

# Living in greener neighborhoods is associated with slower cognitive decline in elderly

July 12 2018

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Elderly people living in greener neighborhoods have a slightly slower cognitive decline, study shows. Credit: Huy Phan

Contact with green space is known to have beneficial effects for mental health. A new study by the Barcelona Institute for Global Health

(ISGlobal), a centre supported by the "la Caixa" Foundation, suggests that it may also play a positive role against cognitive decline in the elderly. In particular, this research published in *Environmental Health Perspectives* shows that the common age-related loss in cognitive function is slightly slower in people who live in greener neighbourhoods.

Researchers performed a 10-year follow-up of 6,500 people aged 45 to 68 from the Whitehall II cohort in the U.K. At three different time points during the course of the study, participants completed a battery of cognitive tests that assessed their verbal and mathematical reasoning, verbal fluency and short-term memory, as well as the decline in these functions. Neighbourhood green [space](#) for each participant was estimated using satellite images.

"There is evidence that the risk for dementia and cognitive decline can be affected by exposure to urban-related environmental hazards (such as air pollution and noise) and lifestyle (such as stress and sedentary behavior). In contrast, living near green spaces has been proposed to increase physical activity and social support, reduce stress, and mitigate exposure to [air pollution](#) and noise. Recent evidence has shown cognitive benefits of [green space](#) exposure in children, but studies on the possible relations of exposure to green spaces and cognitive decline in older adults are still very scarce and often have inconsistent results," says Carmen de Keijzer, ISGlobal researcher and first author of the study.

"Our data show that the decline in the cognitive score after the 10-year follow-up was 4.6 percent smaller in participants living in greener neighbourhoods. Interestingly enough, the observed associations were stronger among women, which makes us think that these relations might be modified by gender," Carmen de Keijzer adds.

"The proportion of people over 60 years old in the world is expected to nearly double between 2015 and 2050 and the number of dementia cases

has been predicted to grow at a similar pace worldwide. Although the differences in cognitive [decline](#) observed in our study are modest at individual level, they become much more significant if we consider these findings at population level," says Payam Dadvand, ISGlobal researcher and last author of the study. "If confirmed by future studies, our results may provide an evidence base for implementing targeted interventions aimed at decelerating [cognitive decline](#) in [older adults](#) residing in urban areas and hence improving their quality of life," he adds.

**More information:** de Keijzer C., Tonne C., Basagaña X., Valentín A., Singh-Manoux A., Alonso J., Antó J.M., Nieuwenhuijsen M., Sunyer J., Dadvand P. Residential Surrounding Greenness and Cognitive Decline: A 10-Year Follow-up of the Whitehall II Cohort. *Environmental Health Perspectives*, 2018.

Provided by Barcelona Institute for Global Health

Citation: Living in greener neighborhoods is associated with slower cognitive decline in elderly (2018, July 12) retrieved 26 April 2024 from <https://medicalxpress.com/news/2018-07-greener-neighborhoods-slower-cognitive-decline.html>

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