Engaging our Patients in Real Change for our Planet

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"You carry Mother Earth within you. She is not outside of you. Mother Earth is not just your environment. In that insight of inter-being, it is possible to have real communication with the Earth, which is the highest form of prayer." ~ Thich Nhat Hanh

y Uncle insists that climate change is a natural process existing irrespective of our individual or collective actions. "The world is warming up anyway so why should I reduce my waste or carpool to work?" Some of my patients share this viewpoint and offering them scientific evidence to the contrary is unlikely to encourage behaviour change. But even our patients and colleagues who most strongly believe in anthropogenic climate change, find our environmental crisis so devastating that they're immobilized; the responsibility feels overwhelming and the impact of actions taken feels insignificant. As healthcare professionals, many of us are acutely aware of the health threats posed by climate change, from Northward advancement of tick vectors and newly established colonies of exotic mosquito species, to cardiac conditions aggravated by air pollution, and mental health concerns characterized by "eco-anxiety" and PTSD.1-5 We recognize that somehow, we must convince our patients to move beyond the inertia towards effective change. This is where I feel so fortunate to be part of a profession perfectly placed to do this, for at least 3 reasons.

As naturopathic doctors, we spend a lot of time encouraging our patients to adapt their behaviour toward healthier outcomes. We understand that healthier choices, such as choosing organic produce and riding our bike to work, are frequently also environmentally responsible choices, but few patients take time to consider why this is. They don't yet understand that humans are more than stewards of our environment - we're manifestations and extensions of it. I offer my patients at least three examples of this:

First, I often speak about our human microbiome as an ecosystem analogous to the microbiome in soil. Resiliency of ecosystems such as these are defined by species diversity, so that a healthy human or garden benefits from early exposure to microbe-rich environments. Climate change threatens microbial diversity globally and some concern exists for extinction of essential human gut microbes, with unknown consequences.6 Second, I might remind patients about how our circadian rhythms (centrally and in our organs), move along with Earth's rhythms. Environmental exposures that interrupt these rhythms, such as urban light pollution, electromagnetic fields

and possibly even climate change directly, are correlated to a variety of health concerns, including through their impact on sleep quality.⁷⁻⁸ Deep restorative sleep in which we heal from toxic environmental exposures, requires that we're in sync with these rhythms. 9-10

Some patients respond more to a conversation about epigenetics and an exploration of how our DNA is manipulated by cumulative lifetime environmental exposures. 11-12 Others are more interested in Traditional Chinese Medicine or Ayurvedic systems of healing, and their perception of humans as microcosms of the environment date back thousands of years. Climate change itself reflects the dance between the Earth's fire, water, and carbon cycles, in which deforestation (carbon) changes the water cycle, leading to more intense droughts and wildfire risk in distant regions. 13-14

By teaching patients that every facet of their biology is influenced by environmental exposure, we've taken climate change from an intangible, global phenomenon to one that's incredibly personal. This is a significant motivator of lasting change. Given that NDs already tend to view the body as ecosystems with infinite interconnected parts, I can't think of another health profession more prepared for this role of Teacher in the effort toward environmental sustainability. I've posted my patient handout on our website and encourage you to share it or reproduce it in your own style, to help motivate your patients towards deeper positive lifestyle change in partnership with our environment.

This takes us to the next reason why our profession is primed to make lasting change in the face of climate change. Experiencing climate change as a personal phenomenon naturally encourages a sense of environmental responsibility but, like any responsibility, the obligatory lifestyle changes can quickly transition from inspiration to burden and chore. This is our opportunity to reframe the discussion about climate change from one of conflict (i.e. fighting the enemy), to one of connection. Rather than giving up lifestyle luxuries to reduce greenhouse gas emissions and win the battle, this process of change is about gaining a deeper connection to our environment through our day-to-day experiences. Research tells us repeatedly that

our immune system, nervous system, and endocrine systems benefit tremendously from time outdoors and we see significant cultural shifts towards appreciation for mindfulness and forest bathing, over material goods. ¹⁵⁻¹⁶ As Naturopathic Doctors, our willingness to bring the spirituality back into medicine offers our patients the chance to rediscover their innate connection with our environment and themselves. From this perspective climate change isn't our enemy – it's our teacher.

