

Physical activity in Primary school children in Oxfordshire

There is consensus that sedentary behaviour in children is an important public health issue and this is recognised by the inclusion of recommendations for minimising sedentary behaviour in the recent UK Chief Medical Officer's report 'Start Active, Stay Active'. In the UK, children accumulate large amounts of sedentary behaviour or sitting through 'screen-time' (TV and computer use). Another concerning issue in young people is obesity, which is dramatically increasing. Of further importance is that sedentary behaviour tracks throughout childhood, into adolescence and adulthood, and sedentary behaviour in childhood is associated with obesity and other health problems in later life. One of the proposed mechanisms for the association between sedentary behaviour and weight status is energy intake. Our research has shown that sedentary behaviour is associated with higher consumption of energy-dense snack foods and lower consumption of fruit and vegetables. During the time spent sitting in front of the TV and computers, children are exposed to numerous advertisements (most often for 'junk foods') that can influence the type of food desired, requested and consumed. Furthermore, screen viewing behaviours may cause distraction resulting in a lack of awareness of actual food consumption or overlooking food cues, which may lead to overconsumption and increased energy intake.

To support Oxfordshire's residents to achieve and maintain a healthy weight, the Oxfordshire County Council (OCC) has created a Whole Systems Approach (WSA) for a healthy weight, which aims to bring stakeholders together from a broad range of sectors to address the food and physical activity environment and jointly develop local delivery plans. This project, a collaboration between the OCC, University of Oxford, and Oxford Brookes University, contributes to this aim. (you can learn more about the project here: <https://pitch-in.ac.uk/projects/tackling-childhood-obesity/>).

Background on what we did

We worked with some primary schools across Oxford and measured physical activity and sedentary time in children in years 5 and 6 (age 9-11). We asked children to wear an accelerometer (Axivity AX3) for 7-days to assess habitual physical activity and sedentary behaviour. The Axivity AX3 was provided with a soft non-allergic wristband and children were asked to keep it on 24/7 but they could remove it anytime they felt uncomfortable. The Axivity AX3 measured sedentary, light,

moderate, and vigorous physical activity. After 7 days we collected accelerometers and Data were downloaded and processed. The results are now ready and we are happy to share them with you.

Definitions

We are going to share the results about sedentary behaviour and physical activity so let us define them first:

Sedentary behaviour: According to the UK Department of Health, *“Sitting or lying down, (with the exception of sleeping), are what we call 'sedentary' behaviours. You can be sedentary at work, at school, at home, when travelling or during leisure time. Sedentary behaviour requires little energy expenditure”*.



Physical activity: According to the World Health Organisation, *“Physical activity is defined as any bodily movement produced by skeletal muscles that requires energy expenditure.”*

We have 3 levels of physical activity:

- **Light Physical activity:** It is the easiest type of activity and we spend the lowest energy during light physical activity. These activities are such as standing still or slow walking



- **Moderate physical activity:** this is a type of activity is more intense than light activity and we spend twice more energy. These activities are such as Walking (almost 3.5 miles per hour), Bicycling (less than 10 miles per hour), Gardening (raking, trimming shrubs), slow dance, Golfing...



