>

**Version:** Accepted for publication

**Publisher:** Association for Physical Education

**Rights:** This work is made available according to the conditions of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) licence. Full details of this licence are available at: <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Please cite the published version.



# Association for Physical Education



## Health Position Paper

September 2015

# Contents

Introduction

Section 1: Physical activity, physical education and school sport

Section 2: Physical education's contribution to public health

Section 3: Physical activity for health guidelines

Section 4: Significance and key features of physical activity for health guidelines

Section 5: UK Governments' physical activity targets

Section 6: Physical activity information on children

Section 7: Monitoring health, fitness and physical activity in schools

References

Appendices

Appendix 1: Summary of actions taken by afPE to embrace 'health'

Appendix 2: Physical activity data

Appendix 3: Practical recommendations for physical education teachers for addressing childhood obesity

## Introduction

This paper presents afPE's position on health and replaces the version published in 2013. Section 1 clarifies the terms 'physical activity, 'physical education' and 'school sport'. Section 2 considers the role of physical education in public health, including its contribution to addressing childhood obesity and to whole school approaches to health. Section 3 presents UK-wide physical activity for health guidelines. Section 4 considers the significance and key features of these guidelines. Section 5 discusses the relationship between UK Government's physical activity targets and physical activity for health guidelines. Section 6 presents headlines from children's physical activity data. Section 7 considers monitoring health, fitness and physical activity in schools. The paper concludes with references and appendices.

Actions taken by afPE to date to embrace 'health' are summarised in Appendix 1.

### Section 1: Physical activity, physical education and school sport

Physical activity, physical education and school sport are similar in that they all include physical movement, but there are important differences between them, as outlined in the following descriptions.

**Physical activity** is a broad term referring to all bodily movement that uses energy. It includes all forms of physical education, sports and dance activities. However, it is wider than this, as it also includes indoor and outdoor play, work-related activity, outdoor and adventurous activities, active travel (e.g. walking, cycling, rollerblading, scooting) and routine, habitual activities such as using the stairs, doing housework and gardening.

**Physical education** is the planned, progressive learning that takes place in school curriculum timetabled time and which is delivered to all pupils. This involves both 'learning to move' (i.e. becoming more physically competent) and 'moving to learn' (e.g. learning through movement, a range of skills and understandings beyond physical activity, such as co-operating with others). The context for the learning is physical activity, with children experiencing a broad range of activities, including sport and dance.

**School sport** is the structured learning that takes place beyond the curriculum (i.e. in the extended curriculum) within school settings; this is sometimes referred to as out-of-school-hours learning. Again, the context for the learning is physical activity. The 'school sport' programme has the potential to develop and broaden the foundation learning that takes place in physical education. It also forms a vital link with 'community sport and activity'.

Whilst all pupils may be encouraged to be involved in school and community sport, not all choose or are able to do so, for a host of reasons. For some children and young people (particularly girls), school physical education is their only regular opportunity for physical activity and makes an important contribution to their overall activity levels. It is therefore considered crucial that pupils receive at least 2 hours of physical education a week and that this is of the highest quality.

## **Section 2: Physical education's contribution to public health**

Physical education contributes to public health and personal well-being through the physical learning context that it provides for every child. Health and well-being should be viewed holistically to comprise physical, psychological/mental and social aspects of health which contribute to people's quality of life. afPE recommends that limited and limiting views of children's health and well-being which reduce health to a focus on appearance, weight, size and shape are avoided.

High quality physical education provides regular participation in physical activity for children aged 5-18 which is associated with:

- Improved cardiovascular health
- Improved bone health
- Reduced body fat and maintaining a healthy weight
- Improved cardiorespiratory fitness
- Stronger muscles
- Improved self confidence
- Improved social skills
- Reduced symptoms of anxiety and depression.

Regular physical activity also reduces the likelihood of risk factors for chronic diseases (such as heart disease) developing and, if maintained into adulthood, reduces the risk of morbidity and mortality from diseases (such as cardiovascular disease, diabetes and cancers).

High quality physical education also ensures that children learn and develop core movement skills which facilitates their current and future involvement in a variety of physical activities. This builds their confidence, competence and motivation to participate in physical activity and to take part in a wide range of activities as they get older.

From a health perspective, curriculum physical education provides an inclusive learning entitlement which should ensure that all children:

- Are provided with opportunities to gain competence in a broad, balanced range of physical activities.
- Are helped to enjoy being active, and to feel confident and comfortable in a physical activity context so that they are more likely to choose to be active in their own time.
- Experience and appreciate the broad range of benefits (physical, psychological and social) of a healthy, active lifestyle.
- Are aware of how active they are and should be, and know how to find out about and access activity opportunities in the community, including at school, around the home and in the local area.
- Understand about 'energy balance' and the need to increase physical activity in daily living to assist with 'healthy' weight management.

High quality physical education embraces whole school approaches to the promotion of healthy, active lifestyles and incorporates physical activity for health recommendations and guidance within national strategies associated with promoting activity and addressing childhood obesity. Examples of some of these national strategies include:

- ‘Tackling Physical Inactivity – A Co-ordinated Approach’ (All-Party Commission on Physical Activity, 2014)
- ‘Everybody Active, Every Day. Implementation and Evidence Guide’ (Public Health England, 2014)
- ‘State of the Nation’s Waistline’ 2015; Turning Obesity Around: A National New Year Resolution (National Obesity Forum, 2015)
- ‘A Fitter Future for All. Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012-2022’ (Department of Health, Social Services and Public Safety, 2012).

### **Physical education’s contribution to addressing childhood obesity**

Physical education’s specific contribution to addressing childhood obesity focuses on promoting active lifestyles which will assist children in achieving a ‘healthy’ weight as well as benefiting from the many other health gains from being active. Those who are overweight or obese may need to do high levels of physical activity combined with adjustments to their diet in order to achieve and maintain a healthy weight (for these individuals, the emphasis should be on duration and frequency of physical activity). However, overweight or obese children can gain health benefits from being active, even if their weight does not change – for example, physical activity increases lean body mass, increases energy expenditure, leads to favourable changes in blood cholesterol levels and improves psychological wellbeing.

Whilst acknowledging the complexity and sensitivity associated with addressing childhood obesity, it is considered that ‘every child of every size matters’ and can benefit from regular engagement in physical activity, and the physical education profession has a responsibility to ensure that the curricular and extra-curricular experiences offered to children of all shapes and sizes are meaningful, relevant and positive. Numerous practical recommendations to support physical education teachers in effectively engaging all children in physical activity both within and beyond physical education have previously been published (see Cale & Harris, 2013) and these are presented in full in Appendix 2. Selected examples of these recommendations include:

- Adopt a critical attitude towards health and obesity discourses and question what you hear and read about obesity, weight, diet and physical activity and encourage young people to do likewise. Some of the research is conflicting and there is some uncertainty surrounding the issues.
- Adopt a broad and holistic approach to health, health education and promotion. Recognise the importance of all dimensions of health rather than allow weight and weight status to dominate.
- Avoid sensationalising ‘obesity’ or ‘weight’ and adopt a sensitive, caring approach in which you focus on inclusion and learning through physical

activity to try to enable all young people to engage, enjoy and achieve within the physical activity and physical education context.

- Avoid focusing on 'weight' as a problem. Outside of the extremes (of thinness and fatness), people can be healthy at any weight if they engage in moderate amounts of physical activity and have a healthy diet. Adopt and promote the view, health at any size and the message that 'it is better (and healthier) to be in shape than to be a particular shape'.
- Provide young people with specific guidance about the importance of physical activity, its contribution to healthy weight management and how to go about becoming more active.
- Consider kit/clothing and changing/showering policies and procedures. Be sensitive to how obese children are likely to feel about what they wear and about undressing in front of others and be flexible and accommodating where possible.
- Adopt aerobic activity as the principal type of activity that involves working the large muscle groups for a sustained period of time. In so doing, keep the activity of a low to moderate intensity (and recognise that it may need to be of a very low level initially). Place emphasis on increasing the duration and frequency of the activity rather than the intensity. Low impact activities are also likely to be more appropriate as these will reduce stress on the bones and joints and be easier and/or more comfortable.
- Encourage obese children to engage in non-weight bearing activities. These are considered particularly appropriate as the body weight is supported, thereby also reducing stress on the bones and joints and making movement easier and/or more comfortable.

