MRC/CSO Social and Public Health Sciences Unit Consultation Response

Title of consultation
National Consultation on Current UK CMO Physical Activity Guidelines

Name of the consulting body
UK Physical Activity Guidelines Review
Centre for Exercise, Nutrition and Health Sciences
School for Policy Studies
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Link to consultation
http://www.bris.ac.uk/sps/research/projects/current/physical-activity/consultation/

Why did the MRC/CSO Social and Public Health Sciences Unit contribute to this consultation?
The MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, is an interdisciplinary research group, comprised of scientists with expertise in key areas of physical activity and health, including the development and evaluation of healthy lifestyle interventions, such as the successful Football Fans in Training (FFIT) programme and research into the environmental determinants of physical activity (SPACES). The Unit receives core-funding from the Medical Research Council and the Scottish Government Chief Scientist Office, as well as grant funding for specific projects from a range of sources. We conduct research to understand the determinants of population health and health inequalities, and to develop and test interventions to improve health and reduce inequalities, using a wide variety of methods including qualitative research, the collection, linkage and analysis of social survey and routinely collected data, evidence synthesis, randomised controlled trials and natural experimental studies. Further information about the Unit is available at http://www.gla.ac.uk/researchinstitutes/healthwellbeing/research/mrccosocialandpublichealthsciencesunit/

Our consultation response
This response was submitted on behalf of the MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, led by Craig Donnachie in collaboration with Kate Hunt, Anne Martin, Paul McCrorie, Laurence Moore, and Anna Pearce.

The current UK physical activity (PA) guidelines outlined in the report by the Department of Health (2011) have served as a resource for informing healthcare professionals/practitioners, policy-makers and researchers about the type, amount and intensity of PA necessary to promote health benefits across the lifespan, including early years (under 5s), children and young people (5-18 years), adults (19-64 years) and older adults (65+ years). The publication of the report in 2011 was a major step forward in advancing the promotion of PA in the UK,
based on the most recent evidence on the amount of activity required for health benefits. The main strengths of the report included important advances in the field, for instance: recognition of a lifecourse approach to PA; stronger recognition of the value of vigorous intensity PA; the flexibility of combining both moderate and vigorous intensity activities to reach PA guidelines; the value of daily activity; and new guidance on sedentary behaviour and its independent influence on ill-health. However, key things to consider when revisiting the guidelines include: the suboptimal numbers of people in the UK who meet the current PA guidelines and the social patterning of PA and sedentary time; the increased understanding of sedentary time as an independent risk factor for health; the danger that simple messages are lost (e.g. as highlighted on infographic summaries\(^1\) - “something is better than nothing”; “Start small and build up gradually”; “Make a start today — it’s never too late”) when conveying the range of messages encompassed within the guidelines. Attempts to summarise the messages with one-page, visually-appealing infographics are positive, but further research on the messages that different population subgroups take from this could be helpful.

Below we review the strengths and benefits of the current guidelines and highlight weaknesses inherent in the current guidelines which could be considered and addressed when making any further amendments or updates to the current guidance. In commenting on the current UK CMO PA guidelines, we provide an overview of these in relation to each of the specific areas outlined in the report, while also referring to recent literature. Further, we discuss ways in which the guidelines should be communicated to both professionals/policy makers and members of the general public. We hope that our response will be of benefit in updating the UK PA guidelines in light of some of the most recent scientific evidence.

**Adults (19-64 years)**

The current UK PA guidelines (Department of Health, 2011) for adults have several strengths and stipulate that all adults should aim to be:

- active daily and perform at least 150 minutes of moderate-intensity aerobic physical activity each week, or at least 75 minutes of vigorous-intensity activity per week, or a combination of these in bouts of ten minutes or more for health benefits;
- undertake PA to improve muscle strength on at least two days a week; and
- minimise the amount of time spent being sedentary (sitting) for extended periods.

