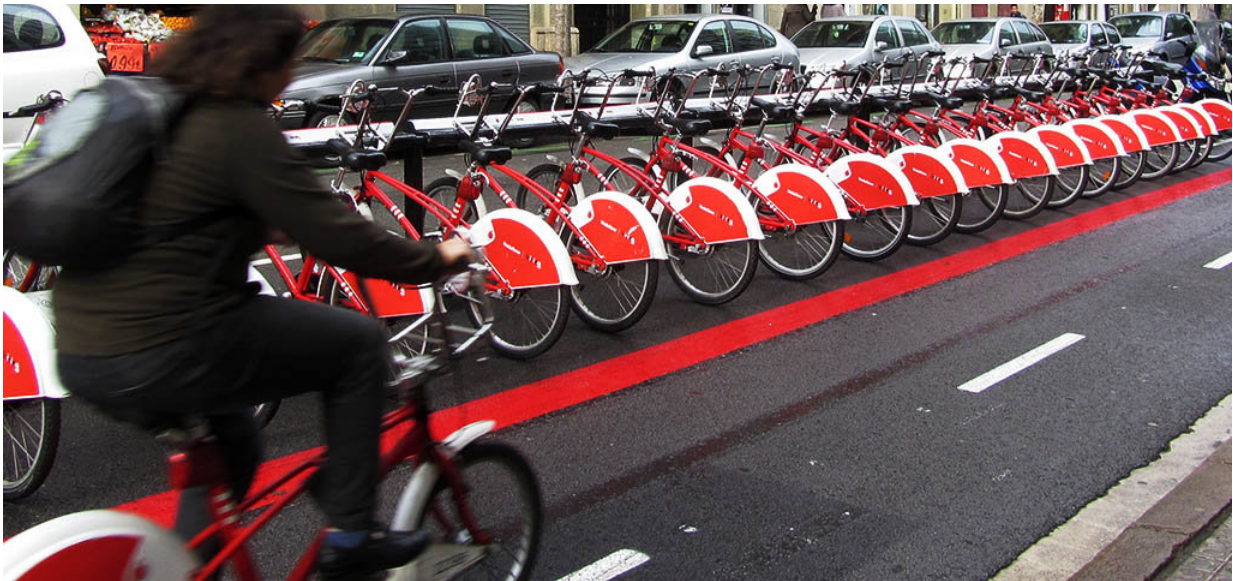


Swapping cars for shared bicycles could prevent up to 73 deaths per year

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Credit: Barcelona Institute for Global Health (ISGlobal)

The 12 largest bicycle sharing systems in Europe offer health and economic benefits. Currently, the use of shared bicycles by people who previously used cars prevents five deaths and saves €18 million per year. If all public bicycle trips were made by previous car users, 73 deaths and €226 million would be saved every year. These are the conclusions of a new study by the Barcelona Institute for Global Health (ISGlobal).

Bicycle sharing systems have become very popular in cities worldwide.

In 2013, there were an estimated 500 services of this type around the planet. In Spain alone, there are almost 100, notably in Barcelona, with 6,000 bicycles or in Valencia or Seville, with 2,000 units each.

The study, published in *Environment International*, analysed the 12 most important [bicycle](#) sharing systems in Europe—all with more than 2,000 units—in six countries (Belgium, France, Germany, Italy, Poland and Spain). Nine have mechanical bicycles, two (Barcelona and Milan) combine electric and mechanical bikes, and one (Madrid) has only electric bikes. In fact, this is the first study to include the impact of [electric bicycles](#).

Based on the Health Impact Assessment method developed by the researchers, they analysed the [health benefits](#) and risks of substituting car trips by trips on bicycles belonging to the shared systems. Using transport data, health surveys and registers of pollution and traffic accidents, they estimated the number of annual deaths due to lack of physical activity, [traffic accidents](#), and [air pollution exposure](#) (PM2.5 particles).

The study estimated the number of deaths avoided through a greater bicycle use. Electric bicycles, they conclude, also offer health benefits, although users get less physical activity and are more exposed to accidents at higher speeds.

Isabel Otero, ISGlobal researcher and first author of the study, says that the results show health benefits, particularly for mechanical bicycles, in all cities studied. "The positive health impacts are mainly due to an increase in [physical activity](#)", she explains. "Thus, the benefits of cycling largely outweigh the risks, in any of the 12 European cities studied."

Of all cities analysed, Paris obtained the best results in terms of health benefits, with 2.5 lives saved per year. This is likely because it is the

largest system in Europe, with more than 23,000 bicycles and 110,000 trips per day. In Barcelona, Bicing (mechanical and electrical) saves one death and 2.5 million euros every year.

"The real benefits could be even greater if local authorities worked to increase the number of bicycle trips per day, ensure traffic safety and improve air quality", says David Rojas, ISGlobal researcher and coordinator of the study. He encourages city authorities to focus efforts on this system given the health and [economic benefits](#), including lives saved.

More information: I. Otero et al, Health impacts of bike sharing systems in Europe, *Environment International* (2018). [DOI: 10.1016/j.envint.2018.04.014](#)

Provided by Barcelona Institute for Global Health (ISGlobal)

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