

# A digest on NATURE, HEALTH AND WELLBEING

How the natural environment through social prescribing and nature-based interventions/activities can support health and wellbeing

## Highlighted evidence

**Headlines from the rapid evidence review on nature, health and wellbeing (2022)** by the National Academy of Social Prescribing (NASP) for NHS England.

Evidence confirms that: Time spent in nature is linked to a range of positive mental and physical health outcomes:

**Reduced blood pressure,** reduced stress levels and associated symptoms, lower levels of cardiovascular and respiratory problems, and reduced risk of diabetes, obesity, and COVID-19



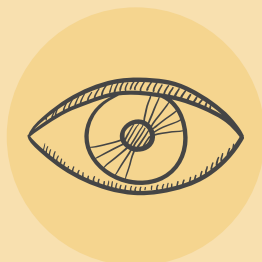
### Mental health benefits

reported include increased mental wellbeing, increased mindfulness, happiness, resilience, and subjective wellbeing

Nature-based social prescribing interventions can positively impact on **happiness and wellbeing**.

This can be by reducing social isolation and developing connection to nature, particularly in people likely to be experiencing health inequalities

Both **contact and connection with nature** play a role in improving health and wellbeing outcomes



**Ambient greenness, access to local green spaces, and subsequent mental health: a 10-year longitudinal dynamic panel study of 2.3 million adults in Wales** led by Geary et al (2023), at the University of Liverpool with collaborators, funded by the National Institute for Health and Care Research (NIHR) and was published in The Lancet Planetary Health in October 2023.

- There is a beneficial role of greenness and access to green or blue spaces in reducing socioeconomic-related inequalities in mental health.
- Every additional 360m to the nearest green or blue space was associated with higher odds of anxiety and depression.
- "Our study has shown that green and blue spaces are likely to protect people from needing to see their GP for anxiety or depression, and in places where people have fewer resources overall, living near these spaces seems to have a bigger protective effect than for people living in areas with more resources." Professor Sarah Rodgers, Professor of Health Informatics at the University of Liverpool.



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# Some proposed theories

## Attention Restoration Theory (ART)

Attention Restoration Theory (ART) proposed Kaplan, R. and Kaplan, S. (1989). ART has been summarised by Bragg, R. & Atkins, G. (2016) in A review of nature-based interventions for mental health care for Natural England (2016) who comment that ART has been widely discussed theory:

ART focuses on two different types of attention (directed and involuntary) and the cognitive changes associated with restoration from mental fatigue (Kaplan and Kaplan, 1989).

Directed attention requires mental effort and concentration and the individual must focus hard to process information (Bird, 2007) .

In contrast involuntary attention or 'soft fascination' (Kaplan et al.) requires no effort and replenishes and restores an individual's capacity for directed attention

Natural environments allow for much involuntary attention and so provide a 'restorative environment' through four key elements:

1. fascination
2. being away from day-to-day routines
3. a feeling of extent (allowing for exploration)
4. compatibility with our expectations

ART is referenced in the Handbook for Nature on Prescription to Promote Mental Health (see resources) and the Green Mind Theory by Pretty et al. (2017).



## The Green Mind Theory

The Green Mind Theory has been proposed by Pretty et al. (2017) at the University of Essex, and is cited in a study by O'Brien (2018). The researchers found evidence of three different types of immersive - attention engagement:

1. **Nature engagement:** activities that deliver health benefits in nature i.e., walking, gardening, fishing, bike/horse riding, outdoor swimming, dog walking, bird watching, park running etc.
2. **Social engagement** low in material consumption yet delivering health benefits i.e., dance, drama and song/ choral groups, parades, fairs and fetes, horticulture societies, conservation volunteering, folklore ceremonies etc.
3. **Craft activities** that deliver attention and immersion, bringing further well-being benefits, i.e., painting, drawing, writing, baking, jam-making, carpentry, knitting, needlework, mindfulness and meditation, tai chi/yoga, boat-building, craft beer/ wine-making, pottery, stone masonry, dry-stone walling, and hedge-laying.

O'Brien researching nature-based interventions for those with mental health and behavioural problems at Westonbirt Arboretum in England, found evidence suggesting the importance of 3 types of engagement: social; woodland craft and creative and sensory, which are meaningful and allowed for the immersion-attention adapted from the Green Mind Theory.

