

People Living Near Green Spaces Are at Lower Risk of Metabolic Syndrome

A study analyses for the first time the relation between long-term exposure to residential green spaces and a cluster of conditions that include obesity and hypertension

Barcelona, September 26 - **Middle-aged and older adults that live in greener neighbourhoods are at lower risk of developing metabolic syndrome** than those living in areas with less green spaces. This is the main conclusion of a new study by the Barcelona Institute for Global Health ([ISGlobal](#)), an institution supported by "la Caixa", which provides further evidence on the **health benefits of green spaces**.

Metabolic syndrome is a cluster of conditions that occur together and include obesity, hypertension, high blood sugar levels, and abnormal fat levels. It is a major risk factor for non-communicable diseases such as heart attacks, diabetes or stroke. To date, a number of studies have analysed the relationship between exposure to green spaces and individual components of metabolic syndrome. In this study, ISGlobal examined the link with metabolic syndrome as a whole, providing an indicator of overall cardiometabolic health, and in the long-term.

The longitudinal study, published in [Environmental Pollution](#), used data from over **6,000 adults** –aged between 45 and 69 at the start of the study– from the Whitehall II cohort from the **UK**. Participants underwent four examinations over a period of 14 years (1997-2013), with a series of tests including blood analysis, blood pressure and waist circumference measurements. Residential greenness was determined by satellite images.

These findings suggest **that long-term exposure to green spaces can play an important role in preventing metabolic syndrome** as a whole, as well as individual components such as large waist circumference, high levels of blood fats or hypertension.

The mechanisms underlying this association “could be related to better opportunities provided by green spaces to perform **physical activity** as well as a decrease in exposure to **air pollution**”, explains **Carmen de Keijzer**, ISGlobal researcher and first author of the study. The association observed was **higher for women** than for men. “Women tend to spend more time in their residential neighbourhood, which could explain this gender difference”, adds the researcher.

“The study found more health benefits in those areas with higher **tree coverage**, which provides a basis for investigating the types of vegetation that impact positively on our health”, says **Payam Dadvand**, ISGlobal researcher and last author of the study.

Green spaces could help reduce the burden of non-communicable diseases, one of the top priorities in public health nowadays. “**We need greener cities if we want healthier cities**”, Dadvand stresses.

A recent study, also by ISGlobal, showed that people living in greener areas have a [slower cognitive decline](#). Less stress, greater longevity, or a better overall and mental health are other [benefits](#) proved by scientific studies.

Reference

Carmen de Keijzer, Xavier Basagaña, Cathryn Tonne, Antònia Valentín, Jordi Alonso, Josep M. Antó, Mark J. Nieuwenhuijsen, Mika Kivimäki, Archana Singh-Manoux, Jordi Sunyer, Payam Dadvand. Long-term exposure to greenspace and metabolic syndrome: A Whitehall II study. *Environmental Pollution*. September 2019. <https://doi.org/10.1016/j.envpol.2019.113231>

About ISGlobal

The Barcelona Institute for Global Health, ISGlobal, is the fruit of an innovative alliance between "la Caixa" and academic and government institutions to contribute to the efforts undertaken by the international community to address the challenges in global health. ISGlobal is a consolidated hub of excellence in research that has grown out of work first started in the world of health care by the Hospital Clínic and the Parc de Salut MAR and in the academic sphere by the University of Barcelona and Pompeu Fabra University. The pivotal mechanism of its work model is the transfer of knowledge generated by scientific research to practice, a task undertaken by the institute's Education and Policy and Global Development departments. ISGlobal a member of the CERCA programme of the Generalitat de Catalunya.

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