



# Healthy Trees, Healthy Lives

## Ten Foundations for Healthy Communities:

1. A sustainable and well managed street tree population that not only incorporates street trees in neighborhoods but also in business districts, industrial zones and along freeways and collector roads.
  - a. In 50% shade, sunburn protection can be 2.5 times longer than when in direct sunlight. In 100% shade, sunburn protection is 5 times as long (1)
  - b. 10% increase in neighborhood canopy can decrease pre-term births and increase birth weights up to 15g (2)
  - c. Tree lined streets can reduce accidents by 5 – 20% and boost pedestrian use (3)
2. Adequate distribution throughout the community of parks, pocket parks, community gardens.
  - a. Low-income communities with high levels of residential greenery have similar mortality rates as higher socio-economic level communities (4)
  - b. Risk of developing cardiovascular disease and respiratory problems is 1.5 times greater for those living more than two blocks from a park or treescaped area (5)
  - c. Treescapes and other green spaces can lead to more (3 times more likely) and longer duration of physical activity (6) and reduce childhood obesity by 12% (7)
3. A health care network that supports treescapes in healing and mental health.
  - a. Recognize the importance of treescapes to mental health.
    - i. Dementia patients with access to treed “wander gardens” saw reduced falls by 30% and medications by 10% (8)
    - ii. Living more than 1km (.6 miles) from green space have 1.42 higher odds of experiencing stress than those living less than 300 meters (328 yards) (9)
    - iii. Employees with views of trees from their desks take 14% less sick days than those without (10)
  - b. Involve trees in healing and recovery
    - i. \$2,200 reduction in average annual healthcare charges per adult for those who were sedentary but became active (11)
    - ii. Views of nature and treescapes reduces recovery time and amount of pain medication (12)
    - iii. Interacting with natural environments and treescapes can improve attentional fatigue both before and after breast cancer treatment or surgery (13)



- c. An active community garden program incorporating fruit and nut trees
    - i. People are up to 3.5 times more likely to consume recommended servings of fruits /vegetables (14)
    - ii. Physical and perceived stress levels decreased significantly among individuals between 50 and 88 years old who maintained a community garden plot compared with those who exercised indoors (15)
    - iii. Improved ability to cope with chronic pain (16)
4. Design and plan for nature
- a. Integrating treescapes, such as atriums and window vies, into building design improve work and learning capabilities and lead to calmer mental states (17)
  - b. Increased species diversity is connected with better psychological benefits of treescapes (18)
  - c. Use of plants and other outdoor props by children promotes increased innovative play, enhancing social and cognitive benefits (19)



5. Green infrastructure as part of the built environment enhances both water and air quality—and human health
- a. Reduces exposure to harmful substances and conditions by filtering runoff and absorbing air pollutants while providing opportunities for recreation, physical activity and a sense of well-being (20)
  - b. Annually, trees in urban areas of the United States remove 17.4 million tons of air pollution preventing 850 deaths and 670,000 cases of acute respiratory symptoms (21)
  - c. Tree canopy can reduce ozone and particulate pollution enough to reduce hospital admissions, lost work days, and mortality (22)
6. Availability and accessibility to natural areas (woodlands), preferably linked by trail or corridor system
- a. People walking in forests or natural areas have reduced stress indicators levels and higher immune system cell activity levels which act to reject tumors and viruses (23)
  - b. Mental health and restorative psychological benefits of greenspace increase with biodiversity (18)
  - c. Air temperatures can be up to 9° cooler in treescapes when compared to open areas (24) and large natural areas or large forested parks can influence (reduce) temperatures on nearby urban areas (25)
7. Neighborhoods with mature trees in front yards
- a. Residents in areas with high levels of trees, are 3 times more likely to be physically active and 40% less likely to be overweight or obese than those living in less green areas (26)

- b. Higher levels of neighborhood greenness are associated with higher level of outdoor playing time among preschool-aged children leading to reduced risk of childhood obesity (27)
  - c. And, can add between 3-15% (average 7%) to the value of a home (28)
8. An educational system that integrates environmentally based curricula with views of treescapes and nature both inside and outside of buildings, and allows for access to treescapes during recess and physical education classes
- a. Increase in attention performance (comparable to common pharmaceutical therapies used in ADHD treatments) for children with ADHD exposed to treescapes and green spaces (29)
  - b. Views from cafeteria and classroom windows with greater quantities of trees are associated with better test scores, graduation rates, percentages of students planning to attend a four-year college, and fewer occurrences of criminal behavior (30), all which are analogous to positive mental health
  - c. Performance on self-discipline indicators (concentration, impulse inhibition and delay of gratification) are higher when children have views of nature (31)



9. Treescapes in public housing to help create an environment that supports positive mental and physical health
- a. Treescapes help to promote development of social ties within public housing (32)
  - b. Public housing with treescapes reported 25% fewer acts of violence (33) and 52% fewer total crimes (34)
  - c. Treescapes in public housing support and develop more creative play, outdoor play and adult-to-child interactions (35)
10. A Comprehensive Plan and regularly updated Urban Forest Management Plan
- a. Recognize the role of trees and treescapes in encouraging physical activity and a healthier community
  - b. Ensure tree population is maintained leading to a healthier, safer environment and target tree planting to optimize public health
  - c. Inclusion of non-profit organizations focused on tree and health issues
    - i. Advocate for general public on health benefits of urban forests
    - ii. Active involvement in volunteer tree plantings help foster sense of place

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