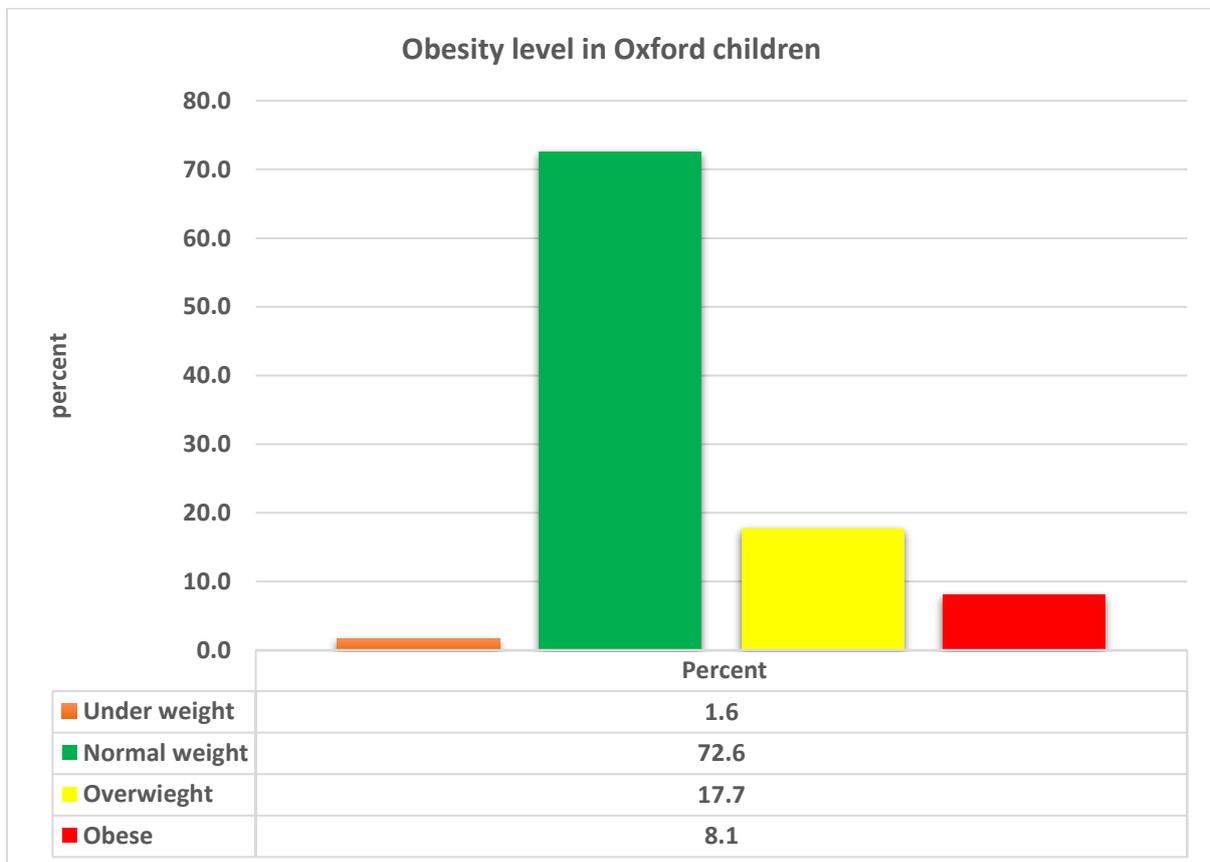
- **Vigorous physical activity:** this is the highest level of physical activity and we spend energy more than Light and moderate physical activity. Vigorous physical activities are such as running, playing football, Volleyball, more than 10 miles per hour bicycling, jumping...





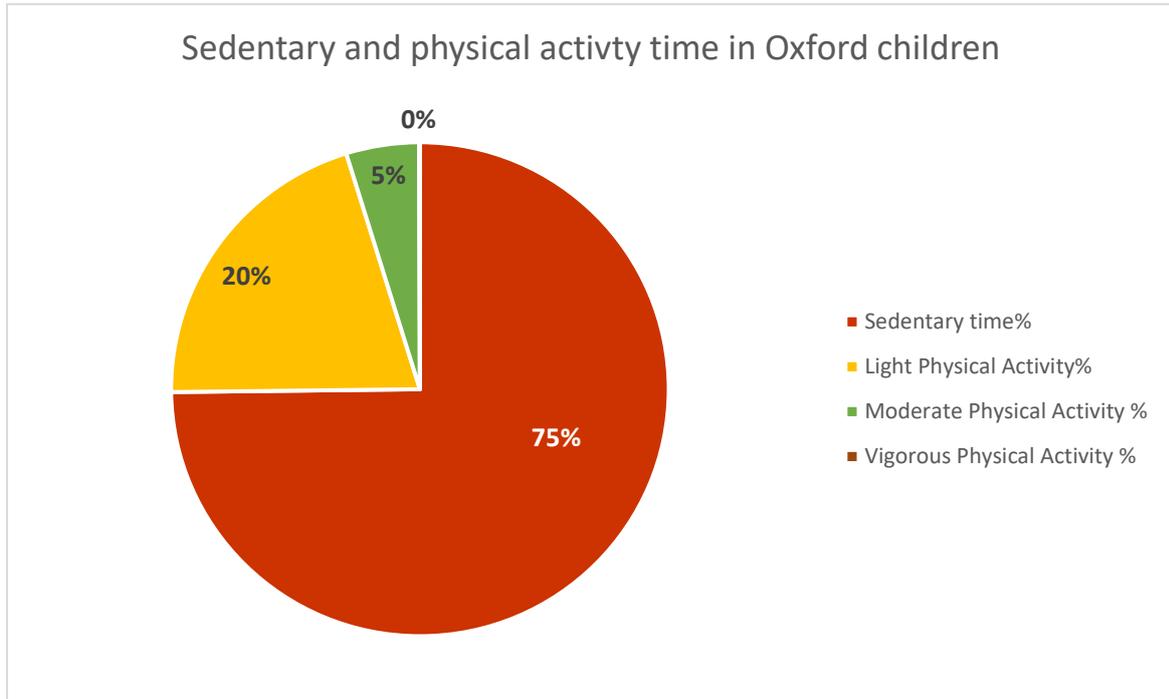
So, if you are wondering that how much physical activity is necessary for children age 9-11, according to World Health Organization, they should have at least 60 minutes of moderate to vigorous physical activity per day.