### **Whole school approaches to the promotion of healthy, active lifestyles**

In addition to every child receiving valuable learning in curriculum physical education, there should be numerous other opportunities to be physically active within the school context. The most effective way of maximising physical activity opportunities in schools is through a whole school approach to activity and health promotion, such as the 'Healthy School' and the 'Active School'. Whilst the 'Healthy School' initiative has a broader focus, both approaches involve creating a school ethos and environment which encourages and facilitates physical activity for all pupils and staff. Examples of strategies to promote healthy behaviours include: safer travel to school (e.g. 'walking buses'); providing attractive, appealing play areas; and making equipment/facilities accessible for both organised and informal activities.

In 2014, Public Health England published a number of papers entitled 'Everybody Active, Every Day' which outlined an evidence-based approach to physical activity and provided a guide to implementation. It highlighted that physical inactivity is common and is the fourth largest cause of disease and disability in the UK. It called for a pro-activity movement through society and pointed out that physical activity needs to be made easy, fun and affordable. It referred to four domains for action, these being:

- an active society: creating a social movement
- moving professionals: activating networks of expertise

- active lives: creating the right environments
- moving at scale: scaling up interventions that make us active.

The 'active society' domain incorporates a call for Government to work with schools, Ofsted and their partners to ensure full implementation of the new National Curriculum, so that no child leaves school without the core skills to be competent in a broad range of physical activities and to understand and apply the long-term health benefits of physical activity. There is also a call for action for schools: to consistently promote the benefits of healthy lifestyles across the curriculum at primary and secondary levels; to promote campaigns for cycling and walking to school; and to engage local community groups and organisations to maximise imaginative use of school facilities such as playing fields, gyms, dance halls and swimming pools. Within the 'moving professionals' domain, there is a call for schools and teacher training bodies to train education staff to understand the link between health and wellbeing and educational attainment. The 'active lives' domain requests that schools: design playgrounds to enhance physical activity; ensure that capital investment strategies and delivery plans integrate active travel planning and supporting facilities such as changing accommodation, secure cycle storage, showers and drying facilities as core requirements; and support and encourage cycle training for children to keep them safe on roads. The 'moving at scale' domain recommends that schools promote understanding and dissemination of the evidence base for physical activity's contribution to health.

Also in 2014, Public Health England published a paper for headteachers, governors and staff in education settings which set out the link between pupil health and wellbeing and attainment. The paper affirmed a positive association between academic attainment and the physical activity levels of pupils. In particular, it reported on physical activity being linked to pro-social behaviour and enhanced peer relationships leading to reductions in disruptive classroom behaviour and improved examination results. The paper also confirmed that: pupils with better health and wellbeing are likely to achieve better academically; effective social and emotional competencies are associated with greater health and wellbeing, and better achievement; and the culture, ethos and environment of a school influences the health and wellbeing of pupils and their readiness to learn.

In the same year, the All-Party Commission on Physical Activity highlighted five vital areas for action, these being: a national plan of action to tackle declining levels of physical activity; getting the message out to key audiences (including education professionals and young people); designing physical activity back into our everyday lives (prioritising physical activity in existing and planned new developments and infrastructure); making physical activity a lifelong habit (emphasising whole school approaches and Ofsted formally evaluating physical activity provision in schools); and proving success (requiring the development of standardised measures of physical activity).

In order to effectively promote healthy, active lifestyles amongst children and young people, the Association for Physical Education recommends the following:

- The key role of curriculum physical education should be recognised and supported in any strategy addressing children's health and well-being.



Physical education focuses on learning through the context of physical activity and is for all pupils; in this respect, it is the cornerstone of effective 'physical activity promotion'.

- Curriculum physical education should develop the understanding, skills, confidence and attitudes required for all pupils to be active in their own time. This should include pupils learning about the physical, psychological/mental and social health benefits of physical activity, the physical activity for health guidelines for their age, and how to access the broad range of physical activity opportunities within the school setting and the local community. In teaching the above, physical education teachers should be aware of, connect with and utilise the power and momentum of national physical activity campaigns such as 'Change4Life' ([www.nhs.uk/Change4Life](http://www.nhs.uk/Change4Life)) and 'This Girl Can' ([www.thisgirlcan.co.uk](http://www.thisgirlcan.co.uk)).
- Physical education should be centrally and collaboratively involved in addressing the 'physical activity' aspect of whole-school approaches to health, including helping to develop a whole-school physical activity policy, and engaging pupils (and staff) in a broad range of interesting and appealing curricular and out-of-school hours physical activity opportunities.
- Physical activity sessions (such as 'energy breaks' during lessons or during lunchtimes e.g. 'wake and shake' and 'take 10') are welcomed as an important addition to physical education. They complement curriculum physical education but should never replace it.
- As encouraged through whole school approaches to the promotion of health, pupils and parents should have a 'voice' and schools should seek and respect their views on physical education, physical activity and school sport and try, where possible, to take on board their ideas (as exemplified in the 'Nike Girls in Sport' project).
- Schools should identify pupils who do not meet the physical activity for health guideline and attempt to establish why this is, bearing in mind that some individuals may not be able to access physical activity opportunities beyond physical education. This may be the case for children: with disabilities; from families without a car; with low skill levels; who have significant household duties; and who act as carers. Culturally aware and sensitive communication with these pupils and their families could help to understand their non-participation and reduce barriers to their involvement. This may be achieved through adaptation of existing policies and practices and the creation of new and different ways of involving or engaging them in the sort of activities they would like. Further strategies may need to be developed to address the challenges of those young people who, despite all provision and opportunities, choose to drop out from physical activity.
- PE teachers should have the knowledge, understanding and skills to be effective promoters of physical activity. This should include learning about the social construction of health and fitness and the complexity of behaviour change as a form of social reform. This may require adjustments to the initial

training of teachers of PE and the provision of professional development, specific to the promotion of healthy, active lifestyles.

### **Section 3: Physical activity for health guidelines**

In 2010, the World Health Organisation published global recommendations on physical activity for health. One year later, in 2011, a report on physical activity for health was published by the four UK home countries' Chief Medical Officers which included guidelines for the early years (under 5s), children and young people (5-18 years), adults (19-64 years) and older adults (65+ years).

As the Association for Physical Education promotes and supports physical education throughout the lifespan, guidelines for all the different age ranges are included in this paper. This is then followed by a particular focus on the 5-18 guideline as many members of the Association for Physical Education teach this age group. This draws on guidance from the British Heart Foundation National Centre for Physical Activity and Health (2013) for those individuals working with children and young people.

Within the physical activity for health guidelines, 'moderate' intensity activity is described as that which causes participants to breathe faster, experience an increase in heart rate, and feel warmer. 'Vigorous' intensity activity is that which results in participants breathing very hard, being short of breath, having a rapid heartbeat, and not being able to carry on a conversation comfortably. The amount of activity needed for it to be described as 'moderate' or 'vigorous' varies from one person to another.

#### **Early Years (under 5s)**

1. Physical activity should be encouraged from birth, particularly through floor-based play and water-based activities in safe environments.
2. Children of pre-school age who are capable of walking unaided should be physically active daily for at least 180 minutes (3 hours), spread throughout the day.
3. All under 5s should minimise the amount of time spent being sedentary (being restrained or sitting) for extended periods (except time spent sleeping).

#### **Children and Young People (5-18 years)**

1. All children and young people should engage in moderate to vigorous intensity physical activity for at least 60 minutes and up to several hours per day.
2. Vigorous intensity activities, including those that strengthen muscle and bone, should be incorporated at least three days a week.

3. All children and young people should minimise the amount of time spent being sedentary (sitting) for extended periods.

