Bringing forests to the city: 10 ways planting trees improves health in urban centers

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Keeping people in cities healthy, especially in poorer neighborhoods, is challenging. One simple, effective and scientifically proven prescription for better health is planting more trees.

The idea of planting more trees in urban environments is so simple, affordable and effective that it's hard to understand why we aren't

applying it more urgently, especially with [mountains of evidence](#) to show how much good trees can do.

Environmental epidemiologist [Mark J. Nieuwenhuijsen](#) provided an easy way to remember how important they are: [the 3-30-300 rule](#), which suggests that for optimal health, everyone should be able to see at least three trees from home, live under a neighborhood canopy of at least 30 percent tree cover and within 300 meters of a green space of at least one hectare.

Trees and urban health

While trees are beautiful and certainly benefit the environment, the most practical argument for planting more is that they provide a demonstrable public health benefit, both in the preventive and therapeutic sense.

As a physician and researcher, that's something I say with the confidence of experience, but there is also powerful evidence behind the assertion.

Here are 10 ways planting more trees in cities makes people healthier:

1. A meta-analysis showed that an increase in vegetation was significantly associated [with two to three percent lower odds of mortality from cardiovascular disease](#). These studies included data from 18 countries and over 100 million people.
2. By improving health, trees [reduce the cost of health care](#), allowing a strained system to take care of more people.
3. Trees [help reduce ground-level concentrations of urban air pollution](#), especially in areas with high pollution concentrations, as such improving air quality.
4. Trees provide shade that cools hot urban environments, including buildings with no air conditioning. [Less heat in summer means fewer premature deaths](#).

5. Trees promote healing. A [study in a Pennsylvania hospital](#) compared post-surgery outcomes for gallbladder patients who recovered in rooms with a treed view to patients in rooms facing a brick wall. Those with a treed view had shorter stays and needed fewer pain medications overall.

6. Trees improve mental well-being. [A published study](#) showed that people who walked 90 minutes in a natural setting experienced less repetitive negative thinking, or rumination, which is corrosive to mental health. Spending time in natural environments has also been shown to be helpful in alleviating the symptoms of post-traumatic stress disorder, anxiety, depression and anger disorder.

7. Trees are an important element of [outdoor environments that support physical activity](#).

8. People who live among trees and other greenery [get more sleep](#), which directly benefits physical and mental well-being.

9. Playing regularly in green spaces is [linked to milder symptoms](#) for kids with ADHD ([attention deficit hyperactivity disorder](#)).

10. Adding trees is [strongly associated with reduced crime](#), while removing trees is strongly associated with increased crime.

Bringing trees to hospital patients

My medical practice includes serving vulnerable patients through the [Shelter Health Network](#) and at a chronic-care hospital, both in central Hamilton, Ont. At the former, I work mainly with men coping with homelessness, addiction and, typically, mental health issues such as major depression, post-traumatic stress disorder and anxiety.

At St. Peter's Hospital, I work with frail elderly people and other patients whose continuing health-care needs are too great for residential facilities.

When patients arrive at the facility and see the treed courtyard and the forested face of the nearby Niagara Escarpment, they often tell me they feel better already.

Just blocks away, though, it's all too easy to find desolate tracts of sun-bleached pavement and bleak, nearly treeless vistas where people live, work and go to school.

In 2012, biologist Lorraine Ironside and I started [Trees for Hamilton](#) and our charitable organization continues to advocate for, and assist with, planting trees on the grounds of medical-care facilities, such as our long-term project to plant 70 trees on the inner-city grounds of Hamilton General Hospital.

The idea is that when patients can't get to trees, we bring trees to them by planting what we call a health-care forest.

So far, the group has co-organized 80 events and planted 5,000 trees with the help of more than 500 volunteers. Our members have made presentations to community and academic groups about the benefits of trees and organizing similar projects.

Using the knowledge and experience we have developed there, we have since started a related national effort called [Canadian Health Care Forests](#), partnering health-care professionals with tree-planting charities across the country to get more trees planted on the grounds of hospitals and clinics.

These organizations are, in turn, associated with several groups that advocate and raise money for tree planting, or which plant trees directly.

Trees in Canadian cities

It's not always easy to find urban places to plant more trees. We have found that a surprising number of homeowners, for example, are not interested in having trees in their yards, because they drop leaves, twigs, cones and bud covers—stuff that needs to be cleaned up. We try to show them how it's more than worth the trouble.

Parks and parkettes downtown could use more trees, but sometimes communities don't want them because they're worried about providing cover for crime. That could maybe be true for bushes and evergreens, but deciduous trees don't obstruct the view in a meaningful way.

Even after urban trees are planted, it can be challenging to protect them. "Weed-whacking" is a distinct threat to tender young trunks, especially on public property, as is the lack of watering. These problems are simple to solve, though, compared to the human problems that a healthy tree canopy helps to address.

In Hamilton, we have about 20 percent urban tree cover overall—only half as much in the most challenged neighborhoods—with a goal to reach 40 percent by 2050, aided by free trees from municipal and non-profit programs. Getting there would require planting about one million new trees.

Nature Canada's September 2022 report, Bringing the Canopy To All, found a range of coverage in other Canadian cities, including 20 percent in Montréal, 28 percent in Toronto, 23 percent in Vancouver and eight percent in Calgary.

Bringing these numbers up to 30 or 40 percent will be challenging, but it's far from impossible to reach such a goal.

If people in every city could make a priority of planting more trees, the benefits for all would be lasting and apparent, far exceeding the cost.

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