

Cultivating Reciprocity Between People and Planet: Habit-Stacking Planetary Health Prescriptions Into Existing Nature RX Encounters During Integrative Health Visits

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Abstract

The reported benefits of nature contact on human health and well-being have prompted the rise of nature prescriptions with health professionals recommending nature exposure. Due to the success of nature prescriptions and calls for greater reciprocity between people and the planet, this essay proposes to leverage health behavior promotion strategies to integrate planetary health prescriptions (Earth RX) into existing nature prescription frameworks with a vision to counsel patients on both the health and well-being benefits of nature contact as well as earth-sustaining behaviors, all of which fosters a compassionate interdependence between personal and planetary well-being. The essay emphasizes the importance of co-designed stakeholder collaboration for program success, addressing factors such as trust, perceived benefits, and accessibility. Finally, this essay concludes that integrating Earth RX in nature prescription programs strategically aligns with the principles of integrative health, acknowledging the reciprocal relationship between human health and well-being and planetary well-being.

Keywords

behavioral medicine, community health partnerships, ecotherapy (nature therapy), health care, health promotion

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Growing public health research suggests the positive relationship between nature contact and improvements in various health outcomes in human beings.^{1,2} Over the past decade, one public health approach to promote increased nature contact has been through nature prescription programs (Nature RX). Nature RX programs are a type of nature-based social prescribing³ in which health professionals utilize the formal structure of a medical prescription to recommend increased time in nature, either for physical activity, recreation, relaxation, or to appreciate a different view.⁴ Myriad Nature RX programs exist across the United States, most of which are affiliated with “Park RX America”, and include participation from 35 states and almost 100 separate programs.⁵ A similar initiative in Canada called PaRX⁶ provides

patients with prescriptions to free annual passes to national parks and is used by thousands of health care professionals. A recent systematic review and meta-analysis of randomized and non-randomized nature prescription trials⁷ suggested that when compared with controls, there was greater reduction in

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systolic and diastolic blood pressure, decreased symptoms of depression and anxiety, and significantly more activity steps taken by Nature RX participants.

As this movement has gained momentum, some have called for a conceptual expansion from a transactional relationship of nature as “healthcare service provider”, to a transformational, reciprocal relationship in which our connectedness with the natural world might also benefit the health and well-being of the planet.⁸ The environmental philosopher Glenn Albrecht coined the term “Symbiocene”⁹ (from the Greek *symbiosis*, or companionship) as the next period of earth’s history (following our current Anthropocenic period) in which humans will symbiotically reintegrate themselves into nature and natural systems, affirming the interconnectedness of all living things. Such companionship, interdependence, and reciprocity between people and planet can take the form of respectful regard, pro-environmental action, and various environmental behaviors related to planetary stewardship. It often imbues a mindset (and heartset) of interconnectedness that helps us view ourselves not as separate from the natural world, but rather as part of it. Such a conceptual expansion towards interconnectedness is not new, and has roots in Traditional Chinese Medicine,¹⁰ Buddhist teachings,¹¹ and certain Indigenous perspectives.¹² Each has asked the question, “Where does the person end and nature begin?” Is it at the skin that comes in contact with the air? Or is it before this, when oxygen is received by the lungs? Is the health of our lungs separate or different from the health of the air? Given the human body and planet comprise primarily water, is the health of one body of water separate from the health of the other? If there is indeed no separation, are we then simply perpetuating the same kind of Cartesian dualism between people and planet that we have effectively done between mind and body? Adopting a mindset marked by non-dual, interconnectedness between people and planet may be a helpful starting place from which our transactional, hedonistic, consuming, wasteful, and harmful behaviors can begin to shift.