### **Adults (19-64 years)**

1. Adults should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week.
2. Alternatively, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or a combination of moderate and vigorous intensity activity.
3. Adults should also undertake physical activity to improve muscle strength on at least two days a week.
4. All adults should minimise the amount of time spent being sedentary (sitting) for extended periods.

### **Older Adults (65+ years)**

1. Older adults who participate in any amount of physical activity gain some health benefits, including maintenance of good physical and cognitive function. Some physical activity is better than none, and more physical activity provides greater health benefits.
2. Older adults should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week.
3. For those who are already regularly active at moderate intensity, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or a combination of moderate and vigorous activity.
4. Older adults should also undertake physical activity to improve balance and co-ordination on at least two days a week.
5. Older adults at risk of falls should incorporate physical activity to improve balance and co-ordination on at least two days a week.
6. All older adults should minimise the amount of time spent being sedentary (sitting) for extended periods.

Reference: *Department of Health (England), Department of Health, Social Sciences and Public Safety (Northern Ireland), the Scottish Government (Scotland) & the Welsh Government (Wales) (2011). Start Active, Stay Active. A report on physical activity for health from the four home countries' Chief Medical Officers.*

#### **Section 4: Significance and key features of the UK guidelines**

The guidelines represent a unique UK-wide consensus on the amount and type of physical activity that is needed to benefit health. To reach this consensus, international, large-scale reviews in the US and Canada were drawn from as well as the rationale for the World Health Organisation Global Recommendations on Physical Activity for Health. The guidelines update previous versions and include new guidelines for early years and older people.

The guidelines are flexible to encourage the creation of new ways to achieve the health benefits of an active lifestyle and to prompt the development of new partnerships to help create a more active society. The guidelines also highlight the risks of excessive sedentary behaviour, which exist independently of any overall volume of physical activity. Health inequities in relation to physical inactivity according to income, gender, age, ethnicity and disability are acknowledged. Organisations and professions with a part to play in promoting physical activity are challenged to work across communities to make physical activity a reality for all.

A particular feature of the guidelines are their lifecourse approach with the overriding message that people need to be active throughout life and that physical activity should be a natural part of everyday life, from the early years through to older adulthood. Another feature is a stronger recognition of the role of vigorous intensity activity, acknowledging that previous national campaigns have emphasised the health benefits of moderate intensity physical activity in order to entice low active, non-sporty people to become more active but this may have led to an assumption that vigorous intensity activity does not benefit health which is not the case. A third feature is the encouragement to combine moderate and vigorous intensity activity within different amounts and types of activity, as suits individual lifestyles and preferences. A further feature is the emphasis upon daily activity so that individuals gain some health benefits which result from responses that occur for up to one to two days, following activity. Being active daily also helps to develop more sustainable, lifelong activity habits. Another feature is the focus on limiting sedentary behaviour with the key message that some activity is better than none and the warning that it is possible for people to achieve recommended levels of physical activity but still put their health at risk if they spend the rest of the time sitting or lying down. Hence, the need to limit sedentary behaviour and to emphasise that action to limit sedentary behaviour is quite different to action to promote physical activity.

Of course, guidelines themselves do not change behaviour. Behaviour change is complex and difficult and can only be achieved through collaboration between organisations and professionals working together to make it easier for people to be more active and less sedentary. A good starting point is planned translation and communication of the guidelines, matched with concerted and committed action on physical activity to tackle barriers to being active at all levels, from the personal through to the environmental. In schools and colleges, safe routes and active playgrounds need to be developed, alongside ensuring the provision of high quality physical education and health education through formal and informal curricula.

## Implementing the physical activity guideline for 5-18 year olds

The following points assist with understanding and implementing the physical activity guideline for the 5-18 age group.

- The headline recommendation for this age group is 'a minimum of one hour a day of moderate to vigorous physical activity'.
- The intensity of physical activity should be above and beyond that experienced during daily living. This means that light activity such as moving around the house and walking slowly between school lessons or while shopping does not contribute towards the 'one hour a day' of physical activity. A reduction in sedentary time should, however, result in an increase in light intensity physical activity and total energy expenditure.
- The evidence supports recommendations on limiting sedentary behaviour, which may be associated with health risks that are independent of participation in physical activity. Physical activity has very low risks for most children and young people; however, the risk of poor health from inactivity is very high.
- The guidelines are relevant to all children and young people aged 5-18 years, irrespective of gender, disability, race or socio-economic status, but should be interpreted with consideration of individual physical and mental capabilities. For children and young people with disabilities, the guidelines need to be adjusted for each individual based on that person's exercise capacity and any special health issues or risks.
- For children and young people who are currently inactive, doing some physical activity, even if it is less than the guidelines, will provide some health benefits. For such individuals, a gradual increase in the frequency, duration and intensity of activity to achieve the guidelines is recommended.
- Children who are overweight or obese can gain health benefits from meeting the recommended levels of physical activity, even in the absence of changes to their weight status. Overweight and obese children and young people may find physical activity uncomfortable and embarrassing so it is important that adults encourage and support their involvement by adapting activities to ensure they are inclusive, achievable and enjoyable.
- There is a dose-response association between activity and health outcomes such that regular participation in activity at a higher level than the guideline (e.g. of greater duration, increased intensity) is associated with even greater benefits. The guidelines acknowledge the dose-response relationship by recommending up to several hours of activity daily in order to obtain maximal benefits.
- Some of the health benefits associated with physical activity result from acute responses that occur for up to 24-48 hours following activity. To reflect this

evidence and to encourage regular activity habits across the week, daily physical activity is recommended.

- For some health outcomes, vigorous intensity physical activity is required. For example, vigorous activity is required to increase cardio-respiratory fitness in young people and it is also important in optimising bone health, particularly prior to the adolescent growth spurt.
- Muscle strengthening and bone health are most favourably affected by resistance training and impact activities. The guidelines recommend that activities that strengthen muscle and bone should be incorporated on at least three days a week (this is an increase from previous recommendations which stated 'at least twice a week'). For children, this can include activities that require lifting their own body weight and jumping and climbing activities, combined with the use of large apparatus and toys. For young people, resistance-type exercise during high intensity sport, dance, water-based activities or weight (resistance) training are appropriate.
- Sedentary behaviours, such as TV viewing or accumulated total sedentary time, are associated with overweight and obesity and metabolic dysfunction in young people. This suggests that prolonged periods of sedentary behaviour are an independent risk factor for poor health. Therefore, reducing sedentary time and breaking up extended periods of sitting is strongly advised.
- The guidelines need to be interpreted with consideration for children and young people's growth and development. Children and young people are a heterogeneous population. Encouraging childhood physical activity is especially important for children from disadvantaged or vulnerable groups or where family or peer support for being active is limited.
- Opportunities to be physically active need to be available on a daily basis, within the constraints of other pressures such as schooling. Activities should be varied and challenging, as appropriate for the age and stage of development.
- The degree of structure and organisation of activity changes gradually with a shift away from unstructured, active play predominant at younger ages towards structured and organised physical activity in youth (e.g. regular physical education, sport, dance and active travel). A balance of unstructured and structured activity enables young people to be active both independently and dependent on adults.
- If children have positive experiences of physical activity, they are more likely to remain active. Children should learn to manage physical risks themselves, as this will enhance their development of physical and social skills.
- There is a substantial positive association between parental and social support and physical activity in young people. For girls in particular, the main facilitators to being physically active are likely to be social and family influences (e.g. having a peer group who approve of activity or having active

siblings and supportive parents). This highlights the importance of taking account of 'pupil voice' when designing, delivering and evaluating PE curricula and physical activity programmes within school and community settings, and working with families to increase the opportunities and support for physical activity within the lives of children and young people.

## **Section 5: UK Governments' physical activity targets**

Back in 2002, the government in England set the following target:

To ensure that **75%** of children do 2 hours of high-quality physical education and school sport a week by **2006** and **85% by 2008**.

