

# Vertical gardens help reduce our stress levels and make us feel better

□ jameslyon • 17 hours ago



According to a new study, vertical gardens on the outer walls of buildings can reduce some of the stress levels caused by living in a big city. Researchers have used virtual reality in more than 100 people and found that vertical greens have a stress-relieving effect.

Image credit: Flickr / Ramesh NG

Rapid urbanization is associated with reduced exposure to nature and increased environmental stress such as traffic noise and pollution. Given that nature can combat stress and promote well-being, there has been tremendous interest and collective efforts around the world to increase green space in examples from Europe to China.

**Vertical green** Refers to the integration of vegetation into the vertical structure of the building. This is different from rooftop greening, which takes

advantage of the flat horizontal space at the top of the building. Previously, vertical greens consisted primarily of self-climbing plants, such as vines, that spread over the façade of buildings. But now the concept is even more extended.

## The garden flies in the sky

Introducing a vertical garden can increase the amount of green space above the ground, thereby **Overcome land constraints**. Common in dense urban areas, it provides important ecosystem services such as cooling systems, sound absorption to reduce noise pollution, and absorption of harmful pollutants to reduce air pollution. However, the benefits of vertical gardens can be even greater, especially in our mental health.

Existing research on **Natural effects on emotions and stress** It has been dominated by the natural environment such as parks and forests. No experimental studies have been conducted to investigate the physiological benefits of having a row of vertical green-covered buildings. Currently, researchers at Nanyang Technological University in Singapore wanted to address this gap with new research.

They asked 111 participants to walk the virtual street for 5 minutes using a VR headset. Participants were randomly assigned to balconies, walls, pillars, or streets with green plants on the buildings, or streets with only buildings with green walls instead of green plants. Traffic noise was generated during the experiment.

Those who saw the building with only green paint had significantly increased stress, as recorded by one measurement of heart rate variability. During that time, those who saw the building with green plants did not experience any changes in stress. This is consistent with **Previous research**. Nature has been found to have beneficial effects on stress and emotions.

Participants then answered the questionnaire to assess positive and negative emotions and the level of anxiety they felt. They said they didn't feel very positive as they walked down the street with buildings covered only by green walls. During that time, people walking down the street in vegetation-covered buildings did not report more or less positive feelings.

*"Urbanization is expected to increase the number of people living in urban areas worldwide in the future. Therefore, city planning can directly affect the quality of life of the population, so city planners and architecture It is important to understand the factors that can contribute to a healthy life in the home. Our work is feasible for vertical greens to integrate nature into our built environment and promote mental health. By providing proof that this is the way to go, we can guide our commitment to lush cities. "*

The study was published in the journal [Landscape and city planning](#).

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<https://www.zmescience.com/science/vertical-gardens-stress-07072021/>

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