Results

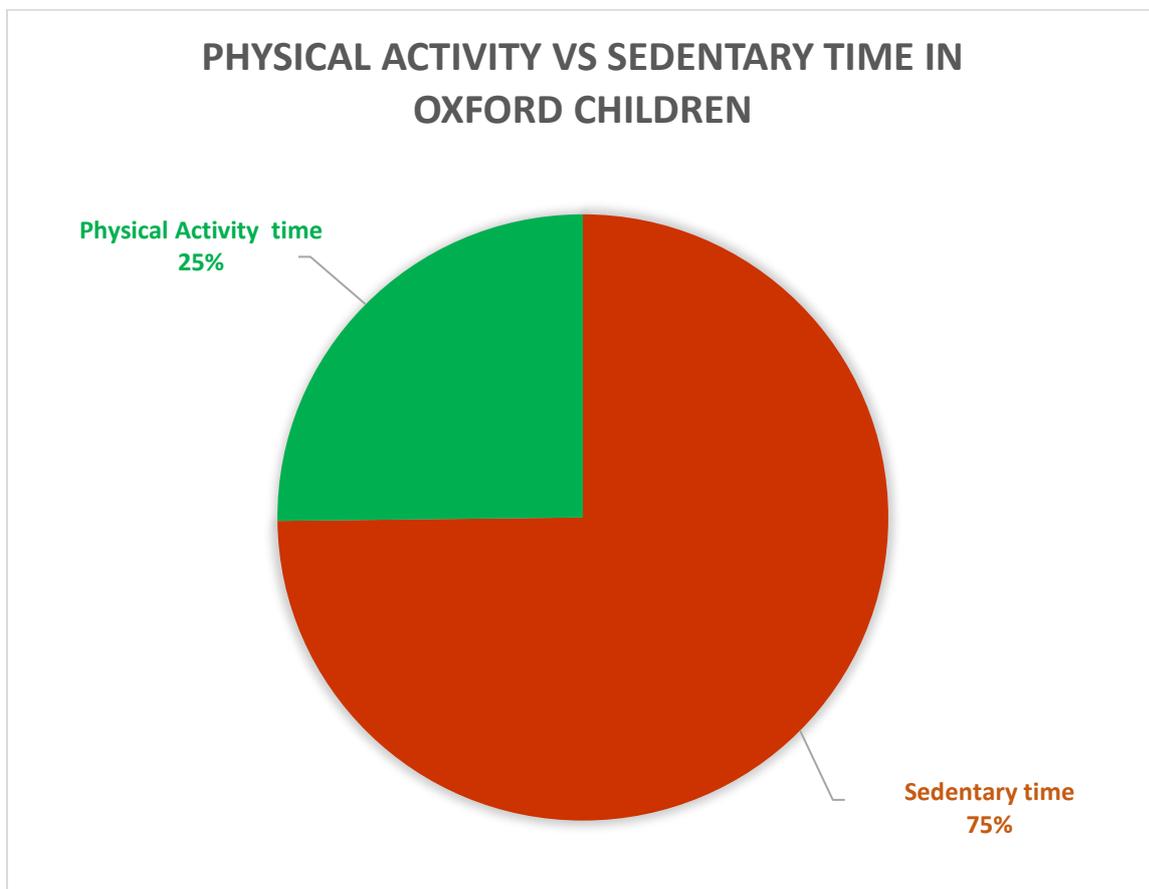


As you can see, more than 25% of children are overweight which 8% of them obese.

How active are Oxfordshire's children?