This was commonly referred to as the '2 hours a week' target. The government claimed that the 75% target was met in 2006 and that the 85% target for 2008 was achieved in 2007. Following this, a long-term government ambition was established in England for 2010:

To ensure that all children should have 2 hours of curriculum physical education and the opportunity to access a further 2 to 3 hours of sport beyond the curriculum per week.

This became known as the 'five hours a week' target.

The Scottish Executive similarly aimed to increase and maintain the proportion of physically active children in Scotland and set a target of 80 per cent of all children aged 16 and under meeting the minimum recommended levels of physical activity by 2022, these being the accumulation of at least one hour of moderate activity on most days of the week. There were also recommendations for curriculum provision:

*While Curriculum for Excellence gives both freedom and responsibility to those planning and delivering the curriculum, the Scottish Government expects schools to continue to work towards the provision of two hours of good quality PE for each child every week. This commitment will be reflected in Building the Curriculum 3: A framework for Learning and Teaching. Physical activity and sport will take place in addition to planned PE sessions, at break times and lunchtimes and beyond the school day. Taken together, the experiences and outcomes in physical education, physical activity and sport are intended to establish the pattern of daily physical activity which, research has shown, is most likely to lead to sustained physical activity in adult life.*

The Welsh Assembly Government similarly committed itself to increasing activity levels within the Welsh population. It declared an aspiration that schools should provide at least 2 hours per week of effective and meaningful physical education for every pupil, to contribute to the recommended physical activity level for children of one hour per day of at least moderate intensity activity. In addition, it launched a '5x60' Secondary School Sport Programme, aimed at increasing the number of secondary aged pupils taking part in physical activity for 60 minutes, at least five

times a week. By targeting children and young people who do not take part in physical activity, the Welsh Assembly Government hoped to reach a target of 90% of secondary school pupils taking part in '5x60' minutes of physical activity per week by 2020. Currently, Sport Wales has a vision involving 'Every Child Hooked on Sport for Life' which describes schools as 'central to the physical education, health and wellbeing of every child'. It also states that 'the role of the teacher is paramount. We need more teachers who are competent, confident and enthusiastic about teaching PE and further commitment to teacher training. The links between provision in school and in communities is absolutely critical if we are to achieve our aspiration of engaging children and young people for life'.

The Northern Ireland Strategy for Sport and Physical Recreation 2009-2019 (Department of Culture, Arts and Leisure, 2009) included the following targets:

By 2011, to have established a baseline for the number of children of compulsory school age participating in a minimum of two hours quality physical education;

By 2014, to provide every child in Northern Ireland over the age of 8 years with the opportunity to participate in at least two hours per week of extra-curricular sport and physical recreation.

### **The relationship between physical activity for health guidelines and government physical activity targets**

National physical activity targets are very much welcomed as they offer a formal acknowledgement of the value of physical activity to society. They also complement physical activity for health guidelines but are clearly different from them. The 'one hour a day' recommendation is how active children and young people should be to gain health benefits.

England's previous 2010 ambition for '5 hours a week' target, along with the other home nations' targets for sport beyond curriculum time, make significant and important contributions to the physical activity recommendation, but still fall short, for the following reasons:

- 4 to 5 hours a week is 2 to 3 hours short of the 7 hours a week required to meet the 'one hour a day' recommendation.
- Children will not be actively moving during all of the 4 to 5 hours a week of physical education and school sport, since this involves changing time, and time spent on valuable learning activities such as planning, observing, analysing, coaching and officiating.

It is a challenge for schools to involve every child in up to 5 hours of physical education and school sport a week, especially younger children whose school days tend to be shorter; and learners at the top of the school age range, when there is much competition for young people's time and commitment.



**To increase the amount of physical activity in physical education lessons, afPE recommends that pupils be actively moving for 50-80% of the available learning time.** This can usually be achieved through effective planning and efficient management and organisation of pupils and resources.

In summary, the physical activity for health guideline and government physical activity targets support each other, in that increased time available for physical education and school sport can help to deliver the physical activity for health guideline. The high quality experiences afforded by physical education and school sport should also motivate and encourage children to be active in their own time, to pursue activities that they particularly enjoy, and provide children with the necessary knowledge, skills and understanding to enable them to take up and pursue activities now and in the future.

There is the added challenge of ensuring that all children (some possibly resistant to organised activity, others meeting difficulties in accessing it for a range of social and economic reasons) are willing and able to find ways of being active for at least 2 to 3 hours, away from the school setting, such as in and around the home, and with family, friends or as individuals. This emphasises the importance of the school context in supporting the entitlement of all children, whatever their circumstances to the physical activity and physical education which are so important for their development, health and well-being.

## **Section 6: Physical activity information on children**

Headlines emerging from the increasing volume of physical activity information on children are presented in this section. Details of the data and their sources are reported in Appendix 1.

*Headline 1: The vast majority of children in England, Northern Ireland and Wales do not meet the ‘one hour a day’ physical activity for health guideline.*

Table 1 reveals that the proportion of children meeting the ‘one hour a day’ guideline varies across the UK.

<b>Country</b>	<b>Girls meeting the 1 hour a day guideline</b>	<b>Girls NOT meeting the 1 hour a day guideline</b>	<b>Boys meeting the 1 hour a day guideline</b>	<b>Boys NOT meeting the 1 hour a day guideline</b>
England (5-15 years)	16%	84%	21%	79%
Northern Ireland (8-12 years)	8%	92%	20%	80%
Wales (4-15 years)	30%	70%	39%	61%
Scotland (5-15 years)	72%	28%	78%	22%

Table 1: Proportion of children meeting and not meeting the ‘one hour a day’ physical activity guideline (Sources: Health Survey for England 2012; Scottish Health Survey 2013, Welsh Health Survey, 2013; Experience of Sport and Physical Activity by Young People in Northern Ireland, 2014).

*Headline 2: Boys are more active than girls across all countries and all age groups.*

*Headline 3: Boys participate in formal sports more than girls.*

*Headline 4: Children become less active with increased age and the decline is greater amongst girls than boys.*

*Headline 5: The proportion of children who walk or cycle to school has fallen over the past few decades and the proportion of car journeys has increased.*

*Headline 6: Children from the lowest socio-economic groups are less active than those from the highest.*

*Headline 7: Only 1 in 10 children aged 11-15 years are aware of how much physical activity they should do.*

*Headline 8: There is a positive association between knowing the physical activity guideline and achieving it.*

*Headline 9: Most children perceive themselves as either very or fairly physically active compared with other children their age; two thirds of children in the lowest activity group think that they are very or fairly physically active compared with others.*

*Headline 10: Girls are more likely than boys to want to do more physical activity, regardless of age.*

To add to the complexity of the picture, national survey data from all UK countries point to differences in physical activity participation according to a range of variables such as: geographical region, urban/rural location; culture/religion; special needs and disabilities. Each of these require a specific, targeted approach in order to effectively increase physical activity participation across all groups within the UK.

## **Section 7: Monitoring health, fitness and physical activity in schools**

Any form of health, fitness or physical activity monitoring carried out with pupils in curriculum time (including, for example, the use of health behaviour questionnaires, activity diaries, pedometers, heart rate monitors and fitness tests) should be positive, meaningful, relevant and developmentally appropriate, and be part of a planned, progressive programme of study, the primary aim of which is to promote healthy, active lifestyles.

Fitness testing is a controversial issue in education and has had its proponents and critics over the years (see papers by Cale and Harris between 2006 and 2013). afPE's stance on this issue is to consider all perspectives but to focus predominantly on the quality of the learning that takes place within curriculum physical education and the effect that this has on learners. Clearly, a very narrow view of fitness testing simply involving the production of scores is not appropriate for the curriculum because it reduces a complex concept to raw figures and is therefore limiting in itself, but mainly because it is likely to be a limiting learning experience with inadequate

knowledge and understanding associated with it, including little or no provision of personalised feedback to help learners make sense of their scores and to respond positively to the experience.

