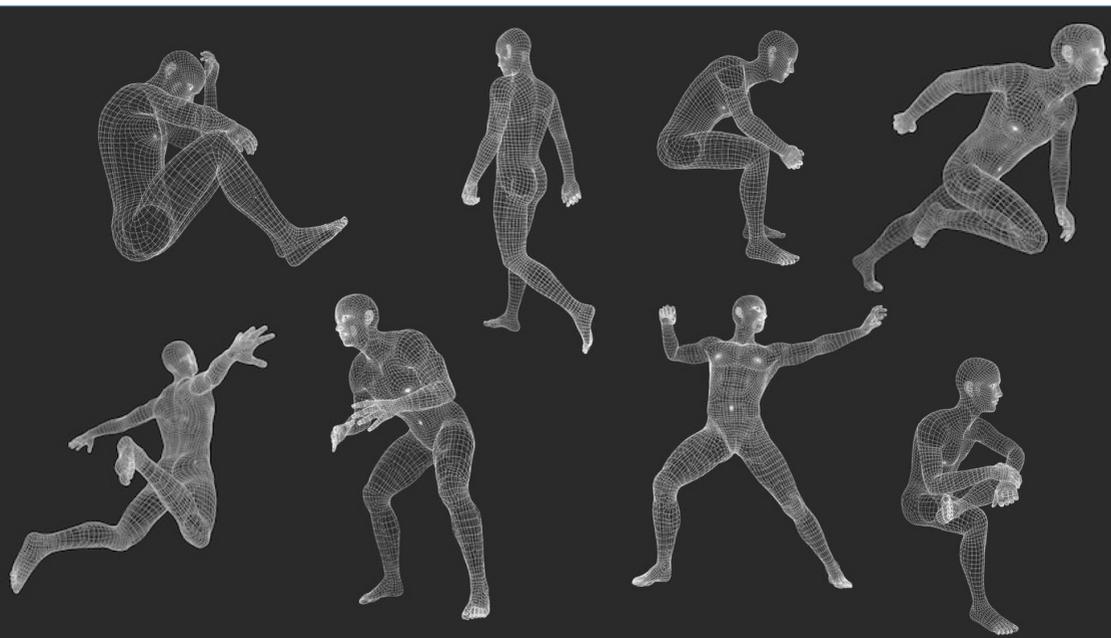


CLAHRCBITE

Brokering innovation through evidence

How active are you across the whole day?



Results

Varied activity across the day, including short bursts of 'hard' activity (like fast walking and/or running), is associated with health.

Who needs to know?

Everyone! Children with this type of activity profile are less fat, and type 2 diabetic adults have better physical function.

What did we do:

We measured physical activity for seven days using wrist-worn monitors in 1700 girls and 400 adults with type 2 diabetes. Usually, researchers focus only on volume of physical activity and/or time spent in moderate-to-vigorous physical activity from these monitors. Instead, we developed a new method that fully describes the distribution of how hard activity is across the whole day. We also measured fatness (girls and adults) and physical function (adults).

What we found and what does this mean:

A good activity profile includes time spent in a range of activity intensities with some time in 'hard' activities (like fast walking and/or running). A poor activity profile includes mainly sedentary time. Having a good activity profile was associated with lower fatness in girls and better physical function in type 2 diabetic adults. This means they had a stronger grip, could walk faster, and sit-down and stand-up more easily.

What next:

Using our measure of the activity profile with measures of activity volume will allow us to determine whether it is the intensity of activity (how 'hard') or the volume of activity (how much we do, regardless of how 'hard' it is) that is important for different health outcomes. When we have done this we will be able to make recommendations for the most appropriate physical activity for specific health outcomes.

Evidence:

Rowlands AV, Edwardson CL, Davies MJ, Khunti K, Harrington DM, Yates T. Beyond Cut Points: Accelerometer Metrics that Capture the Physical Activity Profile. *Med Sci Sports Exerc.* 2018;50(6):1323-32. <http://dx.doi.org/10.1249/MSS.0000000000001561>

What is NIHR CLAHRC EM?

NIHR Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) are collaborations between the NHS, universities and local organisations. Our goals are to conduct applied health research across the East Midlands and translate our research findings into improved outcomes for the public.

 @clahrc_em  www.clahrc-em.nihr.ac.uk  clahrc-em@leicester.ac.uk

This research is funded / supported by the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care East Midlands (CLAHRC EM).