

Women Who Live Near Green Space Are Less Likely to Be Overweight or Obese

The findings are presented in a new study of more than 2,300 inhabitants of seven Spanish provinces

Barcelona, 17 December 2019. Women who live less than 300 metres from green space may be at lower risk of excess weight or obesity. This is the main finding of a study led by the Barcelona Institute for Global Health ([ISGlobal](#)), a centre supported by "la Caixa", and [published](#) in the *International Journal of Hygiene and Environmental Health*.

Using information from the [MCC-Spain](#) multi-case control study, the researchers analysed data on **2,354 people from seven Spanish provinces** (Asturias, Barcelona, Cantabria, Madrid, Murcia, Navarre and Valencia). The study participants, who ranged in age from 20 to 85 years, answered survey questions about their residential history, lifestyle (physical activity, leisure time, etc.), weight and height. In addition, hip and waist circumference was measured and **blood or saliva samples were collected**. To determine whether or not participants were overweight or obese, the researchers used two markers that are commonly used in epidemiologic studies: body mass index and waist-hip ratio.

The study found a **strong association between overweight or obesity in women and lack of access to urban green spaces** such as parks and gardens. However, no such association was found in men. "We do not have a clear understanding of the biological determinants behind the observed gender differences," commented ISGlobal researcher **Cristina O'Callaghan-Gordo**, the lead author of the study. "There are probably social factors, such as differences in how men and women use green spaces, that explain this disparity."

Using the DNA samples collected from the participants' saliva and blood, the researchers analysed the **role of genetics** in this association. "We studied genetic polymorphisms that have been associated with obesity in previous research," commented O'Callaghan-Gordo. "In general, we observed a more marked reduction in risk of obesity in people with a genetic predisposition to this condition. This finding points to the existence of **gene-environment interactions that could either trigger or prevent excess weight gain.**"

Overweight and Obesity: Catalysts of Disease

According to the World Health Organisation, in 2016 more than 1.9 billion adults were overweight. Of these, more than 650 million were obese—a preventable condition. "**Excess weight is an important risk factor for various non-communicable diseases**, including cardiovascular, kidney and liver disease, diabetes, various musculoskeletal disorders, and some types of cancer," commented study leader **Manolis Kogevinas**, a researcher in the [Non-communicable Diseases and Environment](#) programme at ISGlobal. "It is also associated with [increased all-cause mortality](#)."

Natural outdoor environments, including green spaces within urban settings, promote health and well-being by increasing levels of physical activity, reducing exposure to noise and reducing psychological stress, which is an important driver of weight gain. "This study highlights the

important role played by green space in the risk of excess weight and obesity in Spanish women. Understanding the mechanisms that explain this association is crucial to **plan effective and successful public health interventions**,” concluded **Kogevinas**.

Reference

Cristina O’Callaghan-Gordo, Ana Espinosa, Antonia Valentin, Cathryn Tonne, Beatriz Pérez-Gómez, Gemma Castano-Vinyals, Trinidad Dierssen-Sotos, Conchi Moreno-Iribas, Silvia de Sanjose, Guillermo Fernández-Tardón, Mercedes Vanaclocha-Espi, Maria Dolores Chirlaque, Marta Cirach, Nuria Aragonés, Ines Gómez-Acebo, Eva Ardanaz, Víctor Moreno, Marina Pollan, Mariona Bustamante, Mark J. Nieuwenhuijsen, Manolis Kogevinas. Green spaces, excess weight and obesity in Spain. *International Journal of Hygiene and Environmental Health*, December 2019. <https://doi.org/10.1016/j.ijheh.2019.10.007>

About ISGlobal

The Barcelona Institute of Global Health (ISGlobal) is the result of an innovative alliance between “la Caixa” and academic and government institutions. The Institute was set up to contribute to the work undertaken by the international community to address global health challenges. ISGlobal has consolidated a hub of excellence in research and medical care that has its roots in work first started in the world of health care by the Hospital Clínic and the Mar Health Park 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, Policy and Global Development departments. ISGlobal is a member of CERCA, the Catalan Government’s network of research centres.

ISGlobal Press Department

Carol Pozo

carolina.pozo@isglobal.org

93 214 73 33 / 699 183 966

Marta Solano

marta.solano@isglobal.org

93 214 73 33 / 661 45 16 00

Una iniciativa de:

