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# Green social prescribing

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## 1. Green social prescribing

“There was a time when I felt like smashing up the flat. But I went out for a walk, and that helped... Sometimes, you don’t need a magic pill.”

“Being in nature helps me put things in perspective. The sun will always rise, no matter what’s happening for me.”

“Often, people will come to us with issues about loneliness or isolation. Getting them out into greener spaces is all they need to give them a lift. Especially if it helps them interact with other people.”

Green social prescribing is the practice of supporting people to engage in nature-based interventions and activities to improve their mental and physical health. Social prescribing link workers (and other trusted professionals in allied roles) connect people to community groups and

agencies for practical and emotional support, based on a 'what matters to you' conversation.

Most of us intuitively understand that being in nature is good for our health.

Yet how often do we 'prescribe it' for our patients?

*This article was updated in October 2024.*

You may find these associated articles helpful:

- *Social prescribing.*
- *Lifestyle (as) medicine: Why? What? How?*

## 1.1. Headlines

- The World Health Organization (WHO) describes nature as “our greatest source of health and wellbeing” ([WHO 2020](#)).
- Views of natural scenes calm the autonomic nervous system (J. Environ. Psychol.1995;15:77).
- Being in nature for as little as 5 minutes helps control blood sugar levels (Med Sci Sports Exerc. 2022;54:353).
- School pupils perform better on tests if their classroom has a view out onto a green landscape (J.Environ.Psychol.1995;15:77).

## 1.2. The science of green and blue space!

Green space refers to natural outdoor green environments such as parks, gardens, woodlands and other open areas. Blue space refers to natural

water environments such as rivers, lakes, canals and coastal areas (Int J Environ Res Public Health 2021;18(17):9010).

Today's science has proven that a startling range of health outcomes improve with exposure to nature, and that our modern environments may be causing us harm.

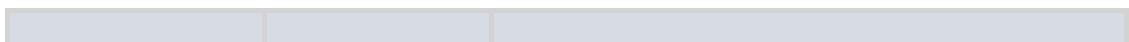
As little as 20 minutes in nature helps to alleviate stress and improves associated physiological biomarkers (Frontiers in Psychology 2019;10:722). A common figure that is highlighted is to aim for at least 120 minutes in nature per week because this resulted in consistently higher levels of both health and wellbeing compared with those with minimal contact. Interestingly, it did not matter how this was achieved, e.g. one big chunk or several quick visits (Sci. Rep. 2019;9:7730).

Gardens, parks, open country, forests, hills or beaches... even tree-lined streets have a measurable impact on wellbeing (Nature 2011;474:498).

Researching the impact of green and blue spaces is challenging due to the difficulty in establishing causation amidst confounding factors. Lower socioeconomic status is strongly linked to poorer health outcomes. Those with lower socioeconomic status often live further from safe, accessible, high-quality green spaces ([European Environment Agency: "Who benefits from nature in cities?"](#), Urban for Urban Green, 2014;13(1):1–18) so spending more time in nature may be a marker of affluence. Not all studies in this field account for such confounding variables.

However, as an intervention that poses minimal risk and is potentially cost-free, these barriers should not prevent action.

## How nature nurtures



Category	Effect	Details
<b>Vision</b>	Healthy vision development	Regular exposure to natural light and varied visual environments supports healthy eye development and counteracts myopia, a growing problem among UK children ( <a href="#">Ophthalmic Physiol Opt.</a> 2022; 42(3):545–558. <a href="#">BJ Opth</a> 2024.10.1136).
<b>Sleep</b>	Improved sleep, mental health and vitamin D	Sunlight exposure stimulates the Circadian rhythm and metabolism. It prompts vitamin D production and the pineal gland's regulation of melatonin, aiding sleep, protecting bones and supporting neuroprotection ( <a href="#">Somnologie (Berl)</a> . 2019; 23(3):147–156; <a href="#">JAHA</a> 2020;9:e015627. <a href="#">Nature Sci Rep</a> 2020;10, 4168).
<b>Cellular ageing</b>	Telomere length	Proximity to green spaces slows cellular aging by reducing the rate that telomeres shorten, predicting a longer lifespan ( <a href="#">Sci Total Environ</a> . 2023;905:1-9).
<b>Cell repair</b>	DNA maintenance	Even 10 minutes of brisk walking outdoors boosts cellular repair and DNA maintenance ( <a href="#">GeroScience</a> 2023;45(6): <a href="#">3211–3239</a> ).
<b>Surgical recovery</b>	Improved recovery time	One study explored post-cholecystectomy recovery for patients in the same hospital where some looked out onto a brick wall, while others had a tree view. Exposure to nature is so powerful that those with a tree view were discharged, on average, a day earlier, required fewer painkillers and reported fewer concerns to nurses ( <a href="#">Science</a> . 1984;224:420).