It is important to consider the evidence on which the current UK guidelines were founded. The decision to confer 150 minutes of at least moderate intensity activity or 75 minutes of vigorous intensity activity per week, appears to have been made based somewhat arbitrarily on the assumption that this level was attainable by most people. However, it is suggested in a report supporting the Australian PA guidelines (Brown et al., 2012), which drew on similar sources as the UK guidelines, that the current 150 minutes guideline may no longer be appropriate as this was based on evidence (i.e. self-report data) accrued between 1950’s and the 1990’s from observational epidemiologic studies at a time when people’s background PA levels were considerably higher than today’s populations (Brown et al., 2012). It is also important to acknowledge that there is no established optimal amount of PA (i.e. somewhere between 150 and 300 minutes of moderate intensity PA per week or 75-150 minutes of vigorous activity per week), nor is there a clear upper threshold for health benefits (i.e. above 300 minutes of moderate activity per week) (Brown et al., 2012). Nevertheless, there is substantial evidence to

\(^1\) https://www.gov.uk/government/publications/start-active-stay-active-infographics-on-physical-activity#history

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indicate a wide variety of health benefits within this range, with some occurring at lower levels for some conditions (e.g. diabetes), and others requiring higher levels of activity (e.g. breast cancer) (Powell et al., 2011).

While the current UK PA guidelines recognise that similar health benefits can be obtained by accumulating PA via shorter sessions, they mainly emphasise the importance of performing *moderate to vigorous* activity (i.e. in bouts of at least 10 minutes in duration). However, there is accumulating evidence that even *light intensity* activity provides some health benefits (Powell et al., 2011). Moreover, it is important to consider a growing evidence base around other forms of PA (which were not explicitly recognised in the current UK guidelines) which may elicit important health benefits, such as High Intensity Interval Training (Batacan et al., 2017). Also, for some adults, performing activity in shorter durations (i.e. in bouts of less than 10 minutes) and/or at lower intensities may be important, particularly for those unable to perform aerobic PA at traditional moderate to vigorous intensities, such as individuals with functional limitations or those with excess weight. Emerging evidence also suggests some unique benefits from other forms of PA, such as resistance training, particularly for specific health conditions (e.g. Strasser et al., 2010).

The evidence on which the UK PA guidelines were largely based (Physical Activity Guidelines Advisory Committee, 2008, United States Department of Health and Human Services, 2008), indicate that the steepest reduction in the risk of dying prematurely occurs at the lowest end of the activity spectrum (i.e. between 30 and 90 minutes of moderate intensity activity per week), with reductions in all-cause mortality diminishing after 90 minutes of activity per week. However, no lower threshold of activity for health benefits (i.e. below 150 minutes) has been confirmed (Brown et al., 2012), and there is evidence of reduced all-cause mortality with as little as 60 minutes of moderate intensity activity per week (Physical Activity Guidelines Advisory Committee, 2008). According to Weed (2016), the efficacy evidence cited by the UK PA guidelines indicates an all-cause mortality risk reduction of: 15% at 60 minutes; 20% at 90 minutes; 25% at 150 minutes; 27% at 180 minutes; and 35% at 300 minutes per week, compared to a baseline level of 30 minutes or less. Hence, the value judgment on which the current UK PA guidelines are based (i.e. 150 minutes of moderate intensity activity) is questionable given the evidence of substantial health benefits achievable at lower levels of activity.

As stated earlier, the current UK PA guidelines were explicitly designed to assist professionals and policy-makers with information for implementing PA policy and practice. However, as specified in the report, they were not originally intended to be communicated directly to members of the general public (Department of Health, 2011). Nevertheless, the guidelines have often been utilised directly as a public health tool, which may have had unintended consequences (Weed, 2016). For instance, while the current UK guidelines explicitly state that increasing activity levels among those who are least active (i.e. performing less than 30 minutes of activity per week) is likely to have the greatest public health benefit, there is a dearth of evidence to suggest that the target of 150 minutes per week is an achievable or a realistic behavioural target for the general population (Weed, 2016). There is also a need to consider whether the way in which current guidelines are constructed and communicated may increase health inequalities. A report published in 2009 by the House of Commons Select Committee on tackling health inequalities commented that there needs to be “a more rigorous culture of piloting, evaluating and using the results to inform policy” (House of Commons Health Committee, 2009, p. 115). Hence, as noted by Weed (2016), it is conceivable that alternative PA recommendations aimed at the general public (such as 90 minutes of moderate intensity...
activity per week), may have better overall compliance and therefore provide greater health benefits at a population level (i.e. opportunity costs).