O'Brien also found that **Care for nature** is an essential component of human well-being and referenced the study Caring for nature matters by Jax K et al. (2018)

A key aspect of engaging with and shaping nature is also the concept of relational values; people do not only receive benefits from engaging with nature but shape it themselves through caring about nature and taking action to care for nature .

Caring is described as one of the mechanisms that are common to many types of Nature on Prescription in The Handbook for Nature on Prescription to Promote Mental Health (2021) by the University of Exeter - Relationship with nature; being outside; making a difference; being in a group; physical activity; personal achievement; having fun; personal growth; creativity and caring.

## Some resources and toolkits

[A Handbook for Nature on Prescription to Promote Mental Health, University of Exeter \(2021\)](#)

[NHS Green Social Prescribing Toolkit](#)

[Creative Health Review Report 2023 by the National Centre for Creative Health & All-Parliamentary Group on Arts, Health and Wellbeing](#)

[National Academy for Social Prescribing \(NASP\)](#)

[The Nature Connection Handbook, University of Derby \(2022\)](#)

[A Dose of Nature. Addressing chronic health conditions by using the environment. A summary of relevant research, University of Exeter](#)

[Natural England National Character: The Brecks \(Area profile 85. 2015\)](#)

[The Brecks Special Qualities Report](#)

For a full list of references  
scan the QR code or visit  
[www.brecks.org](http://www.brecks.org)



## References

- From the **Rapid evidence review on nature, health and wellbeing (2022)** by the National Academy of Social Prescribing (NASP) for NHS England.
- Mughal R. et al. (2022)** How the natural environment can support health and wellbeing through social prescribing. National Academy Social Prescribing NASP
- O'Callaghan-Gordo, Cristina, et al. (2020)** "Green spaces, excess weight and obesity in Spain." International journal of hygiene and environmental health 223, no. 1 (2020): 45-55
- Teixeira, A., et al. (2021).** Obesity and natural spaces in adults and older people: a systematic review. Journal of Physical Activity and Health, 18(6), 714-727
- Yang, L., et al. (2021).** Effects of Urban Green Space on Cardiovascular and Respiratory Biomarkers in Chinese Adults: Panel Study Using Digital Tracking Devices. JMIR cardio, 5(2), e31316
- Hubbard, G., et al. (2021).** Are rurality, area deprivation, access to outside space, and green space associated with mental health during the covid-19 pandemic? A cross sectional study (charis-e). International Journal of Environmental Research and Public Health, 18(8), 3869
- Cheng, X., et al. (2021).** A systematic review of evidence of additional health benefits from forest exposure. Landscape and Urban Planning, 212, 104123
- Geneshka, M., et al. (2021).** Relationship between Green and Blue Spaces with Mental and Physical Health: A Systematic Review of Longitudinal Observational Studies. International journal of environmental research and public health, 18(17), 9010.
- Houlden, V., et al. (2018).** The relationship between greenspace and the mental wellbeing of adults: A systematic review. PloS one, 13(9), e0203000
- de Keijzer, C., et al. (2020).** Long-term exposure to residential greenspace and healthy ageing: A systematic review. Current environmental health reports, 7(1), 65-88
- Barbaro, N., & Pickett, S. M. (2016).** Mindfully green: Examining the effect of connectedness to nature on the relationship between mindfulness and engagement in pro-environmental behavior. Personality and Individual Differences, 93, 137-142
- The Wildlife Trusts (2022)** 30 Days Wild five-year summary review Can be accessed at: <https://www.wildlifetrusts.org/30-days-wild-5-year-review>
- The Wildlife Trusts (2022)** A Wilder recovery: How to build back smarter, stronger, greener Can be accessed at: <https://www.wildlifetrusts.org/sites/default/files/202105/Green%20Recovery%20report%20%28low%20res%29.pdf>
- University of Exeter (2021)** A Handbook for Nature on Prescription to Promote Mental Health. Can be accessed at: [https://www.ecehh.org/wp/wp-content/uploads/2021/05/A-Handbook-for-Nature-on-Prescription-to-Promote-Mental-Health\\_FINAL.pdf](https://www.ecehh.org/wp/wp-content/uploads/2021/05/A-Handbook-for-Nature-on-Prescription-to-Promote-Mental-Health_FINAL.pdf)
- Sundstrom (2022)** Why Outdoors. Can be accessed at: <https://www.wehearyou.org.uk/files/46/whyoutdoors-evaluation-v5-compressed.pdf>
- Howarth, M., et al. (2020).** What is the evidence for the impact of gardens and gardening on health and well-being: a scoping review and evidence-based logic model to guide healthcare strategy decision making on the use of gardening approaches as a social prescription. BMJ open, 10(7), e036923.
- Leavell, M. A., et al. (2019).** Nature-based social prescribing in urban settings to improve social connectedness and mental well-being: a review. Current Environmental Health Reports, 6(4), 297-308
- Natural England (2020)** Monitor of engagement with the natural environment: Headline report and technical reports 2018 to 2019 Accessed at: <https://www.gov.uk/government/statistics/monitor-of-engagement-with-the-natural-environment-headline-report-and-technical-reports-2018-to-2019>