<b>Cardiovascular</b>	Lower blood pressure	Time spent in nature improves cardiovascular health, lowers blood pressure and is associated with lower all-cause mortality (BMJ 2023;383:p2745).
<b>Brain</b>	Amygdala activation	Urban stress leads to higher activation of the amygdala, the brain's fear centre (Mol Psychiatry 2022;27: 4446-4452).
<b>Stress</b>	Lowers our stress hormone, cortisol	Chronic stress is a key driver behind a plethora of long-term conditions. 'Shinrin-Yoku', or forest bathing, reduces salivary cortisol levels by 16% and increases parasympathetic nerve activity, promoting relaxation (Cells. 2023;12(23): 2726, Endocr. Rev. 2020;41:470-490, UFUG 2021;57:126932).
<b>Immune system</b>	Phytoncides	Phytoncides emitted by plants and trees have antimicrobial properties; these enhance immune function, reducing stress and increasing relaxation (J Environ Res Public Health. 2021;18(16):8440).
<b>The gut microbiome</b>	'Old friends'	Gut bacteria are refreshed by 'old friends' in the soil, water and air. This renews our microbiome, which is vital for central nervous system function. Exposure when we are young might play a role in preventing disease later in life (Proc. Natl. Acad. Sci. 2011;108(7):3047-3052, Int J Environ Res Public Health 2021;157:106811).

## The negative impact of our modern environments

Conversely, there is growing evidence that those dwelling in cities are more likely to experience chronic stress and mental distress.

- Psychosis is 77% higher in urban areas (BJPsych 2004;184:293).
- The less 'green' a person's everyday surroundings, the higher their risk of morbidity and mortality (J. Ment. Health 2021;30:179).
- Babies born to mothers who live near green space have a healthier birth weight and a reduced risk of preterm birth than babies who do not (Environment International 2022;170:107648), even when adjusted for socioeconomic status.

### 1.3. What is green social prescribing?

*"Green social prescribing is an exciting and fulfilling way of meeting patient need, whilst also relieving pressure on our services. It treats the whole person rather than just one aspect of their health. Regular walking in or just being out in nature should be advised for every patient." Dr William Bird (UK-based GP and pioneer in green social prescribing).*

Increasingly, we are coming to appreciate the importance of holistic personalised care in medicine, addressing the wider determinants of health. A nature-based solution is more likely to deliver health benefits long term by building healthier lifestyles, including physical activity (BMJ 2018;360:k1034; BMJ 2022;376:e068465). First, let's consider some examples of what green social prescribing may look like and then what different patient groups may need to access them.

#### Examples of green social prescribing

- Guided walking schemes.

- Parkrun and parkwalk.
- Community gardening or food growing.
- Conservation volunteering.
- Green (outdoor) gyms.
- Active travel (such as cycling).
- Caring for animals.
- Open-water swimming.
- Outdoor cultural/craft activities.
- Nature Moves: outdoor movement, play and connection for older populations.

These schemes have the added benefit of social interaction – connecting people to their wider community and giving them a sense of purpose.

So, no ice-cold plunges or mountain climbs are necessary! Unless that takes your fancy...

## **1.4. How can people access green social prescribing?**

- Referral sources are varied, and there is a green social prescribing 'ecosystem'.
- Those from low-income households are the least likely to (or to be able to) spend time in nature, as outlined previously. Additional factors to consider include accessibility restrictions due to physical and mental disabilities (Nature and public health: The role of nature in improving the health of a population. 1st edition by Matilda van den Bosch and William Bird. OUP 2018).

