Press Release

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New study suggests earlier interventions are needed to prevent inactivity in children

Physical activity is presumed to decline with the start of adolescence, however, new research shows that this decline begins earlier than previously thought. Physical activity and sedentary behaviour were studied over a five-year period in 600 children from the Childhood Obesity Project (CHOP). Measurements were taken at the ages of 6, 8 and 11 years. The results showed that the decline of physical activity and the increase of sedentary behaviour started well before adolescence. Interventions to prevent inactivity are needed much earlier, in young children, whilst activity levels are still high.

Increases in sedentary behaviour and lack of physical activity are connected to a number of non-communicable diseases worldwide, including type 2 diabetes. Physical activity is thought to be a major influencing factor in the prevention and management of overweight and obesity in childhood and adolescence. In addition, low levels of activity during childhood can be the cause of increasing inactivity in adults.

Researchers from Ludwig-Maximilians-University of Munich, and part of the DynaHEALTH project, studied both light physical activity (LPA) and moderate or vigorous physical activity (MVPA), as well as looking separately at sedentary behaviour (periods of sitting). Most other studies are focused on total physical activity and MPVA but exclude LPA and sedentary behaviour. However, the analysis of sedentary behaviour has become more important because of the huge increase in sitting activities in children over recent years.

The aim of this study was to analyse the change of total physical activity, MVPA, LPA and sedentary behaviour, from 6 to 11 years and to identify the factors that influence this development with age. Results showed that total physical activity and LPA gradually declined, whereas MVPA remained relatively stable between 6 and 8 years but revealed a steep drop-off by 11 years of age. They also showed that there was a steep decline, between 8 and 11 years, in the number of children fulfilling current physical activity guidelines, of 60 minutes per day in MVPA.

There were also differences between boys and girls; girls seem to be more active in light-intensity activities and boys more in high-intensity activities.

Lead author of the paper, Phillipp Schwarzfischer said "Our study emphasises that a precise measurement and detailed analysis of intensity levels at an early age can give deeper insights into the development of physical activity. This is vital for effective public health planning and

future intervention programmes should look to start earlier than at school age, to convey the importance of physical activity when levels are still high."

The article in Pediatrics (2018) is "Physical Activity and Sedentary Behavior From 6 to 11 Years" by Phillipp Schwarzfischer et al. DOI: 10.1542/peds.2018-0994.

Notes to editors:

See more at: www.dynahealth.eu

This press release only reflects the author's view and the Commission is not responsible for any use that may be made of the information it contains.

Contact Information:

For information about the study:

Phillipp Schwarzfischer can be contacted at Phillipp.Schwarzfischer@med.uni-muenchen.de; or telephone +49 (0)89 4400 57906

For information about DynaHEALTH:

Coordinator contact:

Professor Marjo-Riitta Järvelin, email marjo-riitta.jarvelin@oulu.fi or m.jarvelin@imperial.ac.uk. Telephone +358 40 5606043

Press contact:

Claire Webster, email Claire.Webster@betatechnology.co.uk, Telephone +44 1302 322633

About DynaHEALTH

Partners:

- University of Oulu, Centre for Life Course Health Research and the Northern Finland Cohort Centre, Finland (Coordinator);
- Abbott, Spain;
- Academic Medical Centre, Amsterdam, the Netherlands;
- Beta Technology Ltd, UK;
- Brunel University London, UK;
- Erasmus University Medical Centre Rotterdam, the Netherlands;
- Imperial College London, UK;
- Institute of Diabetes Research, Helmholtz Zentrum München, Germany;
- Center for Clinical Research and Disease Prevention, Bispebjerg and Frederiksberg Hospital, The Capital Region, Copenhagen, Denmark;
- Laboratorios Ordesa, Spain;
- Ludwig-Maximilans-University of Munich, Germany;
- The Folkhälsan Research Centre, Finland;
- University College London, UK;
- University of Granada, Spain.

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About Horizon 2020

Europe has a 10-year growth and jobs strategy called **Europe 2020**. It was launched in 2010 to create the conditions for smart, sustainable and inclusive growth. Five headline targets have been agreed for the European Union to achieve by the end of 2020, covering employment, research and development, climate/energy, education, and social inclusion and poverty reduction.

Europe has identified new engines to boost growth and jobs; these are addressed by seven **'flagship initiatives'**. Within each initiative both the European Union and national authorities have to coordinate their efforts, so they are mutually reinforcing. **'Innovation Union'** is one such flagship initiative. **'Innovation Union'** is the European Union strategy to create an innovation-friendly environment that makes it easier for great ideas to be turned into products and services that will bring our economy growth and jobs.

Horizon 2020 is the financial instrument implementing the Innovation Union and:

- Has a budget of nearly €80 billion for the period 2014-2020 which makes it the biggest European Union Research and Development programme ever.
- Is open to everyone.
- Has three priorities (Industrial Leadership, Excellent Science and Societal Change); each of which has a number of sections with a different focus and each section has a detailed work programme.

http://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020

About Pediatrics

The official journal of the American Academy of Pediatrics and the world's leading pediatrics resource, Pediatrics is the most-cited journal in pediatric medicine, and among the top 100 most-cited journals in all of science and medicine.