Research has found an increase in pro-environmental attitudes and behaviors (e.g., recycling, buying eco-friendly products and locally grown food, choosing to walk or ride a bicycle vs drive), from positive experiences and heightened emotions after nature exposure and connection.^{13,14} As more people take to the outdoors through Nature RX programs, the development of these pro-environmental attitudes and behaviors is exciting to witness. Yet, despite positive emotions often serving as an important foundation upon which positive health behaviors form¹⁵ (and pro-environmental actions are indeed positive health behaviors), experiencing good feelings alone without additional social, cognitive, and behavioral nudging is generally insufficient for new healthy habits and behaviors to be initiated and maintained.¹⁶ Since not everyone consistently experiences increased affinity to nature after exposure, new creative avenues should be explored to achieve purposeful, enacted reciprocity between people and the planet.

The Nature RX movement is an implementation exemplar worth examining for this purpose, and possibly habit-stacking. Habit stacking (or piggybacking) is a behavioral strategy¹⁶⁻¹⁸ that involves pairing a new health habit or behavior with an existing one to exploit the cue salience - response architecture, and in turn, leverage the power and momentum of the existing habit to create and support the new one. For example, if you want to start flossing your teeth every day, you could stack this habit on top of your existing habit of brushing your teeth.¹⁹

Given the initial effectiveness of Nature RX programs, including their popularity, feasibility, and early indicators of efficacy⁴⁻⁷ what if they could be habit-stacked with something like “Earth RX”, a planetary health prescription? What if in the same nature prescription encounter that describes the health benefits of nature contact, individuals could also be counseled on the benefits of personal actions to preserve and protect the health of their community, region, and even the planet? What if in addition to receiving a tailored nature prescription to go for a walk in a nearby forest preserve twice a week, in this same conversation individuals could also receive a prescription to pick up any trash they find during their walk and appropriately dispose of it? Or, maybe they could receive a prescription to take reusable grocery bags when shopping (instead of paper or plastic bags), take a travel mug or ceramic coffee cup to work (instead of using a disposable one), turn off lights in each room when not in use, and wash and reuse plastic zip-lock bags before using new ones. Healthcare organizations could play a role and more broadly promote their Earth RX initiatives through marketing and advertising opportunities. For example, they could make sure that all patients who receive Earth RX prescriptions can “fill” them by picking up a reusable, institutionally branded grocery bag and travel mug. There might even be a motivational note attached on recycled paper that educates on the environmental impact of doing these things, similar to when hotels tell you how much water you’ll save by having your room cleaned every other day instead of daily. By piggybacking Earth RX onto existing Nature RX encounters, busy health professionals will not have to create a new structure or system. Plus, prescribing planetary health behaviors sends an important healthcare value and statement that the health and well-being of people and the health and well-being of the planet are inextricably linked, and as such, both are the responsibility of our healthcare system.²⁰

Adherence to social prescription programs (like Nature RX) is reported to be higher when factors such as trust, perceived benefits, and access and/or affordability are involved.²¹ Further, social prescription programs are most effective, equitable, and financially sustainable when co-designed with stakeholders to ensure achievability, acceptability, and cultural congruence.²² What good does it do to prescribe walking in greenspace to someone who lives in a city without the means of traveling to greenspace, or where the only nearby greenspace is inaccessible or unsafe?

Therefore, working closely with a diverse group of local stakeholders (e.g., patients, caregivers, health professionals, Planetary Health experts) to create relevant and achievable Earth RX behaviors is imperative for offering effective strategies that establishes trust and meets these standards. Because not everyone is able to compost, use public transit, or bicycle for short errands does not mean that there is not something else that is actionable for that individual.

People often feel overwhelmed and ineffective when believing that their individual actions can have any meaningful impact on the health and well-being of the planet given the enormity of what needs to be done. Therefore, helping to define and reframe what planetary health and well-being means can help this become more personal and in turn, more possible. For example, although recycling may not be the sole solution to reversing climate change, it can lead to reductions in the amount of waste being sent to landfills or decrease the need to manufacture new products.²³ It may also be helpful to point out that proactively doing things for the health and well-being of the planet has co-benefits for people as well, such as active transport and consuming less red meat. Finally, appeals that help patients think about the consequences of their actions on *others* vs themselves may also motivate action.¹⁸ To this end, a hospital-based hand-washing campaign increased hand-washing by 10% and soap use by 45% when the appeal was changed from “Hand hygiene helps *you* from catching diseases” to “Hand hygiene helps *patients* from catching diseases.”²⁴

