

Mental Health & Cognitive Benefits

A selection of facts and resources supported by research

2024

Overview

Exposure to quality trees, green space, and nature is emerging as an important public health solution in urban communities. This is especially important with over half of humanity now living in urban areas and growing evidence that urbanization is linked with mental disorders. Nearly 40 years of research confirms that nearby nature, including parks, gardens, urban forests, and green spaces, supports mental health and wellness as well as cognitive function. Green environments may also be effective in treating mental health challenges.

Supporting Emotional Health

- People who live near green spaces tend to be **less depressed** and have **better cognitive functioning** than those who do not live near greenery (Jimenez, 2022).
- Nature helps people recover from **psychological stress** (Jimenez, 2022).
- Gardening, nature-based therapy, and exercise in green spaces for 20 to 90 minutes are specific activities that significantly **enhance mental well-being** in adults (Gregory, 2024).
- Patients with serious depression experience **significant mood improvements** after a 50-minute walk in a natural setting relative to one in an urban setting (Berman et al., 2012).
- People who walk in green space instead of a busy street appear to have fewer racing negative thoughts (**reduced rumination**) (Bratman et al., 2015).
- A study of 10,000 participants found that people living near trees had lower rates of **antidepressant use** (Marselle et al., 2020).
- Edward O. Wilson's **biophilia hypothesis** explains how natural environments have a restorative advantage over artificial environments due to their role in our evolution as a species (Wilson, 1984).

Therapeutic Treatment

- Contact with nature provides **relief and healing** for those who suffer from short-term and chronic mental illness including depression, anxiety, and mood disorders (Berman et al., 2012).
- Prolonged immersion in nature and nature-based therapy programs have shown promise as a way of managing **PTSD** (Gregory, 2024).
- **Parks and nature prescriptions** by physicians and other healthcare and social service providers successfully promote lifestyle or health behavior changes, improving health outcomes and addressing health inequalities (Beil, 2023).

Cognitive Health – The Thinking Part of the Brain`

- Contact with nature **improves the 'thinking'** part of our brain including our ability to pay attention, problem-solve, remember things, plan, and be creative (Kaplan, 1995)

- Natural environments – “**nature breaks**” - replenish and rest our brain resulting in improved performance on tests that measure memory and attention (Kaplan, 1995).
- Workers having **plants in their workspace** did better on a memory and attention test than those who sat at an empty desk with no natural stimuli (Raanaas et al. 2011).
- Association with nature helps our brain to develop white and gray matter in various parts of the **brain**. This supports our memory and cognitive performance (Sakhvidi et al. 2023).

Stress

- Spending time in nature, even 15 minutes results in significant **stress reduction** – reducing blood pressure and heart rates (Bratman et al.,2015)

Youth

- **Nature experiences benefit youth** by reducing stress, restoring attention, increasing physical activity, and mitigating exposure to urban-related environmental hazards such as air pollution, noise, and heat (Sakhvidi et al., 2022).
- Nature improves **children’s emotional wellbeing**, discipline and anger and stress regulation (Sakhvidi et al., 2022).
- Nature increases **positive social interactions** such as cooperation with peers and adults (Sakhvidi et al., 2022).
- Children who view nature outside of their apartment windows perform better on **memory tasks and concentration** (Bratman, 2015).
- Children who live with higher levels of green space may **experience less risk of serious mental health problems**, including psychosis and schizophrenia, later in life (Sakhvidi et al. 2023).
- Schools that are close to, or incorporate trees and green space, have higher test scores on average than schools that do not, even after taking income into account. It is most effective to plant trees within 250 meters from a school (Kuo et al., 2021).

Elderly

- Elderly patients w **dementia** who have nature experiences show improved sleep patterns, and less agitation (Chalfont, 2009).
- Elderly patients with access to “**Wander gardens,**” confined outdoor spaces that enable activity without restraint, experience improved mobility and mental health (Detweiler et al., 2012).

Kinship with Nature

- Trees and forests can help us **transcend day to day life** by giving us perspective and helping us to overcome narrow self-interest. Nature can allow us to see and feel like a part of something bigger, provoking a feeling of awe (Keltner, 2023).
- A 15-minute stroll through the woods can increase connectedness to nature connectedness, and the ability to reflect on life problems more constructively (Mayer et al. 2009).
- Native Americans believe that nature is not just an external environment but is also intertwined with the spiritual essence of existence. It is important to have a **reciprocal**

relationship with plants, where humans give back to the natural world as much as they receive. (Kimmerer, 2013)

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