

Shedding light on cyclist safety

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How do we keep older cyclists safe on our roads? That's the question researchers in The Netherlands hope to answer in a paper published in the *International Journal of Human Factors and Ergonomics*. In it, the team has carried out an evaluation study of a light communication system for bicycles that could improve visibility to other road users.

Frank Westerhuis and Dick de Waard of the University of Groningen,

and Carola Engbers, Rosemary Dubbeldam, and Hans Rietman of Roessingh Research and Development in Enschede, and also at the neighboring University of Twente, suggest that older cyclists are at risk because of low-speed interactions, stopping, (dis)mounting, and potentially misjudging riding speeds. A [lighting system](#) that alerted other road users to a [cyclist's](#) riding speed, braking, and turning intentions, has now been developed to improve safety for older cyclists. Tests on the system were perceived positively by volunteers using and observing the system, the [team](#) reports.

Cycling is a rather common mode of transport across The Netherlands and in many other parts of the world. Researchers have previously suggested that it not only improves personal health but also has environmental benefits, not least because of an obvious reduction in pollution. With an [aging population](#) in many regions and continued good health for many, the number of older cyclists on the roads continues to rise. Of course, [older people](#) are often susceptible to physical and cognitive problems that might increase their accident risk while cycling. As such, there is a pressing need to improve safety for this cohort of cyclists.

Dedicated light signals, as are already obligatory on motorbikes, that show rider's turning and braking behavior would be useful to all other [road](#) users including fellow cyclists. Indicator controls on the bicycle's handlebars would also reduce the need or the older cyclists to take their hands from said handlebars to indication their turning intention as is the norm and so reduce the risk of the cyclist losing their balance ahead and during a turn.

The team points out that in many jurisdictions, such light indicators would have to be accommodated by the limitations of current law regarding blinking lights on bicycles, which are often illegal. Such a progression could be readily made to improve safety and reduce

accidents for a growing number of cyclists.

More information: Frank Westerhuis et al, Enlightening cyclists: an evaluation study of a bicycle light communication system aimed to support older cyclists in traffic interactions, *International Journal of Human Factors and Ergonomics* (2021). [DOI: 10.1504/IJHFE.2021.118225](https://doi.org/10.1504/IJHFE.2021.118225)

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