Fitness test results should be interpreted with caution as there are limitations in the validity, reliability and accuracy of field-based fitness tests. Many factors influence children's performance and scores on fitness tests such as their maturation, genetic potential, skill at taking the test, motivation and the environment. Furthermore, fitness test scores do not necessarily reflect children's activity levels as is sometimes assumed. Another common assumption is that fitness testing is an effective tool for promoting physical activity. Indeed, the rhetoric underlying fitness testing proposals and programmes often implies that it will contribute to the promotion of healthy, active lifestyles. However, for some children (often the least healthy and active), fitness testing is a negative experience and can be embarrassing and humiliating. afPE therefore cautions against the over use of fitness testing as a means of helping children adopt healthy, active lifestyles. Instead, it favours monitoring of physical activity levels to determine which pupils are and are not meeting the physical activity for health guideline; this can occur instead of, or alongside, the monitoring of health-related fitness components.

afPE considers that fitness testing can have a place within the physical education curriculum, providing that it is approached in such a way that it addresses the limitations of narrow versions of fitness testing and offers a positive, educational experience for all learners and contributes to the promotion of healthy, active lifestyles. This clearly depends not only on what is done, but how it is done and who does it. It is important to recognise that afPE is not anti-fitness testing per se; afPE fully supports alternative pedagogical approaches to health, activity and fitness monitoring within the curriculum and has supported the development of teacher resources which present pedagogical alternatives to limited testing practices. For example, approaches which incorporate criterion-referenced standards and provide individualised feedback on both activity and health-related fitness measures are considered more desirable from a learning perspective than narrow, normative approaches to testing.

All field-based measurements within complex social settings such as schools are problematic in some way but the precise accuracy of the measures is not the main issue; the focus is on the learning that goes on before, during and after the measurement process. The process of children measuring each other's fitness and self-reporting their activity is conducive to the learning process. Children can develop knowledge and understanding, skills and attitudes which steer them towards the adoption of healthy, active lifestyles.

From time to time, it is proposed that fitness testing becomes a compulsory aspect of school physical education. This was recommended within the 2009 Annual Report of the Chief Medical Officer in England and, more recently, ukactive's 2015 'Generation Inactive' report recommended formal fitness testing in primary schools as part of the National Child Measurement Programme. In response to this latter recommendation, afPE declared that it does NOT support formal fitness testing in primary schools. It considers this a retrograde step in terms of promoting healthy, active lifestyles and takes this position for the following reasons:

- Fitness testing is not good use of the limited curriculum physical education time in primary schools.
- Fitness testing is not a proven effective strategy for promoting active lifestyles.
- Fitness testing can be dull, dreary and dreaded, especially by the very children whom we want to be more active.
- Fitness test scores can be misleading and do not accurately reflect physical activity levels.

However, afPE fully supports effective promotion of active lifestyles in primary schools and considers that this requires:

- Increased curriculum physical education time in primary schools (many primary schools only have PE twice a week and this is not sacrosanct as it is sometimes shortened or cancelled).
- Increased time on training primary teachers to teach high quality physical education (this should include teaching a sequence of PE lessons during training and working alongside teachers with good knowledge of high quality PE). Well qualified staff teach PE that is more active for children as they plan better, are clearer about what is being taught and how learning is progressed over time, and can adapt tasks so that pupils of all abilities fully participate in and enjoy lessons.
- The identification of primary children who do not meet the current UK physical activity for health guideline of being active for a minimum of at least one hour a day, followed by offering these children free access to additional, enjoyable opportunities to be active within the school environment, and also liaising with their parents/carers to support them in being active at home and in their free time.
- Increasing the proportion of primary children who are active during break times, lunch times and before and after school (there are still many children who are not active at these times).
- Increased physical activity in curriculum time involving the teaching of subjects in 'active' ways which require pupils to get up and move to learn, where appropriate, both within the school building and in the outside environment. This will help to reduce the amount of time children are sedentary during the school day.

If fitness testing were to be introduced for population surveillance purposes (as suggested by the Chief Medical Officer in 2009 and ukactive in 2015), it would be best undertaken by independent, trained specialists in fitness measurement in order that the tests are standardised and that the process has rigour and the results are as robust as they can be. afPE acknowledges that there is merit in obtaining accurate fitness scores from children, with respect to adding to the research literature on what is known about this. However, it does not believe that this is good use of limited curriculum time. Curriculum time is precious and physical education time is best

used to increase children's movement competence and confidence in order to encourage them to be active outside of lessons, in their own time.

In summary, if the limitations of fitness testing are understood and addressed, and if it is incorporated as just one component of a broad, balanced physical education curriculum which also includes monitoring of physical activity, then it can potentially play a positive role in promoting healthy active lifestyles.

## References

All-Party Commission on Physical Activity (2014). *Tackling Physical Inactivity – A Coordinated Approach*. London: All-Party Commission on Physical Activity.

Association for Physical Education (2012). *Safe Practice in PE and Sport*.  
1<sup>st</sup>4sport.com

British Heart Foundation National Centre for Physical Activity and Health (2013). *Interpreting the UK Physical Activity Guidelines for Children and Young People (5-18). Guidance for Those who Work with Children and Young People*. British Heart Foundation National Centre for Physical Activity and Health: Loughborough.

Cale, L., & Harris, J. (2013): 'Every Child (of Every Size) Matters' in Physical Education! Physical Education's Role in Childhood Obesity. *Sport, Education and Society*, 18(4), 433-452.

Cale, L., & Harris, J. (2009). Fitness testing in physical education – a misdirected effort in promoting healthy lifestyles and physical activity? *Physical Education and Sport Pedagogy*, 14 (1): 89-108.

Cale, L., Harris, J., & Chen, M. H. (2012). Monitoring health, activity and fitness in physical education: Its current and future state of health. *Sport, Education and Society*. DOI: 10.1080/13573322.2012.681298.

Department for Culture, Media and Sport (DCMS) (2014). *Taking Part 2013/14: Annual Child Report*. Available at: [www.gov.uk/government/statistics/taking-part-201314-annual-child-release](http://www.gov.uk/government/statistics/taking-part-201314-annual-child-release)

Department of Culture, Arts and Leisure (2009). *Sport Matters. A Culture of Lifelong Enjoyment and Success in Sport. The Northern Ireland Strategy for Sport and Physical Recreation 2009-2019*. Available at: [www.dcalni.org.uk](http://www.dcalni.org.uk)

Department of Culture, Arts and Leisure (2014). *Experience of Sport and Physical Activity by Young People in Northern Ireland. Triennial Report*. Available at: [www.dcalni.org.uk](http://www.dcalni.org.uk)

[Department of Health \(2009\). \*Change4Life\*. Available at: www.nhs.uk/Change4Life](http://www.nhs.uk/Change4Life)

Department of Health (2011). *Physical Activity Guidelines*. Available at: [www.gov.uk/government/publications/uk-physical-activity-guidelines](http://www.gov.uk/government/publications/uk-physical-activity-guidelines)

Department of Health, Cabinet Office, Department for Culture, Media and Sport, Department for Education and Department for Transport (2014). Moving More, Living More: Olympic and Paralympic Games Legacy.

Department of Health, Social Services and Public Safety (2012). A Fitter Future for All. Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012-2022. Available at: [www.dhsspsni.gov.uk](http://www.dhsspsni.gov.uk)

Department of Health, Department of Health, Social Services and Public Safety, the Scottish Government and the Welsh Government (2011). Start Active, Stay Active. A Report on Physical Activity for Health from the Four Home Countries' Chief Medical Officers.

Department for Education (2010). PE and Sport Survey 2009 to 2010. Available at: [www.gov.uk/government/publications/pe-and-sport-survey-2009-to-2010](http://www.gov.uk/government/publications/pe-and-sport-survey-2009-to-2010)

Department for Transport (2014). National Travel Survey 2013. Available at: [www.gov.uk/government/statistics/national-travel-survey-2013](http://www.gov.uk/government/statistics/national-travel-survey-2013)

Harris, J., & Cale, L. (2007). Children's fitness testing: A feasibility study. *Health Education Journal*, 66 (2): 153-172.

