

Living in Greener Neighbourhoods May Postpone the Natural Onset of Menopause

Lower stress and better mental health—known benefits of green spaces—could explain this finding

Barcelona, 13 February 2020. Living near green spaces is associated with a wide variety of benefits, including a [lower risk of obesity](#), [improved attention capacity in children](#) and [slower physical decline](#) in old age. Now, for the first time, a study led by the University of Bergen and the Barcelona Institute for Global Health (ISGlobal), a centre supported by "la Caixa", has found that living in a greener neighbourhood is also associated with **older age at the onset of menopause**.

The [study](#), published in *Environment International*, **analysed data on 1,955 women from nine countries** (Spain, France, Germany, Belgium, United Kingdom, Sweden, Estonia, Iceland and Norway) who took part in the [European Community Respiratory Health Survey](#) (ECRHS). Over a 20-year period, participants completed questionnaires on their health and lifestyle factors and underwent blood sampling. The availability and extent of green space in their neighbourhoods was also calculated.

The study found that **women living in neighbourhoods with little green space became menopausal 1.4 years earlier** than those in living in the greenest areas. On average, age at menopause was 51.7 years for women living in the greenest areas, compared with 50.3 years for women living in areas with little green space.

In addition to genetic factors, age at menopause is influenced by lifestyle factors such as smoking, obesity, physical activity and the use of oral contraceptives. A number of biological processes could explain the association between green space and older age at menopause. "We know that stress increases the level of cortisol in the blood, and numerous studies have shown that **exposure to green spaces reduces it**," explained **Kai Triebner**, postdoctoral visiting researcher at ISGlobal and lead author of the study. "Low cortisol levels have been associated with increased levels of **estradiol**, an important female sex hormone. Perhaps women who live near green space have lower cortisol levels, which would allow them to maintain higher levels of estradiol, which may in turn delay the onset of menopause." He added: "Exposure to green space is also associated with a **lower risk of certain mental health conditions**, such as depression, which is also associated with younger age at menopause."

Menopause: An Indicator of Health

"Menopause is a marker of health and can be associated with undesirable alterations in body physiology and mental health," commented **Payam Dadvand**, researcher at ISGlobal and coordinator of the study. In fact, later age at natural menopause has been positively associated with overall survival, life expectancy and reduced mortality. "If confirmed, our findings will add to the body of evidence on the health benefits of green space and help policymakers to implement interventions aimed at decelerating reproductive aging in our rapidly urbanising world."

Reference

Kai Triebner, Iana Markevych, Steinar Hustad, Bryndís Benediktsdóttir, Bertil Forsberg, Karl A. Franklin, José Antonio Gullón Blanco, Mathias Holm, Bénédicte Jaquemin, Debbie Jarvis, Rain Jögi, Bénédicte Leynaert, Eva Lindberg, Jesús Martínez-Moratalla, Nerea Muniozguren Agirre, Isabelle Pin, José Luis Sánchez-Ramos, Joachim Heinrich, Francisco Gómez Real, Payam Dadvand. Residential surrounding greenspace and age at menopause: A 20-year European study (ECRHS). *Environment International*, August 2019. <https://doi.org/10.1016/j.envint.2019.105088>

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 has been named a Severo Ochoa Centre of Excellence and is a member of the CERCA programme of the Generalitat de Catalunya.

ISGlobal's Press Office

Carol Pozo

carolina.pozo@isglobal.org

0034 93 214 73 33 / 0034 696 91 28 41

Pau Rubio

pau.rubio@isglobal.org

+34 93 214 73 33 / +34 696 91 28 41

"la Caixa" Press Office

Irene Roch

iroch@fundaciolacaixa.org

93 404 60 27/ 669 457 09

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