The Global Advocacy for Physical Activity (GAPA) and International Society for Physical Activity and Health (ISPAH) explicitly recommend that public education via mass media is an effective means of disseminating messages about PA to large populations (Global Advocacy for Physical Activity the Advocacy Council of the International Society for Physical Activity and Health, 2011). In line with this strategy, Brown et al (2012) advocate that it is imperative to devise appropriate communication messages to accompany national PA guidelines within a planned dissemination strategy. This important component is often overlooked, with PA guidelines too frequently remaining as formal documents, under-utilised by both professionals and the public. Thus, as Weed (2016) pointed out, the UK government failed to adequately communicate the key messages of the 2011 PA guidelines directly to the public when they were published, despite outlining the importance of effectively doing so within the report. Recently, the series of infographics which were devised and published by the UK CMO’s expert working group summarise the amount of PA necessary to achieve health benefits across different ages from the 2011 report, to assist health professionals in promoting PA among their patients (https://www.gov.uk/government/publications/start-active-stay-active-infographics-on-physical-activity#history). While, these are important steps in the promotion of the PA guidelines to health professionals and other possible users, it is also vital to have empirical evidence on how well this translates and communicates key messages from the guidelines into usable and interpretable information to various sectors of the general public. It will be especially important in any future updates to the UK PA guidelines to assess how such presentations affect interpretations, and how well these can adapt to changes in social media and other developments (e.g. utilising clear and understandable language across multiple channels, including mass media).

Sedentary behaviour has increasingly shown to be associated with adverse health outcomes, independently of PA (e.g. Thorp et al., 2011). Hence, research is required to design, evaluate and implement effective behaviour change interventions to reduce sedentary behaviour, in addition to increased PA (Owen et al., 2011). However, it is not known what the most appropriate means are to communicate information on the possible negative health consequences of sedentary behaviour to the general public. Additionally, clear recommendations on the extent to which individuals should limit their daily sedentary time is lacking from the current UK PA guidelines.

It is well established that behavioural interventions targeting multiple levels are likely to have the most powerful impact on behaviour change. Our research focuses on how settings and organisations, such as educational settings, professional sports clubs, workplaces and prisons, can be influential domains for intervention delivery, health promotion and dissemination of public health messages, specifically in relation to PA. For example, research in the MRC/CSO Social and Public Health Sciences Unit/University of Glasgow has shown that professional football clubs can be a powerful setting to deliver successful weight loss and healthy lifestyle programmes, through programmes such as Football Fans in Training (FFIT) (Wyke et al., 2015, Hunt et al., 2014b) and European Fans in Training (EuroFIT). FFIT is a gender-sensitised, weight loss and health living programme, delivered through professional football clubs by community coaches free of charge to overweight/obese men aged 35-65; EuroFIT is currently undergoing evaluation (results due in 2018) and builds on learning from FFIT, but is an intervention focussed more explicitly on increasing PA and reducing sedentary time (van Nassau et al., 2016, van de Glind et al., 2017).
Whilst men are underrepresented in health promotion and weight management interventions (Robertson et al., 2014, George et al., 2012), women may be less inclined to take part in PA (unless combined with other behavioural targets). For instance, in 2016, 59% of women in Scotland reported meeting aerobic PA guidelines compared with 69% of men (Scottish Health Survey, 2016). The FFIT programme was designed in accordance with sociological understandings of masculinity, in recognition of the importance of health behaviours as a means of ‘doing gender’ (Hunt et al., 2013) and suggests that it is important to take account of gender in the design on public health interventions. FFIT designed to appeal to men in context, content and style of delivery (Wyke et al., 2015). In 2014, a randomised controlled trial (RCT) demonstrated FFIT was effective with clear differences in weight loss (primary outcome) and in PA, diet, and other secondary outcomes at 1 year after baseline, all in favour of the intervention group and cost-effective (Hunt et al., 2014b). In a recent follow-up study, the intervention group men weighed less than at baseline and sustained improvements in PA, Diet and other secondary outcomes at 3.5yrs (Gray et al., submitted). Qualitative research from FFIT indicates not just the importance of the football setting in prompting men to engage with the programme initially, but also the power of the group setting (i.e. being with ‘men like me’) in facilitating behaviour change (Hunt et al., 2014a, Bunn et al., 2016). This is consistent with reviews of self-management interventions for men, challenging an earlier view that men are not keen to take part in group-based health promotion (Galdas et al., 2015). FFIT is now delivered through 42 football clubs across Scotland via the Scottish Professional Football League Trust, funded by the Scottish Government, and was extended to include deliveries to women at 31 clubs in 2017. FFIT was cited in The Scottish Government ‘A Healthier Future – Action and Ambitions on Diet, Activity and Healthy Weight’ (2017) consultation document as a part of their ongoing commitment to improve health. FFIT is an example of a successfully implemented intervention programme that can target and increase self-reported PA (at least to 12 months and 3.5 years) and has now been extended to different countries (e.g. England and Germany) and adapted for other professional sports organisations (e.g. rugby in England and New Zealand and ice hockey in Canada).