Harris, J., & Cale, L. (2006). A review of children's fitness testing. *European Physical Education Review*, 12 (2), 201-225.

Health and Social Care Information Centre (2012). The Health Survey for England 2012. Available at: [www.hscic.gov.uk/pubs/hse2012](http://www.hscic.gov.uk/pubs/hse2012)

Health and Social Care Information Centre (2015). Statistics on Obesity, Physical Activity and Diet: England 2015.

National Obesity Forum (2015). State of the Nation's Waistline 2015. Turning Obesity Around: A National New Year Resolution. Available at: [www.noaw.org](http://www.noaw.org)

Organisation for Economic Co-operation and Development (OECD) (2013). Health at a Glance 2013: OECD Indicators. Available at: [www.oecd.org/health/health-systems/health-at-a-glance.htm](http://www.oecd.org/health/health-systems/health-at-a-glance.htm)

Public Health England (2014). Everybody Active, Every Day. An Evidence-Based Approach to Physical Activity. London: Public Health England. Available at: [www.gov.uk/phe](http://www.gov.uk/phe)

Public Health England (2014). Everybody Active, Every Day. Implementation and Evidence Guide. London: Public Health England. Available at: [www.gov.uk/phe](http://www.gov.uk/phe)

Public Health England (2014). The Link Between Pupil Health and Wellbeing and Attainment. A Briefing for Headteachers, Governors and Staff in Education Settings. London: Public Health England. Available at: [www.gov.uk/phe](http://www.gov.uk/phe)

Scottish Government (2014). Scottish Health Survey 2013. Available at: [www.scotland.gov.uk/Topics/Statistics/Browse/health/scottish-health-survey/Publications](http://www.scotland.gov.uk/Topics/Statistics/Browse/health/scottish-health-survey/Publications)

Sport England (2015). This Girl Can. Available at: [www.thisgirlcan.co.uk](http://www.thisgirlcan.co.uk)

Welsh Government (2014). Welsh Health Survey 2013. Available at: [www.wales.gov.uk/statistics-and-research/welsh-health-survey/?lang=en](http://www.wales.gov.uk/statistics-and-research/welsh-health-survey/?lang=en)

World Health Organisation (2010). Global Recommendations on Physical Activity for Health. World Health Organisation: Geneva, Switzerland.

## **September 2015**

### **Dr Jo Harris (on behalf of the Association for Physical Education)**

For further information, or to inform afPE about good practice in this area, please contact [admin@afpe.org.uk](mailto:admin@afpe.org.uk)

## **Appendices**

### **Appendix 1: Summary of actions taken by afPE to embrace 'health'**

- The production and dissemination of regular health position papers (2008, 2013, 2015) which clarify physical education's contribution to public health and personal well-being.
- afPE published a response to UK Active's 'Generation Inactive' report in June 2015.
- afPE published a position statement on fitness testing for school-aged pupils in May 2015.
- Prominent afPE members contributed to the production of resources for Sport England's 'This Girl Can' campaign during 2015.
- afPE members contributed to Public Health England's 'Moving More, Living More' commitment to develop a national physical activity approach during 2014.
- afPE published a response to 'Recommendations within the 2009 Annual Report of the Chief Medical Officer' in England.

- There has been close liaison with the Department of Health about the possibility of joint regional conferences on 'activity promotion' with secondary physical education and personal, health and social education (PSHE) teachers.
- afPE has had regular representation on the Department of Health's Physical Activity working group.
- From 2007 onwards, afPE annual conferences have included 'health' focused keynote presentations and/or workshops associated with physical education's role in promoting health and physical activity.
- A series of articles on 'Physical Education and Obesity' have been published in 'Physical Education Matters'.
- afPE organised and delivered a specialist seminar in May 2007 on 'Physical Education and Childhood Obesity'.
- afPE contributed to and endorsed the Department of Health's Physical Activity Toolkit published in 2007.
- afPE board members contributed to the production of 'health and fitness' modules within the National CPD Programme (Learning about health in PE; Are your pupils healthy, active and fit? Does your school promote healthy, active lifestyles?).

## **Appendix 2: Physical activity data on children**

Some of the most recent physical activity data in children derives from the Health Survey for England 2012 which includes information about self-reported data in children aged 2 to 15. Key findings of this survey include:

- A similar proportion of young children aged 2-4 years (9% boys and 10% girls) meet the current guidelines for children under 5 of at least 3 hours of physical activity per day.
- A higher proportion of children aged 5-15 years (21% boys and 16% girls) meet current guidelines of at least one hour of moderately intensive physical activity per day. The proportion meeting guidelines was lower in older children with a decrease amongst boys from 24% (5-7 years) to 14% (13-15 years) and a decrease amongst girls from 23% (5-7 years) to 8% (13-15 years).
- Over time, there was a significant decrease amongst boys in the proportion meeting current guidelines, falling from 28% in 2008 to 21% in 2012. The corresponding change among girls was not statistically significant (from 19% to 16%). The decrease in the proportion meeting recommendations was more marked in the oldest age group with 28% of boys and 14% of girls aged 13-15 meeting the guidelines in 2008, compared with 14% and 8% respectively in 2012.



- Patterns of activity varied by age. Younger (2-4 years) and older (11-15 years) children walked on more days in the last week than those in the middle age groups. Participation in informal activities fell steadily with age, while participation in formal sports increased with age in boys up to the age of 10.
- A similar proportion of boys and girls participated in at least 7 hours of physical activity in the last week (52% and 46% respectively). Among boys, the proportion that participated in at least 7 hours of informal activity in the last week fell from 44% for those aged 2-4 years to 27% for those aged 13-15 years. Among girls, this decrease with age was more marked, falling from 40% to 9%.
- For both boys and girls, there was a gradual increase in the average number of hours spent in formal sports activity in the last week as the equivalised household income quintile increased; this increase was from 1.2 hours for boys and 0.6 hours for girls in the lowest income quintile to 2.1 hours and 1.6 hours respectively in the highest income quintile.

The Health Survey for England 2008 provides some of the most recent data on objective measures of physical activity among children aged 4 to 15 years, obtained through the use of accelerometers to measure the frequency, intensity and duration of physical activity in one minute periods over a 7 day period. Key findings included:

- A higher proportion of boys (33%) than girls (21%) were classified as meeting the government recommendations for physical activity. Only around 1 in 5 children had achieved the 'intermediate' level of 'some activity' (at least 30 minutes of moderate to vigorous physical activity each day), with 47% of boys and 60% of girls in the low activity group.
- There was considerable variation by age. For boys, 51% of 4 to 10 year olds had met the recommendations, but only 7% of boys aged 11-15 years had done so. The pattern was similar for girls, although fewer met the recommendations in either age group. Among girls aged 4-10 years, 34% had met the recommended target, while none of the girls aged 11-15 years had done so.

Key findings for the 5 to 15 age group, from the Department for Culture, Media and Sport's 2013/14 Taking Part Survey which collects data on participation in culture, leisure and sport show that:

- In the previous 4 weeks, 84% of 5-10 year olds took part in sport outside of school and 97% of 11-15 year olds took part in sport in or outside of school. These results have remained stable for 5-10 year olds since 2008/09. For 11-15 year olds, participation is at a similar level to 2008/09 but has increased significantly since 2010/11 (95%).
- Amongst 5-15 year olds, 90% had taken part in sport in the 4 weeks. Following a significant decrease from 2008/09 (90%) to 2012/13 (88%), this figure has now returned to a similar proportion to 2008/09.
- In the previous week, 71% of 5-10 year olds took part in sport outside of school and 90% of 11-15 year olds took part in sport either in or outside of school. This represents no significant change since 2008/09 for either age group, however for 11-15 year olds there has been a significant increase in participation since 2010/11 (86%).

