



NORTHERN IRELAND
CEREBRAL PALSY REGISTER

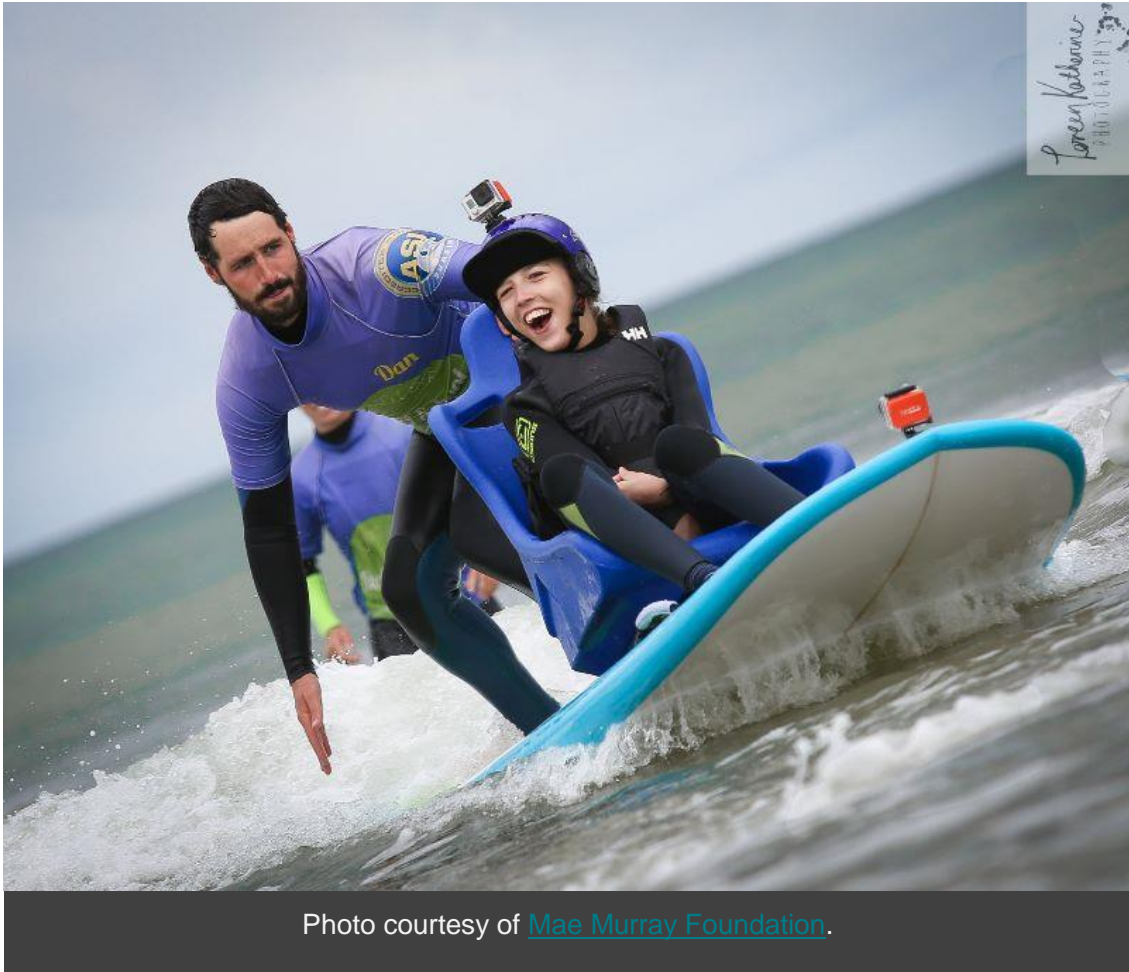
NICPR March Newsletter

Welcome to the fifth Northern Ireland Cerebral Palsy Register (NICPR) newsletter. This short newsletter will focus on physical activity in children and young people with cerebral palsy (CP).

We hope you are finding the NICPR newsletters informative and useful. Feedback and suggestions for further content are welcome at nicpr@qub.ac.uk at any time - we look forward to hearing from you!

Physical activity in CP

Physical activity is any body movement using skeletal muscles that results in energy expenditure ([Caspersen, Powell and Christenson, 1985](#)). Evidence is clear that children and young people with CP spend less time participating in physical activity compared to their typically developing counterparts ([Reedman et al 2017](#); [Reedman, Boyd and Sakzewski 2017](#)). In addition, children with CP participate in less intense ([Bedell et al 2013](#)) and less diverse ([Law et al 2006](#)) physical activities than their peers. As a result of lower activity levels, people with CP are at increased risk for developing metabolic and cardiovascular diseases ([Verschuren et al 2016](#)).



Barriers to participating in physical activity

Some of the barriers to participation in physical activity for people with CP are outlined in the diagram below ([Verschuren et al 2012](#); [Bedell et al 2013](#)).

Environmental barriers

- physical access
- attitudes of others
- availability of equipment
- parental factors
- lack of time
- financial constraints

Personal barriers

- physical abilities (pain, fatigue)
- motivation
- attitudes
- lived experience
- peer relations

Recommendations

Current physical activity recommendations for people with CP are summarised in the table below ([Verschuren et al 2016](#)).

Physical activity intensity Recommendations

Moderate to vigorous	Frequency	≥5 days per week
	Time	60 minutes
	Type	A variety of activities including aerobic exercise and resistance training*
Sedentary	Frequency	7 days per weeks
	Time	<2 hours or break up sitting for 2 minutes every 30-60 minutes
	Type	Non-occupational, leisure-time sedentary activities e.g. watching TV, using computer, playing video games

*The original article by Verschuren et al (2016) details specific recommendations for aerobic exercise and resistance training in the CP population.

Future for physical activity

Many physical activity interventions aim to improve impairments (e.g. muscle strength) and activities (e.g. completion of daily tasks), but fail to address a person's participation in life situations. [Reedman, Boyd and Sakzewski \(2017\)](#) recently recognised the complexity of physical activity and the importance of implementing participation-based interventions supported by human behaviour and motivation theories. As a result, a large randomised controlled trial '[ParticiPAtE CP](#)' is currently underway in Australia to compare usual care with an individually tailored and goal-centred intervention combined with motivational interviewing (behaviour-change counselling approach).

Practice implications

Whilst personal and environmental barriers to participation in physical activity make it challenging for children and young people with CP, physical activity is important for reducing risk of developing metabolic and cardiovascular diseases.

Exercise and physical activity recommendations for people with CP recommend 60 minutes of moderate to vigorous physical activity 5 days per week. In addition, sedentary time should be limited to less than 2 hours per day or break up sitting for 2 minutes every 30-60 minutes.

Prescription of more traditional exercise programmes may not be adequate to improve participation in physical activity for children and young people with CP. Current research aims to establish if individually tailored plans grounded in theories of human behaviour and motivation are more effective at increasing participation in physical activity in the CP population.

