Screen time linked to diabetes

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Credit: St. George's University of London

Daily screen time of three or more hours is linked to several risk factors associated with the development of diabetes in children, according to a study by St George's, University of London.

Both adiposity, which describes total body fat, and insulin resistance,

which occurs when cells fail to respond to insulin, were affected by longer hours of watching television and using computers.

The research has been published online in *Archives of Disease in Childhood*.

Dr Claire Nightingale, Research Fellow, said: "Our findings suggest that reducing screen time may be beneficial in reducing type 2 diabetes risk factors, in both boys and girls, from an early age. This is particularly relevant, given rising levels of type 2 diabetes, the early emergence of type 2 diabetes risk, and recent trends suggesting screen-related activities are increasing in childhood."

The researchers based their findings on a sample of nearly 4500 nine- to 10-year-old pupils from 200 primary schools in London, Birmingham, and Leicester. The children were assessed for a series of metabolic and cardiovascular risk factors, including blood fats, insulin resistance, fasting blood glucose levels, blood pressure and body fat. They were asked about their daily screen time to include TV, computers, and games consoles.

Complete information was obtained for 4495 (2337 girls and 2158 boys) out of the 5887 who took part in the study between 2004 and 2007; additional data on physical activity was also available for 2031 of them.

Around a third of the children spent less than an hour of screen time a day, but 28 percent of the children said they clocked up one to twohours; 13 percent said their tally was two to three hours; and 18 percent said they spent more than three hours looking at screens every day.

Trends emerged between screen time and ponderal index—an indicator of weight in relation to height, and skinfolds thickness and fat mass index—indicators of total body fat.

These levels were all higher in children reporting more than three hours of daily screen time than in those who said they spent an hour or less on it.

And there was a strong trend between levels of screen time and higher levels of leptin, the hormone that controls appetite, and insulin resistance.

The trends remained significant even after taking account of potentially influential factors, including physical activity levels.

Previous research in adults had indicated that spending a lot of time in front of a screen is linked to a heightened risk of weight gain and type 2 diabetes, but until now it has not been clear that children might also be at risk.

Dr Nightingale explained: "It would be very difficult to carry out this research today as smartphones and tablets are so universal. Children today therefore spend even more time looking at a screen than when the original dataset was taken."

Provided by St. George's University of London

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