- Referring or engaging social prescribing link workers can help to overcome these barriers ([NASP 2022 How the natural environment can support health and wellbeing](#)).

## 1.5. Does it work?

- In terms of ‘what works’, the Cross Government Preventing and Tackling Mental Ill Health through Green Social Prescribing Programme 2021–2023 focused on how to improve the use of nature-based settings and activities to promote wellbeing and improve mental health. The programme involved over 8000 people with mental health difficulties, over 50% of whom were from marginalised communities experiencing health inequalities. It demonstrated statistically significant improvements in wellbeing (ONS4) and a social return on investment of £2.42 per £1 invested ([DEFRA Preventing and Tackling Mental Ill Health through Green Social Prescribing Project Evaluation - BE0191](#)).
- Green social prescribing can reduce the need for prescription drugs and medical appointments ([Preventing and Tackling Mental Ill Health through Green Social Prescribing](#)).
- Nature-based social prescriptions can benefit long-term health and wellbeing, and boost life satisfaction, particularly happiness ([DHSC 2023 Exploring perceptions of green social prescribing among clinicians and the public](#)).

## 1.6. How do I incorporate green social prescribing in my practice?



<p><b>Start with a 'What matters to you?' conversation</b></p>	<p><b>Use this to build your message.</b></p> <p>Many patients already appreciate the message that spending time in nature is an opportunity for relaxation, peace or maybe simply a change of perspective.</p> <p>Others would benefit from learning about its wider health benefits – and the science behind those benefits.</p>
<p><b>Find out what referral pathways are open to you</b></p>	<p>Green social prescribing referral pathways are being developed countrywide, but may vary in sophistication by region.</p>
<p><b>Build relationships between your practice and local service providers</b></p>	<p>Primary care staff can support green social prescribing by building relationships with local service providers. In Sheffield, they helped create the '<a href="#">Greenground map</a>', highlighting the network of green and blue spaces throughout the city.</p> <p>Consider who in your practice or network might be best placed and passionate about this. This could make a great leadership/quality improvement project.</p>
<p><b>Suggest simple interventions</b></p>	<p>Whatever our role, we can actively 'green' patient behaviour. Remember, the simplest and most accessible method of green social prescribing is simply going for a walk in nature!</p>
<p><b>Role-modelling</b></p>	<p>81% of clinicians spend a lot of their own time in nature, but what about our workplaces? (<a href="#">DHSC 2023 Exploring perceptions of green social prescribing among clinicians and the public</a>)</p> <p>Start by greening your own space. Fill your practice with prompts such as plants and inspiring pictures of nature.</p>

**If you are still looking for inspiration, here are a few phrases that might be**

## useful to get the science of green and blue spaces in our consultations:

*Did you know that:*

- *Looking at a natural view calms the body's stress responses?*
- *You may feel better when you're outside? Science tells us that nature reduces stress.*
- *A bit of fresh air helps sharpen the mind.*
- *Nature helps lower your blood pressure and cholesterol levels? Walking more can benefit your heart condition.*
- *Getting outdoors more often can help you sleep better? It stimulates your body's own sleep hormone. A better option than pills!*
- *By being out in nature (cue local area knowledge: by the sea, in the park, in the woods, or just in your garden) regularly, you improve [add patient's condition as appropriate]? You also reduce the risk of other conditions such as Alzheimer's or dementia.*

Further prompts:

- *Where is your favourite place to go and get some fresh air and a bit of nature time?*
- *What would make it easier/more likely for you/your family to get out into nature more often?*

## 1.7. Who benefits most?

Green social prescribing is suitable for everyone, but the evidence is strongest for those who:

- Need support with their mental health.

- Have complex social needs that affect their wellbeing.
- Are lonely or isolated.
- Have one or more long-term conditions.
- Are experiencing inequalities.