Finally, let's explore how naturopathic interventions also contribute unique approaches for addressing the current climate crisis. This became clearer to me about 12 years ago after serving on a board with Health Canada officials, whose purpose was to help Canadian communities adapt to the effects of extreme heat events. At the time, this meant preventing adverse health outcomes by implementing early warning systems for communities, and training physicians and vulnerable populations about how to stay cool during extreme heat events. It meant removing people from the harmful environment or applying technology to change the environment. However, in my work as a Naturopathic Doctor, "adapting" also means directly supporting how a human body operates in the given environment. In the current climate crisis, where change is happening now and progressively so, this form of adaptation is a critical ally. Botanical adaptogens, interventions that improve organ reserve, and recommendations designed to reverse heart disease rather than suppress symptoms (which can make us less adaptable to external temperatures), are all examples of how NDs are well placed to help our patients adapt to the upcoming climate changes. And of course, helping patients mitigate environmental toxic exposure improves adaptability already, and with a positive feedback loop of our own that reduces ecological damage.

When communicating with patients about the impact of the environment on their health, I find it useful to apply the concepts of Environmentally-Acquired Illness (EAI). On the surface, a literature review of climate change and disease reveals a shocking list of health conditions ranging from pulmonary and cardiac conditions, to cancer and infectious or zoonotic illness. The Lancet Commission on Pollution and Health further states that "pollution, which is "intimately linked to global climate change", is the largest environmental cause of disease and death in the world today". ¹⁷ But EAI provides a framework for exploring *how* environmental contaminants can contribute to complex chronic conditions such as Fibromyalgia and Multiple Chemical Sensitivity, from a systems biology approach. ¹⁸

There's one final lesson to flesh out of this new climate change discussion. In his book, "Climate, A New Story", Charles Eisenstein suggests that climate change is the second world event to teach humanity that we're all intimately connected. (The first event was the use of the atomic bomb.) What you do affects me and what I do affects you. He suggests that climate change is an initiation process that brings communities closer together through deeper awareness of our connection to each other. From a business perspective,

this means that embracing ecological health as a professional responsibility is a naturally community-driven approach that can strengthen your reputation and broaden your reach as a naturopathic doctor. Since including environmental responsibility in our clinic mandate 6 years ago, the business benefits have been significant and rewarding. Teaching patients how to source environmentally-responsible products has required networking with many like-minded businesses and identifying strategic community partners. It's put us in touch with patients who are unfamiliar with naturopathic medicine but who more quickly grasp "root cause" approaches with belief systems that align well with ours. We've enjoyed increased internet traffic with social media campaigns that engage people with healthy behaviours, such as the David Suzuki Foundation outdoor challenge, and have connected with hundreds more like-minded people through various fundraising events.

As we take ourselves and our patients through the process of aligning our activities with the needs of our environment, at some point the deepening awareness of vast global ecological destruction becomes too overwhelming. During these times I like to remember one of our guiding principles, "The Healing Power of Nature". It refers just as much to the ability of ecosystems to regenerate, as it does to our own body's capacity for healing. Life is resilient and sometimes just the smallest nudge triggers profound healing.

About the Author

Dr. Sonya Nobbe ND graduated from CCNM in 2007. She is the founder of Kingston Integrated Healthcare Inc., a multi-disciplinary facility that brings together a dozen health professionals for deeper collaboration and professional growth. 2019 marks their 10-year anniversary! With the help of her team, Sonya enjoys supporting patients with complex chronic conditions, such as Chronic Fatigue Syndrome, Fibromyalgia, Multiple Chemical Sensitivity, and Lyme disease. She welcomes your interest and inquiries: www.KIHC.ca.

