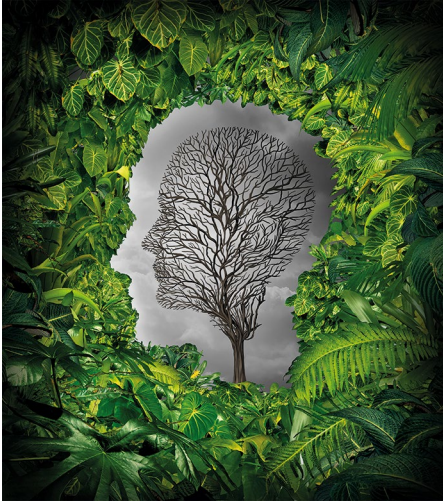


## MENTAL HEALTH

## Healthful green minds

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Credit: Brain light / Alamy Stock Photo

Evidence is mounting that exposure to natural environments is beneficial for mental wellbeing. This raises concerns about the mental health of the world's large and growing urban populations. However, the validity and scale of this potential association has not been tested in a large population.

Kristine Engemann, of Aarhus University, and colleagues find that, for >900,000 Danish participants, their exposure to green

environments up to the age of 10 years was significantly associated with their risk of later developing psychological disorders. The green area around participants' childhood homes was calculated from historical satellite imagery and compared with data on participants' mental health outcomes, controlling for urbanization, socioeconomic and parental factors. Growing up in the least green environments was associated with a 15–55% greater risk across psychological disorders—except for intellectual disability and schizoaffective disorders—compared to those living in the greenest locations. The association was strongest for mood, depression, neurotic, stress-related and somatic disorders, and it appeared to show a dose–response relationship between greater years of green exposure and lower mental health risk.

This research represents an important strengthening of the evidence for an association between green spaces and mental health outcomes. Future causal studies are needed to uncover the mechanisms underlying this association.

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