## Travel to and from school

This is recognised as an opportunity for children to achieve part of their recommended daily physical activity. The Health Survey for England 2012 report stated that:

- Two thirds of children who had attended school in the last week had walked to or from school on at least one occasion (64% of boys and 67% of girls). 41% of boys and 44% of girls walked to/from school every day. On average, children spent 1.1 hours walking to/from school in the last week. More boys (6%) than girls (1%) cycled to/from school on at least one occasion in the last week.
- The proportion of both boys and girls who had walked and/or cycled to or from school on at least one occasion in the last week was similar in 2008 and 2012.

The National Travel Survey (2013) provides information on travel to and from school for children aged 5 to 16 years and reported that:

- 42% of trips involved walking and the proportion of car trips was 34%.
- A higher proportion of children aged 5-10 walk to school (46%), compared with children aged 11-16 (37%).
- Between 1995/97 and 2013, the proportion of walking trips has fallen from 47% to 42%. Over the same time period, the proportion of car trips has increased from 30% to 34% and the average distance travelled has increased by 31% to 2.7 miles, suggesting that as education trips get longer, more children are travelling to school by car, rather than walking.

The Health Survey for England (2012) also includes information on children's participation in formal sports and informal activities and reported the following:

- Overall, 93% of boys and 92% of girls had participated in any type of physical activity in the last week.
- Boys were more likely than girls to have participated in formal sports (48% and 38% respectively) on at least one occasion in the last week; however, levels of walking (52% boys and 54% girls, excluding walking to/from school) and informal activity (85% both sexes) were similar.
- Boys averaged more days of participation in informal activities and formal sports (4 days and 1.3 days respectively) than girls (3.8 and 0.9 respectively).

The Taking Part Survey 2013/14 also includes information on the sports that children participated in and reported that:

- Amongst 5-10 year olds, using the 'sport in the last 4 weeks' measure, there has been a decrease in the rate of those who had participated in football, hockey, rounders and those who did walking or hiking since 2010/11.
- For 11-15 year olds, using the 'sport in the last 4 weeks' measure, there has been a significant increase since 2010/11 in the rate of those who had played

basketball, rounders, dodgeball, tennis, table tennis, badminton and taken part in swimming, diving or lifesaving, athletics and cycling or riding a bike.

- 78% of 5-15 year old children reported that they had participated in some form of competitive sport in the last 12 months. Nearly three quarters had taken part in competitive sport in school (74%), whilst a third had taken part outside of school (34%). There have been no significant changes recorded in these figures since 2010/11.

The PE and Sport Survey 2009-10 collected information about participation in PE and school sport within schools in the School Sport Partnership Programme in England and found that:

- 55% of pupils in years 1-13 of participating schools took part in at least 3 hours of high quality PE and out-of-hours school sport in a typical week (this represented a 5% increase from 2008/09). The proportions were 64% of pupils in primary schools, 46% in secondary schools and 64% in special schools. 58% of boys and 52% of girls took part in 3 hours of PE and school sport. There are small differences in participation levels between boys and girls in Years 1-7; however, after Year 7, the gap grows bigger.
- Participation levels are highest in Years 4 -6 and also reasonably high in Years 1-3 and Years 7-8. They are at their lowest in Years 12 and 13. The greatest improvements have been in Years 1-3, while the smallest improvements have been for Years 12 and 13.
- Participation rates do not vary across different regions of the country but they do vary in terms of urban and rural areas, with those in rural areas being more likely to participate in at least 3 hours of PE and school sport (60% v 54%).
- There is some link between high levels of participation in at least 3 hours of PE and school sport, and the proportion of pupils who are eligible for Free School Meals (FSM). Highest performing schools tend to have fewer pupils who are eligible for FSM than do lower performing school.

### **Sedentary behaviour**

The Health Survey for England (2012) asked children about the amount of time spent in sedentary pursuits and reported that:

- Average total sedentary time (excluding time at school) was similar for boys and girls on weekdays (3.3 and 3.2 hours respectively) and weekend days (4.2 and 4 hours respectively).
- The average time per day spent watching TV on weekdays increased steadily with age in boys (from 1.5 hours for 2-4 year olds to 1.8 hours for 13-15 year olds); however, the increase among the same ages was steeper in girls (1.5 to 2.2. hours). Conversely, on weekend days, the increase with age in other sedentary time was steepest for boys (from 1.4 hours for 2-4 year olds to 2.9 hours for 13-15, compared with 1.4 to 2.4 hours in girls).
- For both boys and girls, the average number of hours spent watching TV on both weekday and weekend days increased as equivalised household income decreased.
- Among children aged 2-10, the mean number of sedentary hours on a typical weekday decreased from 3 hours for both sexes in 2008 to 2.9 hours for boys

and 2.8 hours for girls in 2012. Among boys aged 11-15, mean sedentary time on weekend days increased from 4.8 hours in 2008 to 5 hours in 2012; for girls of similar age, mean sedentary time decreased from 4.8 to 4.5 hours.

### **Attitudes and perceptions of physical activity**

The Health Survey for England (2007) provided information on 11-15 year old children's knowledge and attitudes to physical activity and found that:

- When asked how much physical activity children should do, only 1 in 10 children aged 11-15 suggested that it should be 60 minutes on all 7 days of the week. A further 8% of boys and 3% of girls overestimated the minimum recommendations.
- There was some association between thinking that children should be active for at least 60 minutes per day and actually achieving the recommended targets. 12% of boys and 13% of girls who thought children should do physical activity at the recommended level also achieved this compared to 9% of boys and 6% of girls who did not think this.
- Most boys and girls perceived themselves to be either very or fairly physically active compared with other people their age (90% and 84% respectively). The proportion of boys who perceived themselves to be very physically active was similar from age 11 to 15 (47% and 42% respectively) compared with a significant decline in girls between ages 11 and 15 (38% and 19% respectively).
- For the most part, children who achieved a high level of activity accurately perceived themselves as being either very or fairly physically active compared with others (94% of boys and 92% of girls). However, 68% of boys and 67% of girls in the lowest activity group thought they were very or fairly physically active compared with others.
- Girls were more likely than boys to want to do more physical activity (74% and 61% respectively), regardless of age. The proportion who wanted to do more physical activity declined with age among boys, but not among girls. The most frequently mentioned sports and activities boys would like to do more were ball sports (39%), riding a bike and swimming (both 35%), whereas among girls the most frequently mentioned was swimming (47%). For both boys and girls, there was a pattern of declining interest in some activities with age.

### **National and international comparisons**

The Scottish Health Survey (2013) found that:

- In 2013, 75% of children in Scotland were active at the recommended level of at least 60 minutes a day every day (including school-based activities).
- Boys (78%) remain more likely than girls (72%) to meet the guideline.
- The decline in activity levels with increased age remains more pronounced for girls than boys. 81% of girls aged 5-7 meet the guideline, compared with 51% of those aged 13-15 years. The equivalent figures for boys were 86% and 68% respectively.

- In 2013, two-thirds (67%) of children aged 2-25 years participated in sport or exercise in the week prior to interview (71% of boys and 63% of girls). For boys, this marked a halt to a recent decline in participation. For girls, the downward trend, evident since 2009 (70%) continued in 2013 (63%).
- 21% of boys and 28% of girls aged 5 to 12 years knew the physical activity for health guideline.

The Welsh Health Survey (2013) found that:

- Around a third (35%) of children aged 4-15 years in Wales were reported as undertaking physical activity for at least an hour on every day of the previous week, more common among boys (39%) than girls (30%).
- 52% of children were reported as undertaking physical activity for at least an hour on five or more days of the previous week, including 35 per cent who did so every day.
- A higher proportion of boys than girls were reported to undertake these levels of physical activity.