Further research using concepts from Self-Determination Theory (Deci and Ryan, 2000), also showed how the context of FFIT encouraged men to use pedometers to self-monitor their progress toward their PA goals during the 12-week programme and beyond (Donnachie et al., 2017). This showed that whilst some men no longer needed to self-monitor their PA after the programme as they had fully internalised their motivations for increased PA, others continued to use the pedometer or other wearable technologies because it was enjoyable and helped sustain their increased PA. However, a few men found the device ‘controlling’ and no longer used it. These men seemed most reliant on external factors, including support from the group and/or coaches. The findings suggest the importance of a greater focus on the roles that rapidly developing technologies for self-monitoring may play, and an awareness that branding, advertising and the underlying algorithms which determine how information is displayed, may reinforce or undermine any new guidelines. It will be important to identify individuals motivated by extrinsic factors or exhibit negative experiences of self-monitoring tools and offer greater support to identify the benefits of PA based on a person’s own values.

The examples given above, reinforce the importance of gender-awareness in designing health behaviour change interventions to reach those in society who are often the most hard to engage. Recent research showed that framing PA as a way of enhancing daily wellbeing was perceived positively by women but not men (Segar et al., 2012), and hence men and women may have different motivations for adopting and maintaining PA. The ways in which performances of gender may influence the ways in which men and women respond to health
promotion materials should be considered when devising communication strategies for implementing and disseminating information on future PA guidelines.

It is advocated that multilevel PA interventions aimed at individuals, social environments, physical environments and policies are crucial to drive population level change (Sallis et al., 2006). In line with this ecological perspective, the Toronto Charter for Physical Activity (Bull et al., 2010) outlines four actions to facilitate population level changes in PA:

- implementation of national policies and action plans (e.g. identification of leadership for PA from any government sector or other relevant non-government agencies, including an implementation plan, outlining accountability, timelines and funding);
- introduction of policies that support PA (e.g. urban and rural planning policies and design guidelines that support walking, cycling, public transport, sport and recreation);
- reorientation of services and funding to prioritise PA (e.g. across health, education, workplace, transportation, planning and environment); and
- development of partnerships for action (e.g. cross-government working groups and community initiatives, including collaboration with population subgroups, such as socially disadvantaged groups).

These four distinct, although interlinked areas, demonstrate the powerful influence that decision makers at national, regional and local levels have on PA behaviour (Bull et al., 2010). It is therefore necessary to integrate PA recommendations within the UK guidelines that go beyond an individual behavioural focus, aimed explicitly toward policy and decision makers within health, transport, urban design, environment, education, workplace and private sector organisations. Multilevel approaches also illustrate a greater need for interdisciplinary working and communication (i.e. between policy-makers and researchers) and therefore should be actively promoted within the updated UK PA guidelines.

We hope that it will be useful to consider these points when updating the UK PA guidelines for adults, specifically the amount of PA the general public should be encouraged to perform for health benefits. These issues also have important ramifications for research, especially the development and evaluation of public health interventions, which often incorporate outcomes based on whether individuals achieve (or do not achieve) PA levels congruent with national guidelines. In addition, there is sometimes greater value placed on objective or device-based assessment over self-report measures of PA, both within population and intervention studies. It is important to recognise that the current UK PA guidelines are based predominantly on the relationship between self-reported PA and health outcomes. Self-report and device-based activity measures assess different PA constructs and therefore are not directly comparable (Fulton et al., 2016). These are important issues to recognise when considering the evidence base for updating the PA guidelines. Collaboration between policy-makers and researchers working in the field of PA and health may assist in effective communication and dissemination of information concerning the UK PA guidelines directly to members of the general public. Additionally, it is important to recognise that the PA guidelines may constitute a public health intervention in themselves, hence it is important to consider how best to facilitate motivation for increased activity (effectively and safely), specifically among those in society who are least active. Greater interdisciplinary collaboration is needed (i.e. between behavioural, social and biological scientists) to advance the field.

Older adults (65+ years)
The current strengths of the UK PA guidelines for older adults include recognition of the importance of:

- doing any amount of PA for some health benefits, including maintenance of good physical and cognitive function;
- performing at least 150 minutes of moderate intensity activity in bouts of 10 minutes or more;
- performing 75 minutes of vigorous intensity activity, for those who are already activity at moderate intensity, (spread across the week) or a combination of moderate and vigorous activity;
- undertaking PA to improve muscle strength on at least two days a week;
- incorporating PA to improve balance and coordination on at least two days a week to reduce the risk of falls; and
- minimising the amount of time spent being sedentary (sitting) for extended periods.