Most of the nature and human health research to date focuses exclusively on the unidimensional, transactional health benefits that nature offers people.²⁰ The strategy proposed herein, to piggyback Planetary Health education and behavioral tools on the already accepted structure and momentum of Nature RX, is a creative solution that may help facilitate planetary stewardship, especially when suggested by trusted health professionals. In fact, Mellor et al²⁰ have advocated for more active involvement of health professionals to “weave greener interventions” into their regular care of patients and interactions with others in their healthcare systems. This active involvement includes linking nature restoration initiatives to health, speaking up at meetings and with peers that nature access is an essential human right and matter of health equity, pressuring their own institutions to improve green spaces and offer patients nature RX opportunities, and pushing for more research, funding, and policy change to support nature restoration initiatives. While hospital administrators and leaders might balk at a request for more time, resources, and funding to incorporate Mellor’s recommendations, our piggy-backing approach is budget neutral by capitalizing on the existing Nature RX framework. This in turn increases the readiness, enthusiasm, and likelihood of adoption by both patients and healthcare systems.

The field of integrative, whole person health is uniquely positioned to prioritize and lead efforts that recognize enacted reciprocity between people and planet.²⁵ Implementing Earth

RX within the structure of existing Nature RX programs is organic to the work of integrative health professionals who recognize the interdependent relationship between humans and nature. Making this a part of health and well-being discussions in the clinic, community, and beyond, ultimately supports a more sustainable, reciprocal, and interconnected world.

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References

1. Jimenez MP, DeVille NV, Elliott EG, et al. Associations between nature exposure and health: a review of the evidence. *Int J Environ Res Public Health*. 2021;18(9):4790. doi:10.3390/ijerph18094790
2. Bratman GN, Anderson CB, Berman MG, et al. Nature and mental health: an ecosystem service perspective. *Sci Adv*. 2019; 5(7):eaax0903. doi:10.1126/sciadv.aax0903
3. Leavell MA, Leiferman JA, Gascon M, Braddick F, Gonzalez JC, Litt JS. Nature-based social prescribing in urban settings to improve social connectedness and mental well-being: a review. *Curr Environ Health Rep*. 2019;6(4):297-308. doi:10.1007/s40572-019-00251-7
4. James JJ, Christiana RW, Battista RA. A historical and critical analysis of park prescriptions. *Journal of Leisure Research*. 2019;50:311-329.
5. Zarr R, Cottrell L, Merrill C, Park RX. Park prescription (dc park rx): a new strategy to combat chronic disease in children. *J Phys Act Health*. 2017;14(1):1-2. doi:10.1123/jpah.2017-0021
6. Pruitt-Young S. A new program in Canada gives doctors the option of prescribing national park visits. <https://www.npr.org/2022/02/09/1079356799/a-new-program-in-canada-gives-doctors-the-option-of-prescribing-national-park-visits>
7. Nguyen PY, Astell-Burt T, Rahimi-Ardabili H, Feng X. Effect of nature prescriptions on cardiometabolic and mental health, and physical activity: a systematic review. *Lancet Planet Health*. 2023;7(4):e313-e328. doi:10.1016/S2542-5196(23)00025-6
8. Varanasi U. Focusing attention on reciprocity between nature and humans can be the key to reinvigorating planetary health. *Ecopsychology*. 2020;12(3):188-194. doi:10.1089/eco.2020.0011

