

The Speed Illusion

Children Don't Reliably See Cars Going Over 20 mph

A 20's Plenty for Us Press Release – March 2011

20's Plenty



Where People Live

Research has proven that children cannot accurately judge the speed of vehicles above 20 mph. Scientists aimed to discover why children are overrepresented as road casualties. Research found that vehicles traveling faster loom less than slower vehicles. This creates a dangerous illusion in which faster vehicles may be perceived as not approaching¹. 20 mph speed limits can help protect children from making risky road crossing choices.

Vision scientists at Royal Holloway, University of London measured children's detection of cars approaching in a road crossing scenario. At speeds faster than 20 mph, primary age children (6-11 years) may not be able to tell that a car is coming. This strongly supports the implementation and enforcement of 20 mph speeds near child pedestrians. Public Health body NICE guidance also wants 20 mph limits near children².

Published by international journal *Psychological Science* on March 9th the paper explains "the speed illusion". This can mean that pedestrians, and/or drivers at junctions, may under-estimate the velocity of faster vehicles and, in some cases, will fail to see them at all.

Researchers measured the vision of 111 children in primary schools and calculated approach speeds that they could reliably detect. Adult pedestrians can make good judgments for vehicles going up to 50 mph, but primary school age children become unreliable once the approach rises above 20 mph. The study says:-
"Children's perceptual limitations place them at greater risk of stepping in front of cars traveling at higher speeds. Driving over 20 mph in a residential or school area not only increases the potential severity of any impact, but also increases the risk that a child will injudiciously cross in front."

Professor Wann stresses that the simplest solution lies in traffic regulation :-

"There's strong evidence that children may make risky crossing judgements when vehicles are travelling at 30 or 40 mph. 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 though 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 :-

"It's simplistic to blame children saying they "run out", without checking. But this study suggests it is fast motor vehicles that create the errors, as it is then impossible for kids to make correct judgments. It's up to adults to protect children through 20 mph limits and for drivers to obey the signs."

20's Plenty for Us welcomes comment and feedback - www.20splentyforus.org.uk

¹ John P. Wann, Damian R. Poulter, and Catherine Purcell. Reduced Sensitivity to Visual Looming Inflates the Risk Posed by Speeding Vehicles When Children Try to Cross the Road. *Psychological Science Online* First, published on March 9, 2011 as doi:10.1177/0956797611400917 - online at <http://pss.sagepub.com/content/early/2011/03/04/0956797611400917>

² NICE Preventing unintentional injuries among under-15s <http://www.nice.org.uk/guidance/index.jsp?action=byID&o=13273>

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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