However, since the guidelines were published new evidence has emerged. Bauman et al (2016) conducted a review of the epidemiological evidence and existing evidence-based PA guidelines, including new evidence around cardiometabolic risk, reduced risk of falls, improved cognitive function and functional capacity, and reduced risk of depression, anxiety and dementia. While the same health benefits of PA for adults extend to older adults, there is growing evidence indicating benefits for older adults well below current recommendations (e.g. Hupin et al., 2015) and at lower PA intensities (e.g. Tse et al., 2015). There is also evidence that older adults have improved biomarkers and less oxidative stress or positive epigenetic changes attributed to increased PA (Kaliman et al., 2011). Further evidence suggests that PA can reduce incidence of dementia, improve cognition in people with dementia, and enhance health among those with existing dementia (e.g. Blondell et al., 2014, Sofi et al., 2011). Increased PA is recognised as an important behaviour for preventing Alzheimer’s disease (e.g. Norton et al., 2014) and for preventing and managing other neurological conditions, including Parkinson’s disease (e.g. Shu et al., 2014).

There is also growing evidence of increased mental health for older adults, including reductions in symptoms of anxiety and depression (e.g. Bridle et al., 2012, Windle, 2014) and some evidence of social benefits (McNeill et al., 2006) as a consequence of increased PA. Moreover, some evidence suggests that prolonged sitting time, among older adults is associated with all-cause mortality and other negative health outcomes, independently of PA (De Rezende et al., 2014), although the evidence base here is more limited and there is a need for more research. Recent work involving researchers from here at MRC/CSO Social and Public Health Sciences Unit and colleagues at Glasgow Caledonian University has been undertaken to understand inactivity and sedentary behaviour patterns among older adults in Scotland as part an international collaborative project called the Seniors Understanding Sedentary Patterns (USP) project (https://www.gcu.ac.uk/seniorsusp/). The main aim of this project is to gain greater insight into the determinants and consequences of sedentary behaviour and inactivity in older people in order to develop future interventions. Results from this study are due in 2018.

Bauman et al (2016) conclude that there is need for a greater focus globally on the importance of ‘active aging’ beyond the established benefits of chronic disease prevention and argue that additional efforts are needed to increase awareness of the importance of progressive resistance/strength and balance training, particularly among frail older adults (with increased
sarcopenia) and for whom aerobic moderate or vigorous activity would be too hazardous (i.e. risk of fall/injury). Bauman and colleagues note that changes in the framing of PA for older adults is necessary (i.e. via social marketing and health communications) with future public health research required to investigate health outcomes pertaining to strength and balance training specifically. These recent developments in the literature should thus be considered when revising the current UK PA guidelines for older adults.

Children and young people (5-18 years)

A key strength of the current CMO guidelines for children and young people was the integration of wide-ranging evidence (available at the time) into a clear and simple three-point public health message that has been used to help promote PA levels and reduce sedentary time from the date of its publication. This over-arching message projects the importance of:

- the dose-response relationship that exists between activity and health, from the inactive to the active, and the recognition that higher levels will provide additional health gains, even in the absence of change in weight status;
- makes reference to the measurable components of PA (e.g. frequency, intensity, and duration;
- recognises the importance of moderate to vigorous activity over and above that of normal daily living;
- makes specific reference to vigorous activity for particular health outcomes; and
- for the first time, identified the negative consequences of prolonged sitting periods.

It is imperative that the new recommendations follow the same basic principle of translating complicated and wide-ranging pieces of evidence into clear and simple messages that can guide the public and be used by health professionals in a meaningful way to change behaviour. We support the need for an updated investigation into the guidelines that will recognise our current knowledge of the PA and health literature. The supporting text alongside the guidelines made reference to areas of the field that were undeveloped and these need to be specifically reassessed in the new review. This includes any work (observational or experimental) that has explored the benefits of light intensity activity; the differential distribution of activity throughout the week and its impact on health; the duration of individual sessions of vigorous activity; the insufficient evidence preventing a ‘time limit’ to be recommended for sitting time; and the incorporation of any specific new evidence relating to benefits of muscle and bone strengthening activity.