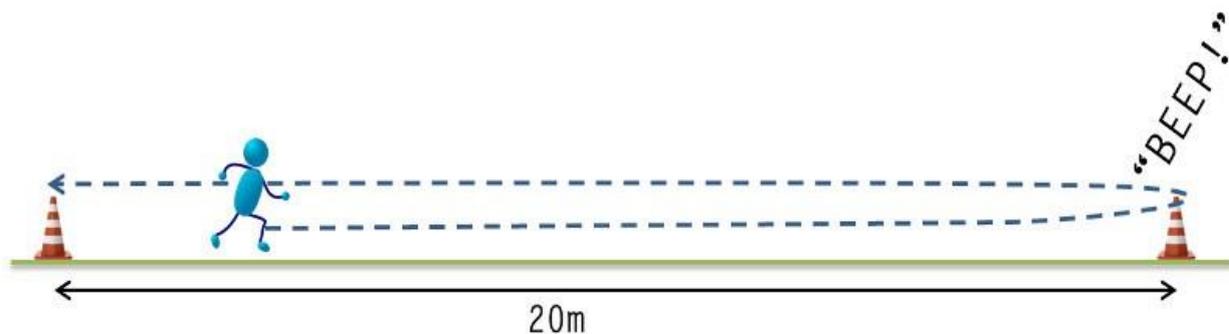


So, what does this mean? How much time in total do children spend on being physically active vs. being sedentary?

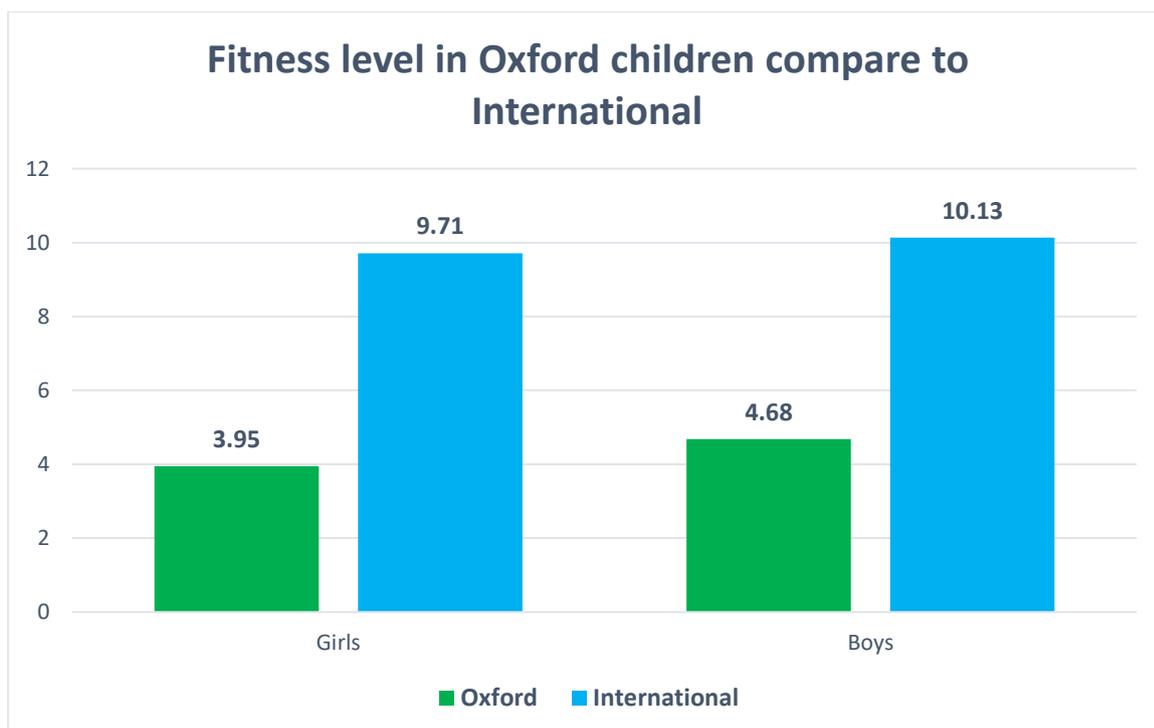


How fit are our children?

We measured children’s fitness with the shuttle run (Beep) test. In the Beep test, we asked the child/ren to run on a 20-meter line, back and forth between beeps which they could hear on a speaker. They could stop at any time they feel tired.



We compared Oxford’s children with more than 100,000 children of the same age, from 51 countries. Here are the results:



Your Feedback

Now that we shared the result with you, we would like to hear from you. We need your help to improve healthy behaviour and physical activity in children. Therefore, it would be great if you could spare a few minutes and let us know what you think. Please click on the link:

https://brookeshls.co1.qualtrics.com/jfe/form/SV_88hllh9YAb2vrUx