9. Albrecht G. Ecopsychology in the symbiocene. *Ecopsychology*. 2014;6(1):58-59. doi:[10.1089/eco.2013.0091](https://doi.org/10.1089/eco.2013.0091)
10. Hou W. Reflections on Chinese traditional ideas of nature. *Environ Hist Durh N C*. 1997;2(4):482-493. doi:[10.2307/3985610](https://doi.org/10.2307/3985610)
11. Li Y, Zeng G, Wang L, Tan K. Accurate stride-length estimation based on LT-StrideNet for pedestrian dead reckoning using a shank-mounted sensor. *Religions*. 2023;14(9):1170.
12. Redvers N, Aubrey P, Celidwen Y, Hill K. Indigenous Peoples: Traditional knowledges, climate change, and health. *PLOS Glob Public Health*. 2023;3(10):e0002474. doi:[10.1371/journal.pgph.0002474](https://doi.org/10.1371/journal.pgph.0002474)
13. DeVille NV, Tomasso LP, Stoddard OP, et al. Time spent in nature is associated with increased pro-environmental attitudes and behaviors. *Int J Environ Res Public Health*. 2021;18(14):7498. doi:[10.3390/ijerph18147498](https://doi.org/10.3390/ijerph18147498)
14. Martin L, White MP, Hunt A, Richardson M, Pahl S, Burt J. Nature contact, nature connectedness and associations with health, wellbeing and pro-environmental behaviours. *Journal of Environmental Psychology*. 2020;68:101389. <https://doi.org/10.1016/j.jenvp.2020.101389>
15. Van Cappellen P, Rice EL, Catalino LI, Fredrickson BL. Positive affective processes underlie positive health behaviour change. *Psychol Health*. 2018;33(1):77-97. doi:[10.1080/08870446.2017.1320798](https://doi.org/10.1080/08870446.2017.1320798)
16. Gardner B, Arden MA, Brown D, et al. Developing habit-based health behaviour change interventions: twenty-one questions to guide future research. *Psychol Health*. 2023;38(4):518-540. doi:[10.1080/08870446.2021.2003362](https://doi.org/10.1080/08870446.2021.2003362)
17. Clear J. *Atomic habits : tiny changes, remarkable results : an easy and proven way to build good habits and break bad ones. Avery, an imprint of*. New York: Penguin Random House; 2018: 306
18. Rothman AJ, Gollwitzer PM, Grant AM, Neal DT, Sheeran P, Wood W. Hale and hearty policies: how psychological science can create and maintain healthy habits. *Perspect Psychol Sci*. 2015;10(6):701-705. doi:[10.1177/1745691615598515](https://doi.org/10.1177/1745691615598515)
19. Judah G, Gardner B, Aunger R. Forming a flossing habit: an exploratory study of the psychological determinants of habit formation. *Br J Health Psychol*. 2013;18(2):338-353. doi:[10.1111/j.2044-8287.2012.02086.x](https://doi.org/10.1111/j.2044-8287.2012.02086.x)
20. Mellor C, Botchway S, Barnes N, Gandy S. Seeding hope: restoring nature to restore ourselves. Nature restoration as an essential mental health intervention. *Int Rev Psychiatry*. 2022; 34(5):541-545. doi:[10.1080/09540261.2022.2092391](https://doi.org/10.1080/09540261.2022.2092391)
21. Pescheny J, Randhawa G, Pappas Y. Patient uptake and adherence to social prescribing: a qualitative study. *BJGP Open*. 2018; 2(3):bjgpopen18X101598. doi:[10.3399/bjgpopen18X101598](https://doi.org/10.3399/bjgpopen18X101598)
22. Astell-Burt T, Pritchard T, Francois M, et al. Nature prescriptions should address motivations and barriers to be effective, equitable, and sustainable. *Lancet Planet Health*. 2023; 7(7):e542-e543. doi:[10.1016/S2542-5196\(23\)00108-0](https://doi.org/10.1016/S2542-5196(23)00108-0)
23. Crunden EA. *How useful is recycling, really?* Washington, DC: The Atlantic; 2021.
24. Grant AM, Hofmann DA. It's not all about me: motivating hand hygiene among health care professionals by focusing on patients. *Psychol Sci*. 2011;22(12):1494-1499. doi:[10.1177/0956797611419172](https://doi.org/10.1177/0956797611419172)
25. Logan AC, Langevin HM, Langevin HM. Spotlight: an interview with NCCIH director, Dr. Helene M. Langevin, on whole person health. *on Whole Person Health. Challenges*. 2022;13(2):42.