Recent work conducted here by MRC/CSO Social and Public Health Sciences Unit (McCrorie, Mitchell, and Ellaway, 2018) has demonstrated the large differences in prevalence estimates when analysing a nationally representative sample of 10/11 year old Scottish young people utilising different measures of PA. Prevalence was estimated to be at ~10% when using the current CMO ‘daily’ component but rose to ~70% when using an average of 60mins/day instead. These have significant implications for measurement, communication, and most importantly, our understanding of health related benefits of both approaches. Anecdotally, parents of children were extremely concerned when, on some occasions, our feedback suggested that their child was not meeting the current guidelines as recommend by the CMO. In most, if not all, occasions, these children demonstrated levels of Moderate to Vigorous PA that were higher than 60 minutes on average per day. These findings also resonate with
previous research indicating that PA status can vary depending on the recommendation that is applied (Thompson et al., 2009).

In the absence of any evidence to suggest that the accumulation of 420 mins/week or a mean of 60mins/day has any differential health outcomes compared to the currently recommended 60 mins of Moderate to Vigorous PA/day, we would advise the consideration of including this message within the guidelines. We do not think this would over-complicate the message, but would provide recognition that daily patterns of activity are not homogenous, and from a measurement and communication perspective, unfairly disadvantage those who may engage in higher total volume of activity but do not reliably meet a specified threshold per day.

The current CMO guidelines highlight the social and environmental barriers to PA throughout and we applaud this approach. However, we believe that the commonly made assertion that PA is lower among less advantaged groups is lacking in evidence, particularly for children. An accurate understanding of the social gradient in PA (and how this changes across the life course) is crucial if policies and interventions to increase PA are to be successful. Studies examining childhood PA by socio-economic circumstances show mixed results, potentially due to differences in the way PA is defined and measured. For example, in the UK Millennium Cohort Study (MCS), parents from more advantaged backgrounds were more likely to report that their child takes part in arranged sporting activities or activities as a family, and less likely to report sedentary behaviours such as TV viewing and PC time (Goisis et al., 2016). However analyses examining total PA, in the same cohort and using objective (device-based) data, indicate that children from less advantaged backgrounds are no less active and no more sedentary than their more advantaged peers (Pouliou et al., 2014). These findings have been corroborated in analyses of other high quality data sets including the Growing Up in Scotland (GUS) and the Avon Longitudinal Study of Parents and their Children (ALSPAC), using both device-based (accelerometer) (Riddoch et al., 2007, McCrorie and Ellaway, 2017) and self-reported (validated questionnaires) PA data (McCrorie and Ellaway, 2017). In fact, there is some evidence to suggest that those from less advantaged backgrounds are, overall, more active than their more advantaged peers (McCrorie and Ellaway, 2017, Pouliou et al., 2014, Riddoch et al., 2007), possibly due to lower rates of car ownership in less advantaged groups (Pouliou et al., 2014), and a higher propensity to use active modes of transport in the school commute (McCrorie and Ellaway, 2017).

**Early years (under 5s)**

The strengths of the current UK CMO PA guidelines for the Early Years are:

- separate guidelines for infants (who cannot walk unaided) and toddlers (who can walk unaided);
- provision of case examples of how PA can be promoted, accessible for parents and Early Years staff; and
- incorporation of sedentary behaviour as a risk factor to health and cognitive development of the young child.

However, the current Guidelines list daytime napping as a sedentary behaviour which might need to be re-considered given that daytime naps can benefit child development, in particular under the age of 2 years, similar to sleep (Thorpe et al., 2015).

The current guidelines mention that “regular physical activity is valuable in developing motor skills” and there is new evidence to support this statement (Wick et al., 2017). In addition,
recent evidence suggests a bi-directional relationship between fundamental movement skills and PA, where the presence of fundamental movement skills was associated with higher levels of moderate to vigorous PA (Logan et al., 2015). Therefore, future updates to the UK guidelines should consider the importance of promoting the development of fundamental movement skills for increased abilities to engage in physical activities.

Although the current UK PA guidelines refer to the association of sedentary behaviour and impairments of cognitive development, much stronger scientific evidence has emerged on the benefits of PA and fundamental movement skills for cognitive development (Carson et al., 2016, Zeng et al., 2017, Tandon et al., 2016). The benefits on cognitive development should be mentioned in addition to the benefits for physical and mental health and social bonding.

The guideline section, ‘How can activity be supported’, should highlight the importance of providing parents with information on how to promote the development of movement skills. To increase the reach and impact of the guidelines, all professional groups working in antenatal care and the early years (e.g. midwives, health visitors and social care) should be made aware of any updated guidelines and their role in promoting child PA. The guidelines could include web links to further resources such as videos, or relevant organisations.

References


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**When was the response submitted?**

31/01/2018

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