

Primary Age Children Cannot Accurately See Vehicles Going Above 20 mph

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20's Plenty



Where People Live

Research on vision has found that primary age children cannot accurately see, or judge the speed of, vehicles travelling above 20 mph. This is strong evidence that 20 mph limits where people live are needed to protect children from road danger caused by age-related inability to correctly register faster traffic.

A new study by vision scientists at Royal Holloway, University of London has measured children's ability to detect approaching cars in a road crossing scenario. At vehicle speeds faster than 20 mph, primary school age children (6-11 years) may not be able to tell that a car is approaching. This strongly supports arguments for implementing and enforcing 20 mph speed restrictions in areas with child pedestrians such as residential streets.

The study, which is in press for the international journal *Psychological Science*, outlines how a speed illusion can mean that all pedestrians, and/or drivers at junctions, can under-estimate the speed of faster vehicles and may, in some cases, fail to see them at all. Researchers measured the perceptual acuity of over 100 children in primary schools and calculated the approach speed that they could reliably detect. Adult pedestrians can make accurate judgments for vehicles travelling up to 50 mph, but primary school age children become unreliable once the approach speed goes above 20 mph.

Professor John Wann who led the research suggests

"This is not a matter of children not paying attention, but a problem related to low-level visual detection mechanisms, so even when children are paying very close attention they may fail to detect a fast approaching vehicle."

Professor Wann stresses that the simplest solution lies in traffic regulation

"These findings provide strong evidence that children may make risky crossing judgements when vehicles are travelling at 30 or 40 mph. In addition, the vehicles that they are more likely to step in front of are the faster vehicles that are more likely to result in a fatality. Travelling 1 mile through a residential area at 20 mph vs. 30 mph will only add 60 seconds to journey time. We encourage drivers to take a minute and save a child's life".

Anna Semlyen, Campaign Manager for 20's Plenty for Us said

"We cannot address child road safety by simply teaching them to pay more attention. Child pedestrians can't judge approach speeds as well as adults. It's simplistic to blame children and suggest they "run out", without checking. But this study suggests it's drivers going too fast that create errors, as it is then impossible for children to make correct judgments. It's up to adult society to protect families through 20 mph limits where people live and for drivers to obey the signs. "

This study was part of a larger project sponsored by the *ESRC*, one of the UK research councils, in order to understand the perceptual factors that can lead to pedestrian accidents. The research group has recently published brain imaging research in the *Proceedings of the Royal Society* to that show some of the key components for detecting collision events lie at the brain-stem level, which is a low-level early detection system.

20's Plenty for Us welcomes comment and feedback, so please contact us if you have or need any further information

20's Plenty for Us campaigns for 20mph speed limits without physical calming as the default in towns and residential areas

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