In 2013, the Organisation for Economic Co-operation and Development (OECD) published 'Health at a Glance 2013: OECD Indicators' which reported the following data on physical activity among children based on latest available health surveys:

- At age 11, Austria, Ireland, Spain and Finland stand out as strong performers with over 30% of children reporting exercising for at least 60 minutes per day over the past week. At age 15, children in the USA are the most active, followed by Ireland, Czech Republic, the Slovak Republic and Canada. Children in Denmark, France, Italy and Switzerland were least likely to report exercising regularly. Italy ranks at the bottom end of the spectrum for both boys and girls, and at both ages. In the UK, exercising for at least 60 minutes per day over the past week falls from age 11 to age 15 for both boys and girls, with girls aged 11 (under 20%) being less physically active than boys (over 30%).
- A consistently high proportion of boys than girls reported undertaking physical activity, whether moderate or vigorous, across all countries and all age groups.
- It is of concern that physical activity tends to fall between the ages 11 to 15 in almost all OECD countries, with boys in Italy and in the USA the only exceptions.
- In Austria, Finland, Norway and Germany, the rate of boys exercising at recommended levels is reduced by half between age 11 and age 15. This is also the case for girls in many countries. In Austria, Ireland, Spain and Finland, rates of physical activity among girls fall by over 60%.

### **Appendix 3**

Practical recommendations for physical education teachers for addressing childhood obesity (adapted from Cale & Harris, 2011, pages 14-16).

General

- Adopt a critical attitude towards health and obesity discourses and question what you hear and read about obesity, weight, diet and physical activity and encourage young people to do likewise.
- Remember that some of the research is conflicting and there is a degree of uncertainty surrounding the issues.
- Adopt a broad and holistic approach to health, health education and promotion. Recognise the importance of all dimensions of health rather than allow weight and weight status to dominate.
- Examine your own attitudes, beliefs, values and prejudices concerning the overweight/obese and seriously and honestly question any biases, the foundations on which these are based and the influence they may have on your practice (e.g. in terms of the information and messages you give). Avoid transmitting weightist prejudices but rather try to counteract and challenge them, including any shown by others.
- Carefully consider the health information and messages you give, the validity of these, how they may be received, interpreted and made sense of and how they may make young people feel about themselves and their bodies.
- Avoid sensationalising 'obesity' or 'weight' and adopt a sensitive, caring approach in which you focus on inclusion and learning through physical activity to try to enable all young people to engage, enjoy and achieve within the physical activity and physical education context.
- Avoid focusing on 'weight' as a problem. Outside of the extremes (of thinness and fatness), people can be healthy at any weight if they engage in moderate amounts of physical activity and have a healthy diet. Adopt and promote the view, health at any size and the message that 'it is better (and healthier) to be in shape than to be a particular shape'.
- Carefully consider the judgments and comments you make about food. Avoid generating unhelpful dualism around food types (e.g. chips\_bad; celery\_good) but instead focus on quality and moderation. Also, avoid criticising or ridiculing the food young people eat as this can damage the relationships they (and others who make it) have with food. As well as for health, recognise that food is an important part of one's culture and that people eat for fun, pleasure and social reasons.
- Physically educate young people about their bodies. Help them to understand that bodies change and are not fixed (i.e. as during puberty). Also help them to understand how the body responds to friendly treatment (i.e. the benefits of physical activity and a healthy diet).
- Help all young people, regardless of their size or weight, to feel good about their bodies in order to build their competence, confidence and sense of control. Promote the message 'learn to like your body' and help them to see the body not as the enemy but as part of the whole person.
- Help obese youngsters to learn to understand and deal with their individuality, strengths and weaknesses and to be proud of who they are and what they have. Promote the message 'celebrate being special'.
- Provide young people with specific guidance about the importance of physical activity, its contribution to healthy weight management and how to go about becoming more active.

- Identify young people with low activity levels and provide them with personalised guidance and encouragement to achieve manageable physical activity targets.
- Encourage your department and physical education colleagues to work alongside other subject staff (e.g. those from personal, social and health education, science, food technology) to ensure that consistent messages are promoted about the contribution of physical activity to healthy weight management.
- Consider how 'obesogenic' or physical activity promoting, the school and physical education environments are. Focus efforts on making the environment more conducive to physical activity.

### Activity recommendations

- Consider kit/clothing and changing/showering policies and procedures. Be sensitive as to how obese children are likely to feel about what they wear and undressing in front of others and be flexible and accommodating where possible. For example, try to provide private changing facilities and allow children to wear tracksuit bottoms and, for swimming, T-shirts.
- Encourage obese children to adopt and maintain regular physical activity, including participation in physical education, even if weight loss is slow or does not occur. They will still derive physical and mental health benefits from the activity.
- Most obese children will know their capabilities and limitations where participating in physical activity is concerned. Some are also often quite skilled (e.g. in techniques involving small muscle groups) or often have considerable muscular strength and may excel in certain physical activities. Consult with them to establish what they can and cannot do.
- Where possible, frequently change and vary the choice of activity/activities for obese children (and encourage them to do likewise if exercising on their own), to avoid over use or fatigue of the same muscle groups and joints.
- Adopt aerobic activity as the principal type of activity that involves working the large muscle groups for a sustained period of time. In so doing, keep the activity of a low to moderate intensity (and recognise that it may need to be of a very low level initially). Place emphasis on increasing the duration and frequency of the activity rather than the intensity. Low impact activities (e.g. walking, stepping) are also likely to be more appropriate as these will reduce stress on the bones and joints and be easier and/or more comfortable.
- Encourage obese children to engage in non-weight bearing activities (e.g. swimming, aqua aerobics, seated aerobics, seated multi-gym work, cycling, indoor rowing). These are considered particularly appropriate as the body weight is supported, thereby also reducing stress on the bones and joints and making movement easier and/or more comfortable.
- Incorporate physical activities that will promote and improve muscular strength and endurance. These are important to enable obese children to carry out everyday tasks more easily, which may in turn facilitate a more active lifestyle. Circuits or resistance exercise can be beneficial for this and can also help to increase fat free mass and improve muscle tone. If using fixed resistance equipment, however, intense or maximal resistance work

must be avoided. Consult the Guidelines on Health-Related Exercise within Safe Practice in Physical Education (afPE, 2012) for specific guidelines on resistance training.

- Try to incorporate physical activities that will promote and improve balance and posture. This might be through dance or gymnastic activities or via circuits or resistance exercise (e.g. the flamingo balance or working the postural muscles such as the shoulders (trapezius/rhomboids) and back (erector spinae) as in 'shoulder squeezes' and 'back lifts').
- Games are suitable for most obese children as they typically involve intermittent or short bouts of physical activity with rest periods. Ensure games and team games especially are managed sensitively though to ensure children are appropriately included and accepted within the group (see points below).
- Where appropriate, make adjustments to the size of the activity area, team size or equipment used to accommodate for an individual's body size and/or poor exercise tolerance or movement efficiency. For example, reduce the size of the court/pitch, increase the number of players, use different weight/sized equipment.
- Avoid practices that highlight and focus on size and weight to avoid stigmatising and causing obese children embarrassment and humiliation. For example, weighing and measuring to calculate BMI, using skinfold calipers, introducing 'fat' clubs.
- Select physical activities, tasks, as well as the positions and responsibilities you allocate to individuals carefully and sensitively to avoid obese children becoming disheartened, embarrassed and humiliated. For example, avoid assault courses that involve children squeezing through or jumping over equipment, unfair races, public displays, or activities/games that require constant running or jumping. Also avoid always allocating inactive and/or lower status roles or positions to the obese individuals(s) in the class (e.g. scorer, goal keeper, equipment helper).
- Consider grouping procedures carefully (e.g. avoid letting the children pick teams) and take weight and size into account when grouping for specific tasks and activities with a partner or within a group/team (e.g. marking/defending or tackling in games, supporting or partner/group balancing in gymnastics).
- Beyond the structured and organised physical activity you promote, encourage children to participate in lifestyle activities such as walking or cycling to school and/or the shops, using the stairs instead of the lift and assisting with household chores around the home such as cleaning the car and gardening. All of these will increase total energy expenditure.
- Encourage children not to spend too much time in sedentary activities such as watching television or playing computer or video games. At the same time, avoid labelling sedentary activities as 'bad' activities for, as potentially 'relaxing' activities, they have a role to play in the promotion of mental health. It is advisable to carry out all activities (physical and sedentary) in moderation.