([DEFRA Preventing and Tackling Mental Ill Health through Green social prescribing Project Evaluation - BE0191](#))

## 1.8. Will patients buy into it?

Some patients may feel that they are being ‘fobbed off’. There may be a perception that going for a walk is not as effective as medication, but walking’s pedigree as a health intervention vs. other treatment options is strong (GeroScience 2023;45(6): [3211-3239](#), BJSM 2023;57:1203-1209).

Walking is an instant, free and easy way to improve levels of both physical activity and mental health. Evidence shows that individual activity choice is crucial for sustaining patient engagement (Health Psychol. Rev. 2021;16(2):220–256).

### **Branching out: can we overcome hurdles to nature?**

Alerted to the health benefits, some patients will be able to ‘go it alone’ because they have the capability, opportunity and motivation to make the behaviour change.

For others, it can be far more challenging. As highlighted above, access to green and blue spaces in the UK is strongly correlated with levels of deprivation, with research showing that people in the most deprived areas have less green or blue space within walking distance compared with those

in more affluent regions. Accessing these areas therefore comes at a greater cost and time (Am. J. Prev. Med. 2015;49(1):80-84, Health & Place 2019;59:102200, [European Environment Agency: "Who benefits from nature in cities?"](#)).

As healthcare professionals, we also have a differing ability to 'green' our practice depending on where we work. This is where green social prescribing comes in!

Green social prescribing attempts to mitigate the inequalities in access to nature, particularly in areas with poorer access (BJGP 2019;69(678):6-7). A report commissioned by Natural England outlines that a key requirement for good practice in green social prescribing is to attempt to remedy the disparity in access for those in socioeconomically deprived communities (<https://publications.naturalengland.org.uk/publication/5134438692814848>).

An example of this in action is the national initiative, [Our Parks](#).




Our Parks is a Sport England-funded UK initiative that focuses on areas of deprivation, offering free outdoor fitness classes in parks which are often underused due to safety concerns by residents. By partnering with local councils and delivering sessions led by qualified coaches, it helps to reduce barriers such as cost and location, encouraging more people to use green spaces for their health and wellbeing.

While still in its developmental stages, green social prescribing is viewed as a promising approach to mitigate built environmental inequities. Research tells us that six in ten patients are more likely to spend time in nature if advised to do so by a healthcare professional ([NASP 2022 How the natural environment can support health and wellbeing](#)).

However, for real justice, significant changes in urban design are needed to ensure all inhabitants have access to our natural spaces.

## Let's step outside together

Nature makes us healthier and helps us feel better, and there is ample evidence to support this. Let's 'green up' our prescribing!

	<p><b>Green social prescribing</b></p> <ul style="list-style-type: none"><li>• Taking time to be out in nature is so important for individual health that it makes sense to 'prescribe' it to our patients.</li><li>• Nature helps people to maintain their wellbeing and their mental resilience, but many of us have lost contact with it due to factors such as urbanisation.</li><li>• There is evidence to demonstrate the physiological changes that happen when we spend time in natural spaces.</li><li>• Green social prescribing is maturing across the UK.</li><li>• It can be accessed directly by the patient, but for those with greater barriers to accessing it, consider prescribing it or engage our social prescribers to.</li></ul>
	<p>How could you, as an individual or a practice, 'wild' your approach to health?</p> <p>Do you know what green social prescribing is available in your area?</p> <p>Could you ask the social prescribing link worker?</p>
	<p><b>Useful resources:</b></p> <p><u>Websites</u> (all resources are hyperlinked for ease of use in Red Whale Knowledge)</p> <ul style="list-style-type: none"><li>• The National Academy for Social Prescribing:<ul style="list-style-type: none"><li>• <a href="#">Full toolkit on green social prescribing</a></li><li>• <a href="#">How the natural environment can support health and wellbeing through social prescribing</a></li></ul></li></ul>

- Impact of social prescribing on health service use and costs
- Natural England
  - Links between natural environments and physical health - EIN066
  - Links between natural environments and mental health - EIN065
  - How the Natural Environment can support Children and Young People - EIN067
- IFF research - green social prescribing: what do patients, the public and clinicians think?
- NHS England - green social prescribing evidence, case studies and resources
- RCGP - parkrun practice initiative

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