## References for Ambient greenness, access to local green spaces, and subsequent mental health: a 10-year longitudinal dynamic panel study of 2.3 million adults in Wales by Geary et al, (2023)

**Geary, Rebecca S et al. (2023).** Ambient greenness, access to local green spaces, and subsequent mental health: a 10-year longitudinal dynamic panel study of 2.3 million adults in Wales. The Lancet Planetary Health, Volume 7, Issue 10, e809 - e818 October 2023

**National Institute for Health and Care Research (NIHR)** news. Accessed at: <https://www.nihr.ac.uk/news/study-funded-by-nihr-highlights-inequalities-in-access-to-green-spaces-and-mental-health/34610>

## References for proposed theories

**Kaplan, R. and Kaplan, S. (1989).** The Experience of Nature: A Psychological Perspective. Cambridge University Press; New York, NY, USA: 1989.

**Bragg, R. & Atkins, G. (2016).** A review of nature-based interventions for mental health care. Natural England Commissioned Reports, Number 204. Accessed at: <https://publications.naturalengland.org.uk/publication/4513819616346112>

**Bird, W. (2007)** Natural Thinking, A report for the Royal Society for the Protection of Birds, Investigating the links between the Natural Environment, Biodiversity and Mental Health. Sandy: RSPB.

**Kaplan S, (1995)** The restorative benefits of nature: Toward an integrative framework. J. Environ. Psychol. 1995;15:169-182. doi: 10.1016/0272-4944(95)90001-2

**Taylor, A. F., Kuo, F. E. and Sullivan, W. C. (2001)** Coping with ADD: the surprising connection to green play settings. Environment and Behaviour, 33, 54-77.

**Berman M.G., Jonides J., Kaplan S. (2008)** The cognitive benefits of interacting with nature. Psychol. Sci. 2008;19:1207-1212. doi: 10.1111/j.1467-9280.2008.02225.x

**Kaplan, (1990)** ibid

**Hartig, T. and Staats, H. (2006)** The need for psychological restoration as a determinant of environmental preferences. Journal of Environmental Psychology, 26, 215-226

**Kaplan, (1995)** ibid

**Herzog, T.R. and Strevey, S.J. (2008)** Contact with nature, sense of humor, and psychological wellbeing. Environment and Behavior, 40, 747-776.

**Natural England. (2009)** Childhood and nature: A survey on changing relationships with nature across generations. Cambridgeshire: Natural England.

**Pretty, J.R. et al. (2017)** Green Mind Theory: How Brain-Body-Behaviour Links into Natural and Social Environments for Healthy Habits. Int. J. Environ. Res. Public Health 2017, 14, 706

**Pretty, J.R. et al. (2017)** Ibid

**O'Brien L. (2018)** Engaging with and Shaping Nature: A Nature-Based Intervention for Those with Mental Health and Behavioural Problems at the Westonbirt Arboretum in England. Int J Environ Res Public Health. Oct 10;15(10):2214.

**O'Brien L. (2018)** Ibid

**Pretty, J.R. et al. (2017)** Ibid

**Jax, K. et al. (2018)** Caring for nature matters: A relational approach for understanding nature's contribution to human well-being. Current Opinion in Environmental Sustainability, 35, pp. 22-29.

**O'Brien L. (2018)** Ibid

**University of Exeter (2021)** A Handbook for Nature on Prescription to Promote Mental Health.