Could a dose of nature be just what the doctor ordered?

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Numerous studies over the past 30 years have linked exposure to nature with improved human health and well-being. These findings are of growing importance: In the near future, 70% of the world's population will live in cities, where they will face a rising tide of lifestyle-related disease. Still, little is known about the mechanisms underlying the nature-health connection, and confusion awaits those who would transform existing findings into action.

In the June issue of BioScience, a group of biologists and public health experts led by Danielle F. Shanahan address this knowledge gap by examining nature through the lens of medical thinking. Their aim is to establish a basis for studying exposure to the outdoors in much the same way that a researcher would study a medicine, through dose-response modeling. With this approach, a precise "nature dose" would be evaluated for its ability to produce a health response. The authors hope that such inquiry will help research move beyond coarse measures of nature dose "to understand how urban nature can be manipulated to enhance human health."

Nature exposure can occur in a variety of ways, from rural forest excursions to greenery viewed from an office window, and the differential effects of exposures require careful study. In fact, one important feature of such modeling is that more of a good thing—even nature—may not always be better. The authors describe several possible dose-response curves and find that plateaus in health responses are to be expected. Surprisingly, increased crowding and complexity of greenery
in cities could even "decrease a person's feeling of safety and increase stress," say Shanahan and her colleagues.

As is often the case, the researchers state that progress will be made only when researchers work outside of their traditional subject-matter silos. For early findings to become recommendations, input from a variety of fields will be needed to untangle the complex web of socioeconomic, health, and ecological factors that surround the nature-health connection. According to the authors, this will require "a new research direction" that relies on "much closer collaboration among health scientists, ecologists, and sociologists."


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