

Environmental wellbeing: How the healing powers of nature reduce anxiety and boost health

Nature has a profound impact on both our physical and mental health. Kathy Willis, a botanist and professor of biodiversity at the University of Oxford, explores these benefits in her book *Good Nature*, revealing how interacting with nature improves brain and body functions. Below are some of the key insights.

- 1. Visual impact of nature:** Viewing natural landscapes lowers heart rate, reduces stress hormones, and induces brainwave patterns associated with calmness and clarity. Green and white leaves, as well as yellow and white flowers, have the most calming effects, while blue, radially symmetrical flowers are aesthetically preferred by many. Open landscapes with scattered trees are particularly beneficial, inducing a relaxed, focused state by reducing mental strain and enhancing brainwave activity associated with calm.
- “We all know that being in nature is good for our health and mental well-being. But how does it work its magic? For example, what explains the finding that, following gall bladder surgery, people who could see a verdant scene from their hospital window recovered three times faster and needed far less pain medication than those who only looked out over a brick wall?”
- 2. The power of scent:** The sense of smell plays an even stronger role in reducing anxiety than sight. Scents like lavender (containing *linalool*) and pine (with *pinene*) have anti-anxiety effects, while compounds found in cedar and juniper reduce stress and improve immune function by increasing natural killer cells. *Limonene*, found in citrus fruits, also serves as an important anti-inflammatory agent.
 - 3. Healing sounds:** Natural sounds such as birdsong and water significantly reduce stress and improve mood and cognitive performance. However, harsh sounds, such as the squawking of crows or parrots, can have negative effects. Sound therapy in hospitals has shown that natural sounds during procedures reduce pain-related stress.
 - 4. The hidden sense:** Beyond sight, smell, and sound, the environmental microbiome—tiny living organisms in the air around us—also boosts health. Research shows that exposure to biodiverse environments improves the human microbiome and enhances immune function, reducing inflammation and the risk of diseases such as asthma.
 - 5. Touch and interaction:** Touching natural elements, such as wood, reduces blood pressure and increases relaxation. Studies with schoolchildren demonstrate that physical interaction with plants leads to improved academic performance and increased feelings of calmness and happiness.
 - 6. Nature as medicine:** Spending at least 20 minutes in nature at a time, with a minimum of 120 minutes per week, maximizes its health benefits. Activities like gardening amplify the effects by engaging multiple senses and connecting individuals with the environmental microbiome.
 - 7. Nature in urban spaces:** Increasing biodiversity in cities is essential for both human well-being and ecological balance. Biodiverse environments in urban settings cannot simply be relocated; they must be preserved where people live to maintain the positive effects on mental and physical health.
 - 8. Practical applications:** Schools and hospitals can greatly benefit from incorporating natural elements such as green walls and trees. Nature can enhance cognitive performance in children and may one day be integrated into healthcare systems as a complement to traditional medicine.

In conclusion, Kathy Willis’s research highlights the powerful role of nature in reducing anxiety, boosting health, and promoting well-being across multiple senses. The findings suggest that integrating nature into daily life and urban planning is not only beneficial but necessary for optimal health.

Source: Douglas K 2024, A natural world, *New Scientist*, no. 3506, pp. 41–43