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References

- Greig JD, Young I, Harding S, Mascarenhas M, Waddell LA. A scoping review of Lyme disease research relevant to public health. *Can Commun Dis Rep.* 2018;44(10):243–56. https:// doi.org/10.14745/ ccdr.v44i10a03
- Ng V, Rees EE, Lindsay LR, Drebot MA, Brownstone T, Sadeghieh T, Khan SU. Could exotic mosquito-borne diseases emerge in Canada with climate change? *Can Commun Dis Rep.* 2019;45(4):98–107. https://doi.org/10.14745/ccdr.v45i04a04
- Smith KR, Woodward A, Campbell-Lendrum D., Chadee DD, Honda Y, Liu Q, Olwoch JM, Revich B., Sauerborn R. Human health: impacts, adaptation, and co-benefits. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA; 2014:709-754.
- Lelieveld J, Klingmuller K, Pozzer A, et al. Cardiovascular disease burden from ambient air pollution in Europe reassessed using novel hazard ratio functions. *European Heart Journal*. May 2019;40(20):1590–1596. https://doi.org/10.1093/ eurheartj/ehz135
- Clayton S, Manning CM, Krygsman K, Speiser M. Mental Health and Our Changing Climate: Impacts, Implications, and Guidance. https://www.apa.org/images/mental-health-climate_ tcm7-215704.pdf. Washington, D.C.: American Psychological Association, and ecoAmerica; 2017.
- Karl JP, Hatch AM, Arcidiacono SM, et al. Effects of Psychological, Environmental and Physical Stressors on the Gut Microbiota. Front Microbiol. Sept 2018;11(9):2013. doi: 10.3389/fmicb.2018.02013.
- Rifkin DI, Long MW, Perry MJ. Climate Change and sleep: A systematic review of the literature and conceptual framework. Sleep Medicine Reviews. Dec 2018;42:3-9. doi.org/10.1016/j. smrv.2018.07.007
- 8. Obradovich N, Migliorini R, Mednick SC, Fowler JH. Nighttime temperature and human sleep loss in a changing climate. *Science Advances*. May 2017:3 (5), e1601555. DOI: 10.1126/sciadv.1601555.
- 9. Dave RS, Jain P, Byrareddy SN. Functional Meningeal Lymphatics and Cerebrospinal Fluid Outflow. *J Neuroimmune Pharmacol.* Jun 2018;13(2):123-125. doi: 10.1007/s11481-018-9778-5.

- Hablitz LM, Vinitsky HS, Sun Q, et al. Increased Glymphatic Influx is Correlated With High EEG Delta Power and Low Heart Rate in Mice Under Anaesthesia. *Science Advances*. Feb 2019;5(2):eaav5447. DOI: 10.1126/sciadv.aav5447.
- 11. Burggren W. Epigenetic Inheritance and Its Role in Evolutionary Biology: Re-Evaluation and New Perspectives. *Biology* (Basel). May 2016;5(2):E24. doi: 10.3390/biology5020024.
- 12. Skinner MK. Environmental Epigenetics and a Unified Theory of the Molecular Aspects of Evolution: A Neo-Lamarckian Concept that Facilitates Neo-Darwinian Evolution. Genome Biol Evol. Apr 2015;7(5):1296-302. doi: 10.1093/gbe/evv073.
- 13. Bonan GB, Doney SC. Climate, ecosystems, and planetary futures: The challenge to predict life in Earth system models. Science. Feb 2018;359(6375):eaam8328. DOI: 10.1126/science.aam8328.
- 14. Ellison D, Morris CE, Locatelli B, et al. Trees, Forests and Water: Cool Insights For A Hot World. *Global Environmental Change*. Mar 2017;43:51-61. https://doi.org/10.1016/j.gloenvcha.2017.01.002.
- 15. Hansen MM, Jones R, Tocchini K. Shinrin-Yoku (Forest Bathing) and Nature Therapy: A State-of-the-Art Review. *Int J Environ Res Public Health*. Jul 2017;14(8):E851. doi: 10.3390/ijerph14080851.
- 16. Andersen, J. Minding the Gap Between Awareness and Behavior: Roles of Mindfulness and Connectedness to Nature in Fostering Ecological Behavior. [Master's thesis]. Cambridge, Massachusetts: Harvard Extension School; 2017. http://nrs.harvard.edu/urn-3:HUL.InstRepos:33826274.
- 17. Landrigan PJ, Fuller R, Acosta NJR, et al. The Lancet Commission on Pollution and Health. *Lancet*. Feb 2018;391(10119):462-512. DOI:https://doi.org/10.1016/S0140-6736(17)32345-0.
- 18. International Society for Environmentally Acquired Illness. ISEAI.org. 2019. Accessed August 11, 2019.
- 19. Eisenstein, C. *Climate: A New Story*. Berkeley, California: North Atlantic Books; 2018.